Appendix P

DESERT TORTOISE PROTECTION AND TRANSLOCATION PLAN

DESERT TORTOISE PROTECTION AND TRANSLOCATION PLAN

Easley Renewable Energy Project

Prepared for

Intersect Power

IP Easley, LLC

a subsidiary of Intersect Power, LLC

Submitted by

Aspen environmental group

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Agency Review Status
Bureau of Land Management
U.S. Fish and Wildlife Service
California Department of Fish and Wildlife

CONTENTS

LIST OF TABLES

ATTACHMENTS

LIST OF ACRONYMS

AB	Authorized Biologist
ACEC	Area of Critical Environmental Concern
BLM	Bureau of Land Management
BMP	Best Management Practices
BRTR	Biological Resources Technical Report
CA 177	California Highway 177
CDCA	California Desert Conservation Area
CDFW	California Department of Fish and Wildlife
CHU	Critical Habitat Unit
CRPR	California Rare Plant Rank
DB	Designated Biologist
DB/AB	Designated Biologist and USFWS Authorized Biologist
DETO	Mojave Desert Tortoise
DFA	Development Focus Area
DRECP	Desert Renewable Energy Conservation Plan
ECM	Environmental Compliance Manager
EIS	Environmental Impact Statement
FCR	Field Contact Representative
FEIS	Final Environmental Impact Statement
GPS	Global Positioning System
I-10	Interstate 10
LUPA	Land Use Plan Amendment
MW	Megawatts
NECO	Northern and Eastern Colorado Desert Coordinated Management Plan
O&M	Operations and Maintenance
POD	Plan of Development
PV	Photovoltaic
RWQCB	Colorado River Basin Regional Water Quality Control Board
USFWS	U.S. Fish and Wildlife Service
WEAP	Worker Environmental Awareness Program

1. INTRODUCTION

IP Easley, LLC (Applicant or Proponent), a subsidiary of Intersect Power, LLC, proposes to construct, operate and decommission the Easley Renewable Energy Project (Easley or Project), a utility-scale solar photovoltaic (PV) electrical generating and storage facility, and associated infrastructure to generate and deliver renewable electricity to the statewide electricity transmission grid. The approximately 3,700-acre Project site is located in Riverside County near the Desert Center area (see POD [Plan of Development] Appendix A, Figure 1).

The Project would generate and store up to 650 megawatts (MW) of renewable electricity via arrays of solar photovoltaic (PV) panels, battery energy storage system (BESS), and appurtenant facilities. A 6.7-mile 500 kilovolt (kV) generation-tie (gen-tie) line would mainly traverse the adjacent Oberon Renewable Energy Project that is owned by Intersect Power and connect into its approved substation (see POD Appendix A, Figure 2). From the Oberon Substation, the power generated by the Easley Project would be transmitted to the SCE Red Bluff Substation via the Oberon 500 kV gen-tie line which is expected to be fully energized by the end of 2023. For a complete Project description and summary of the Project location, refer to the POD main text.

The Project includes both public and private lands (see POD Appendix A, Figure 2). Public lands within the Project solar application area are managed by the U.S. Bureau of Land Management (BLM) and are designated as Development Focus Area (DFA) by the Desert Renewable Energy Conservation Plan (DRECP) and associated Record of Decision (ROD). They have thus been targeted for renewable energy development. Because the proposed Project is partially located on federal land under management of the BLM, the BLM is the lead agency under the National Environmental Policy Act (NEPA), 42 U.S.C. section 4321 et seq. Private lands within the Project solar application area are under the jurisdiction of Riverside County who will serve as the lead agency under the California Environmental Quality Act (CEQA).

Clean, renewable energy generation will have an overall benefit to plant and wildlife species on a local, regional, and global scale by replacing fossil fuel energy sources, reducing toxic emissions, and mitigating the effects of climate change on ecosystems. The solar and energy storage facility, gen-tie line, and associated components are collectively referred to as the Easley Renewable Energy Project (Project) throughout this report.

All activities described in this Plan will be coordinated between the Applicant, Riverside County, BLM, U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Wildlife (CDFW).

For the purposes of this Plan, the following definitions have been developed:

- *Relocation* – the action of moving a desert tortoise out of harm's way of Project activities or components. Relocated tortoises would be moved no more than 300 meters from where they were detected.
- *Translocation* – the action of moving a desert tortoise from within the solar facility footprint to a pre-established recipient site more than 300 meters from where they were detected.

Relocation and translocation of tortoises may be necessary during fence construction, facility site clearance, initial grading, gen-tie line construction, or operations at the Project site. All relocation and translocation efforts would be carefully implemented to avoid and minimize adverse impacts to tortoises and receiving tortoise populations. To maximize relocation/translocation success, Project construction activities must be closely coordinated with appropriate tortoise exclusion fencing, clearance surveys, handling procedures, environmental considerations (such as ambient temperature), health assessments, and relocation/translocation scheduling.

1.1. Plan Purpose

The purpose of this Desert Tortoise Protection and Translocation Plan is to provide a framework for management approach, monitoring, and relocation or translocation of any desert tortoise located within the Project site.

The purpose of the Plan is to define:

- Appropriate methods and procedures for managing desert tortoise on the Project site to avoid and minimize take during construction and long-term operations.
- Coordinate with Riverside County, BLM, USFWS, and CDFW to determine if tortoises may be moved to more suitable areas within the nearby Chuckwalla Critical Habitat Unit (CHU).
- Clearance and monitoring guidelines to verify that no desert tortoise individuals are present within the disturbance footprint of the Project site in advance of construction activities.
- Procedures to minimize stress, disturbance, and injuries to any relocated or translocated desert tortoise for the Project.
- Procedures to avoid and minimize impacts to resident desert tortoise individuals from Project activities. Resident tortoises are those residing in the recipient area and/or habitat in the vicinity of the Project site.

This Plan was prepared in accordance with the following guidance documents:

- Desert Tortoise (Mojave Population) Field Manual (USFWS, 2009)
- Revised Recovery Plan for the Mojave Population of the Desert Tortoise (USFWS, 2011)
- Translocation of Mojave Desert Tortoises from Project Sites: Plan Development Guidance (USFWS, 2020)
- Health Assessment Procedures for the Mojave Desert Tortoise (USFWS, 2019a)

Riverside County, BLM, USFWS, and CDFW will review this plan and may revise it to conform to requirements of: (1) relevant provisions of the Project's Final Environmental Impact Report or Environmental Assessment, (2) any USFWS Biological Opinion (BO) or concurrence with the DRECP Programmatic BO or CDFW Incidental Take Permit (ITP) issued for the Project, (3) any revisions relevant to mitigation measures that may be adopted in the BLM Decision Record, or (4) any further direction from the resource agencies.

1.2. Regulatory Background

The desert tortoise is protected under the Endangered Species Act and the California Endangered Species Act. This Desert Tortoise Protection and Translocation Plan conforms to the USFWS guidance for Translocation of Mojave Desert Tortoises from Project Sites: Plan Development Guide relocation (USFWS, 2020).

Federal Endangered Species Act of 1973. The Endangered Species Act (ESA) (16 USC 1531 et seq.) and subsequent amendments protect endangered and threatened species and the ecosystems upon which they depend. Section 9 prohibits the take of any fish or wildlife species listed as endangered and most species listed as threatened, and defines take to mean "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Harm is defined to mean "any act that kills or injures the species, including significant habitat modification." Harass is further defined as actions that create the likelihood of injury to listed species to an extent as to significantly disrupt normal behavior patterns which include breeding, feeding, and sheltering.

The ESA also includes mechanisms for allowing exceptions to the Section 9 take prohibitions. Section 7 requires federal agencies, in consultation with the U.S. Fish and Wildlife Service to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered wildlife species or result in the destruction or adverse modification of critical habitat for these species. Under Section 7, USFWS may authorize limited, incidental take (i.e., incidental to an otherwise lawful activity) of listed species in a Biological Opinion.

Desert Renewable Energy Conservation Plan (DRECP), Land Use Plan Amendment to the California Desert Conservation Area Plan. The purpose of the DRECP is to conserve and manage plant and wildlife communities in the desert regions of California while facilitating the timely permitting of compatible renewable energy projects (BLM, 2015). The DRECP covers over 10 million acres of BLM land. The BLM Proposed Land Use Plan Amendment (LUPA) and Final Environmental Impact Statement for the DRECP was released in November 2015 and the BLM Record of Decision (ROD) for the DRECP was issued in September 2016 (BLM, 2016). The Easley Project site is within the Chuckwalla Valley ecoregion subsection of the DRECP area. The DRECP LUPA identifies the Project area as a Development Focus Area (DFA). The DRECP LUPA identifies a series of Conservation Management Actions (CMAs) to be implemented on BLM-administered lands.

California Endangered Species Act. The California Endangered Species Act (CESA) prohibits take of wildlife listed as threatened or endangered and defines "take" as any action or attempt to "hunt, pursue, catch, capture, or kill." CESA also allows exceptions for take that occurs incidental to otherwise lawful activities. Approval requires minimization and full mitigation of projected impacts. For projects that affect a species listed under both CESA and the federal ESA, compliance with the federal ESA will satisfy CESA if CDFW determines that the federal incidental take authorization is consistent with CESA under Fish and Game Code § 2080.1. For projects that will result in take of a species listed under CESA but not under the federal ESA, the applicants must apply for a take permit under § 2081(b).

1.3. Mitigation Requirements

This Plan has been prepared in accordance with DRECP CMAs related to desert tortoise including:

- LUPA-BIO-COMP-1: Compensation
- LUPA-BIO-IFS-1: Individual Focus Species (IFS): Desert Tortoise (activities within desert tortoise linkages)
- LUPA-BIO-IFS-2 (new roads in Tortoise Conservation Areas (TCAs))
- LUPA-BIO-IFS-3 (culvert sizing for desert tortoise)
- LUPA-BIO-IFS-4 (desert tortoise exclusion fencing)
- LUPA-BIO-IFS-5 (desert tortoise monitoring for initial clearing and grading)
- LUPA-BIO-IFS-6 (desert tortoise monitoring during geotechnical boring)
- LUPA-BIO-IFS-7 (desert tortoise monitoring during geotechnical testing)
- LUPA-BIO-IFS-8 (inspections for desert tortoise under vehicles)
- LUPA-BIO-IFS-9 (speed limits in desert tortoise habitat)
- LUPA-VPL-BIO-IFS-1 (site activities in previously disturbed areas in desert tortoise linkages and TCAs)
- DFA-BIO-IFS-1: Individual Focus Species (IFS) (protocol surveys in desert tortoise habitat)
- DFA-BIO-IFS-2 (setback requirements)
- DFA-BIO-IFS-3: Desert Tortoise (desert tortoise translocation)

Additional Project-specific mitigation measures related to desert tortoise may be developed during the NEPA and CEQA processes.

2. BASELINE CONDITIONS

The Project site overlaps a desert tortoise linkage (Pinto Wash Linkage) as defined in the DRECP Land Use Plan Amendment (LUPA). A DRECP Desert Tortoise Conservation Area (TCA) is adjacent to the Project area across Kaiser Road (see POD Appendix G, Biological Resources Technical Report [BRTR] [Ironwood, 2022], Figure 1).[1] The Project site is outside of but adjacent to desert tortoise critical habitat, which is located approximately 0.8 mile west of Kaiser Road, extending to the west into Joshua Tree National Park and to the south, south of the I-10 freeway into the Chuckwalla Mountains. The TCA includes this critical habitat. The gen-tie line would cross desert tortoise critical habitat in the TCA south of BLM Open Route DC 379 and a DRECP multi-species linkage to interconnect to the Oberon Substation.

Other open space areas in the vicinity include the Alligator Rock Area of Critical Environmental Concern (ACEC), approximately 3 miles south of the Project site, and the Desert Lily Preserve ACEC, approximately 4 miles east of the Project site. The closest Joshua Tree National Park boundary is located approximately 4 miles northeast of the Project site (see POD Appendix G, BRTR, Figure 1). Nearby land uses include previously developed or developing solar facilities, transmission lines, fallow and active agriculture, and rural residences.

2.1. Vegetation

Much of the Project site consists of creosote bush scrub with desert pavement and desert dry wash woodland intermixed. The private parcels consist of primarily man-made features that include deciduous orchard/fallow agriculture or developed areas. One vegetation community, desert dry wash woodland, is identified by BLM and CDFW as sensitive due to the association with alluvial processes. Vegetation communities are discussed in detail in the BRTR (see POD Appendix G).

2.2. Desert Tortoise Surveys

Wildlife surveys conducted in 2019-2022 conformed to full coverage desert tortoise protocol surveys with 10-meter transects on the Project site (see POD Appendix G, BRTR). All observed tortoise sign (e.g., live tortoises [all age classes], shell/bone/scutes, scats, burrows/pallets, tracks, eggshell fragments, and courtship rings) was recorded. Incidental observations of desert tortoise sign were recorded if they were not previously recorded in subsequent surveys for other resources (i.e., botanical, avian, jurisdictional delineations). The condition of burrows, scat, and carcasses were categorized per the following class designations (USFWS, 2009):

- Burrows:
  - currently active, with desert tortoise or recent desert tortoise sign
  - good condition (no evidence of recent use) - definitely desert tortoise
  - deteriorated condition (including collapsed burrows) - definitely desert tortoise
  - good condition - possibly desert tortoise
  - deteriorated condition (including collapsed burrows) - possibly desert tortoise.
- Scat:
  - wet (not from rain or dew) or freshly dried, obvious odor
  - dried, with glaze, some odor, dark brown
  - dried, no glaze or odor, signs of bleaching (light brown), tightly packed material

[1] Under the DRECP, TCAs include areas identified in the USFWS recovery plan for the desert tortoise (USFWS, 2011). Tortoise Conservation Areas (TCAs) include desert tortoise habitat within critical habitat, Desert Wildlife Management Areas, Areas of Critical Environmental Concern, Grand Canyon–Parashant National Monument, Desert National Wildlife Refuge, National Park Service lands, Red Cliffs Desert Reserve, and other conservation areas or easements managed for desert tortoises.

  - dried, light brown to pale yellow, loose material, scaly appearance
  - bleached, or consisting only of plant fiber

- Carcasses:
  - < 1 year, fresh putrid, scutes mostly adhered, sheen on exposed scutes, unexposed bone waxy and solid
  - 1-2 years, scutes mostly adhered to bone, exposed scutes pale without sheen, unexposed bone silky
  - 2-3 years, scutes peeling off bone, unexposed scutes pale and without sheen, no growth ring peeling
  - 4 years, shell bone falling apart, growth rings on scutes peeling; bone fissured
  - >4 years, disarticulated and scattered

Methodology is discussed in detail within the BRTR for the Project (see POD Appendix G, BRTR).

Nussear, et al. 2009 includes a model for the statistical probability of desert tortoise occurrence, and since publication it has continued to be a reliable tool in determining the likelihood for tortoise occupancy across the historical range of the species. The model provides a geographic representation of predicted occupancy ranging from very low (0.0) to very high (1.0). Various analyses of desert tortoise have used a model value of ≥ 0.5 as denoting the threshold for suitable habitat for desert tortoise (see POD Appendix G, BRTR). Conversely, lands that score < 0.5 have a low to moderate probability of desert tortoise occupancy.

Desert tortoise habitat has lower predicted occupancy levels in the northernmost portion of the Project site (0 to 0.2) and increases toward the southwest, with the highest occupancy levels of 0.6 in the southwest corner of the Project site (Nussear, et al. 2009) (see POD Appendix G, BRTR, Figure 9). The areas with higher predicted occupancy levels are also closest to desert tortoise conservation areas. These predicted occupancy values do not account for habitat degradation resulting from existing anthropogenic features (Nussear, et al. 2009), which would further reduce the occurrence probability in disturbed areas.

No live desert tortoises, active sign, or burrows were documented. Nine locations of tortoise carcasses were observed, most of which were characterized by shell bones falling apart and growth rings on scutes peeling (class 4) or disarticulated bones or scutes more than 4 years old (class 5). Most of the desert tortoise sign was concentrated within the south-central portion of the Project site (see POD Appendix G, BRTR, Figure 9). Desert tortoise sign observed during field surveys were consistent with the predicted occupancy model, with all the observed sign occurring in areas with occupancy values of 0.3 or higher. Table 1 summarizes desert tortoise observations.

Table 1. Tortoise Sign and Location

Date	Sign Types	Notes
9/14/2021	Carcass	Class 4: 4 years; shell bone falling apart; growth rings on scutes peeling; bone fissured
9/17/2021	Carcass	Class 5: > 4 years disarticulated and scattered
9/22/2021	Carcass	Class 5: > 4 years disarticulated and scattered
9/22/2021	Carcass	Class 5: > 4 years disarticulated and scattered
3/21/2022	Carcass	Class 4: 4 years; shell bone falling apart; growth rings on scutes peeling; bone fissured
3/23/2022	Carcass	Class 5: > 4 years disarticulated and scattered
3/28/2022	Carcass	Class 5: > 4 years disarticulated and scattered
3/30/2022	Carcass	Class 5: > 4 years disarticulated and scattered
3/31/2022	Carcass	Class 5: > 4 years disarticulated and scattered

2.3. Expected Desert Tortoise Occurrence

Desert tortoise density estimates could not be calculated as no live desert tortoise were observed during protocol surveys (USFWS, 2009). Habitat on the Project site was not suitable and minimal sign (carcasses) was observed. Desert tortoise are present in the region and may use the site for movement between habitat areas, though they are unlikely to inhabit the site. Biological surveys and monitoring, as described in this Protection and Translocation Plan, would be performed to avoid and minimize impacts to desert tortoise.

3. MANAGEMENT APPROACH AND GOALS

This section describes the detailed approach for desert tortoise protection and relocation/translocation throughout the construction phase of the Project. The intent of this Plan is to ensure that all ground-disturbing activities would minimize take of desert tortoise by either on-site monitoring, exclusion fencing and relocation, or translocation. The desert tortoise translocation approach for this Project aligns with the DRECP's guidance on desert tortoise translocation for projects with few (less than 35 or <5 dt/km2) tortoises. On the Easley Project site, desert tortoise surveys resulted in identification of carcasses. No live individuals, active sign, or burrows were observed.

Consistent with DRECP CMA DFA-BIO-IFS-3:

> If protocol surveys identify 35 or fewer desert tortoises in potential impact areas on an activity site, the USFWS and CDFW (for third party activities) will be contacted and provided with the protocol survey results and information necessary for the translocation of identified desert tortoises. Pre-construction and construction, and other activities will not begin until the clearance surveys for the site have been completed and the desert tortoises have been translocated. Translocation will be conducted in coordination with the USFWS and CDFW, as appropriate, per the protocols in the Desert Tortoise Field Manual (USFWS, 2009) and the most up to date USFWS protocol.
>
> If protocol surveys identify an adult desert tortoise density (i.e., individuals 160 millimeters (mm) or more) of more than 5 per square mile or more than 35 individuals total on a project site, the project will be required to be redesigned, re-sited, or relocated to avoid and minimize the impacts of the activity on desert tortoise.

The strategy to minimize take within the Easley Project site includes the following components:

- Assign a Lead Authorized Biologist (Section 3.1) and a qualified team of biologists with clear communication and reporting responsibilities to the lead and wildlife agencies;
- Identify, avoid, relocate, or translocate all desert tortoises within construction areas out of harm's way;
- Survey for desert tortoise along planned fence routes (Section 4.1);
- Monitor fence construction (security fencing and desert tortoise exclusion fencing) for solar facility sites (Section 4.2);
- Conduct full-coverage clearance surveys (Section 4.4) within the exclusion fencing to identify any desert tortoises within all disturbance areas (fenced solar fields and gen-tie disturbance sites);
- Exclude desert tortoises using passive relocation or allowing them to move on their own or relocate (Section 6);
- Conduct compliance monitoring and impact avoidance as needed throughout construction on the solar facility and gen-tie (Section 6.5);
- Translocate tortoises (Section 7).

Per CMA DFA-BIO-IFS-3, pre-construction, construction, and other Project activities will not begin until the clearance surveys for the site have been completed and the desert tortoises have been relocated or translocated.

Consistent with USFWS 2020 Guidance on Translocation, any tortoises that are relocated out of harm's way would be placed within 300 meters of their capture locations in suitable habitat. The need to translocate tortoises to other sites within the Chuckwalla Critical Habitat Unit (CHU) will be determined in coordination with Riverside County, BLM, USFWS, and CDFW (Section 7). Consultation between BLM, USFWS, and CDFW has identified a regional recipient site for recovery purposes. Translocation candidates may be released to the recipient site upon agency approval. Since no live individuals or active sign were observed, translocation efforts may be scaled down in coordination with resource agencies.

3.1. Key Roles

Desert Tortoise Authorized Biologists will be selected based on approvals by Riverside County, BLM, USFWS, and CDFW. A Lead Biologist (described below) will oversee the overall desert tortoise program, including clearance surveys, monitoring, and reporting related to desert tortoise on the Project site. Authorized Biologists (described below) will be responsible for handling of desert tortoises encountered during the Project. The Lead Biologist will be supported by one or more Authorized Biologists as well as Biological Monitors selected by the Lead Biologist.

Implementation of this plan will be subject to review and approval by the Riverside County, BLM, USFWS, and CDFW. These agencies are referred to throughout this Plan as the permitting and wildlife agencies.

Various aspects of this Plan will be implemented before, during, and after Project construction. Biological monitors will be on the Project site for the duration of the construction phase, and desert tortoise protection measures will be implemented to avoid and minimize potential impacts to desert tortoise or desert tortoise habitat.

- **Lead Biologist.** The Applicant shall assign a Lead Biologist, approved by BLM, CDFW, and USFWS as the primary point of contact for the BLM and resource agencies regarding biological resources mitigation and compliance. The Lead Biologist shall conduct or oversee pre-construction clearance surveys for work areas and ensure that all Authorized Biologists and Biological Monitors are implementing biological compliance requirements properly during construction activities.
- **Authorized Biologist.** An Authorized Biologist is experienced with desert tortoise ecology and principles of conservation ecology and will have their qualifications submitted for review by Riverside County and BLM and for authorization by the USFWS and CDFW under the Project permits to handle desert tortoises. Authorized Biologists will serve as crew leads during field surveys and will be responsible for all handling activities for desert tortoises. Additional activities such as transmittering, health assessments, and blood withdrawals require further qualifications and authorizations from the wildlife agencies. Because of various monitoring activities and staff availability, more than one Authorized Biologist will be assigned to the Project and other selected Authorized Biologists may serve as the Lead Biologist for resource agencies regarding desert tortoise mitigation and compliance.
- **Biological Monitor.** Biological Monitors are biologists who will work under the direct supervision and guidance of an Authorized Biologist to assist with clearance surveys and compliance monitoring. They may also handle desert tortoise under direct supervision of the Authorized Biologist. Biological Monitors will support the Authorized Biologist in implementation and compliance monitoring tasks, including watching for tortoises wandering into the construction areas, ensuring that all personnel are checking under vehicles and equipment prior to moving, and examining excavations and other potential pitfalls for entrapped animals and aid with survey needs/requirements.

3.2. Worker Environmental Awareness Program

The Lead Authorized Biologist, in conjunction with the Applicant, will prepare and implement a Worker Environmental Awareness Program (WEAP) for all Project employees and construction crew members. The WEAP shall address the sensitivity of the desert tortoise and its habitat, as well as measures that must be taken during the Project to avoid adverse impacts to the species. The Applicant will be responsible for ensuring that all workers at the site receive WEAP training prior to beginning work on the Project and receive refresher training throughout Project construction and operations. A log will be maintained of all workers who received WEAP training, and will be made available for Riverside County, BLM, USFWS, and CDFW review. The WEAP will be available in English and Spanish. The Applicant will submit the WEAP to Riverside County, BLM, USFWS, and CDFW for approval prior to implementation.

4. EXCLUSION FENCING

Prior to the construction of solar facilities, temporary or permanent desert tortoise exclusion fencing will be installed around the entirety of the approved solar field and storage facility construction areas, as well as parking and laydown areas. Security fencing can be installed simultaneously and collocated with permanent desert tortoise exclusion fencing.

Based on its success at the Oberon Project, the Applicant may elect to use wildlife-friendly fencing on portions of the proposed facility (see Section 4.3). O&M safety practices, including worker training and biological monitoring of nesting, burrowing, or denning wildlife, would be implemented to maximize long-term safety of desert tortoises and other wildlife present at the site.

Linear components of the Project (i.e., gen-tie) will have no exclusion fencing installed prior to construction activities. Any work conducted in an area that is not fenced to exclude desert tortoises shall be monitored by a Desert Tortoise Monitor who will stop work if a tortoise enters the work area (Section 6.2). Biological monitors will be present for any ground disturbing activities that may occur on the linear components or outside of desert tortoise exclusion fencing.

4.1. Pre-construction Surveys

USFWS guidelines require desert tortoise surveys within the enclosed exclusion fence line to ensure there are no desert tortoise within the fenced construction areas. No more than 10 days prior to the initiation of fence construction, a pre-activity tortoise survey will be conducted using techniques that provide 100% visual coverage of the disturbance area. Qualified biologists will walk along linear transects throughout the potential fencing disturbance area, spaced 5 meters apart and 20 meters from the fence centerline (total = 40 meters, 130 feet) with an additional buffer area of 30 meters (100 feet), spaced at 10 meters. All burrows and burrow complexes that may be used by any tortoise identified in this Plan will be examined to determine occupancy. If any burrow within the potential disturbance area for fence construction or inside the planned fence line is determined to be unoccupied, it will be carefully collapsed in accordance with the Desert Tortoise Field Manual (USFWS, 2009). If a burrow is potentially occupied by a tortoise, then further actions will be required (Sections 4.4.1).

4.2. Fence Construction Monitoring

A biological monitor will be present during all fencing installation activities. The biological monitor will inspect the work area prior to ground disturbance or vehicle access for desert tortoise to ensure that no tortoises have moved into the work area. The ground beneath all parked vehicles and equipment will be inspected for desert tortoise prior to being moved. If at any time a desert tortoise moves into the work area, activities will halt until the animal moves out of the work site on its own accord or is moved from harm's way by an Authorized Biologist. Fencing around each parcel group will include a desert tortoise

exclusion gate and/or grating. This gate will remain closed at all times, except when vehicles are entering or leaving the Project area. If it is deemed necessary to leave the gate open for extended periods of time (e.g., during high traffic periods), a biological monitor will be present to monitor for desert tortoise activity in the vicinity.

If a desert tortoise is found along the fence line during construction of the fence a transmitter will be placed on the animal.

4.3. Fencing Requirements

Specifications for exclusion fencing material and installation techniques will follow that which is outlined in the Desert Tortoise Field Manual (USFWS, 2009). The exact location of different fencing types would be determined in coordination with the USFWS based on the translocation of desert tortoise from the Project site.

Permanent Fencing. The permanent desert tortoise exclusion fence would be constructed with durable materials (i.e., 16 gauge or heavier) suitable to resist desert environments, alkaline and acidic soils, wind, and erosion. Fence material would consist of 1 inch horizontal by 2-inch vertical, galvanized welded wire, 36 inches in width (36 inches tall once installed), which would be securely affixed to directly driven steel T-posts. Shade structures would also be installed, as described below.

Installation of desert tortoise fencing integrated with security fencing would provide more stability to the desert tortoise exclusion fence, especially during large rain events. For maximum durability, the tortoise fence would be integrated with an up to 6-foot-high chain-link site security fence that meets National Electric and Safety Code (NESC) requirements. The security fence would be topped with one foot of three strand barbed wire, or as dictated by BLM specifications.

Temporary Fencing. Temporary desert tortoise exclusion fence would be built with the same materials, except that it would not be trenched or buried below ground level but rather bent inwards flush with the ground surface. Temporary desert tortoise fencing would only be installed in areas for 30 days or less and would be checked by biological monitors daily until permanent fencing is installed or the fencing is removed. Temporary desert tortoise exclusion fencing will either be permanently installed at a later date or will be removed per approved Project discussions with agencies.

Wildlife-friendly Fencing. If used, wildlife-friendly fencing would be installed around solar arrays in the Pinto Wash Linkage and areas adjacent to desert dry wash woodland that provide higher quality desert tortoise habitat. If wildlife-friendly fencing is implemented, temporary desert tortoise exclusion fencing may be removed after construction, after vegetation is substantially re-established. This would allow desert tortoise and other wildlife passage through portions of the project site for the life of the project. In areas where wildlife-friendly fencing is implemented, the security fence would leave a 6- to 8-inch gap between the lower fence margin (rail or mesh) and the ground. The bottom of the fence fabric (chain-link or similar material) would be wrapped upward so that no sharp edges are exposed along the lower fence margin.

Fence Gates. Fence gates will include either a desert tortoise exclusion barrier or a grate installed in the ground along the entire section of each gate to prevent desert tortoise access. In coordination with USFWS and BLM, use of grates may be excluded in sandy areas, where they may fill with sand and no longer create a barrier for desert tortoise. Fence gates will remain closed at all times, except when vehicles are entering or leaving the Project area. If the gate must remain open for an extended amount of time, a Biological Monitor will monitor for potential tortoise entering the site.

4.4. Clearance Surveys

Clearance surveys would be performed when desert tortoises are most active in spring (April 1 through May 31) or fall (September 1 through October 31). In accordance with USFWS protocols, clearance surveys need to be completed when temperatures are greater than 55 degrees and cooler than 95 degrees.

Due to its low elevation, the Chuckwalla Valley historically becomes warmer much earlier than the majority of the desert tortoise range in higher elevation. Clearance surveys are challenging to complete within the limited temperature constraints during the protocol survey period since ambient temperatures often exceed 95 degrees Fahrenheit (°F) by mid-morning before the end of April in Chuckwalla Valley. Various analyses of desert tortoise have used a model value of ≥ 0.5 as denoting the threshold for suitable habitat for desert tortoise. Therefore, clearance surveys in areas with a modeled value of <0.5[2] have been authorized by the BLM and resource agencies at the higher temperature threshold of up to 40 degrees Celsius (°C) (104°F). This higher threshold would apply to portions of the Easley Project site with a modeled value of <0.5 as shown on BRTR, Figure 9 (see POD Appendix G).

If a desert tortoise is found within the fenced areas during clearance surveys when temperatures are beyond 35°C (95°F), the desert tortoise would be observed for the day by a biologist (at a distance with binoculars) until dusk when it settles. It will be located at dawn again and observed until it can be handled within the proper temperature to affix a transmitter by an authorized biologist. If necessary, a temporary pen may be erected around the tortoise and any surrounding vegetation per the USFWS (2009) guidelines to increase safety or to hold it during the Project site tortoise clearance. The pen would be removed once the tortoise is relocated or translocated. All penned or avoided tortoises must be monitored daily to ensure their safety. Also see Section 5 below.

4.4.1. Solar Facility Components

After exclusion fencing is fully installed, a desert tortoise pre-construction clearance survey will be conducted within each of the fenced areas. Surveys will be led by Authorized Biologists experienced with searching for desert tortoise, potential burrows, scat, and carcasses. Surveys will consist of 100 percent visual coverage using pedestrian belt transects spaced at 5-meter intervals. An additional 500-foot (150 meter) buffer outside the Project boundary will also be surveyed with pedestrian belt transects spaced at 10 meters apart to identify any potentially active burrows that may be indirectly affected by construction activities.

During the first survey pass, all sign (scat, carcasses, tracks, etc.) will be removed from the clearance area. All burrows will be inspected and carefully excavated, including canid complexes that have been determined to be unoccupied. Burrows will be excavated in a manner to detect tortoise nests (USFWS, 2009). If a viable nest is located, procedures will follow those in the Desert Tortoise Field Manual (USFWS, 2009).

A burrow within the fenced area of the Project site that is classified as inactive (no sign of desert tortoise) and confirmed to be unoccupied will be excavated. Inactive burrows within the buffer zone will be excavated only if they will be directly impacted by construction activities, such as burrows just outside Project boundaries that may become occupied later. Excavation and backfilling techniques will be conducted in accordance with standard desert tortoise burrow excavation protocols (USFWS, 2009).

If a burrow identified during desert tortoise clearance surveys within the Project development area is suspected to be actively occupied by a desert tortoise, the apron of the burrow will be swept of any tracks and the mouth of the burrow will be loosely gated with dried sticks. The burrow will be inspected for 3 consecutive days. If needed, a fiber-optic mounted video camera may be used to confirm occupancy.

[2] Areas that do not have a high modelled desert tortoise occupancy; and/or historical data did not have active desert tortoise sign within the area or in immediate adjacent areas; and/or are within or adjacent to areas with a higher level of human disturbances.

Motion-activated game cameras may also be placed in front of the burrow mouth for 3 consecutive days to confirm occupancy. If no evidence of activity occurs (no tracks, stick gate intact, no photo evidence of a tortoise), then the burrow will be deemed unoccupied and carefully excavated per desert tortoise protocol (USFWS, 2009). Excavation will be under the direction of an Authorized Biologist who has been approved to do so by the USFWS and the CDFW. If a potentially occupied burrow is identified outside the desert tortoise active season, the Authorized Biologist will coordinate with USFWS and CDFW to determine a course of action, such as examining the burrow with a fiber-optic mounted video camera or, if necessary, designating an avoidance area around the burrow until occupancy can be confirmed and the tortoise (if present) can ultimately be actively or passively relocated as prescribed in Chapter 7 of the USFWS Desert Tortoise Manual (2009) or as otherwise specified in USFWS and CDFW authorizations.

Larger burrows, caliche caves, and den complexes that take longer/require equipment to excavate (and are not completely excavated on the first pass) are recommended to be fenced with temporary exclusion fencing in the event it is occupied by a tortoise. Temporary in-situ pens will be sized based on size of penned tortoise with the addition of shade cloth installed, if necessary. Daily monitoring of pens will be performed to detect tortoise activity and, if present, ensure tortoise well-being.

After the first pass is complete, at least one additional 100 percent visual coverage pass on transects perpendicular to the first, will occur. If no live tortoises or active tortoise sign is observed on these two passes, the clearance survey will be complete. If active desert tortoise sign is observed during the second survey pass, a third pass may be required after consultation with the agencies.

If juvenile tortoises are found during the first or second pass, additional focused searches will be performed in the immediate area of where it was found. It is recommended transects of 2.5 meters or less are walked within 250 meters of the located sign to maximize the chance of locating a small individual.

If a desert tortoise is found during clearance surveys within the solar sites, a transmitter will be placed on the animal, and it will be monitored until it is determined if its burrow is inside or outside the fence. If its burrow is determined to be outside the solar site then the tortoise will be placed on the outside of the fence where its burrow is located, until the Protection and Translocation Plan is approved, and it is moved to its permanent location. If the burrow is within the solar fence site, the transmittered tortoise will be left and monitored in-situ until the Protection and Translocation Plan is approved and it is moved to its permanent location.

Cessation of work will be implemented if desert tortoise or any wildlife is observed within the work area.

4.4.2. Linear Components

The linear components of the Project will have no exclusion fencing installed prior to construction activities. Pre-construction clearance surveys on the gen-tie routes will be conducted by walking one pass of 5 meter transects within the proposed disturbance areas (including roads, pads, and pull areas). Unfenced work areas shall be delineated using stakes and flagging, and preconstruction clearance surveys would be conducted immediately prior to initiation of ground disturbing activities and daily work activities. Any work conducted in an area that is not fenced to exclude desert tortoises shall be monitored by a Desert Tortoise Monitor who will stop work if a tortoise enters the work area (Section 6.2).

Biological monitors will be present for any ground disturbing activities that may occur on the linear components or outside of desert tortoise exclusion fencing. Biological monitors will escort construction vehicles and inspect work areas prior to crews beginning any ground disturbance. An additional 500-foot (ca. 150-meter) buffer will be surveyed with 10-meter transects as possible (access may not be available on adjacent private parcels) to identify any active burrows that may be directly or indirectly affected by construction activities. Clearance of gen-tie components will not include successive passes, but on-site construction monitoring will be implemented as described below.

Sign of desert tortoise will be recorded, as listed above for solar facility sites. Inactive and unoccupied burrows will be excavated only if they will be directly affected by construction activities. Determination of active or inactive burrows will follow the procedure described for the solar facility components in Section 4.4.1.

4.5. Shade Structures

Shade structures will be installed along the exterior of the desert tortoise exclusion fence per USFWS guidance only along parcel boundaries adjacent to native vegetation, and not along the portion of fence lines along Highway 177 and Kaiser Road. Structures would be spaced minimally 305 meter (1000 feet) and placed directly against the exclusion fence. The shade structures will be made of PVC pipe, approximately 5 to 6 feet in length and 12 to 15 inches interior diameter, to allow tortoises to move around inside of them. For temporary structures, a schedule 40 PVC pipe can be used and for permanent structures, a thicker 80 PVC pipe will be used. These structures will be covered with 3 to 4 inches of soil or rocks for insulation. The integrity of shade structures will be inspected during fence inspections and will be repaired, as necessary.

4.6. Fence Inspections

Fence inspection will occur daily for two weeks following fence installation. If no desert tortoises are observed fence-walking, inspections will occur weekly during desert tortoise active seasons (April 1 to May 31 and September 1 to October 31) and monthly during non-active seasons (June to September, November to March). The applicant will inspect the exclusion fence and tortoise proof gates or barriers such as cattle guards (CMA LUPA-BIO-IFS-4), monthly during construction, quarterly for the life of the Project, and immediately following all major rainfall events. In coordination with USFWS and BLM, use of grates may be excluded in sandy areas, as they may fill with sand and require more frequent inspections. Any damage to the fence resulting from rain events, will be immediately repaired.

5. DESERT TORTOISE HANDLING

If desert tortoise(s) are found, they may be relocated or translocated, as defined in Section 1. Relocation is discussed in detail in Section 6. Translocation is discussed in detail in Section 7.

Only persons permitted by the USFWS and CDFW under the Desert Tortoise Activity Form (i.e., streamlined Section 7 consultation process) or Incidental Take Permit would be allowed to handle desert tortoises. All desert tortoises will be handled by an Authorized Biologist in accordance with the Desert Tortoise Field Manual (2009) and the USFWS Revised Translocation Guidance (2020). Authorized Biologists would handle tortoises in accordance with approved disinfection and sanitation techniques and procedures defined by the Desert Tortoise Health Assessment Procedures (USFWS, 2019a). Desert tortoise monitors may handle desert tortoise under close supervision of the Authorized Biologist for training purposes.

5.1. Seasonal and Temperature Constraints

Any handling of desert tortoises would always be below the temperature of 95°F. During handling, the desert tortoise will be kept in a shaded environment that does not exceed 95°F and will not be released until ambient air temperatures fall below 95°F. Additionally, release of desert tortoise should occur when the following ambient temperature conditions are met at the recipient site:

- Temperatures are not forecasted to exceed 95°F within three hours of release.
- Temperatures are not forecasted to exceed 100°F within one week of release.
- Forecasted daily low temperatures are not forecasted to fall below 50°F within one week of release.

The following seasonal restrictions will apply for activities identified in the Plan:

- Collection of biological samples for disease testing will not occur between November 1 and May 14 without written approval from CDFW.
- Translocations will occur in spring (April 1 through May 31) or fall (September 1 to 30), subject to temperature constraints, unless otherwise coordinated with the USFWS and CDFW; translocation may occur outside of the spring season if weather conditions at the recipient site are favorable and approved by the USFWS and CDFW.

5.2. Data Collection

Authorized Biologists will maintain a record of all desert tortoises identified on the Project site. If desert tortoises are handled, additional data will be collected as described below. This data will be submitted to CDFW and USFWS in monthly reports and entered into the USFWS/BLM-provided master database, according to standardized format and conventions. Data collected will include:

- The location, date and time of capture, observation, and release site;
- Whether the individual was found above ground or in a burrow;
- Temperature (measured at 5 centimeters above the ground) at start and end of handling;
- General condition and health of the individual including sign of respiratory disease, injuries or trauma and signs of shell disease or abnormalities;
- Weight and measurements of the tortoise;
- Identification number;
- Transmitter information if applicable (number, frequency, and attachment location);
- Information if the tortoise voids its bladder or defecates;
- Information regarding desert tortoise nests or eggs, if located.

Photographs of each desert tortoise handled should include the following:

- Dorsal view of the desert tortoise;
- Numbered scute;
- Frontal view of desert tortoise face and forelegs;
- Any recent or previously healed injuries/anomalies, or signs of disease.

Should a tortoise void or defecate between capture and release, it will be thoroughly rehydrated and rinsed to remove any odors that could attract potential predators. Detailed specifics of these procedures are provided below in Section 5.2.

Any desert tortoise handling event must be completed within 30 minutes or less (not including rehydrating a desert tortoise that has voided).

5.3. Numbers and Transmitters

5.3.1. Numbering Desert Tortoises

All tortoises located on the Project site, including juveniles, will be marked with a unique identifying number. Prior to clearance activities, the Desert Tortoise Recovery Office and CDFW must be contacted to obtain a set of unique identifying numbers to be used for the Project. Corresponding data will be recorded.

5.3.2. Transmittering Desert Tortoises

Transmitters will be attached to all desert tortoises identified on the Project site that will be relocated, translocated, or monitored for passive exclusion, except brumating (hibernating) tortoises and tortoises less than 100 millimeters (mm) MCL. Tortoises less than 100 mm MCL would be released without being

held or transmittered, as long as the temperature requirements are met (Section **Error! Reference source not found.**).

The Applicant will consult with the Desert Tortoise Recovery Office to coordinate transmitter frequencies with those currently being used to monitor tortoises at other project sites in the vicinity so that no overlap between frequencies occur.

Radio transmitters and antennae must be mounted so as not to impede growth or the daily activities of the tortoise, such as burrow construction, righting of overturned desert tortoises, and mating and will be similar to the manner described in Boarman et al. (1998). Every effort would be made to ensure that the well-being of the desert tortoise is not compromised by either the process of attaching radio transmitters or the location and operation of these devices. Attachments of transmitters will be performed by an Authorized Biologist permitted to attach transmitters, or under their supervision. Placement and installation of radio antennae on desert tortoises will be done in a manner that eliminates gaps between the carapace and the antennae (i.e., the antennae attachment will be flush with the carapace). Females and sub-adults will have transmitters attached on either first (anterior) costal with the antennae attachments trailing along the costals toward the rear of the carapace. Confirmed males may have transmitters attached to the fifth (posterior) vertebral, with the antenna attachments trailing along the costals toward the anterior of the tortoise.

The total mass of the transmitter, including antenna, epoxy, etc., will not exceed 10 percent of the tortoise's body mass. Every two years transmitter batteries would be replaced, or earlier if the batteries become weak, are expected to fail, or are found to be malfunctioning.

Other guidance pertinent to transmitters in this Plan includes:

- Radio transmitters may temporarily (up to 48 hours) be attached to tortoises with duct tape, in situations in which full processing cannot be completed to comply with temperature guidelines, or when light levels do not allow for formal and final transmitter attachment.
- Any shell damage from attachment or removal of radio transmitters will be reported in writing within three working days to the USFWS and CDFW.
- Tortoises, with attached transmitters will be monitored at approved intervals year-round to ensure that animals are not lost due to long-range movements beyond the area capable of being detected by telemetry equipment. If a desert tortoise has a malfunctioning transmitter, it will be replaced before the animal becomes active.
- Transmitters and other equipment will be removed from all tortoises that can be located prior to end of monitoring timeframes. Every effort will be made to locate and remove non-functioning transmitters and other equipment from tortoises that are handled under this Project's relocation/translocation program.
- This effort will include thorough searches of each affected tortoise's home range and all known shelter sites. All efforts to locate tortoises will also be documented within monitoring reports submitted to the involved regulatory agencies, along with an estimate of the number of hours spent or areas covered while searching for tortoises with non-functioning transmitters and other equipment.
- Any tortoise too small to be transmittered will be marked with a unique identifier number prior to release.

5.4. Inactive Tortoises

To the greatest extent practicable, brumating (hibernating) tortoises will not be relocated or translocated. If a brumating tortoise is discovered within a burrow on the Project site or within 500 feet of the Project

boundary, the Authorized Biologist will coordinate with USFWS and CDFW to determine a course of action. This may include examining the burrow with a fiber-optic mounted video camera or, designating an avoidance area around the burrow until occupancy can be confirmed. If a brumating desert tortoise cannot be avoided by Project activities or be passively relocated, the tortoise may be captured and released to an artificial burrow that replicates the capture burrow (i.e., location relative to a shrub, direction, length) outside the Project fence and in an area where construction has finished so that the tortoise will not be disturbed in that location.

5.5. Nest and Egg Handling Protocol

Any nest that is found will be carefully excavated by hand, only by an authorized biologist, at a time of day when the air temperature 6 inches above ground is approximately equal to the soil temperature at egg level. Disposable rubber or latex gloves will be worn when marking and handling eggs. Before disturbance of nest contents, each egg will be gently marked with a small dot on the top using a felt-tipped pen to establish the egg's orientation in the nest. In handling nest contents, eggs must be maintained in this orientation at all times. Because the egg is very fragile, it may break during handling; this will be lethal to the developing tortoise inside. Broken eggs will be buried nearby and left in the field, or the contents preserved and made available for research projects. Broken eggs will be reported to the USFWS, and appropriate State wildlife agency as required for tortoise mortalities. The depth of the nest below the soil surface and the position of the nest relative to the burrow entrance (or other shelter cover) will be measured and recorded. Approximately 1 inch (2.5 centimeters) of soil from the nest area will be placed in a bucket and the egg(s) will be carefully transferred into the bucket, maintaining egg orientation. The eggs will be gently covered with soil that is free of cobbles and pebbles, to a depth equivalent to that of the original nest. A nest will be prepared at the release site with the same depth and location in relation to the burrow entrance as the original nest. The eggs will be transferred to the new nest, maintaining their original orientation. The eggs will be replaced so that they touch one another. Eggs will be gently covered with soil from which cobbles and pebbles have been removed so that all the air spaces around the eggs are filled.

6. RELOCATION AND PASSIVE EXCLUSION

Visual health assessments will occur on all relocated (<300 meters) desert tortoises. No biological samples would be collected, unless showing physical signs of infection. Biological sampling is described in detail under Translocation in Section 7.1.

6.1. Relocation

Desert tortoises less than 160 mm will be relocated as soon as possible after detection to maximize their chance of survival and preclude holding them in situ (via temporary transmitter or temporary pen) for an extended period.

Adult desert tortoises (more than 160 mm) identified for relocation will be transmittered and left in situ or within on-site pens following health assessments, data collection, and monitoring, until they can be transported.

If pens are used, they will be constructed according to husbandry procedures in accordance with the most recent USFWS guidance (USFWS, 2011). The pens will be at least 6 meters × 6 meters (19 feet × 19 feet) for adult tortoises and 2 meters x 2 meters (6 feet x 6 feet) for juvenile tortoises. Penned tortoises will be monitored regularly.

Adult desert tortoises found healthy and clinically disease-free would be moved to the selected relocation site. Tortoises assessed as clinically ill or diseased would not be placed in situations where contagion can

spread to healthy tortoises. Additional health examinations would be performed as necessary to determine their disposition, as discussed with USFWS and CDFW. If the desert tortoise is unable to be returned to the wild, it may be transported to an approved adoption entity or research facility, according to USFWS and CDFW direction.

6.2. Passive Exclusion

Full avoidance of impacts to desert tortoise will be prioritized on all linear Project components and in unfenced work areas by using a biological monitor to accompany construction crews and equipment in the field (Section 6.5.2).

If a desert tortoise is observed during surveys, in areas where construction activities will occur within a short period of time, such as a few hours, it will be noted and observed until it leaves the areas on its own accord. All construction or maintenance activities will cease if a desert tortoise is detected within the work area or if a tortoise is in imminent danger. Work within the vicinity will not continue until the tortoise moves a safe distance out of the work area.

Desert tortoises would be relocated from unfenced work areas if: (1) an above-ground tortoise does not leave a work area and no other alternate work site is available for crews, and therefore must be moved out of harm's way, or (2) an occupied burrow is located within or adjacent to a work area that cannot be avoided during construction.

Burrows will be inspected for occupancy and will be excavated only if they would be directly impacted by construction. If a burrow is occupied or potentially occupied, it will be inspected and managed as described in Section 4.4.1. If a potentially occupied burrow is found during the inactive season, that may be impacted by construction activities, the Lead Authorized Biologist will coordinate with the USFWS and CDFW to determine the course of action.

6.3. Temporary Penning

If a desert tortoise is found within linear work areas (where wildlife fencing will not be installed) during a desert tortoise clearance survey, the tortoise may be temporarily penned, as described in Section 6.1, to prevent it from moving on to the Project site and then needing to be physically moved. Penning would be conducted in accordance with USFWS guidance (2009), in temperatures below 95^{o}F, and would be reported to CDFW and USFWS within 24 hours.

6.4. Post Clearance Procedures

After clearance and relocation are completed, there remains a possibility of finding tortoises within the Project site, especially juvenile tortoises. A Biological Monitor would monitor initial clearing and grading activities for any tortoises missed during the clearance survey. Should a tortoise be discovered, an Authorized Biologist would be responsible for translocating it per this Plan.

Juvenile, subadult tortoises (less than 160 mm MCL), and eggs that are found after clearance has been completed will be relocated/translocated upon detection if they pass the visual health assessment and handling would occur within the temperature limits as described in Section 5.

Any tortoise found in the solar field after construction and during operations, prior to passage fencing installation, is most likely to have entered the site through an opening in the exclusion fence. It is likely, although not impossible, that any tortoise found during operations would not yet have constructed a burrow and would have only recently entered the site. Any such tortoise would be relocated/translocated per this plan.

6.5. Compliance Monitoring

6.5.1. Solar Facilities

Monitoring will be conducted by qualified biological monitors who will be present during all initial ground disturbance and vegetation removal activities to ensure that activities avoid any desert tortoise that may have been missed during clearance surveys. Any excavations with steep walls must have a wildlife escape ramp and be fully covered at the end of the workday to prevent entrapment of any wildlife species. After vegetation is fully removed within fenced areas, weekly spot checks will be conducted to ensure that there are no desert tortoises within the construction area for the duration of the construction phase.

6.5.2. Linear Components

A biological monitor will escort construction crews and inspect work areas prior to construction equipment access and prior to beginning any construction activities. A biological monitor will be present for any ground disturbing activities and any construction activities that require equipment access to the gen-tie (e.g., tower construction, cable pulling, and crane operations). Any excavations with steep walls must have a wildlife escape ramp and be fully covered at the end of the workday to prevent entrapment of any wildlife species. The ground beneath all parked vehicles and equipment will be inspected for desert tortoise prior to being moved. Work activities will be stopped by the biological monitor if a desert tortoise enters the work area. Work activities will proceed at the site only after the tortoise has either moved away of its own accord or is relocated by an Authorized Biologist. Work within the vicinity will not continue until the biological monitor determines that the tortoise is no longer in harm's way.

7. TRANSLOCATION

If a desert tortoise is found on the Project site, within the solar facilities or associated infrastructure during the pre-construction, construction, or operation and maintenance phases, and is not in an area appropriate for relocation (i.e., suitable habitat does not occur within a 1.5-kilometer buffer surrounding the potential release point), the tortoise will be translocated.

This section describes the methods and procedures to be followed when translocating a desert tortoise. Translocation will be conducted in coordination with the USFWS and CDFW, as appropriate, per the protocols in the Desert Tortoise Field Manual (USFWS, 2009) and the most up to date USFWS protocol. In each case, translocation would occur after approval of the associated translocation package by Riverside County, BLM, USFWS, and CDFW.

Translocations will occur in spring (April 1 through May 31) or fall (September 1 to 30), subject to temperature constraints, as described in Section 5.1, unless otherwise coordinated with the USFWS and CDFW; translocation may occur outside of the spring season if weather conditions at the recipient site are favorable and approved by the USFWS and CDFW.

Tortoises less than 160 mm will be translocated as soon as possible after detection to maximize their chance of survival and preclude holding them in situ (via temporary transmitter or temporary pen) for an extended period.

Adult desert tortoises (more than 160 mm) identified for translocation will be transmittered and left in situ or within on-site pens following health assessments (Section 7.1), data collection (Section 5.3), and monitoring (Section 8.2), until they can be transported.

As described in Section 6.1, if pens are used, they will be constructed according to husbandry procedures in accordance with the most recent USFWS guidance (USFWS, 2011). The pens will be at least 6 meters ×

6 meters (19 feet × 19 feet) for adult tortoises and 2 meters x 2 meters (6 feet x 6 feet) for juvenile tortoises. Penned tortoises will be monitored regularly.

Adult tortoises found healthy and clinically disease-free would be moved to the selected translocation site. Tortoises assessed as clinically ill or diseased would not be placed in situations where contagion can spread to healthy tortoises. Additional health examinations would be performed as necessary to determine their disposition discussed with USFWS and CDFW. If the tortoise is unable to be returned to the wild, it may be transported to an approved adoption entity or research facility, according to USFWS and CDFW direction.

7.1. Health Assessments

Health assessments will occur on all translocated desert tortoises. Juveniles will be given a visual health assessment before release. If it is determined that translocation of a tortoise is desirable the health assessments will include collection and processing of biological samples to minimize the risks of spreading disease to the recipient site's population. Health assessments for translocation candidates include (1) physical inspection of the desert tortoise, measurements of body mass and carapace, (2) oral swabs and blood draws to be conducted by approved Authorized Biologists only. Collection of biological samples for disease testing will not occur between November 1 and May 14 without written approval from CDFW.

The desert tortoise is susceptible to diseases such as upper respiratory tract disease (URTD), herpesvirus, shell diseases, bacterial and fungal infections, and urolithiasis (bladder stones) that could have significant impacts on populations. There are at least two pathogenic species of Mycoplasma known to cause URTD in desert tortoise (*Mycoplasma agassizii* and *Mycoplasma testudineum*). PCR tests of oral swabs are used to determine presence of these pathogens, while ELISA tests of drawn blood are used to detect antibodies for each pathogen. Both tests will be used to determine if a tortoise is positive for disease. Procedures for handling desert tortoise to reduce the risk of disease transmission are outlined by USFWS (2019a, 2019b, 2009) and are incorporated into this Plan as appropriate.

Blood draw samples and the appropriate fee for each sample will be sent to:

Dr. Mary Brown
University of Florida Mycoplasma Laboratory
2015 SW Archer Road Room V2 234
Gainesville, Florida 32608

CDFW may approve another facility. Plasma and oral swab samples and the appropriate fee for each sample will be submitted to the sample bank at University of California, Los Angeles, in accordance with USFWS (2019a). PCR tests will be conducted by the San Diego Zoo.

A minimum of two full health assessments, including blood draw, would be completed for each translocation candidate identified on the Project site 14 to 30 days apart, prior to translocation. Additional assessments (outside of 30 days) may be conducted, but a narrow window is necessary to discover animals with intermittent clinical signs. The last assessment would involve a visual inspection only and will occur 1 to 2 days prior to the translocation date to ensure that the individual is still a good candidate for translocation. If a tortoise is suspect for disease or tests positive, the tortoise will be tested a second time. If the tortoise tests negative for disease after two health assessments, it will be translocated. Collection of biological samples will occur after May 15, or earlier with written approval from USFWS and CDFW, and before October 31. Tortoises over 100 millimeters midline carapace length (MCL) found between November 1 and May 14 will be transmittered and monitored in situ until disease testing can occur.

Desert tortoises determined to be infectious or unhealthy, with significant clinical signs of ill health, would not be relocated or translocated. Such tortoises would be immediately removed from the wild and sent to a CDFW-approved facility where they would undergo further assessment, treatment, and/or necropsy.

The Applicant will pay the veterinary costs associated with treatment of an ill or injured desert tortoise up to but not exceeding $3,000 (Desert Tortoise Conservation Center estimated cost for one year of housing, care, treatment, and other services). Should an injured or ill tortoise die prior to being transferred for further assessment and treatment at a CDFW-approved facility, the carcass will be submitted for necropsy.

Necropsy Submission. Dead tortoises found on the Project site will be sent to the following CDFW-approved facility for necropsy analysis:

Dr. Robert Ossiboff
University of Florida
Veterinary Diagnostic Laboratories
2015 SW 16th Ave. Room VS 50
Gainesville, FL 32608
(352) 294-4726

Another facility may be used if approved by CDFW.

7.2. Transport

To transport desert tortoise during translocation, each tortoise will be placed in a clean, sterilized, ventilated, and protected container, consistent with USFWS (2009) for transport. During transport by vehicle, the tortoise container will be kept shaded and placed on a well-padded surface that is not over a heated portion of the vehicle floor. The vehicle used for transport should be in good condition with functional air conditioning or heat, if needed. In all circumstances, transportation methods will be consistent with the USFWS Desert Tortoise Field Manual (USFWS, 2009) or the most recent USFWS and CDFW guidance and best management practices. Every effort will be made while handling tortoises to release each animal within 30 minutes of its capture. Except during brief one-minute periods when plastron measurements, weighing and photographs are taken, animals will be kept in an upright position. If a tortoise voids its bladder as a result of being handled, the animal will be rehydrated. The process of rehydrating a desert tortoise will take place at the location where the animal was captured (or to be released, for translocated tortoises), and consist of placing an individual tortoise in a tub with a clean plastic disposable liner for a minimum of 10 to 20 minutes. The amount of water that is placed in the lined tub will not exceed the lower jaw height of the tortoise.

7.3. Release Locations

All desert tortoises will be translocated to the selected recipient site (Section 7.4). Release locations will be selected for individual tortoises based on the identification of like-for-like shelter resources (i.e., similar cover and habitat in comparison to that at the location of where each individual is found on a project site). Potential release locations would be investigated to ensure presence of vegetation for shelter and appropriate soils for existing or new burrows. If necessary, artificial burrows may be added to the release site. Special attention will be paid to predator sign at any proposed release site, with the assumption that concentrated predator sign may indicate a poor release site. In general, tortoises will be released at an unoccupied, aboveground location in the shade, with burrows or shelter available in the vicinity. Per USFWS (2020) recommendations, translocated desert tortoise will not be put into occupied burrows, but will be placed at a shelter site, consisting of unoccupied soil burrows, spaces within rock outcrops, caliche caves, or the shade of shrubs.

7.4. Translocation Review Package

Per the USFWS Translocation Guidance (2020), a translocation review package, incorporating the penultimate health assessment in the month before the scheduled translocation, will be submitted to Riverside County, BLM, USFWS, and CDFW for approval of the proposed disposition of each tortoise on the Project site. If health assessments are conducted in a season prior to the scheduled translocation date, a tentative translocation review package may be submitted for review subject to consideration of new results from the health assessments conducted in the month prior to translocation; this can help expedite final approval of the disposition plan (see below). The translocation review package will include the following:

- Disposition plan (USFWS, 2020) or more recent, including complete health histories for the Project site tortoises;
- Complete survey data from the Project, recipient, and control sites (if updated from site selection surveys that were previously submitted);
- Photographs of individual tortoises as specified on the health assessment data sheet;
- Health assessment data sheets for resident, control (if necessary), and Project site tortoises, if not submitted previously;
- Map(s) of the recipient site, showing proposed release points of Project site tortoises and locations of resident tortoises;
- Map(s) of the Project site (including all Project phases and all relevant digital GIS layers), illustrating distribution and health status of Project site tortoises and proposed release sites of tortoises to be moved < 300 meters (if applicable);
- Any other Project-specific information that supports or clarifies translocation decisions.

Disposition plans summarize key health findings and describe the proposed fate of each desert tortoise (i.e., translocated to recipient site or removed from population due to suspected disease) Disposition plans will be completed within the spring or fall season in which translocation occurs. Project delays or severe drought conditions that result in translocation occurring in a subsequent desert tortoise activity season, other than that in which the disposition plan was developed, would result in the need to complete updated health assessments (biological samples are valid for 1 year). A minimum of two weeks would be provided for evaluation of the translocation review package. Desert tortoises would be translocated only after the acceptance of the translocation review package by Riverside County, BLM, USFWS, and CDFW. Prior to translocation and because of drought conditions, consultation with agencies will occur to determine the best course of action.

7.5. Recipient Site

Translocation recipient sites were evaluated based on the assumption that no more than 5 desert tortoises will need to be translocated off the Easley Project site. If more than 5 tortoises are identified for translocation, the Applicant will consult with Riverside County, BLM, USFWS, and CDFW to use the most current information regarding translocation sites and additional sites may need to be identified.

Site assessments were completed to characterize habitat suitability and identify existing desert tortoise sign. The assessment areas were identified in coordination with BLM, CDFW, and USFWS. All areas are located south of the Project sites, south of Interstate Highway 10, near or within the Chuckwalla Mountain Wilderness Area, and within desert tortoise critical habitat (see Attachment A). BLM, USFWS, and CDFW first identified two potential recipient sites, Area 1 and Area 2. Methods and potential site locations for the required assessment were developed after coordination with BLM and CDFW in March 2022. The two sites (Areas 1 and 2) were assessed, however survey results indicated some concerns with Areas 1 and 2

for desert tortoise translocation. After additional coordination with BLM in April 2022, a revised site, Area 2a, was identified, and the assessment was performed (see Attachment A). All three recipient sites are modelled to have high desert tortoise occupancy. Live desert tortoises, burrows, scat, and tracks were found at all three recipient sites.

Area 2a is a revised version of Area 2, moving it just outside the Chuckwalla Mountain Wilderness Area and revising the boundary to be within BLM managed lands only (see Figure 1, Attachment A). It is southeast of Areas 1 and 2 and consists of approximately 1,736 acres. Area 2a is approximately 8 miles southeast from the Project sites.

Frequent consultation has occurred between the agencies, biologists, and the Applicant's agents to discuss survey results and determine an appropriate recipient site. General data pertinent to the suitability of habitat for the translocation of desert tortoises was gathered and submitted to BLM, USFWS, and CDFW in April 2022. General observations of field surveys are found below.

Soils in Area 2a appeared to be rocky and cobbly only in areas closest to the Chuckwalla Mountains. The remainder of the Area 2a had friable soils. Incised washes were only nearest to mountainous areas and most of the site contained sheetwash. Vegetation communities include creosote bush scrub, desert pavement, and microphyll woodland. Live desert tortoises, burrows, scat, and tracks were found.

Area 2a has some off-road disturbance, but there is also a large, unexploded ordinance (UXO) in the southern portion of the potential recipient site. BLM has notified Riverside County Sheriff Department of the location of the UXO and BLM requested an update from the County in May 2022 regarding the status of the UXO and whether it has been removed. There remains some concern at Area 2a with the status of the UXO, since it could have a negative impact on translocated desert tortoises. Access to Area 2a may also limit locations suitable for translocation due to its distance from a traversable road and the extended time it may take to take walk a desert tortoise to the southern portion of the site.

Out of the three areas assessed, Area 2a is most suitable as a recipient site for desert tortoise for the Project sites. Area 2a has suitable desert tortoise habitat with live individuals, and sign observed. The northwestern most portion of Area 2a is rockier and mountainous, but the remainder of Area 2a has similar habitat as the Project sites with soil burrows and sheetwash.

7.6. Control Site

Projects with a small number of tortoises for which a regional population-augmentation site is unavailable need not survey the recipient site (USFWS, 2020). Translocating few tortoises will negligibly increase the density of a recipient site and will minimally disrupt resident-tortoises social dynamics and contact rates (USFWS, 2020). Monitoring a small number does not provide a robust analysis of tortoise needed to evaluate translocation effectiveness, so identifying a control site is unnecessary in this situation. Determining precisely what constitutes a "small number" of tortoises depends on Project-specific details, such as the scope and scale of the Project, the area across which tortoises will be displaced, and the area within which the tortoises are proposed to be moved. The Applicant will coordinate with USFWS and CDFW to determine if control sites are necessary.

The control site, if required, will be selected based on the following considerations:

- be similar in habitat type/quality (e.g., level of disturbance), post-translocation population size, and disease status to the recipient sites, to the maximum extent possible;
- not have foreseeable development or other impacts precluding tortoise occupancy;
- not have been previously used as a recipient site for other projects; and
- be a minimum distance of 10 kilometers away from an unfenced recipient site that has no substantial anthropomorphic or natural barriers to prevent the interaction of control, resident, and translocated desert tortoises.

8. MONITORING AND REPORTING

8.1. Construction Monitoring and Reporting

Agencies will be notified when clearance surveys would be performed and the results of the surveys. During the construction phase, the Lead Authorized Biologist will prepare daily records of desert tortoise observations and site inspections in accordance with Project requirements. If at any time a desert tortoise is identified on the Project site, Riverside County, BLM, USFWS, and CDFW will be notified. A copy of the daily records and all health data sheets resulting from health assessments will be submitted to USFWS and CDFW per the reporting timelines specified below.

Reporting regarding construction monitoring and implementation of this Plan will be provided in weekly updates and monthly reporting to Riverside County, BLM and USFWS, as well as quarterly reporting to CDFW. Annual and final reports will also be submitted to Riverside County, BLM, USFWS, and CDFW, as required. Summaries of all compliance tortoise surveys, relocation, translocation, and monitoring activities conducted during the previous calendar year will be included in these reports.

8.2. Translocation Monitoring and Reporting

8.2.1. Post Translocation Monitoring

When a regional augmentation site is not available and few tortoises need to be translocated, long-term monitoring of only a small number of tortoises lacks statistical power to inform questions about biological effectiveness or contribution to recovery (USFWS, 2020). In addition, such projects conducted under the protocols described herein pose negligible risks of negative population-level effects. Therefore, long-term monitoring is not recommended in these instances. Instead, telemetry-based monitoring of six months or more may be appropriate to document short-term survival of small numbers of translocated tortoises. The Applicant will consult with Riverside County, BLM, USFWS, and CDFW to determine the appropriate monitoring duration and methodology.

8.2.2. Effectiveness Monitoring

Current guidance recommends that post-translocation effectiveness monitoring, when translocating a small number of tortoises, may be relaxed (USFWS, 2020). Determining precisely what constitutes a “small number” will depend on Project-specific details, such as the scope and scale of the Project, the area across which tortoises will be displaced, and the area within which the tortoises are proposed to be moved (USFWS, 2020). Nevertheless, relocated and translocated tortoise will be transmittered and monitored (via radio telemetry) for a duration and frequency determined by the wildlife agencies to (1) allow time for health assessment results and decision-making, and (2) ensure animal well-being immediately following release.

All relocated or translocated desert tortoises will be monitored:

- Once within 24 hours of release;
- Twice weekly for the first two weeks after release;
- Weekly during the more-active season;
- Biweekly during the less-active season; and
- For a duration agreed upon by Riverside County, BLM, USFWS, and CDFW from date of release.

If necessary, a formal effectiveness monitoring program will be implemented. The effectiveness monitoring program will include all translocated desert tortoises and an equal number of resident individuals at the recipient site and a control site with equal gender ratios. These groups will be monitored for a

period of 5 years after the initial translocation date. Tortoises would be monitored at the same frequency as stated above or as otherwise determined by the wildlife agencies.

Transmitter batteries will be changed as necessary throughout the monitoring period as necessary to maintain battery life. At the end of the monitoring period, coordination with USFWS and CDFW will determine whether transmitters should be removed and decommissioned, or if another entity will assume the monitoring role.

8.2.3. Health Monitoring

If necessary, a formal effectiveness monitoring program will include twice-annual health assessments. Health assessments, including serology testing, will be conducted for all transmittered translocated, resident, and control tortoises. A final visual health assessment will be completed for each translocated individual at the end of the monitoring period. Any health problems or mortalities observed will be reported to USFWS and CDFW verbally and in writing within 48 hours of discovery, and will include unique identifier, location, suspected health issue and/or cause of death (if known). Fresh carcasses will be brought for necropsy as directed by USFWS and CDFW. Animals showing severe clinical signs of disease at any time will be addressed following the guidelines provided in this plan.

8.2.4. Reporting

Reporting regarding implementation of translocation and monitoring will be provided in weekly updates and monthly reporting to Riverside County, BLM and USFWS, as well as quarterly reporting to CDFW. Annual and final reports will also be submitted to Riverside County, BLM, USFWS, and CDFW, as required. Summaries of all compliance tortoise translocation, and post-translocation, effectiveness, and health monitoring activities conducted during the previous calendar year will be included in these reports.

9. OPERATIONS AND MAINTENANCE

Tortoises observed within the fence line of the solar facility components during routine maintenance activities or along the main access road by personnel leaving or entering the Project site will be relocated to suitable habitat within 300 meters of where it was found or will be translocated into suitable habitat outside of the fence line. Only persons permitted by the USFWS and CDFW under the Desert Tortoise Activity Form (i.e., streamlined Section 7 consultation process) or Incidental Take Permit would be allowed to handle desert tortoises. Relocation is discussed in detail in Section 6. Translocation is discussed in detail in Section 7.

All desert tortoises will be handled by an Authorized Biologist in accordance with the Desert Tortoise Field Manual (2009), the USFWS Revised Translocation Guidance (2020), and approved disinfection and sanitation techniques and procedures defined by the Desert Tortoise Health Assessment Procedures (USFWS, 2019a). Desert tortoise monitors may handle desert tortoise under close supervision of the Authorized Biologist for training purposes.

Any routine maintenance or emergency/unexpected repairs that require surface disturbance or heavy equipment will require that either the tortoise be allowed to move out of harm's way on its own accord, or the tortoise will be relocated by an Authorized Biologist.

If wildlife-friendly fencing is used, O&M safety practices, including worker training and biological monitoring of nesting, burrowing, or denning wildlife, would be implemented to maximize long-term safety of desert tortoises and other wildlife present at the site.

10. DECOMMISSIONING

During the Project decommissioning and reclamation phase, activities will take place both inside fenced areas and in unfenced native habitat; however, once the main decommissioning activities are completed, fencing would be removed. Desert tortoise conservation measures will be in place and the decommissioning activities will be monitored for the presence of desert tortoise and desert tortoise sign. If desert tortoise is located during Project decommissioning, the Project owner will contact the wildlife agencies for direction on the steps to take to address the desert tortoise in the decommissioning area.

11. ADAPTIVE MANAGEMENT

Adaptive management will be used, as necessary, whenever unexpected issues occur during Project construction, operations and maintenance, and decommissioning. Generally, adaptive management measures would be implemented if there is evidence of Project-related disturbance to or increased risk to desert tortoise, and/or where initial protection methods have been deemed ineffective. Any monitoring, management, and reporting appropriate to the unexpected issue would be developed in coordination with USFWS and CDFW.

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Attachment A

IRONWOOD CONSULTING ASSESSMENT

Desert Tortoise Recipient Sites 1, 2, and 2a for Arica Solar Project, Victory Pass Solar Project, and Oberon Renewable Energy Project

Date: May 3, 2022

To: BLM, CDFW, USFWS

From: Ironwood Consulting, Inc.

Subject: Assessment of Desert Tortoise Recipient Sites 1, 2, and 2a for Arica Solar Project, Victory Pass Solar Project, and Oberon Renewable Energy Project

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BACKGROUND

Ironwood Consulting Inc (Ironwood), on behalf of Intersect Power and Clearway Energy, assessed potential recipient sites for the translocation of up to 10 tortoises from the Arica Solar Project, Victory Pass Solar Project, and Oberon Renewable Energy Project (Project sites).

The Limited Notice to Proceed (LNTP) for the Project sites required that an assessment for potential recipient sites be completed prior to April 1, 2022. Methods and potential site locations for the required assessment were developed after coordination with BLM and CDFW on March 11, 2022. The two sites (Areas 1 and 2) were assessed, and a brief preliminary memo was submitted on April 1, 2022 to meet the LNTP requirements.

Survey results indicated some concerns with Areas 1 and 2 for desert tortoise translocation. After additional coordination with BLM on April 5, 2022, a revised site, Area 2a, was identified, and the assessment was performed with a brief preliminary results memo submitted to BLM, CDFW and USFWS on April 15, 2022.

PURPOSE

The purpose of the assessments completed was to:

- Characterize habitat suitability for the translocation of up to 10 tortoises in the areas identified, including assessment of soil type and vegetation cover
- Document desert tortoise sign, including live individuals, burrows, scat, carcasses, tracks, and eggshells

This report summarizes the findings of the assessments completed by Ironwood for Areas 1, 2, and 2a. Previous research by Dr. Ken Nussear (University of Nevada Reno) in 2020 provided supplemental data indicating that Areas 1, 2, and 2a had live desert tortoise.

LOCATION

The assessment areas were identified in coordination with BLM, CDFW, and USFWS. All areas are located south of the Project sites, south of Interstate Highway 10, near or within the Chuckwalla Mountain Wilderness Area, and within desert tortoise critical habitat (Figure 1).

All of Area 1 is located within the Chuckwalla Mountain Wilderness Area. It is in the vicinity of 661000/3725000 and is approximately 1500 acres. Area 1 is approximately 3 miles southeast of the Project sites

Area 2 is located southeast of Area 1. Much of Area 2 is on BLM managed lands and a small portion is within state lands. The eastern portion of Area 2 is within the Chuckwalla Mountain Wilderness Area. Area 2 is in the vicinity of 664000/3714000 and consists of approximately 1500 acres. Area 2 is approximately 7 miles southeast from the Project sites.

Area 2a is a revised version of Area 2, moving it just outside the Chuckwalla Mountain Wilderness Area and revising the boundary to be within BLM managed lands only. It is southeast of Areas 1 and 2 and consists of approximately 1,736 acres. Area 2a is approximately 8 miles southeast from the Project sites.

METHODS

Experienced desert tortoise biologists walked intuitive transects spaced approximately 10 - 100 meters apart, allowing for the entire site to be evaluated efficiently within the limited time available. Transect spacing was determined by landforms, intuition, and roughly, UTMs. Assessment dates are summarized below in Table 1.

Data collected included classification information on all tortoise sign, location (UTMs), and photographs. Additional burrow data was recorded during the survey, and included burrow type (soil burrow, rock outcropping, caliche cave), and size classification. The condition of burrows, scat, and carcasses were categorized per the following class designations (USFWS 2009):

- Burrows:
    1. currently active, with desert tortoise or recent desert tortoise sign
    2. good condition (no evidence of recent use) - definitely desert tortoise
    3. deteriorated condition (including collapsed burrows) - definitely desert tortoise
    4. good condition - possibly desert tortoise
    5. deteriorated condition (including collapsed burrows) - possibly desert tortoise.
- Scat:
    1. wet (not from rain or dew) or freshly dried, obvious odor
    2. dried, with glaze, some odor, dark brown
    3. dried, no glaze or odor, signs of bleaching (light brown), tightly packed material
    4. dried, light brown to pale yellow, loose material, scaly appearance
    5. bleached, or consisting only of plant fiber
- Carcasses:
    1. < 1 year, fresh putrid, scutes mostly adhered, sheen on exposed scutes, unexposed bone waxy and solid;
    2. 1-2 years, scutes mostly adhered to bone, exposed scutes pale without sheen, unexposed bone silky;
    3. 2-3 years, scutes peeling off bone, unexposed scutes pale and without sheen, no growth ring peeling
    4. 4 years, shell bone falling apart, growth rings on scutes peeling; bone fissured
    5. > 4 years, disarticulated and scattered

In addition, tortoise burrows with widths more than or equal to 180 millimeters (mm) were classified as adult burrows and less than 180 mm were considered juvenile burrows (USFWS 2019, 2020).

Notable data and photos of suitable habitat and other information such as human impacts were also collected.

Table 1. Survey Dates

Date	Assessment Area	Biologists	Temperature (°C)	Cloud Cover (Range)	Rain	Wind Range (mph)	Duration (hours)
3/22/2022	Area 1	D. Focardi, J. Weidensee	29-28	26-50%	none	0 to 5	9
3/23/2022	Area 1	D. Focardi, J. Weidensee	16-28	0%	none	0 to 5	10.25
3/24/2022	Area 1	D. Focardi, J. Weidensee	15-34	0%	none	0 to 5	9.5
3/25/2022	Area 1	D. Focardi, J. Weidensee	24-35	26-50%	none	6 to 10	10
3/27/2022	Area 2	D. Focardi, J. Weidensee	22-32	26-50%	none	6 to 10	10.25
3/28/2022	Area 2	D. Focardi, J. Weidensee	19-27	51+	rain at end of day	Over 15	10
3/29/2022	Area 2	D. Focardi, J. Weidensee	13-23	26-50%	none	6 to 10	9
3/30/2022	Area 2	D. Focardi, J. Weidensee	17-27	11-25%	none	6 to 10	9.5
4/8/2022	Area 2a	J. Yerger, M. Lopez	24-33	0%	none	6 to 10	8
4/9/2022	Area 2a	J. Yerger, M. Lopez	24-32	0%	none	6 to 10	10

RESULTS

Results from the assessments are summarized below and are depicted in Figures 2-6 that also include desert tortoise observations from Ken Nussear's research.

SOILS

Figure 2 summarizes the soil type series for all three potential recipient sites.

Area 1 is mapped primarily as rillito-gunsight series soil type. Rillito series consist of very deep, somewhat excessively drained soils that form in mixed alluvium. Rillito soils are on fan terraces or stream terraces. Gunsight series consist of very deep, somewhat excessively drained, strongly calcareous soils formed in alluvim from mixed sources that are on fan terraces or stream terraces. Soils observed in Area 1 were rocky and cobbly in most areas with more excessively drained soils.

Area 2 is mapped primarily as rillito-gunsight soil types but on the western edge is mapped as tecopa-rock outcrop-lithic toriorthents. The rocky outcrop was observed to be on the western edge of Area 2 closest to the wilderness area. The remainder of the site had friable soils, more so than soils observed in Area 1.

Area 2a is mapped primarily as rillito gunsight soil type, similar to Area 1. However, observations in the field showed that is it not as deeply and excessively drained as Area 1. Soils appeared to be rocky and cobbly only in areas closest to the Chuckwalla Mountains. The remainder of the Area 2a had friable soils.

WATERS

Area 1 is within the Lower Palen Lake and Corn Springs Wash watershed boundaries. There were ephemeral washes and incised washes observed throughout a majority of the Area 1.

Area 2 is within the Aztec Mines watershed. There are some ephemeral washes mapped and incised washes were primarily in the mountainous areas, with more sheetwash throughout.

Area 2a is within the Aztec Mines watershed and the Ford Dry Lake watershed. Incised washes were only nearest to mountainous areas and most of the site contained sheetwash.

Figure 3 summarizes all the ephemeral waters and watershed boundaries for all three potential recipient sites.

VEGETATION COMMUNITIES

There are three vegetation communities that occur within the three recipient sites and are depicted in Figures 4 and 5.

Creosote bush scrub: Sonoran creosote bush scrub has a State Rarity rank of S5 (CDFW 2021), being demonstrably secure, and is not designated as a sensitive plant community by BLM. It is synonymous with creosote bush-burro bush shrubland (*Larrea tridentata-Ambrosia dumosa)* alliance and creosote bush-brittlebush shrubland (Larrea tridentata-*Encelia farinosa*) alliance (Sawyer et. al 2009) and *Lower Bajada and Fan Mojavean – Sonoran Desert Scrub* (NVCS). Sonoran creosote bush scrub occurs on well-drained, secondary soils of slopes, fans, and valleys and is the basic creosote bush scrub habitat of the Colorado Desert (Holland 1986). This is the dominant vegetation community for Areas 1, 2, and 2a.

Desert dry wash woodland/microphyll woodland: Desert dry wash woodland is a sensitive vegetation community recognized with a state rarity rank of S4 (CDFW 2021). Desert dry wash woodland is characteristic of desert washes and is likely to be regulated by CDFW as jurisdictional state waters. This community is synonymous with blue palo verde (*Parkinsonia florida*) - ironwood (*Olneya tesota*) (microphyll) woodland alliance (Sawyer et. al 2009) and Sonoran - Coloradan Semi Desert Wash Woodland / Scrub (NVCS). Holland (1986) describes this community as an open to relatively densely covered, drought-deciduous, microphyll (small compound leaves) riparian scrub woodland, often supported by braided wash channels that change following every surface flow event. This vegetation community occurs as a thick ribbon on the northern portion of Area 1 only, while in Areas 2 and 2a, it is more widely distributed and covers more area.

Desert pavement: The term desert pavement is primarily descriptive of soil and substrate conditions, rather than vegetation. It has a state rarity rank of S4 (CDFW 2022) and is synonymous to the rigid spineflower – hairy desert sunflower (*Chorizanthe rigida – Geraea canescens)* desert pavement sparsely

vegetated alliance (Sawyer et. al 2009). It is sparsely vegetated with an intermittent layer of cryptogamic crust. The ground surface is sandy and gravelly mixed alluvium with various rocks and gravel. The shrub layer of creosote bush is extremely sparse. This soil substrate occurs in several patches across much of Area 1. There is none mapped on Area 2, while in Area 2a, there is a small patch on the western boundary.

DESERT TORTOISE OBSERVATIONS

All 3 recipient sites are modelled to have high desert tortoise occupancy. Area 1 has the highest occupancy of 0.8-9.9 in the southwestern portion of the site while the northwestern portion is at 0.8-0.9. Areas 2 and 2a both have a high occupancy of 0.8-0.9.

Live desert tortoises, burrows, scat, and tracks were found at all three recipient sites. Observations are summarized below in Table 2.

Table 2. Summary of Desert Tortoise Observations

Number of Observations Summary	**Area 1**	**Area 2**	**Area 2a**
Live desert tortoise from assessment	5	4	4
Live desert tortoise from 2020 Nussear study	6	5	5
Burrow classes*	5 (class 1), 3 (class 2), 35 (class 3), 17 (class 4)	5 (class 1), 7(class 2), 35 (class 3), 11 (class 4)	5 (class 1), 11(class 2), 46 (class 3), 13 (class 4)
Burrow characteristics	9 (soil), 44 (caliche), 1 (rock), 1 (other**)	15 (soil), 29 (caliche)	21 (soil), 25 (caliche)
Age sized burrows	56 (adult), 1 (juvenile)	44 (adult)	45 (adult), 1 (juvenile)
Pallet	1 (class 2), 1 (class 4)	0	1 (class 2)
Scat	3 (class 2)	0	1 (class 2), 1 (class 3)
Tracks	2	0	2
Carcass	0	1	1

**= includes burrows in buffers*

***other = wash bank or compressed gravel*

OTHER NOTABLE OBSERVATIONS

There are some human impact observations at each site.

Area 1 has some off-road disturbance, but less so within the washes since many washes are incised.

Area 2 has many more human impacts. Besides off-road disturbance, there is an old mining shaft in the northern part of the site, a new mining claim, and a water guzzler (see Area 2 photos), all of which can have negative impacts to wildlife.

Area 2a has some off-road disturbance, but there is also a large, unexploded ordinance (UXO) in the southern portion of the potential recipient site (see Area 2a photos). BLM has notified Riverside County Sheriff Department of the location of the UXO and BLM requested an update from the County on May 2, 2022 regarding the status of the UXO and whether it has been removed.

DISCUSSION

All three areas assessed have suitable desert tortoise habitat, but each area had unique characteristics that should be considered for its suitability as a recipient site for the Project sites.

Although Area 1 has suitable desert tortoise habitat, with several burrows and tortoise sign, the habitat is slightly different from the habitat the occurs on the Project sites. Area 1 has more caliche-type caves for desert tortoise with only very shallow soil burrows that may only provide day shelter. The Project sites contain more friable soils, flat topography for soil burrows and do not have caliche-type caves for desert tortoises. Area 1 is rockier, more cobbly, and mountainous than the Project sites. Large, incised washes and larger swaths of desert pavement were observed in Area 1. Area 1 is also entirely located within the Chuckwalla Mountains Wilderness Area and it may be difficult to obtain permission from several agencies for use of Area 1 as a recipient site for desert tortoise found at the Project sites.

Area 2 has suitable desert tortoise habitat with several soil burrows observed, live desert tortoise, and active tortoise sign. Only the western portion of the site was mountainous and rocky. The remainder of Area 2 had similar habitat as the Project sites with soil burrows and sheetwash. However, there were more human impacts observed in Area 2 that include a recent mining claim, mining shaft, a water guzzler, and off-road tracks. The human impacts may be hazardous for wildlife. In addition, a portion of Area 2 is located within the Chuckwalla Mountains Wilderness Area. These observations prompted the revision of Area 2, to Area 2a, shifting it outside the wilderness area and south of the large human impact areas.

Area 2a has suitable desert tortoise habitat with live individuals, and sign observed. The northwestern most portion of Area 2a is rockier and mountainous, but the remainder of Area 2a has similar habitat as the Project sites with soil burrows and sheetwash. There remains some concern at Area 2a with the status of the UXO, since it can have a negative impact to translocated desert tortoises. Access to Area 2a may also limit locations suitable for translocation due to its distance from a traversable road and the extended time it may take to take walk a desert tortoise to the southern portion of the site.

Out of the three areas assessed, Area 2a is most suitable as a recipient site for desert tortoise for the Project sites. If Area 2a is accepted as the translocation recipient site and it becomes necessary for desert tortoise translocation for the Project sites, a translocation package will be prepared in coordination with BLM, CDFW, and USFWS.

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U.S. Fish and Wildlife Service (USFWS). 2020. Translocation of Mojave Desert Tortoises from Project Sites: Plan Development Guidance. US Fish and Wildlife Service, Las Vegas, Nevada.

U.S. Geological Survey (USGS). 2022. National Hydrography Dataset. Watershed Boundary Dataset. http://nhd.usgs.gov/. Accessed April 2022.

Figures

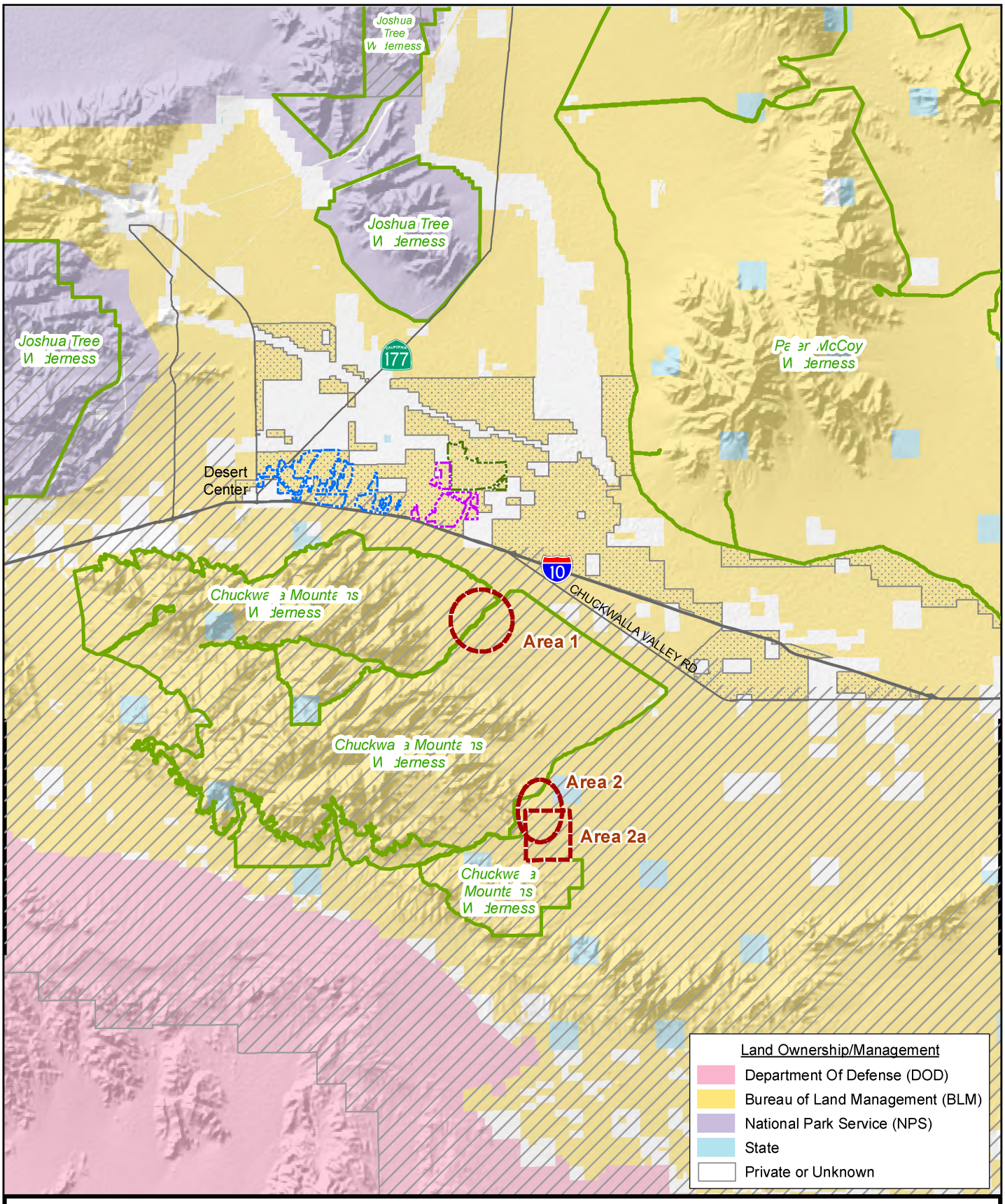
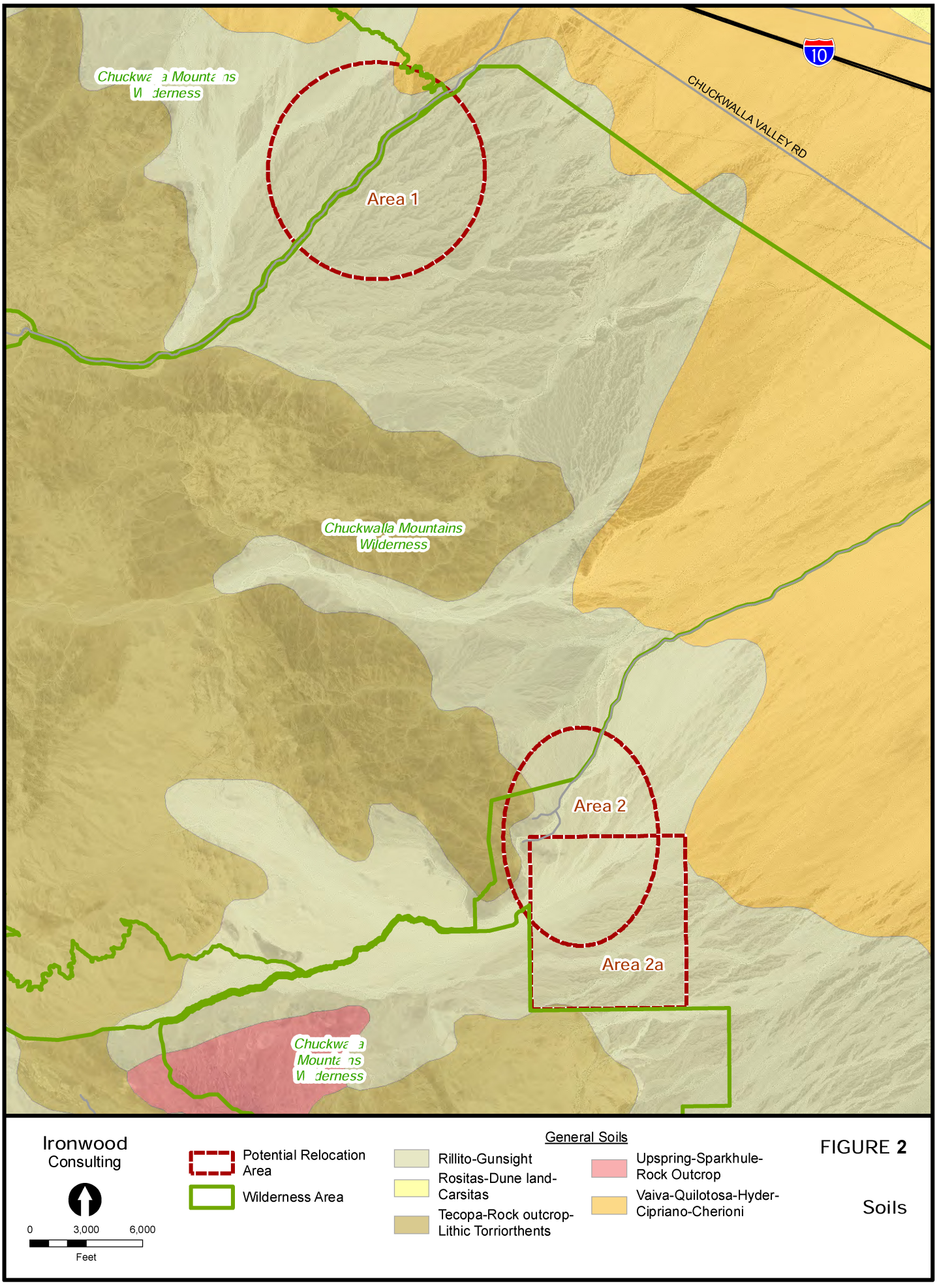
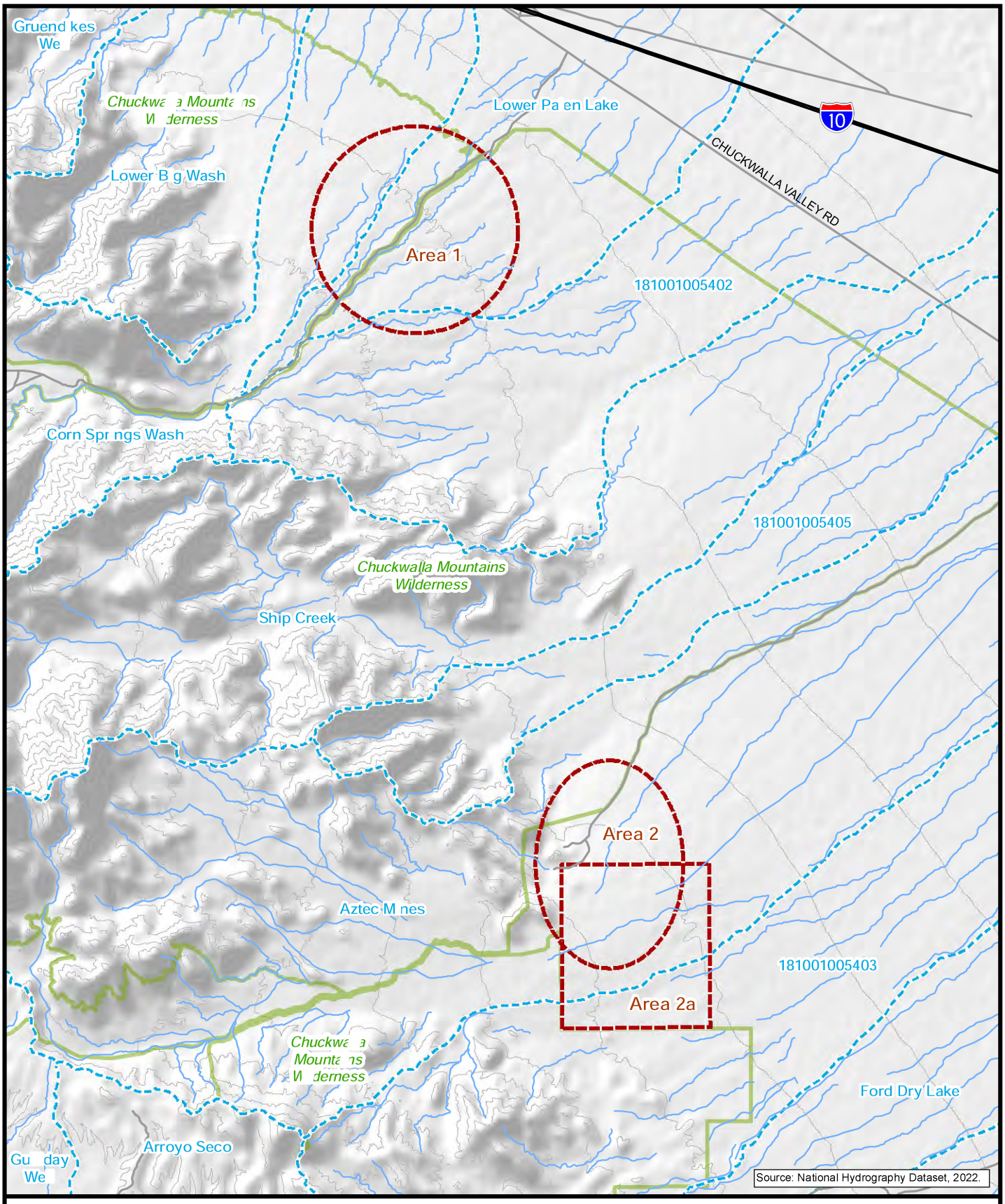


FIGURE 1

Regional Map of Relocation Areas


P:\GIS\Ironwood\Shared\Projects\Projects\Arica_VP_OberonSoils.mxd
Chuckwa a Mounta ns
W derness
Area 1
CHUCKWALLA VALLEY RD
10
Chuckwalla Mountains
Wilderness
Area 2
Area 2a
Chuckwa a
Mounta ns
W derness
Ironwood
Consulting
0
3,000
6,000
Feet
Potential Relocation Area
Wilderness Area
General Soils
Rillito-Gunsight
Rositas-Dune land-Carsitas
Tecopa-Rock outcrop-Lithic Torriorthents
Upspring-Sparkhule-Rock Outcrop
Vaiva-Quilotosa-Hyder-Cipriano-Cherioni
FIGURE 2
Soils


P:\GIS\Ironwood\Shared\Projects\Projects\Arica_VP_Oberon\Hydrology.mxd
Gruend kes We
Chuckwa a Mounta ns W derness
Lower B g Wash
Lower Pa en Lake
10
CHUCKWALLA VALLEY RD
Area 1
181001005402
Corn Spr ngs Wash
181001005405
Chuckwalla Mountains Wilderness
Ship Creek
Area 2
Aztec M nes
181001005403
Area 2a
Chuckwa a Mounta ns W derness
Ford Dry Lake
Arroyo Seco
Gu day We
Source: National Hydrography Dataset, 2022.
Ironwood Consulting
0 3,000 6,000
Feet
Ephemeral Drainage
Watershed Boundary
Potential Relocation Area
Wilderness Area
FIGURE 3
Hydrology

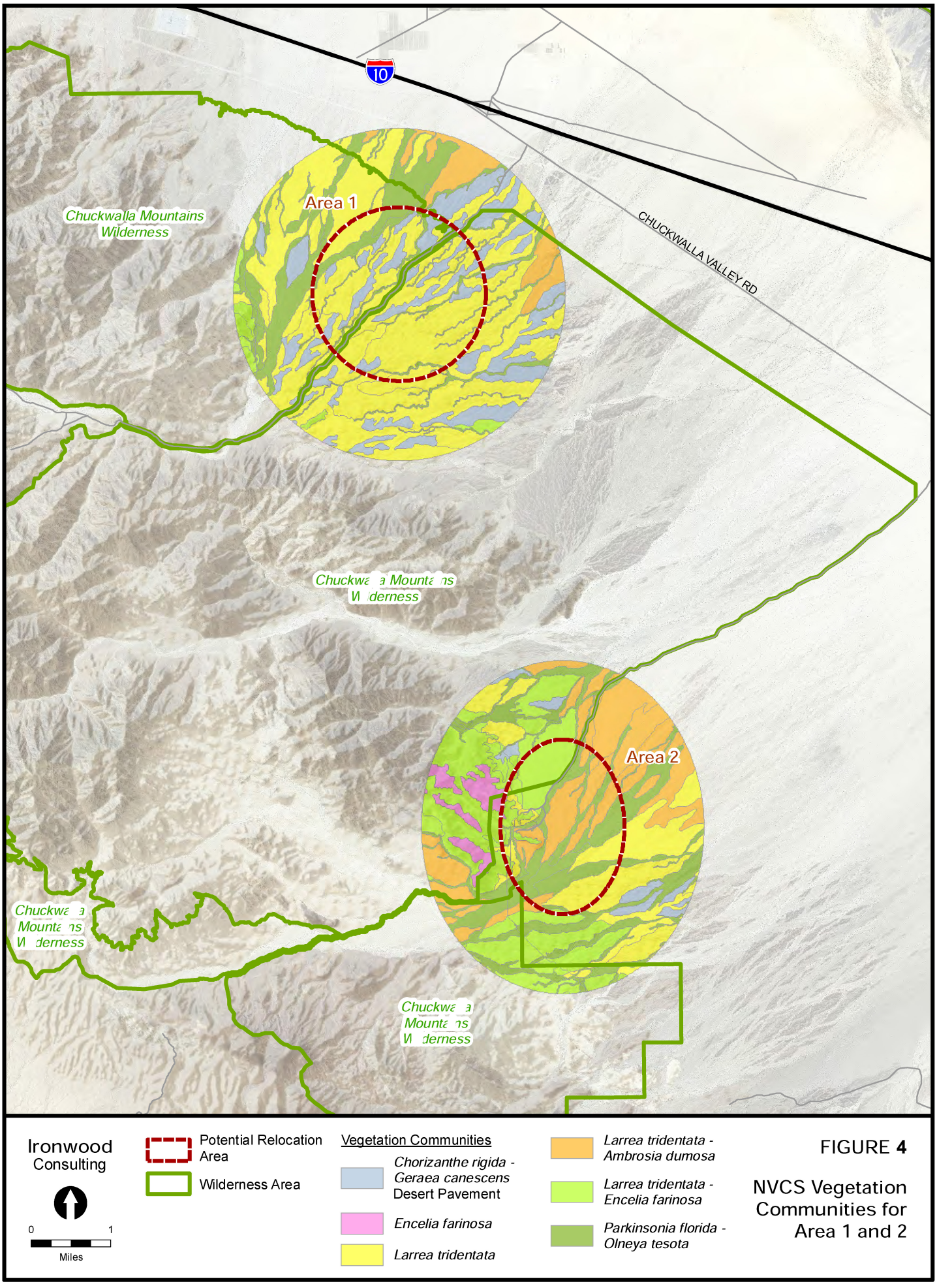
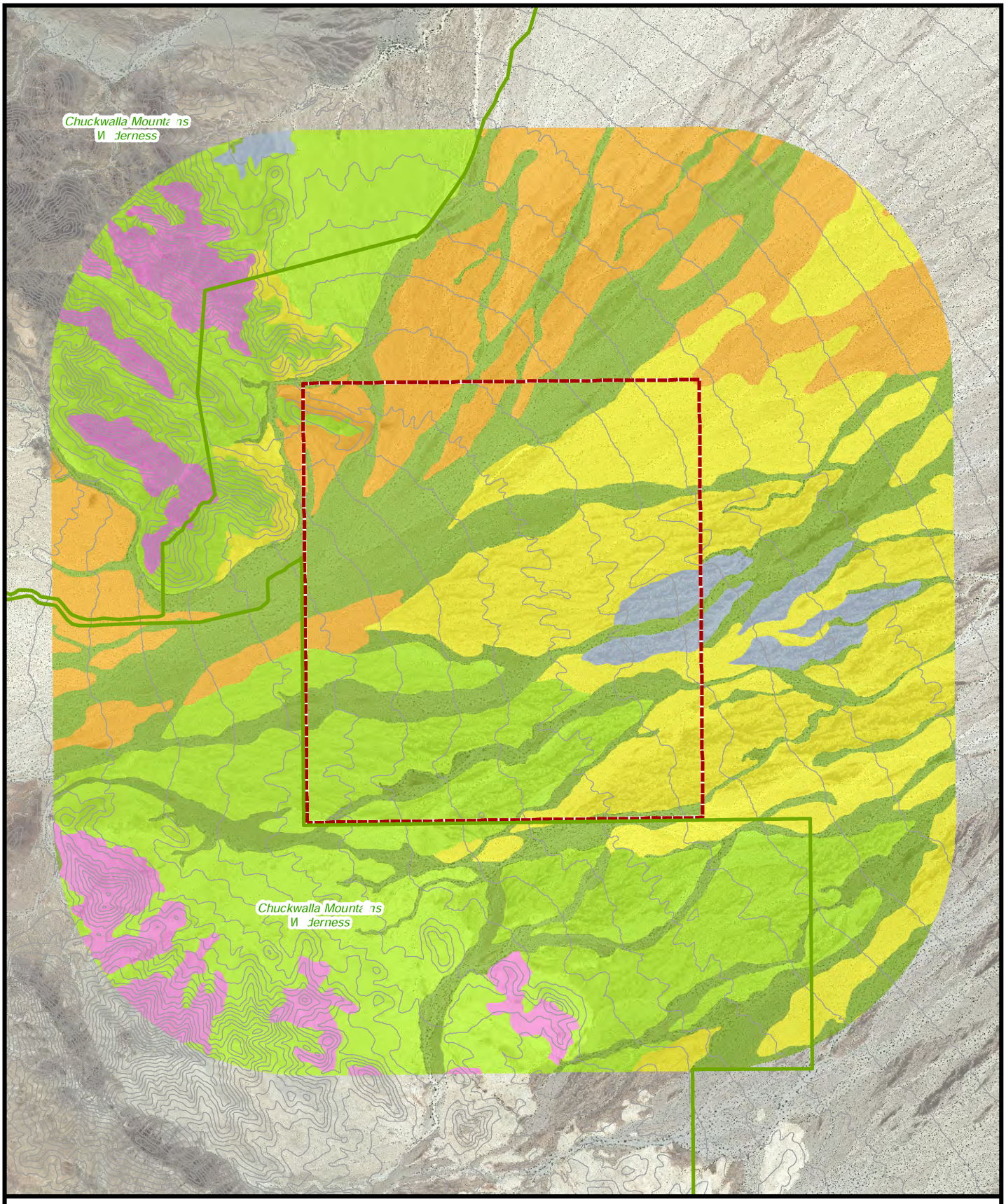


FIGURE **4**

NVCS Vegetation Communities for Area 1 and 2

P:\GIS\Ironwood\Shared\Projects\Projects\Arica_VP_Oberon\Area_2a_Veg.mxd



Ironwood Consulting

0 1,000 2,000
Feet

Potential Relocation Area

Wilderness Area

Vegetation Communities

Chorizanthe rigida - Geraea canescens Desert Pavement

Encelia farinosa

Larrea tridentata

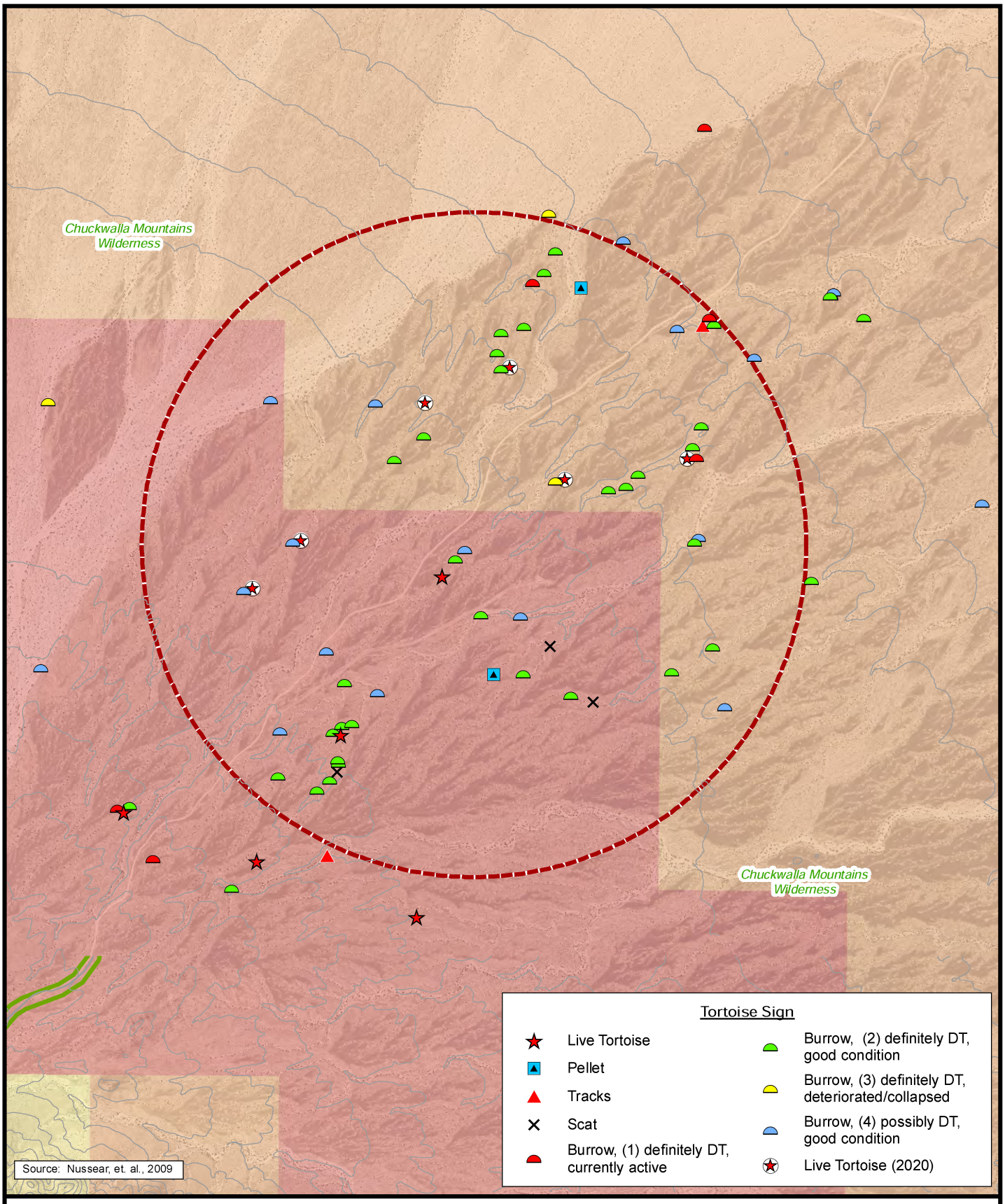
Larrea tridentata - Ambrosia dumosa

Larrea tridentata - Encelia farinosa

Parkinsonia florida - Olneya tesota

FIGURE **5**

NVCS Vegetation Communities for Area 2a



Ironwood Consulting

0 1,000 2,000
Feet

Potential Relocation Area

Wilderness Area

Desert Tortoise Predicted Occupancy

0	0.4 - 0.5
0 - 0.1	0.5 - 0.6
0.1 - 0.2	0.6 - 0.7
0.2 - 0.3	0.7 - 0.8
0.3 - 0.4	0.8 - 0.9

FIGURE **6**

Area 1
Desert Tortoise Sign
March 2022

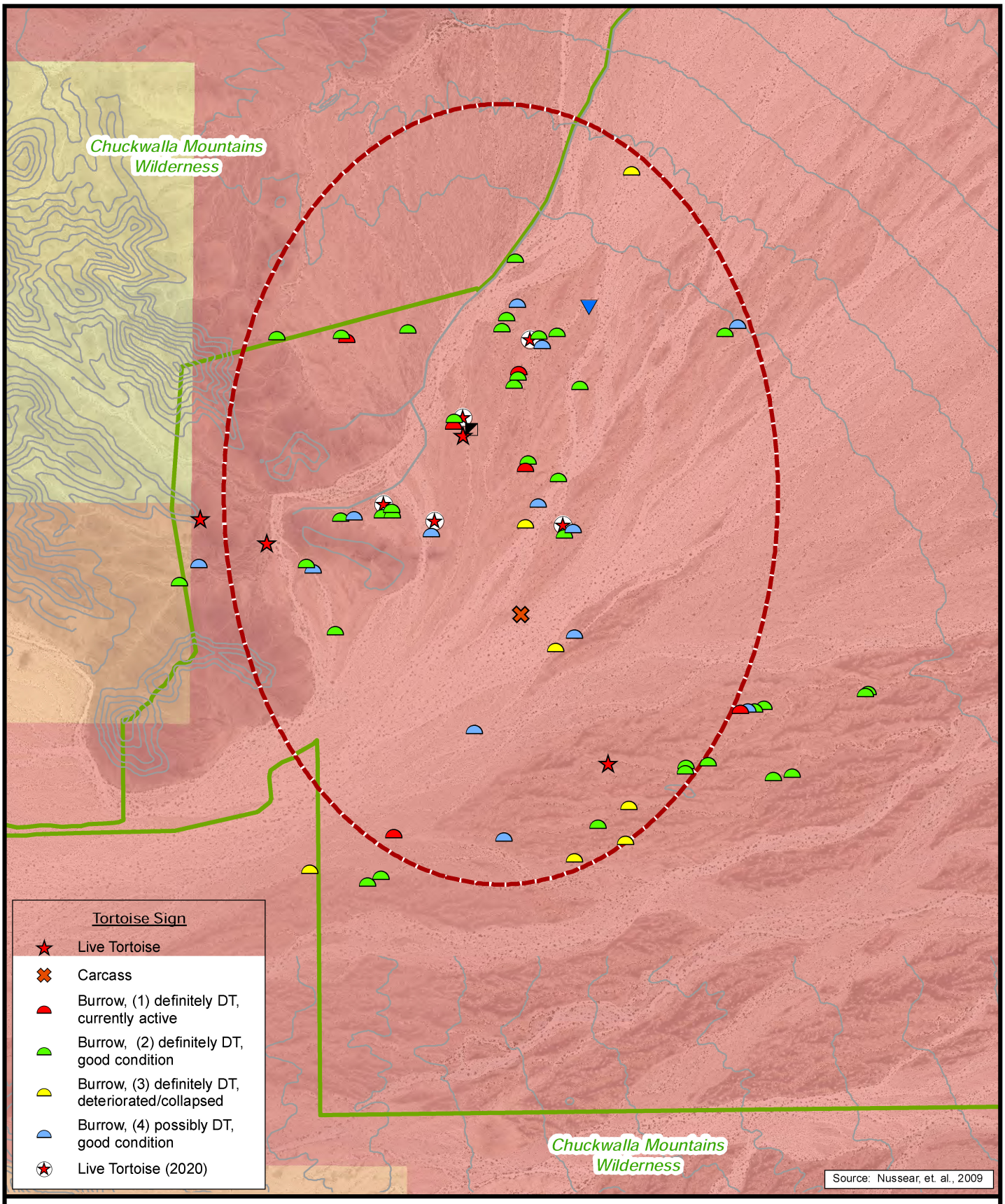


FIGURE **7**

Area 2
Desert Tortoise Sign

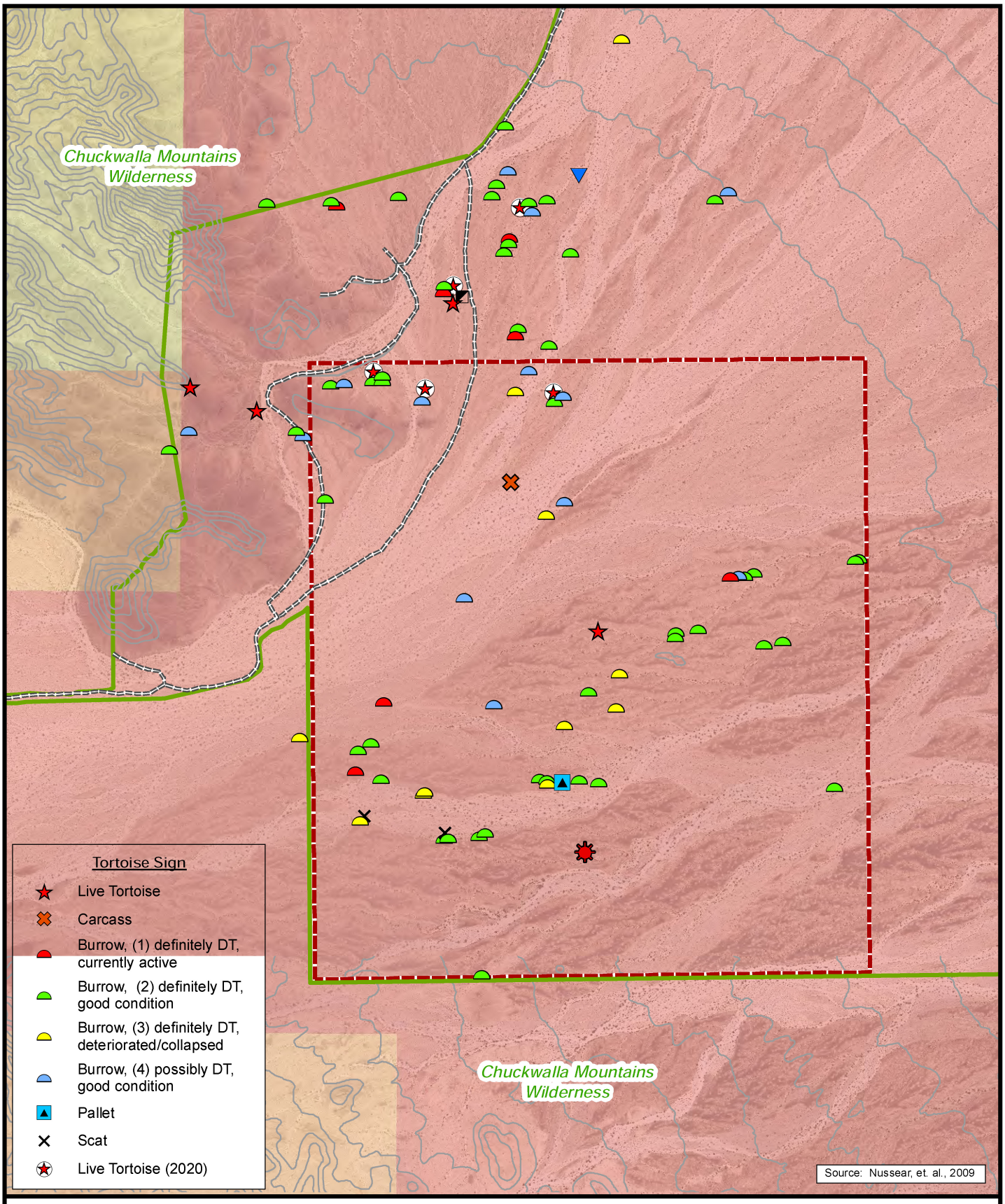
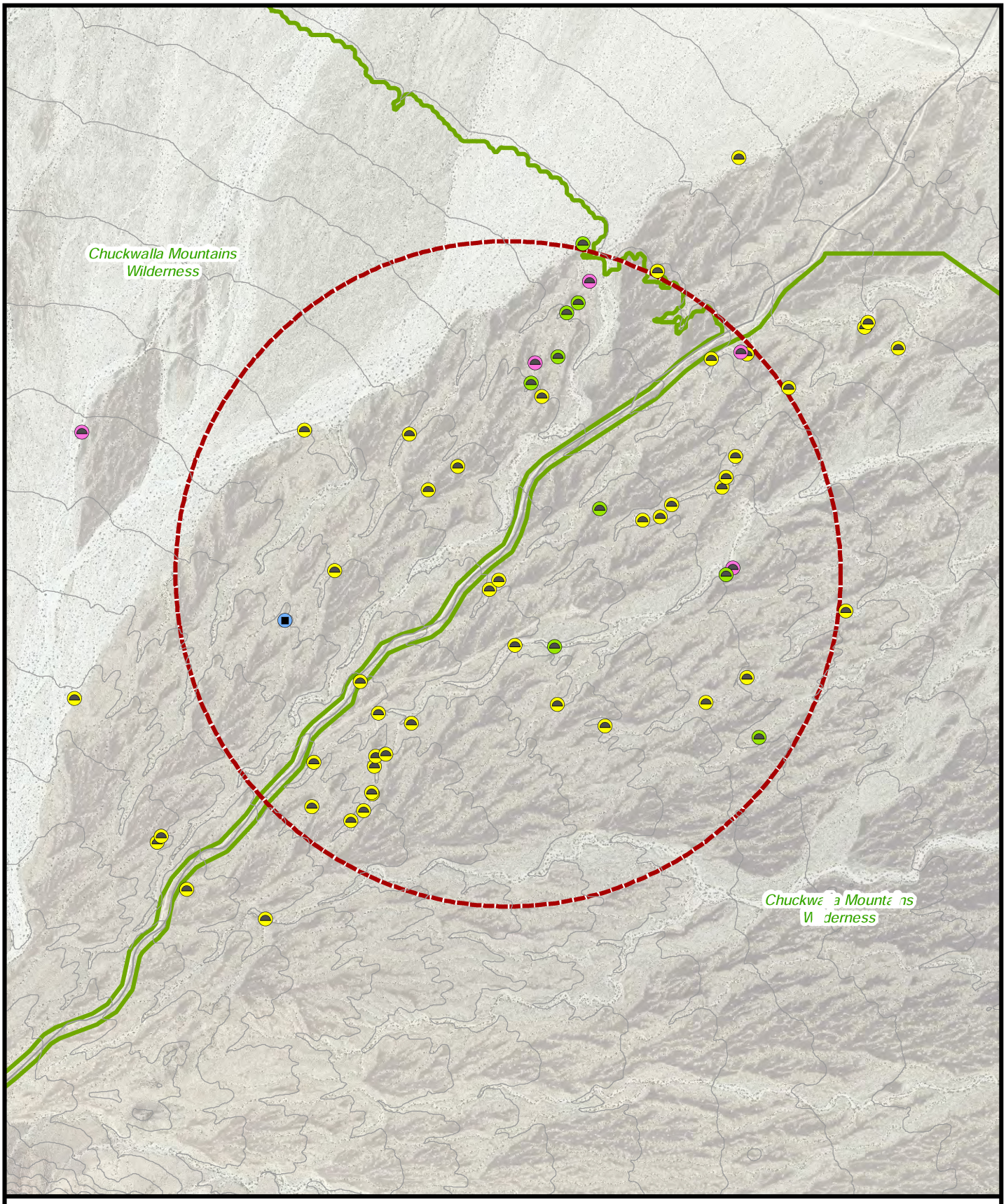


FIGURE **8**

Area 2a
Desert Tortoise Sign

P:\GIS\Ironwood\Shared\Projects\Projects\Arica_VP_Oberon\Burrows_Area_1.mxd



Ironwood Consulting

0 1,000 2,000
Feet

Potential Relocation Area

Wilderness Area

Desert Tortoise Burrow Characteristics (size/type)

Adult, Caliche

Adult, Soil

Adult, Other

Juvenile, Soil

Juvenile, Rock

FIGURE **9**

Area 1
Burrow Characteristics

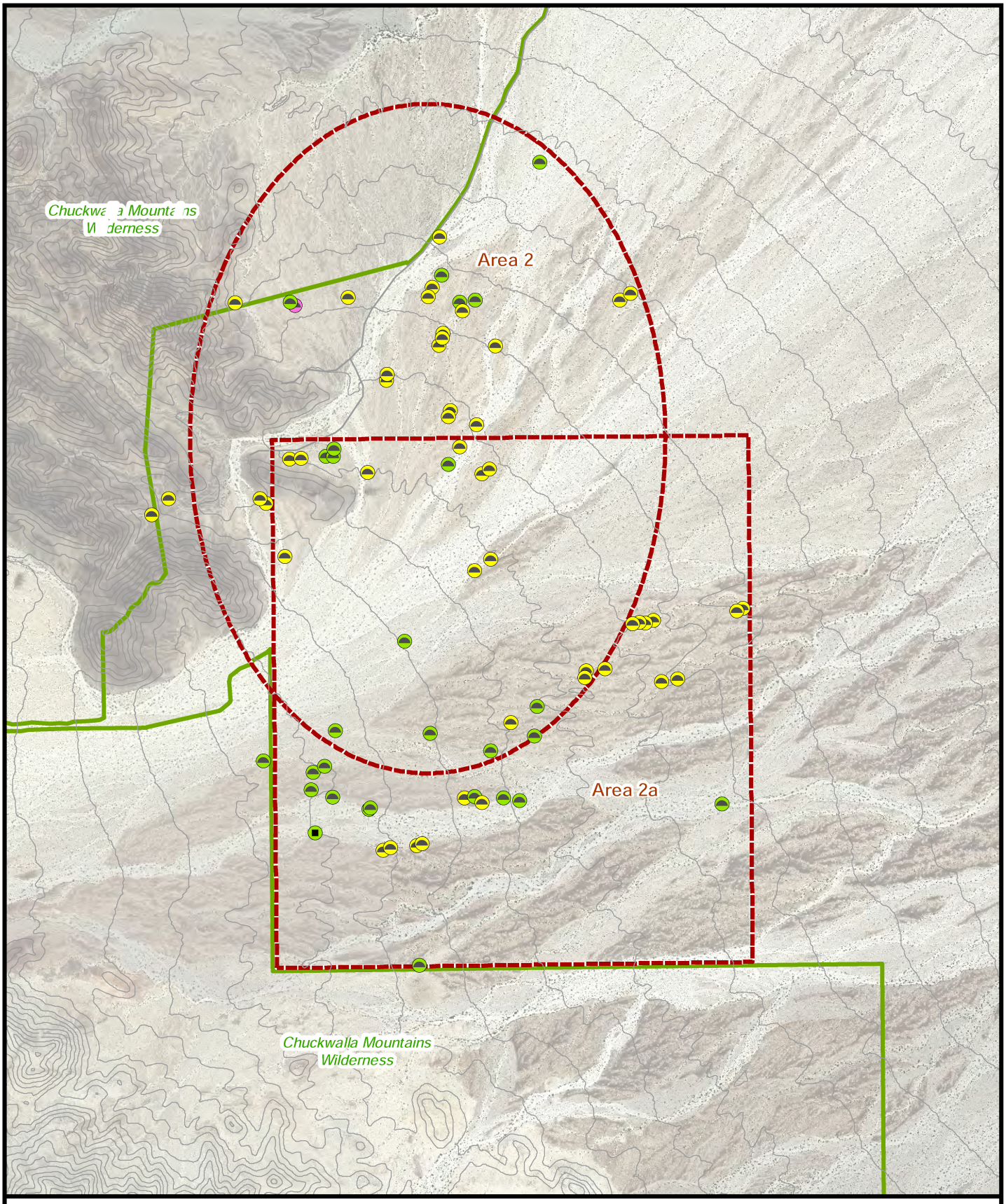


FIGURE **10**

Areas 2 and 2a
Burrow Characteristics

AREA 1 REPRESENTATIVE PHOTOS

Species / Special Resource / Habitat: Habitat

Project Name:	**AVPO Recipient Site Survey**	Observer:	**Dave Focardi**
Observation Date:	**03-25-2022**	Creation Date:	**03-25-2022**
Latitude:	**33.643194**	Easting:	**660573**
Longitude:	**-115.2685095**	Northing:	**3723941**

Sign Type(s):	• Potential habitat
Substrate/Surficial Geology:	• Desert Wash
Vegetation Type:	• Olneya tesota

Comments
incised wash that would make traditional straight line transect surveys difficult

Additional Photos

Photo description:

incised wash that would make traditional straight line transect surveys innacurate

Photo description:

incised wash that would make traditional straight line transect surveys innacurate

Photo description:
further downstream, still incised

Photo description:
further downstream, still incised

Species / Special Resource / Habitat: Canyon wall cemented gravel caves

Project Name:	**AVPO Recipient Site Survey**	Observer:	**Jenny Weidensee**
Observation Date:	**03-24-2022**	Creation Date:	**03-24-2022**
Latitude:	**33.6320354**	Easting:	**659877**
Longitude:	**-115.2762899**	Northing:	**3722695**

Sign Type(s):
- Burrow

Substrate/Surficial Geology:
- Alluvial fan
- Desert pavement
- Desert Wash

Vegetation Type:
- Larrea tridentata

Comments
Many Class 4 possible DETO shelters along canyon walls.

Additional Photos

None

Species / Special Resource / Habitat: Desert tortoise

Project Name:	**AVPO Recipient Site Survey**	Observer:	**Jenny Weidensee**
Observation Date:	**03-25-2022**	Creation Date:	**03-25-2022**
Latitude:	**33.6511862**	Easting:	**661717**
Longitude:	**-115.2560239**	Northing:	**3724846**

Sign Type(s):

- Burrow

	• Scat
Substrate/Surficial Geology:	• Desert Wash
Vegetation Type:	• Olneya tesota

Comments
DETO burrow in compressed gravel el wash bank. . Much scat inside. Appears recently occupied.

Additional Photos

Photo description:
Photo description:

AREA 2 REPRESENTATIVE PHOTOS

Species / Special Resource / Habitat: Microphyll woodland (ironwood/palo verde)

Project Name:	**AVPO Recipient Site Survey**	Observer:	**Dave Focardi**
Observation Date:	**03-27-2022**	Creation Date:	**03-27-2022**
Latitude:	**0**	Easting:	**664099**
Longitude:	**0**	Northing:	**3713741**

Sign Type(s):
- Potential habitat

Substrate/Surficial Geology:
- Alluvial fan
- Desert pavement
- Desert Wash

Vegetation Type:
- Parkinsonia florida - Olneya tesota

Comments
4 photos, habitat, South, West, North, East, and fieldmaps screenshot.

Additional Photos

Photo description:
habitat west

Photo description:
habitat north

Photo description:

habitat east

Species / Special Resource / Habitat: Desert tortoise

Project Name:	**AVPO Recipient Site Survey**	Observer:	**Jenny Weidensee**
Observation Date:	**03-27-2022**	Creation Date:	**03-27-2022**
Latitude:	**33.5491788**	Easting:	**663336**
Longitude:	**-115.2407305**	Northing:	**3713558**

Sign Type(s):	• Live individual • Burrow
Substrate/Surficial Geology:	• Desert Wash
Vegetation Type:	• Olneya tesota

Comments
DETO in soil burrow under OLNTES at wash bank. Possible female, est. 230 mm MCL

Additional Photos

Photo description:
Photo description:

Species / Special Resource / Habitat: Desert tortoise

Project Name:	**AVPO Recipient Site Survey**	Observer:	**Jenny Weidensee**
Observation Date:	**03-28-2022**	Creation Date:	**03-28-2022**
Latitude:	**33.5368453**	Easting:	**664975**

Longitude: **-115.2232304** Northing: **3712318**

Sign Type(s):
- Burrow

Substrate/Surficial Geology:
- Desert pavement
- Desert Wash

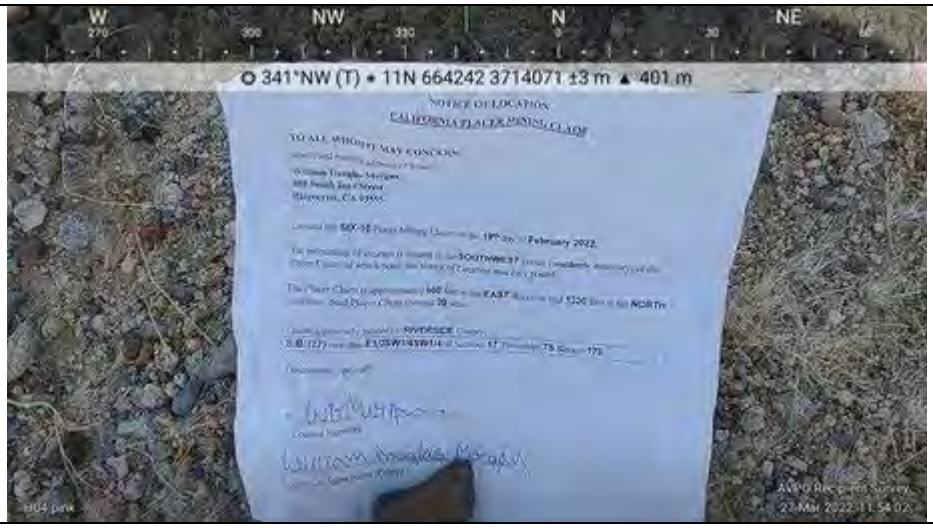
Vegetation Type:
- Olneya tesota

Comments
Class 3 DETO soil burrow. Eroded and collapsed. Under OLNTES

Additional Photos

Photo description:
Photo description:

Species / Special Resource / Habitat: mining claim



Project Name:	**AVPO Recipient Site Survey**	Observer:	**Dave Focardi**
Observation Date:	**03-27-2022**	Creation Date:	**03-27-2022**
Latitude:	**33.5536712**	Easting:	
Longitude:	**-115.2307967**	Northing:	

Sign Type(s):
- mining claim

Substrate/Surficial Geology:
- Alluvial fan
- Desert pavement
- Desert Wash

Vegetation Type:
- Parkinsonia florida - Olneya tesota

Comments
mining claims from 2022, 4 stakes this location

Additional Photos

Photo description:

mining claim

Photo description:

mining claim

Species / Special Resource / Habitat: Mine Shaft

Project Name:	**AVPO Recipient Site Survey**	Observer:	**Jenny Weidensee**
Observation Date:	**03-27-2022**	Creation Date:	**03-27-2022**
Latitude:	**33.5464394**	Easting:	**663304**
Longitude:	**-115.2404619**	Northing:	**3713255**

Sign Type(s):

- Mine

Substrate/Surficial Geology:	• Mine structure
Vegetation Type:	• Larrea tridentata - Ambrosia dumosa

Comments
Old mine road and mine shaft.

Additional Photos

Photo description:

Protective cover over deep shaft has 1 open end that could be detrimental to DETO and other animals.

Photo description:

Species / Special Resource / Habitat: Guzzler

Project Name:	**AVPO Recipient Site Survey**	Observer:	**Dave Focardi**
Observation Date:	**03-30-2022**	Creation Date:	**03-30-2022**
Latitude:	**33.5586225**	Easting:	**664792**
Longitude:	**-115.2247695**	Northing:	**3714631**

Sign Type(s):
- Potential habitat
- Guzzler

Substrate/Surficial Geology:
- Desert Wash

Vegetation Type:
- Parkinsonia florida - Olneya tesota

Comments
Guzzler built in 2-7-98 according to concrete Michael.

Additional Photos

Photo description:

guzzler

Photo description:

guzzler

Photo description:

FWS trail cam H7102

Photo description:

ohv tracks of someone coming to check trail camera

AREA 2A REPRESENTATIVE PHOTOS

Species / Special Resource / Habitat:	Desert tortoise

Project Name:	**AVPO Recipient Site Survey**	Observer:	**John Yerger**
Observation Date:	**04-08-2022**	Creation Date:	**04-08-2022**
Latitude:	**0**	Easting:	**663818**
Longitude:	**0**	Northing:	**3711702**

Sign Type(s):	• Burrow • Scat
Substrate/Surficial Geology:	• Desert Wash
Vegetation Type:	• Parkinsonia florida - Olneya tesota

Comments
Scat (this year; dark, but no sheen); 2 class 3 burrows both 160mm (under Parkinsonia)

Additional Photos

Photo description:

Burrow under fallen Parkinsonia branches

Photo description:

Burrow under dripline of large Parkinsonia

Species / Special Resource / Habitat: Desert tortoise

Project Name:	**AVPO Recipient Site Survey**	Observer:	**Maribel Lopez**
Observation Date:	**04-08-2022**	Creation Date:	**04-09-2022**
Latitude:	**33.53359922450122**	Easting:	**665968**
Longitude:	**-115.21263209970542**	Northing:	**3711868**

Sign Type(s):
- Burrow

Substrate/Surficial Geology:
- Desert Wash

Vegetation Type:
- Parkinsonia florida - Olneya tesota

Comments
Class 2 burrow, 200 wide, 450 deep

Species / Special Resource / Habitat: Desert tortoise

Project Name:	**AVPO Recipient Site Survey**	Observer:	**John Yerger**
Observation Date:	**04-08-2022**	Creation Date:	**04-08-2022**
Latitude:	**0**	Easting:	**664210**
Longitude:	**0**	Northing:	**3711619**

Sign Type(s):
- Burrow
- Scat

Substrate/Surficial Geology:
- Desert Wash

Vegetation Type:
- Parkinsonia florida - Olneya tesota

Comments

Scat (large; this year; dark, but no sheen); class 2 caliche burrow ~280mm

Species / Special Resource / Habitat: Microphyll woodland (ironwood/palo verde)

Project Name:	**AVPO Recipient Site Survey**	Observer:	**Maribel Lopez**
Observation Date:	**04-08-2022**	Creation Date:	**04-08-2022**
Latitude:	**33.53307158939224**	Easting:	
Longitude:	**-115.2309410464654**	Northing:	

Sign Type(s):	• Potential habitat
Substrate/Surficial Geology:	• Desert Wash
Vegetation Type:	• Parkinsonia florida - Olneya tesota

Comments

Species / Special Resource / Habitat: Microphyll woodland (ironwood/palo verde)

Project Name:	**AVPO Recipient Site Survey**	Observer:	**John Yerger**
Observation Date:	**04-08-2022**	Creation Date:	**04-08-2022**
Latitude:	**0**	Easting:	**663773**
Longitude:	**0**	Northing:	**3711672**

Sign Type(s):	• Potential habitat
Substrate/Surficial Geology:	• Desert Wash
Vegetation Type:	• Parkinsonia florida - Olneya tesota

Comments

Species / Special Resource / Habitat: Lower bajada and fan Mojavean habitat

Project Name:	**AVPO Recipient Site Survey**	Observer:	**John Yerger**
Observation Date:	**04-09-2022**	Creation Date:	**04-09-2022**
Latitude:	**0**	Easting:	**663870**
Longitude:	**0**	Northing:	**3711195**

Sign Type(s):	• Potential habitat
Substrate/Surficial Geology:	• Desert pavement
Vegetation Type:	• Ecotone between Larrea and headwaters of desert wash woodland

Comments

Species / Special Resource / Habitat: Microphyll woodland (ironwood/palo verde)

Project Name:	**AVPO Recipient Site Survey**	Observer:	**Maribel Lopez**
Observation Date:	**04-09-2022**	Creation Date:	**04-09-2022**
Latitude:	**33.532827194672784**	Easting:	
Longitude:	**-115.21633387836448**	Northing:	

Sign Type(s):	• Potential habitat
Substrate/Surficial Geology:	• Desert Wash
Vegetation Type:	• Parkinsonia florida - Olneya tesota

Comments

Species / Special Resource / Habitat: UXO

Project Name:	**AVPO Recipient Site Survey**	Observer:	**John Yerger**
Observation Date:	**04-09-2022**	Creation Date:	**04-09-2022**
Latitude:	**0**	Easting:	**664841**
Longitude:	**0**	Northing:	**3711562**

Sign Type(s):
- 500 lb bomb body

Substrate/Surficial Geology:
- Desert pavement

Vegetation Type:
-

Comments
500 pound bomb body probably training ordinance but possibly still hazardous

Additional Photos

Photo description:

Identifying information engraved onto bomb body

Photo description:

Possibly intact priming charge?