Appendix A

Incidental Take Permit Applications

Appendix A-1

Arica Solar Project
Incidental Take Permit Application

ARICA SOLAR PROJECT

Incidental Take Permit Application (Section 2081)

Prepared for:

Arica Solar, LLC
A subsidiary of Clearway Energy Group LLC

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List of Acronyms

ACEC	Area of Critical Environmental Concern
APM	Applicant Proposed Measure
BLM	Bureau of Land Management
BMP	Best Management Practices
BRTR	Biological Resources Technical Report
CDCA	California Desert Conservation Area
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CMA	Conservation Management Action
DFA	Development Focus Area
DRECP	Desert Renewable Energy Conservation Plan
ESA	Endangered Species Act
FEIR	Final Environmental Impact Report
FEIS	Final Environmental Impact Statement
Gen-tie	Generation tie
I-10	Interstate 10
kV	kilovolt
LUPA	Land Use Plan Amendment
MM	Mitigation Measure
MW	Megawatts
NECO	Northern and Eastern Colorado Desert Coordinated Management Plan
NEPA	National Environmental Protection Act
O&M	Operations and Maintenance
PCE	Primary Constituent Element
PV	Photovoltaic
SCE	Southern California Edison
SEZ	Riverside East Solar Energy Zone
SWPPP	Stormwater Pollution Prevention Plan
USFWS	U.S. Fish and Wildlife Service
WEAP	Worker Environmental Awareness Program

Arica Solar Project
Incidental Take Permit Application

1.0 Applicant

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2.0 Species to be Covered

Mojave desert tortoise (*Gopherus agassizii*). The Mojave desert tortoise is listed as threatened under the California Endangered Species Act (CESA). It is not subject to the rules and guidelines pursuant to sections 2112 and 2114 of the California Fish and Game Code (which pertain to the greater sandhill crane). It is also listed as threatened under the federal Endangered Species Act (ESA).

3.0 Project Description

Arica Solar, LLC, an indirect wholly owned subsidiary of Clearway Energy Group LLC, proposes to construct, operate, and decommission the Arica Solar Project (Arica Solar or Project) entirely located on public lands managed by the Bureau of Land Management (BLM) near the Desert Center area of Riverside County (Figure 1). The proposed Project consists of utility-scale solar photovoltaic (PV) electrical generating and storage facility, including associated infrastructure, to generate and deliver renewable electricity to the statewide electricity transmission grid. The Project will be built alongside and share the Project switchyard and gen-tie with the adjacent Victory Pass Project, owned by Victory Pass I, LLC, another subsidiary of Clearway Energy Group LLC. The impacts attributed to the gen-tie are considered in the Victory Pass Project ITP Application.

Under California Environmental Quality Act (CEQA) and National Environmental Quality Act (NEPA) the Arica Solar and Victory Pass projects have been analyzed together. An Environmental Impact Report is being prepared with CDFW as the CEQA lead agency expected to be published in summer 2021. The BLM is preparing an Environmental Assessment (EA) under NEPA also expected to be published in summer 2021. The Project will be consistent with the Desert Renewable Energy Conservation Plan (DRECP) Land Use Plan Amendment, which is undergoing federal ESA Section 7 consultation between the BLM and U.S. Fish and Wildlife Service (USFWS). The BLM is seeking USFWS concurrence that the Project is covered under the DRECP Biological Opinion (USFWS, 2016). The USFWS has developed an Activity Form for the streamlined DRECP concurrence process. BLM will submit the completed form to confirm USFWS concurrence.

Throughout this application, the related projects are identified as follows:

- Arica Solar Project (subject of this application). The Arica project and shared gen-tie line (Figure 1). The shared switchyard is located within the Victory Pass parcel.
- Victory Pass Solar Project (separate application): The Victory Pass project site, substation, and shared gen-tie line and access road(s) (Figure 1).

The proposed Arica Solar Project site consists of a solar facility, battery energy storage system, and associated facilities on BLM-administered land, and a proposed 230-kilovolt (kV) generator-tie line (gen-tie) connecting to the existing Southern California Edison (SCE) Red Bluff Substation. The Project would disturb approximately 1,355 acres and approximately 50 additional acres along a shared gen-tie corridor (Project footprint). The boundaries of the Project footprint's disturbance area were designed to avoid desert dry wash woodland and sensitive plant species to meet the BLM California Desert Conservation Area (CDCA) Plan, as Amended[1]. The Arica Solar Project is expected to generate 265 megawatts (MW) of renewable energy using photovoltaic (PV) panels with up to 200 MW of storage. The Project substation is anticipated to be built within the northern section of the Victory Pass Project site and the Project will share a switchyard with the adjacent Victory Pass Solar Project, owned by Victory Pass I, LLC, another subsidiary of Clearway Energy Group LLC (Attachment 1, Figure 1). The gen-tie line would exit the shared switchyard near the western end of the Victory Pass site and head west for approximately 2 miles and then south for approximately one mile to reach the Red Bluff Substation's 230 kV bus at its western end. The gen-tie line right-of way would be approximately 150 feet wide and approximately 3.2 miles long.

Construction is anticipated to occur over an 18-month period with multiple overlapping stages. Stage 1 (months 1 to 8) would include mobilization, site preparation, fencing, placement of laydown areas, and trenching. Stage 2 (months 4 to 12) would include installation of cables, pules, racking systems, inverters, and modules. Stage 3 (months 10 to 18) would include installation of modules and commissioning and testing.

For the purposes of this application, the Project area refers to the area surveyed during the 2019 and 2020 biological surveys (Ironwood, 2020); Project fence-line refers to all land anticipated to be developed within the Project area (including access roads and the gen-tie route), and the Project vicinity refers to the Desert Center region, including multiple land uses on public and private lands.

3.1 Solar Fields and On-site Facilities

Solar Fields

Panels would be arranged on the sites in solar arrays mounted on either fixed-tilt or tracking technology, depending on the PV panels ultimately selected. Structures supporting the PV modules would consist of steel piles (e.g., cylindrical pipes, H-beams, or similar), which would be driven into the soil using pneumatic techniques, such as a hydraulic rock hammer attachment on the boom of a rubber-tired or tracked equipment. The piles would be spaced 10-15 feet apart. For a single-axis tracking system, piles typically would be installed to a reveal height of approximately 4 feet above grade but could higher or lower in certain areas depending on site topography. The fixed-tilt system reveal height would vary based on the racking configuration specified in the final design. For single-axis tracking systems, following pile installation the associated motors, torque tubes, and drivelines (if applicable) would be placed and secured. Some designs allow for PV panels to be secured directly to the torque tubes using appropriate panel clamps. For some single-axis tracking systems, and for all fixed-tilt systems, a galvanized metal racking

[1] The Desert Renewable Energy and Conservation Plan amendment to the CDCA Plan includes conservation and management actions that require avoidance of some special plant species and certain types of habitat.

system, which secures the PV panels to the installed foundations, would be field-assembled, and attached according to the manufacturer's guidelines. Panels would be arranged in strings with a maximum height of 14 feet.

Panels would be electrically connected into panel strings using wiring secured to the panel racking system. Underground or above ground cables would be installed to convey the direct current (DC) electricity from the panels via combiner boxes located throughout the PV arrays, to inverters to convert the DC to alternating current (AC) electricity. The output voltage of the inverters would be stepped up to the collection system voltage via transformers located close to the inverters. The collector lines would be 34.5 kV.

The Project may include the installation of up to 200 MW of battery storage. The system is expected to be located adjacent to the Project substation. The battery system would consist of batteries housed in storage containers or similar. The containers themselves would be approximately eight feet wide by four feet long by 10 feet high (2.4 meters wide by 1.2 meters long by 2.6 meters high), with approximately 6.5 feet (2 meters) of clearance on all sides. The battery storage component would have a footprint of up to 5 acres. Site preparation required for the battery storage containers would be the same as those contemplated for storage buildings; the area for battery storage would need to be level so that the resulting pad is a flat cement or concrete foundation.

Except for the inverters and the transmission facility, the solar field development would maintain sheet flow wherever possible, with water exiting the site in existing natural contours and flows. The Project footprint's placement was modified to avoid all large washes that cross the site. A Stormwater Pollution and Prevention Plan (SWPPP) will be prepared by a qualified engineer or erosion control specialist and implemented prior to construction. The SWPPP will include Project information and identify best management practices (BMP). The BMPs would include stormwater runoff quality control measures, concrete waste management, stormwater detention, watering for dust control, and construction of perimeter silt fences, as needed.

On-Site Facilities

The Project substation is anticipated to be built within the northern section of the Victory Pass site as depicted in Figure 1. All interconnection equipment, including the control room if required, would be installed aboveground and within the footprint of the substation. The overall footprint of the substation is anticipated to be approximately 300 feet by 300 feet and poles up to 100 feet in height.

The substations may include a 100-kW emergency generator for use if the regional transmission system fails. If necessary, the substations would contain a control room building approximately 15 by 30 feet with an overall height up to 20 feet. The substations would be surrounded by a barbed wire chain-link fence to comply with electrical codes.

The substations must have access to communication systems in the area to comply with Federal Energy Regulatory Commission/California Independent System Operator/Utility monitoring and control requirements. Compliance may be accomplished by underground lines, aboveground lines, or wirelessly.

The Operations and Maintenance (O&M) facility for the Project would be 3,500 square feet and located near the substation. The facility would be monitored by onsite O&M personnel and/or remotely. The O&M facility may consist of offices a restroom, and a storage area. A septic system and leach field would be located at the O&M building to serve the sanitary wastewater treatment needs.

The Project site would have temporary construction staging areas and an area for construction worker parking for use throughout the 16-month construction period and then decommission and/or replaced by solar arrays. The staging areas would include material laydown and storage areas and an equipment assembly area.

The boundary of the Project would be secured by six-foot tall chain-link perimeter fences, topped by three-strands of barbed wire that would add an additional foot to the fence height. The security fence would be collocated with a desert tortoise fence at its base, if required. The ingress/egress would be accessed via a locked remote gate.

Motion sensitive, directional security lights would be installed to provide adequate illumination around the substation areas, each inverter cluster, at gates, and along perimeter fencing. All lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties. No project component is 200 feet tall so would not require safety lighting per Federal Aviation Administration regulations. Off-site security personnel could be dispatched during nighttime hours or could be on-site, depending on security risks and operating needs. Infrared security cameras, motion detectors, and/or other similar technology may be installed to monitor the site through review of live footage 24 hours a day, 7 days a week. If such equipment were required, the equipment would be placed along the perimeter of the facility and/or at the inverters.

3.2 Shared Switchyard and 230 kV Gen-tie Transmission Line

A 230 kV shared gen-tie line would interconnect the shared switchyard with the existing Red Bluff Substation. The overall footprint of the switchyard is estimated at approximately 300 by 300 feet and is on the Victory Pass Project. The gen-tie line would exit the shared switchyard near the western end of the Victory Pass site and head west for two miles and then south for one mile to reach the Red Bluff Substation's 230 kV bus at its western end. The gen-tie line right-of way would be 150 feet wide and approximately 3.2 miles long. New poles would be constructed of steel and would be between 100 to 140 feet tall. Because the transmission structures would be less than 200 feet tall, they would not require lighting, avoiding potential interference with aviation. The impacts of the shared gen-tie line are considered in the Victory Pass Project ITP Application.

3.3 Access Roads

Access to the sites would be from State Route (SR)-177. The Projects' construction and operation traffic would exit the I-10 at SR-177, then take SR-177 to Ragsdale Road, to BLM route DC425, to BLM route DC379. Route DC379 would reach the site boundaries. It is shared with numerous other ROW holders and ranges between 16 and 24 feet wide. Some improvements such as grading and widening may be required in areas where it has not been improved previously. The proposed access roads would be widened up to 24 feet wide.

Alternate routes to reach the solar sites include using the Corn Springs exit off the I-10 instead of the proposed Desert Center exit. After exiting at Corn Springs road, the existing BLM road DC 950 and DC 511.

The impacts of the shared access road are considered in the Victory Pass Project ITP Application regardless of whether the SR-177 or Corn Springs Road exit is used.

3.4 Construction

Construction is anticipated to occur over an 18-month period with multiple overlapping stages. Stage 1 (months 1 to 8) would include mobilization, site preparation, fencing, placement of laydown areas, and trenching. Stage 2 (months 4 to 12) would include installation of cables, pules, racking systems, inverters, and modules. Stage 3 (months 10 to 18) would include installation of modules and commissioning and testing.

The typical construction work schedule is expected to be from 7:00 a.m. to 5:00 p.m., Monday through Friday. However, to meet schedule demands or to reduce impacts, it may be necessary to work early morning, evening, or nights and on weekends during certain construction phases. The work schedule may be modified throughout the year to account for changing weather conditions (e.g., starting the workday earlier in the summer months to avoid work during the hottest part of the day for health and safety reasons). If construction work takes place outside these typical hours, activities would comply with Riverside County standards for construction noise levels. For safety reasons, certain construction tasks, including final electrical terminations, must be performed after dark when no energy is being produced. The Projects would use restricted nighttime task lighting during construction. Lighting would include only what is needed to provide a safe workplace, and lights would be focused downward, shielded, and directed toward the interior of the site to minimize light exposure outside the construction area.

Pre-Construction Activities and Site Preparation

Surveying. Surveying includes two main objectives: (1) obtaining detailed topographic information for supporting the stormwater modeling and grading design, and (2) construction layout surveying with staking. The Projects would develop detailed topographic information for the ROWs using photogrammetry and field cross sections. Concurrent with the acquisition of topographic data, aerial photographs would be obtained and analyzed to determine changes in land use and stream channel configurations. The final site plans for the Projects would be based on the detailed topographic survey of the site that is performed as a part of the permitting and engineering design process.

Road corridors, buried electrical lines, PV array locations, and the locations of other facilities would be located and staked to guide construction activities.

Staking and Flagging. Preconstruction survey work would consist of staking and flagging the following: (1) ROW and construction area boundaries, (2) work areas (permanent and short-term), (3) cut and fill, (4) access and roads, (5) transmission structure centers, (6) foundation structure, and (7) desert tortoise or endangered plant avoidance areas, if any. Staking and flagging would be maintained until final cleanup.

Site preparation activities include installation of desert tortoise fencing and completion of pre-construction surveys, preparing and constructing site access roads, establishing temporary construction trailers and sanitary facilities, and preparing construction staging areas. Mobilization would include bringing construction equipment to the sites prior to start of construction. The Projects sites would include several temporary staging areas. These staging areas would be used in phases throughout the 16- to 18-month Project construction period.

Vegetation Removal/Clearing. Vegetation would not be removed from the Projects sites until the onset of a given construction activity. Within the solar fields, roadways, and areas around the O&M building, vegetation would be disced under, mulched or composted, and retained on site to assist in erosion control and limit waste disposal. In some areas to be graded outside of the solar field, native vegetation may be harvested for replanting to augment soil stabilization.

Vegetation would be cleared for construction of the drainage controls, including berms. Organic matter would be mulched and redistributed within the construction area (except in trenches and under equipment foundations). Plant root systems would be left in place to provide soil stability except where grading and trenching are required for placement of solar module foundations, underground electric lines, inverter and transformer pads, road and access ways, and other facilities.

Grading and Micrograding

The Projects sites are flat, nearly level, and require minimal grading to allow for installation of the PV panels. Grading would be required only for the inverter pads, substation, driveways, and other improvements, including potentially the access roads. Access driveways may be constructed by placing two to four inches of decomposed granite or comparable material directly on the existing soil. Soil compaction, soil strengthening agents, or geo fabric may be used for access and circulation driveways. Compaction may also be required for the construction of inverter pads, substation, control rooms, and driveways. Driveways and other work areas would be sprayed periodically with water to reduce dust. Driveways and work areas may also be treated with BLM-approved dust suppression products.

Areas comprising the solar fields would be prepared using conventional farming equipment including tractors with discing equipment and vibratory rollers, with limited use of scrapers to perform micrograding within sections of the solar array field. The sites would be contour graded level; the overall topography and drainage patterns would remain unchanged, but within each solar array "high spots" would be graded, and the soil cut from these limited areas used to fill "low spots" within the same array. With this approach, rubber-tired farming tractors towing discing equipment would disc the top 5 to 7 inches of soil. A water truck would follow closely alongside the tractor to moisten the soil to keep dust at or below acceptable levels. The tractor may make several passes to fully disc the vegetation into the topsoil, preserving the underground root structure, topsoil nutrients and seed base. A drum roller would then be used to flatten the surface and return the soil to a compaction level similar to the preconstruction stage. The intent of the roller is to compact the soil under the solar field area and even out the surface after the discing is complete.

Lastly, limited use of scrapers for micrograding would be employed to only where needed to produce a more level surface than can be produced by the disc and roll technique. Very limited cut and fill would be completed within specific arrays to limit slope to within 3.0% and produce a consistent grade in each solar field area. Requirements for cut and fill grading would be defined after completion of initial site studies. Hydrology analysis would evaluate the areas that are susceptible to scour from stormwater runoff. Vegetation would be cleared from roadways, access ways, and where concrete foundations are used for inverter equipment, substations, and the O&M facilities.

Solar Array Assembly and Solar Module Electrical Construction

Construction activities would include the installation of civil infrastructure (e.g., driveways, utilities, fencing), mechanical infrastructure (e.g., piles, tracking components), and electrical infrastructure (e.g., PV panels, cable harnesses). The following would be included:

Civil Infrastructure

- Survey and Project layout, including road, panel, substations, switchyard, and support buildings;
- Driveway construction, including placement of aggregate;
- Temporary facilities, parking, and staging areas;
- Installation of the chain-link fence and gates;
- Watering for dust control and soil compaction; and
- Switchyard, skid/inverter, and control room pads.

Mechanical & Electrical Infrastructure

- Installation of tubular steel foundations and placement of a racking system on top of tubular steel;
- Placement of PV solar modules and DC collection system;
- Installation of a wire harness, fuses, and wire grounding;
- Trenching for buried wires;
- Installation of buried wiring;
- Inverter/transformer structures;
- Wiring and interconnection;
- AC collection system;
- Trenching and overhead installation of the medium-voltage collector lines from inverters/transformers to the Project substation;
- Construction of the Project substations;
- Construction of the switchyard and interconnection to the transmission/distribution system;
- Telecommunications installation;
- Installation of meteorological equipment;
- Water storage tanks; and
- On-site well for operations water.

Underground cables to connect panel strings would be installed using ordinary trenching techniques, which typically include a rubber-tired backhoe excavator or trencher. Wire depths would be in accordance with local, State, and Federal requirements, and would likely be buried at a minimum of 18 inches below grade, by excavating a trench approximately 3 to 6 feet wide to accommodate the conduits or direct buried cables. After excavation, cable rated for direct burial or cables installed inside a polyvinyl chloride (PVC) conduit would be installed in the trench, and the excavated soil would likely be used to fill the trench and lightly compressed. All cabling excavations would be to a maximum depth of 10 feet.

All electrical inverters and the transformer would be placed on concrete foundation structures or steel skids. Commissioning of equipment would include testing, calibration of equipment, and troubleshooting. The substation equipment, inverters, collector system, and PV array systems would be tested prior to commencement of commercial operations. Upon completion of successful testing, the equipment would be energized.

Certified electricians in the construction workforce would perform appropriate electrical construction activities starting with combiner box connections. Utility journeymen may be required to perform or supervise the higher-voltage electrical construction activities for the on-site substation and gen-tie line.

230 kV Gen-Tie Line Construction

The gen-tie line structures would be constructed of either tubular steel monopoles or lattice structures. Construction of the gen-tie line would cause temporary disturbance within a construction corridor estimated at a width of 150 feet. However, the long-term disturbance associated with the gen-tie line would be limited to the foundations of the transmission structures and the footprint of the access roads. Existing access roads would be used where feasible.

Pre-construction activities for the gen-tie line would consist of surveying and marking the ROW and structure locations and mobilization of equipment and materials. A laydown yard (within each Project site) would be prepared for storage of materials.

Access roads, if not existing, would be developed to access the gen-tie line facilities. This would include the permanent roads to the new transmission structure locations and temporary roads for construction.

Temporary work areas around the transmission structures would be necessary during construction to accommodate pole assembly and erection. Clearing and grading would also be needed for wire setup sites. Puller and tensioner sites require a large, relatively level area to safely accommodate all the equipment required on a wire stringing operation. These sites would be determined once the wire pulls have been planned. Permanent disturbance would be limited to areas within the gen-tie corridor.

Structures would be assembled in sections on cribbing that provide for the proper alignment of the steel members. Steel sections would be laid out with hydraulic cranes. The pole base and top sections would be assembled at each structure site. Insulators and hardware may be placed on the structure prior to erection.

Foundations would be constructed at each transmission structure location. Various foundation types are being considered, including drilled-shaft anchor-bolted foundations, drilled-shaft embedded foundations, and vibrated steel casings. A crane would be used for pole erection to set the pole base sections on foundations.

For the Projects, conventional wire stringing using tension stringing equipment has been assumed. After stringing, wires would be sagged in accordance with specified sagging data, corrections, and offsets. After sagging, the wires would be dead-ended on the dead-end structures and clipped-in on the tangent and angle structures. Final inspection, testing, would need to be coordinated with functional checkout and commissioning of the substation equipment at each end of the line.

Within the Red Bluff Substation, SCE would install equipment supporting a new 220 kV switchrack position to terminate the Projects' gen-tie. All work would occur within the substation fenceline. SCE will also install the 220 kV transmission tower structures between the Projects' last structure and the substation, and install telecommunications infrastructure, including fiber optic cable, as appropriate, into the substation.

Construction Site Stabilization and Restoration

Before construction begins, the Project would determine the appropriate site stabilization measures. A detailed geotechnical study is planned to support detailed design for each Project. The study would include survey work, drilling geotechnical borings, soil sampling, and electrical resistivity testing. Numerous bores would be drilled throughout the sites up to a depth of 20 feet. The study would provide input with respect to soil conditions and needed stabilization measures. After construction is completed, relatively minimal operations and maintenance activities are required during operations. Access roads and aisle ways would need to be maintained, but the areas covered by panels can support revegetation.

At the end of the Project's useful life, the Applicant would decommission the facility and remove above-ground facilities including the PV arrays and supporting electrical and facility systems. Following facility decommissioning and removal, the area would be reclaimed per applicable regulations in effect at the time of decommissioning.

Construction Access and Traffic

All materials for the Project's construction would be delivered by truck. Most truck traffic would occur on designated truck routes and major streets. Construction traffic would include periodic truck deliveries of materials and supplies, recyclables, trash and other truck shipments, and construction worker commuting vehicles. Most construction equipment and vehicles would be brought to the sites at the beginning of the construction process during construction mobilization and remain on-site throughout the duration of the construction activities for which they were needed. Generally, the equipment and vehicles would not be driven on public roads while in use for the Project.

The number of truck deliveries expected over the Project's construction period would be between 10 and 65 per week. Peak truck deliveries (65 per week) would likely occur between month 6 and month 10. Construction truck deliveries and shipments would typically avoid the peak traffic hours in the morning and evening. Materials would typically be delivered starting a few weeks before the start of the associated task apart from electrical gear which would be shipped prior to installation. Materials deliveries during construction would travel up to 150 miles one way from source to the Projects sites. During construction, an average of 231 workers per day would commute to the sites with a maximum of 503 workers during peak construction.

3.5 Operation and Maintenance

Maintenance activities generally include road maintenance; vegetation restoration and management; scheduled maintenance of inverters, transformers, and other electrical equipment; and occasional replacement of faulty modules or other site electrical equipment. The access roads would be regularly inspected and any degradation due to weather or wear and tear would be repaired. The Project may apply a dust palliative on dirt access roads if indicated.

It is anticipated that maintenance of the Project would require up to six workers to perform daily visual inspections and minor repairs. Typical work schedules are expected to be in two 12-hour shifts. During operations, potable water would be trucked into the site (one truck a week from Desert Center) or on-site groundwater would be used, including treatment, as necessary. The O&M workforce would generate small amounts of sanitary wastewater that would be handled by an on-site septic system and leach field. Only limited deliveries would be necessary for replacement PV modules and equipment during operations.

On occasion, the presence of 10 to 15 workers may be required for repairs or replacement of equipment and panel cleaning. Minimal maintenance requirements are anticipated. Maintenance and other operational staff would use standard size pickup trucks and vehicles.

The Project facility would have an on-site O&M building, and the Project would be monitored by onsite O&M personnel or remotely. Should the security system detect the presence of unauthorized personnel, a security representative would be dispatched to the facility, and appropriate local authorities would be notified. A Knox-Box containing keys for the Project would be installed to permit emergency access to the sites.

Washing of solar panels is expected to occur up to three times per year. Water for onsite maintenance purposes would likely be sourced from an existing nearby well but if found to not be potable, a new well may be developed, or water would be trucked from offsite.

The Project would develop a plan for vegetation management at the sites. An Integrated Weed Management Plan would be developed and implemented to control invasive exotic weeds. The plan would comply with existing BLM plans and permits including the *Vegetation Treatments Using Herbicides* (2007) and *Vegetation Treatment Final EIS* (2007).

Weed control activities include both non-mechanical and herbicide control methods. Manual non-mechanical means of vegetation management would be limited to the use of hand-operated power tools and hand tools to cut, clear, or prune species. Hand-operated tools such as hoes, shovels, and hand saws could be used under the program, as well as hand-pulling of plants. Mechanical control activities, such as chaining, disking, grubbing, and mowing using tractors or other heavy equipment may also be used.

If herbicides or pesticides are required, they would be BLM-approved herbicides to control weed populations when manual control methods are not successful in managing the spread of invasive plants. The

process for treatments would be characterized in a Pesticide Use Proposal approved by the BLM. Herbicides would likely be necessary to control the spread of invasive weeds following construction disturbance as part of an integrated pest management strategy.

3.6 Decommissioning and Repowering

At the end of the BLM ROW grant term if no contract extension is available for a power purchaser and no other buyer of the energy emerges, or there is no further funding of the project, the Project would be decommissioned and dismantled. When the Project concludes operations, much of the wire, steel, and modules of which the system is comprised would be recycled to the extent feasible. The Project components would be deconstructed and recycled or disposed of safely, and the sites could be converted to other uses in accordance with applicable land use regulations in effect at the time of closure.

A detailed Decommissioning and Reclamation Plan would be developed in a manner that both protects public health and safety and is environmentally acceptable. The decommissioning and restoration process involves the removal of aboveground and belowground structures (including solar panels, electrical equipment), restoration of topsoil, revegetation, and seeding. Temporary erosion and sedimentation control BMPs would be used during the Project's decommissioning phase. All other aboveground site infrastructure including fences, awnings, and the concrete pads and related equipment, would be removed. All materials would be recycled to the greatest extent possible in appropriate recycling facilities. Debris would be removed from the area.

The site would be restored to approximate pre-project conditions, including removal of specified improvements, removal of buried infrastructure, restoration of compacted soil, and revegetation and mulching, according to a BLM-approved reclamation measures.

After closure, measures would be taken to stabilize disturbed areas once equipment and structures are decommissioned and removed. These measures would be fully outlined in the Decommissioning Plan. Disturbed soil would be stabilized using standard erosion control BMPs (e.g., use of mulch, fiber rolls, silt fences, reseeding, etc., as applicable) until final reclamation measures may be implemented. A small portion of the Project site contains structures that are in direct contact with the ground and thus would create surface disturbance during removal; these include access roads, the O&M facility, associated parking areas. Removal of the solar arrays would create minimal ground disturbance due to the small footprint of their pile foundation design. Final reclamation measures would be implemented as soon as practicable after facility closure.

4.0 Project Location

The Project site is located on two 7.5-Minute U.S. Geological Survey topographic quadrangles: Sidewinder Well and Corn Spring. The entirety of the Project footprint is located within BLM-administered land in unincorporated Riverside County, California (Figure 1). It is situated within Chuckwalla Valley near the community of Desert Center, nearly halfway between the cities of Indio and Blythe. The Project site is within the CDCA planning area and the southern Desert Tortoise Recovery Unit of the Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan. The solar facility is not located within any ACECs (Areas of Critical Environmental Concern), but Alligator Rock ACEC is almost 3 miles southwest, the Desert Lily Preserve ACEC is 3 miles north, and Joshua Tree National Park is 5 miles north of the Project site. The gen-tie line enters into the Chuckwalla ACEC within an existing utility corridor. The Project site is located partially within desert tortoise critical habitat, and a multi-species linkage area is just west of the site (Figure 3).

The entire Project site is within the boundaries of the Riverside East Solar Energy Zone (SEZ) identified in the Solar Programmatic Environmental Impact Statement (EIS) approved by a Record of Decision signed by BLM on October 12, 2012. Additionally, the Project site is within the Chuckwalla Valley ecoregion subarea of the Desert Renewable Energy Conservation Plan (DRECP) area. The DRECP identifies the federal lands in and around the Project site in the Land Use Plan Amendment (LUPA) and Final Environmental Impact Statement (FEIS) as a Development Focus Area (DFA), as approved by a Record of Decision signed by BLM on September 14, 2016.

5.0 Site Description

Biological resources on the Arica Solar Project site are described in the Biological Resources Technical Report (BRTR; Ironwood, 2020).

5.1 Vegetation Communities and Land Cover

The primary natural vegetation community within the Project site is creosote bush scrub. One vegetation community (desert dry wash woodland) is identified by BLM (2002; 2021) and CDFW (2021a) as sensitive due to the association with alluvial processes but the Project avoids this community except along the access roads and gen-tie line. Vegetation communities on the Project site are described in further detail and mapped in the Project's BRTR (Ironwood, 2020).

Sonoran creosote bush scrub. Sonoran creosote bush scrub covers much of Project site and intergrades with desert dry wash woodland along desert washes. Within the Project site, it primarily occurs on sandy soils with a shallow clay pan. Dominant plants are creosote bush and white bursage. This vegetation community occurs throughout much of the Project site and is dominated by creosote bush, burro bush, and has an understory of annual buckwheat *(Eriogonum* sp.) and *Cryptantha* species. It also occurs in ribbons within the desert dry wash woodland on the western boundary.

Desert dry wash woodland. Desert dry wash woodland (also called microphyll woodland) is managed as a sensitive vegetation community recognized as S4 by the CNDDB (CDFW, 2021a and 2021b), the BLM California Desert District (BLM, 2002); and the DRECP (BLM, 2015). It is an open to relatively densely covered, drought-deciduous, microphyll (small compound leaves) riparian scrub woodland, often supported by braided wash channels that convey water and sediment. Within the Project site it is dominated by an open tree layer of ironwood, blue palo verde, and smoke tree (*Psorothamnus spinosus*). The understory is a modified creosote scrub with big galleta grass (*Hilaria rigida*). Desert dry wash woodland is primarily concentrated on the western portion of the survey area. Ribbons of Sonoran creosote bush scrub run through portions of the western desert dry wash woodland in the survey area. The project disturbance area (i.e., the fence-line) avoids the desert dry wash woodland (Figure 2). The gen-tie crosses desert dry wash woodland and desert pavement.

Sand flats, stabilized and partially stabilized desert dunes. The northwestern part of the site is at the margin of the Palen Dunes. These dune systems consist of Desert sand flats and dunes providing unique habitats that often support plants, mammals, reptiles and insects that are restricted to sand dunes. The active aeolian deposits or "dune" areas contain more active sand migration features and will be avoided in the north section of the Project.

Desert saltbush scrub. Toward the northern part of the site, the creosote bush scrub vegetation grades into saltbush scrub in small areas and then into the sandy habitats described above. In this area of intergradation, desert saltbush species become dominant. Desert saltbush scrub is dominated by fourwing saltbush (*Atriplex canescens*) with sparse creosote bush and *Cryptantha* species within the understory.

5.2 Desert Tortoise Occurrence

Predicted desert tortoise occupancy levels are lowest in the northernmost portion of the site (less than 0.3) and increase toward the southwest. The highest occupancy levels of 0.5-0.6 are in the southwest portion of the site (Figure 3). These predicted occupancy values do not account for habitat degradation resulting from existing anthropogenic land uses and features which would further reduce the occurrence probability in disturbed areas. Anthropogenic land uses in the vicinity that would further reduce desert tortoise habitat value (Section 5.4). Predicted desert tortoise occupancy values of 0.3 or above are appropriate for identifying suitable habitat in this low desert region (BLM, 2012).

The entire Project site was surveyed by Ironwood Consulting (Ironwood) biologists in fall 2019 and the spring and summer of 2020. Wildlife surveys conducted in fall 2019 conformed to full coverage desert tortoise protocol surveys (USFWS, 2010). Field survey dates and personnel are described in detail in the Project's Biological Resources Technical Report (Ironwood, 2020).

Desert Tortoise may be present on the site or use the site for foraging. USFWS protocol desert tortoise field surveys have been completed, and no desert tortoises were observed within the Arica Solar Project fenceline. One desert tortoise sign was observed during field surveys outside the fenceline, which was a Class 4 desert tortoise burrow (good condition, possibly desert tortoise) on the western boundary of the survey area. This is consistent with the predicted occupancy model, with the only observed sign occurring in the area with occupancy values of 0.0-0.5. Live desert tortoise were detected about a mile southwest of the Project along with numerous sign and potential burrows within the same area in avoided desert dry wash woodland. The full list of desert tortoise sign found one mile from the Arica fenceline is provided in the Victory Pass Solar Project ITP Application and Victory Pass Biological Resources Technical Report (Ironwood, 2020).

5.3 Critical Habitat

The Arica Project site lies within the southern portion of the Colorado Desert Recovery Unit and avoids all critical habitat. The only portion of the site located within critical habitat is a small portion of the Gen-tie line, 1.3 miles south of the Project fenceline where it crosses Chuckwalla ACEC between the I-10 Freeway and the Red Bluff substation, adjacent to existing, approved, and proposed gen-tie routes. The gen-tie impacts to critical habitat are addressed as part of the Victory Pass Project ITP Application.

The proposed Arica 230 kV gen-tie line poles would be placed outside of areas of surface sensitivity. Roads would be routed around areas of surface sensitivity. If adequate access roads are already in existence, then Arica would use the existing access roads and would not need to improve the roads.

5.4 Habitat Connectivity

Despite no observations of desert tortoise, portions of the Arica site may have a role in desert tortoise movement between populations in occupied habitat areas north and south. Higher quality desert tortoise habitat exists in the Palen Mountains to the northeast and the Chuckwalla Mountains to the south, and the Arica site is located between these areas. Desert tortoises may use intermountain habitat, such as the Arica site, as dispersal routes, providing connectivity between habitat areas in the surrounding mountains (Averill-Murray and Averill-Murray, 2005). Several undercrossings or large culverts under I-10 about 1.5 miles south of the Arica Project may provide some opportunity for wildlife movement beneath the freeway. The BLM's California Desert Conservation Area Plan, as amended by the DRECP Land Use Plan Amend-ment, designates specific areas within the mapped habitat linkage for multiple species habitat connectivity.

The Project is outside the East Riverside DFA Multispecies Linkage near Desert Center (per CMA LUPA-BIO-13).

On a local scale, desert tortoise connectivity is impaired by local incompatible land uses including linear barriers (including the Interstate 10 freeway, State Route 177, the Colorado River Aqueduct) and various disturbed or developed lands such as existing, approved, and proposed solar development, active and fallow agriculture, rural residential areas, and the Chuckwalla Valley Raceway.

6.0 Anticipated Mojave Desert Tortoise Take

Species Background

The desert tortoise is federally listed as threatened under the ESA (USFWS, 1990); with critical habitat designated by USFWS (USFWS, 1994a). This listing status applies to the Mojave population, located in the United States north and west of the Colorado River. All wild desert tortoises in California are part of the listed population. A recovery plan was published by USFWS (1994b) and a revised recovery plan was published in 2011. The desert tortoise is also listed as threatened under the California Endangered Species Act (CESA). The species is also covered under the NECO (BLM, 2002) and DRECP (BLM, 2016).

Desert tortoises are widely distributed in the deserts of California, southern Nevada, extreme southwestern Utah, western and southern Arizona, and throughout most of Sonora, Mexico. Suitable landscapes for desert tortoise are generally defined as alluvial fans, plains, and rocky slopes at elevations of 1,969 to 3,937 feet above sea level; desert tortoise range from below sea level to 7,300 feet in elevation (USFWS, 2008). Presence of ephemeral annual plant species is an indicator of habitat suitability for desert tortoise because these species are the primary components of the tortoise diet (Esque, 1994; Jennings, 1997; Avery, 1998). Generally, desert tortoise prefers creosote bush scrub habitat with a high diversity and cover of perennial and annual plants. Within the Colorado Desert biome, where the Project site is located, desert tortoise may also use blue paloverde (*Parkinsonia florida*)-ironwood (*Olneya tesota*)-smoke tree (*Psorothamnus spinosus*) communities (USFWS, 2008). Less commonly, desert tortoise will occur in blackbrush (*Coleogyne ramosissima*), Joshua tree (*Yucca brevifolia*), and juniper (*Juniperus* spp.) vegetation communities at higher elevations, and saltbush vegetation (*Atriplex* spp.) at lower elevations (Nussear et al., 2009). Desert tortoise requires soils that are firm enough to support burrows but also friable enough to allow for burrow excavation (Andersen et al., 2000). In some cases, desert tortoise takes advantage of existing natural shelters such as rock formations or exposed calcic soil horizons (i.e., “caliche caves”; Nussear et al., 2009).

Desert tortoises are most active when plants are available for forage or when pooled water is available for drinking; they are most active in early March through early June and again between September and early November. They typically have home ranges from under 25 to 200 acres (USFWS, 2008). Individual tortoises commonly traverse 1,500 to 2,600 feet per day within their home range, and males have been recorded to travel up to 0.6 miles within their home range (Berry, 1986). Desert tortoises disperse extended distances, up to 2.0 miles in 16 days and 4.5 miles in 15 months (Berry, 1986). Mojave Desert tortoises require 13 to 20 years to reach sexual maturity and have low reproductive rates (USFWS, 2008); individuals can live 50 to 100 years and have a long period of reproductive potential.

Threats to desert tortoise include a fatal respiratory disease; increases in raven populations that prey on juvenile tortoises; mortality associated with roads and off-highway vehicle use; and habitat destruction, degradation, and fragmentation. Populations have declined precipitously in some parts of the range, including areas within the Colorado Desert recovery unit such as the Chuckwalla Bench within the Chuckwalla ACEC (BLM, 2002).

Anticipated Take

It may become necessary to capture and move one or more desert tortoises from harm's way during project construction, constituting *take* as defined in the California Fish and Game Code Section 86 ("hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"). Therefore, the Applicant requests authorization to take Mojave desert tortoises for the purpose of translocating them off-site, out of harm's way, during construction.

Wildlife protection measures and monitoring requirements that will be identified in Section 9.0 (Proposed Mitigation) will minimize potential take of desert tortoise during construction. The Applicant does not anticipate lethal take during any phase of the Project. However, it is possible that accidental take may occur during construction. Therefore, the Applicant requests authorization for incidental take of Mojave desert tortoise during construction. Because the Project includes desert tortoise fencing, take is not anticipated during operations and maintenance and the Applicant is not requesting authorization for incidental take of Mojave desert tortoise during operations and maintenance nor decommissioning at this time.

7.0 Impacts Analysis

The Project would impact the follow acres of natural habitat.

Table 1. Arica Solar Vegetation and Habitat Cover Acres

Vegetation and Habitat Types	Solar field, Substation, and Storage	Gen-tie*	Total
Sonoran creosote bush scrub	1332	0	1,332
Saltbush scrub	23	0	23
Desert pavement	0	0	0
Desert dry wash woodland	0	0	0
Totals	1,355	0	1,355

* The gen-tie acres of disturbance would be the same as for the Victory Pass Solar Project and are for the gen-tie ROW. They are addressed in the Victory Pass ITP Application.

Additionally, the Project includes a shared access road(s). The access road will include use of existing roads only, either from the SR-177 exit or the Corn Springs Road exit, but may require ground disturbance to widen and improve it. The existing access road is between 14 and 30 feet wide and may require widening to 24 feet wide in some places which would require likely less than 7 acres of additional disturbance. This acreage is addressed in the Victory Pass ITP Application.

Without mitigation or avoidance measures, development of the Arica Solar Project could cause mortality or injury to desert tortoises present during construction or O&M. Desert tortoises or eggs could be harmed during clearing or grading activities, or tortoises could become entrapped within open trenches and pipes. Project activities could also cause direct mortality, injury, or harassment of tortoises or eggs because of vehicle strike. Other direct effects could include individual tortoises or eggs being crushed or entombed in their burrows, disruption of tortoise behavior during construction or operation of facilities, disturbance by noise or vibrations from the heavy equipment, and injury or mortality from encounters with workers' or visitors' pets. Desert tortoises may also be attracted to the construction area by shade beneath vehicles, equipment, or materials, or the application of water to control dust, placing them at higher risk of injury or mortality.

These direct impacts to desert tortoises would be avoided through measures presented in Section 9.0 (Proposed Mitigation) of this application.

Without mitigation, Project construction and operation could create "subsidies" such as food, water, or nest sites, for common ravens. Ravens prey on juvenile desert tortoises, contributing to the overall decline in tortoise recruitment.

Project development would only minimally affect desert tortoise movement routes and access to habitat, due to existing barriers, road hazard, and habitat degradation.

The Project would minimally affect desert tortoise critical habitat as designated by the USFWS where the shared gen-tie line crosses into critical habitat.

8.0 Jeopardy Analysis

The USFWS and CDFW have issued take authorization for large-scale solar energy projects in the Project vicinity. The following jeopardy analysis is based on the USFWS Biological Opinion for the Palen Solar Project issued in 2018 (USFWS, 2018). Although the natural habitat impacts of the Arica Solar Project are much smaller than the Palen Solar Project, and potential impacts to desert tortoise are proportionally less, the conclusions of the USFWS Palen Solar Project analysis are substantially applicable to the Arica Solar Project. Based on the current status, environmental baseline for the Project area, effects of the proposed Project, and cumulative effects of the desert tortoise, the proposed Project is not likely to jeopardize the continued existence of the desert tortoise for the following reasons:

- The Applicant will implement numerous measures (see Section 9.0, Proposed Mitigation) to ensure that most tortoises are moved out of the project footprint and injury and death of tortoises is minimized (i.e., clearance surveys, exclusion fencing, relocation, translocation, and employing qualified tortoise biologists).
- The Applicant will manage potential subsidies such as trash and water to reduce the potential for increased predation by common ravens and will implement weed management and soil stabilization techniques to reduce the spread of invasive nonnative plants in the project area.
- Given the small number of tortoises potentially affected by the Arica Project, there is no information to indicate that development of the Project would appreciably reduce the tortoise population levels in the region.
- Few, if any, tortoises are likely to be injured or killed as a result of relocation or translocation.
- Though the Arica Project would reduce the amount of available tortoise habitat and thereby result in a loss of habitat connectivity, the BLM's review and analysis of the East Riverside DFA Multispecies Linkage will consider the need for local connectivity.
- Movement of some tortoises into habitat adjacent to the Arica Project site would allow those tortoises to remain in the population and contribute towards recovery of the species.
- Compensation requirements of acquisition and/or restoration/enhancement through the BLM and CDFW will result in a net increase in the quantity and quality of habitat managed for tortoise conservation.
- With implementation of the mitigation measures, the impacts of the Arica Project are expected to be effectively minimized and offset and are not likely to diminish appreciably the conservation role and function of desert tortoise habitat in the Arica Project area or the species' range.

9.0 Proposed Mitigation

This section lists the avoidance and minimization (i.e., biological resource protection) measures that would be implemented as part of the Arica Solar Project. Implementation of these measures is expected to minimize and offset potential adverse effects to desert tortoise.

Mitigation measures are proposed to fully mitigate the Project's impacts to desert tortoises and their habitat, including any potential desert tortoise take. In summary, the Applicant Proposed Measures (APMs) and Mitigation Measures (MMs) will minimize the potential for take of desert tortoise and compensate for habitat loss. Several additional mitigation measures would minimize harm or mortality to desert tortoises and other wildlife, and minimize, mitigate, or offset adverse habitat impacts such as erosion or weed infestations. The Applicant will further ensure no inadvertent take prior to CDFW's issuance of the permit, as follows:

The following subsections provide lists and brief summaries of Applicant Proposed Mitigation Measures (APMs). They are organized to identify measures applicable during the construction phase (Section 9.1) and the operation and maintenance phase (Section 9.2). The Mitigation Measures are anticipated to be included in the EIR. The general measures are designed to minimize or avoid impacts to biological resources, including vegetation and habitat. Implementation of these measures will benefit multiple biological resources, including desert tortoise.

The summaries include APMs and additional MMs identified in the CDFW's Administrative Draft EIR (in prep.) as they apply to the desert tortoise.

In addition to the APMs and MMs, the BLM Proposed Action (i.e., gen-tie segments on BLM-administered lands) would be subject to Conservation Management Actions (CMAs) specified in the DRECP LUPA as applicable within Development Focus Areas. The private land components would not be subject to the DRECP CMAs. All applicable and non-applicable CMAs will be identified in the EA.

9.1 General Avoidance and Minimization Measures During Construction

Applicant Proposed Measures

APM BIO-1: Pre-construction Surveys. The Applicant will support pre-construction biological clearance surveys performed at all activity areas to minimize impacts on special-status plants or wildlife species.

APM BIO-2: Minimize Vegetation Removal. The Applicant will prepare a Project Revegetation Plan for areas temporarily impacted by construction and will make every effort to minimize vegetation removal and permanent loss.

APM BIO-5: Biological Monitors. Biological monitors will be assigned to the Project at key times during construction and locations. The monitors will be responsible for ensuring that impacts to special-status species, native vegetation, wildlife habitat, or unique resources will be avoided to the fullest extent possible. Where appropriate, monitors will flag the boundaries of areas where activities need to be restricted to protect native plants and wildlife, or special-status species. These restricted areas will be monitored to ensure their protection during construction.

APM BIO-6: Worker Environmental Education Program (WEEP). All construction crews and contractors will participate in WEEP training prior to starting work on the Project. The WEEP will include descriptions, locations, legal status and protections, and measures to avoid sensitive resources.

APM BIO-10: Vehicles and equipment shall be parked on pavement, existing roads, and previously disturbed areas to the extent practicable.

APM BIO-11: Speed Limit. Vehicles will not exceed 15 mph in ROWs or on unpaved roads within sensitive land-cover types.

APM BIO-13: Trash Removal. All human-related trash waste shall be contained and removed from the Project site.

APM BIO-14: Limit New Road Development. The development of new access and ROW roads and vegetation clearing will be minimized.

APM BIO-16: Habitat Management Plan. The Applicant will prepare and implement an operational Habitat Management Plan for the Project site to describe the management for sensitive biological resources found on the site.

APM BIO-19: To prevent harassment or mortality of special-status animals, or destruction of their habitats by dogs or cats, no pets should be permitted on project sites.

APM BIO-20: Removal of Food Waste. All food-related trash items will be contained and removed from the site each day.

APM BIO-22: Biological Representative. A representative shall be appointed as the main contact for any injuries or inadvertent kills, or the finding of injured or deceased special-status species within the Project site.

APM BIO-23: Sensitive-status Species Incident Reporting. Any injured or inadvertently killed special-status species shall be immediately reported to the biological representative, and then the representative will contact the USFWS by the end of the day (or beginning of next working day if the agency office is closed). Formal notification will also be provided in writing within three working days of the incident.

Mitigation Measures Identified in Administrative Draft EIR

- **Biological Monitoring (EIR MM BIO-1)**. Requires the Applicant to assign a Lead Biologist as the primary point of contact and Field Contact Representative (FCR) for the lead and resource agencies. Identifies a series of Lead Biologist responsibilities, including training and supervision of additional Biological Monitors, ensuring that all biological monitoring activities are completed properly and according to schedules, conducting and overseeing Worker Environmental Awareness Program (WEAP) training, and multiple related clearance survey, inspection, and reporting responsibilities.
- **Worker Environmental Awareness Training (EIR MM BIO-2).** Requires the Applicant to ensure that all workers at the site receive WEAP training. Specifies details of the WEAP training, including designation of authorized work areas, prohibition of activities outside designated areas, vehicle speed limits, handling hazardous substances, fire prevention, and other generalized environmental requirements. Includes ESA and CESA description and consequences of non-compliance and emphasizes special-status species including desert tortoise.
- **Minimization of Vegetation and Habitat Impacts (EIR MM BIO-3).** Requires delineating the limits of work and confining all disturbances, vehicles, and equipment to the fenced/flagged areas. Requires minimizing soil and vegetation disturbance to minimize impacts to soil and root systems, site cleanup, and hazardous materials handling and cleanup.

- **Integrated Weed Management Plan (EIR MM BIO-4).** Requires an Integrated Weed Management Plan (IWMP) to minimize or prevent invasive weeds from infesting the site or spreading into surrounding habitat. The IWMP will identify weed species occurring or potentially occurring in the Project area, means to prevent their introduction or spread (e.g., vehicle cleaning and inspections), monitoring methods to identify infestations, and timely implementation of manual or chemical (as appropriate) suppression and containment measures to control or eradicate invasive weeds.
- **Vegetation Resources Management Plan (EIR MM BIO-5).** Requires a Vegetation Resources Management Plan to revegetate temporarily disturbed areas to prevent further degradation and manage dust, erosion, and visual impacts; salvage cacti from public lands; and execute long-term vegetation management within the solar facility during its operations.
- **Compensation for Special-Status Species Habitat Impacts (EIR MM BIO-6).** The Applicant will acquire and protect, in perpetuity, compensation habitat to offset loss of natural habitat at ratios of 5:1 for desert dry wash woodland impacts, 1:1 for Sonoran creosote bush scrub and desert pavement impacts, and 5:1 for desert tortoise critical habitat.
- **Wildlife Protection (EIR MM BIO-8).** Requires multiple measures to avoid or minimize impacts to wildlife, such as wildlife avoidance; vehicle speed limits; minimizing lighting, noise and other disturbances; preventing water and food attractants; wildlife exclusion from work areas; avoiding entrapment; and handling and reporting dead or injured animals.
- **Desert Tortoise Protection (EIR MM BIO-9).** Requires an incidental take authorization, a Desert Tortoise Translocation Plan, a Raven Management Plan, a USFWS Authorized Biologist qualified to handle desert tortoises and conduct pre-construction clearance surveys, and construction phase desert tortoise exclusion fencing. Any observations of injured or deceased desert tortoise must be reported immediately to the Palm Springs Fish and Wildlife Office by email or telephone.
- **Gen-tie lines (EIR MM BIO-11)**. Requires structures to be designed to discourage their use by raptors for perching or nesting (e.g., by use of anti-perching devices), visually warn birds (permanent markers or bird flight diverters); and prevent electrocution.
- **Streambed and Watershed Protection (EIR MM BIO-14)**. Requires multiple Best Management Practices (BMPs) to minimize adverse impacts to streambeds and watersheds, such as preventing equipment operation in ponded or flowing water; preventing mud, silt, or pollutants from entering ephemeral drainages or being placed in locations that may be subjected to high storm flows, culvert or crossing designs; site clean-up; and siting of stationary equipment and vehicle maintenance work areas.

9.2 General Avoidance and Minimization Measures During Operation and Maintenance

Applicant Proposed Measures

APM BIO-5: Biological Monitors. Biological monitors will be present during key construction events and responsible for ensuring impacts to special-status species and native habitat will be avoided to the fullest extent possible, flagging-off sensitive resources as needed.

APM BIO-6: Worker Environmental Education Program (WEEP). All construction crews and contractors will participate in WEEP training prior to starting work on the Project. The WEEP will include descriptions, locations, legal status and protections, and measures to avoid sensitive resources.

APM BIO-11: Speed Limit. Vehicles will not exceed 15 mph in ROWs or on unpaved roads within sensitive land-cover types.

APM BIO-13: Trash Removal. All human-related trash waste shall be contained and removed from the Project site.

APM BIO-16: Habitat Management Plan. The Applicant will prepare and implement an operational Habitat Management Plan for the Project site to describe the management for sensitive biological resources found on the site.

APM BIO-20: Removal of Food Waste. All food-related trash items will be contained and removed from the site each day.

APM BIO-22: Biological Representative. A representative shall be appointed as the main contact for any injuries or inadvertent kills, or the finding of injured or deceased special-status species within the Project site.

APM BIO-23: Sensitive-status Species Incident Reporting. Any injured or inadvertently killed special-status species shall be immediately reported to the biological representative, and then the representative will contact the USFWS or CDFW as applicable by the end of the day (or beginning of next working day if the agency office is closed). Formal notification will also be provided in writing within three working days of the incident.

Mitigation Measures Identified in the Administrative Draft EIR

- **Biological Monitoring (EIR MM BIO-1)**. Requires the Applicant to assign a Lead Biologist as the primary point of contact and Field Contact Representative (FCR) for the lead and resource agencies. Identifies a series of Lead Biologist responsibilities, including train and supervision of additional Biological Monitors, ensuring that all biological monitoring activities are completed properly and according to schedules, conducting or overseeing Worker Environmental Awareness Program (WEAP) training, and multiple related clearance survey, inspection, and reporting responsibilities.
- **Worker Environmental Awareness Training (EIR MM BIO-2).** Requires the Applicant to ensure that all workers at the site receive WEAP training. Specifies details of the WEAP training, including designation of authorized work areas, prohibition of activities outside designated areas, vehicle speed limits, handling hazardous substances, fire prevention, and other generalized environmental requirements. Includes ESA and CESA description and consequences of non-compliance and emphasizes special-status plants potentially occurring in the area such as Emory's crucifixion thorn (*Castela emoryi*) or Harwood's eriastrum (*Eriastrum harwoodii*), desert tortoise, Mojave fringe-toed lizard, burrowing owl, golden eagle, nesting birds, desert kit fox, American badger, and burro deer.
- **Integrated Weed Management Plan (EIR MM BIO-4).** Requires an Integrated Weed Management Plan (IWMP) to minimize or prevent invasive weeds from infesting the site or spreading into surrounding habitat. The IWMP will identify weed species occurring or potentially occurring in the Project area, means to prevent their introduction or spread (e.g., vehicle cleaning and inspections), monitoring methods to identify infestations, and timely implementation of manual or chemical (as appropriate) suppression and containment measures to control or eradicate invasive weeds.
- **Vegetation Resources Management Plan (EIR MM BIO-5).** Requires a Vegetation Resources Management Plan to revegetate temporarily disturbed areas to prevent further degradation and manage dust, erosion, and visual impacts; salvage cacti from public lands; and execute long-term vegetation management within the solar facility during its operations.

- **Wildlife Protection (EIR MM BIO-8).** Requires multiple measures to avoid or minimize impacts to wildlife, such as wildlife avoidance; vehicle speed limits; minimizing lighting, noise and other disturbances; preventing water and food attractants; wildlife exclusion from work areas; avoiding entrapment; and handling and reporting dead or injured animals.
- **Gen-tie lines (EIR MM BIO-11)**. Requires structures to be designed to discourage their use by raptors for perching or nesting (e.g., by use of anti-perching devices), visually warn birds (permanent markers or bird flight diverters); and prevent electrocution.
- **Streambed and Watershed Protection (EIR MM BIO-14)**. Requires multiple Best Management Practices (BMPs) to minimize adverse impacts to streambeds and watersheds, such as preventing equipment operation in ponded or flowing water; preventing mud, silt, or pollutants from entering ephemeral drainages or being placed in locations that may be subjected to high storm flows, culvert or crossing designs; site clean-up; and siting of stationary equipment and vehicle maintenance work areas.

10.0 Mitigation Monitoring Plan

A Mitigation Monitoring and Reporting Program would be prepared and implemented for the Arica Project.

11.0 Mitigation Funding Sources

It is the financial obligation of Arica Solar, LLC to fund all mitigation that would be identified in the ITP.

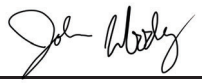
12.0 CEQA Documentation

The EIR is in preparation and is anticipated to be published in the summer 2021.

13.0 Certification

I certify that the information submitted in this application is complete and accurate to the best of my knowledge and belief. I understand that any false statement herein may subject me to suspension or revocation of this permit and to civil and criminal penalties under the laws of the State of California.

By: Arica Solar, LLC

Signature: 
Name: John Woody
Title: Vice President
Date: July 1, 2021

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Attachment 1
Figures

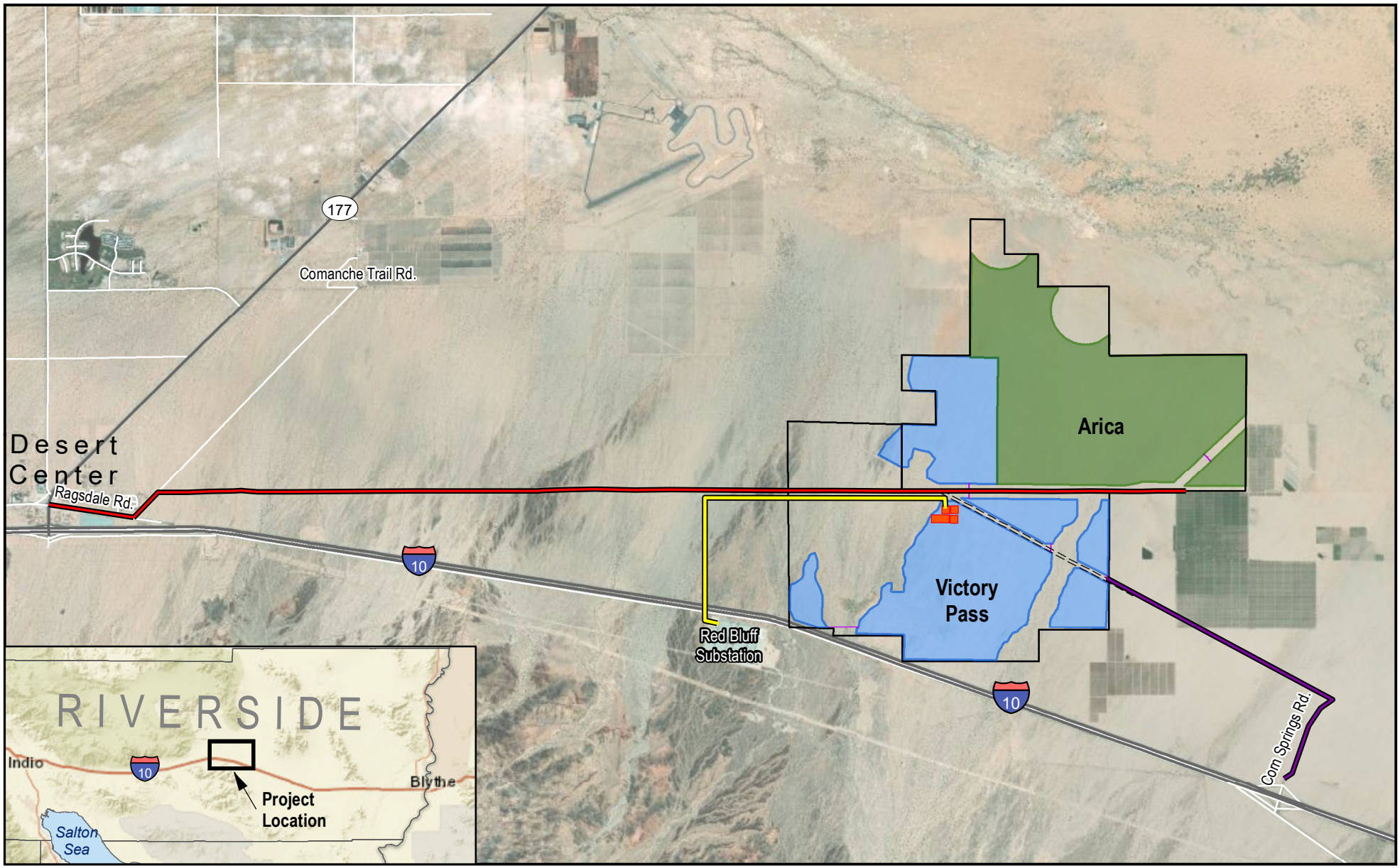
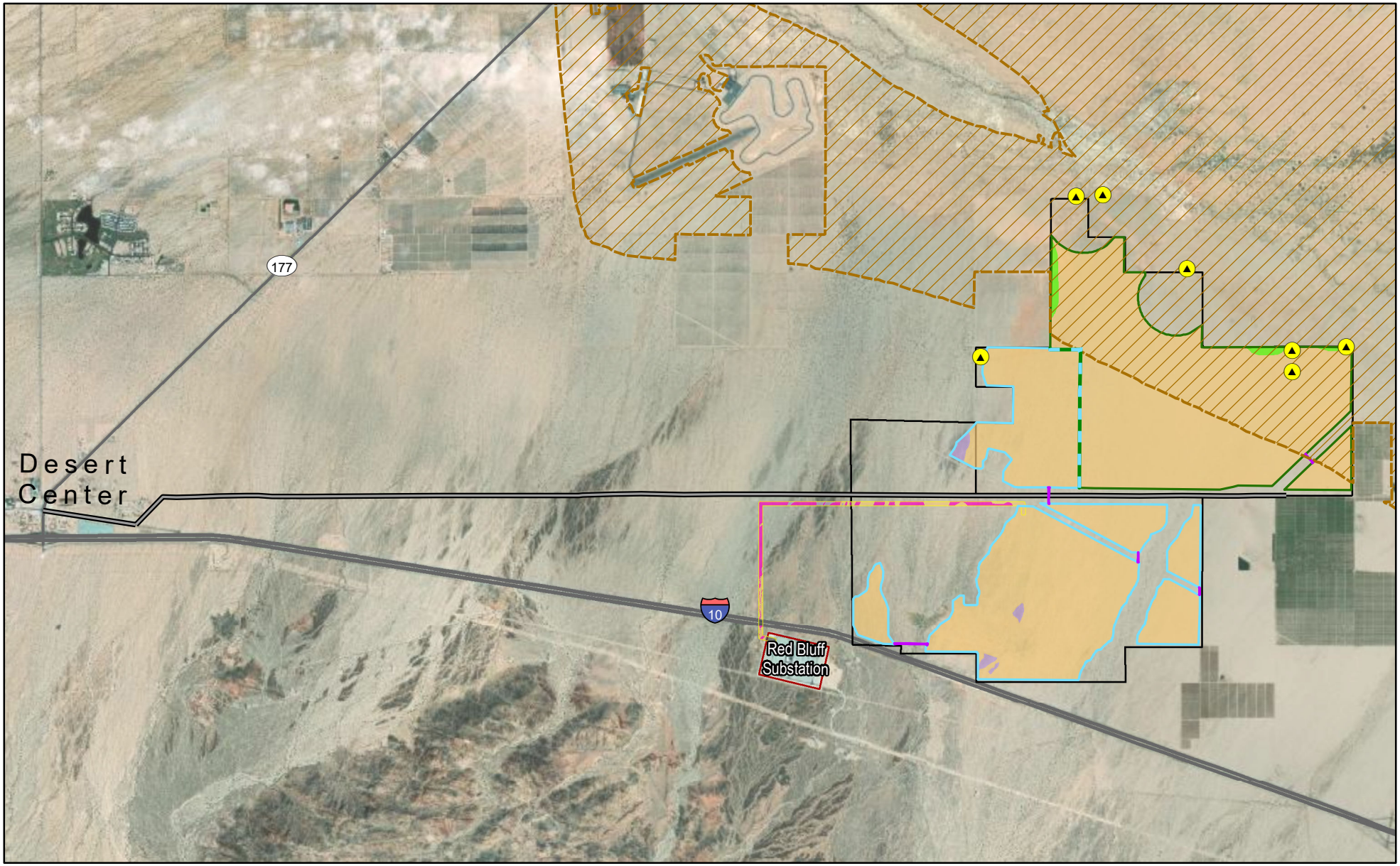


Figure 1
Proposed Arica and Victory Pass Projects

March 2021



Sources: Ironwood, 2020; DRECP, 2013

0 0.5 1

Scale in Miles

Project Area

Proposed Access Road

Shared Gen-tie Line

Shared Fenceline

Arica Fenceline

Victory Pass Fenceline

Project Roads

Vegetation and Cover Types

Desert Pavement

Developed/Disturbed

Dry Desert Wash Woodland

Saltbush Scrub

Sonoran Creosote Bush Scrub

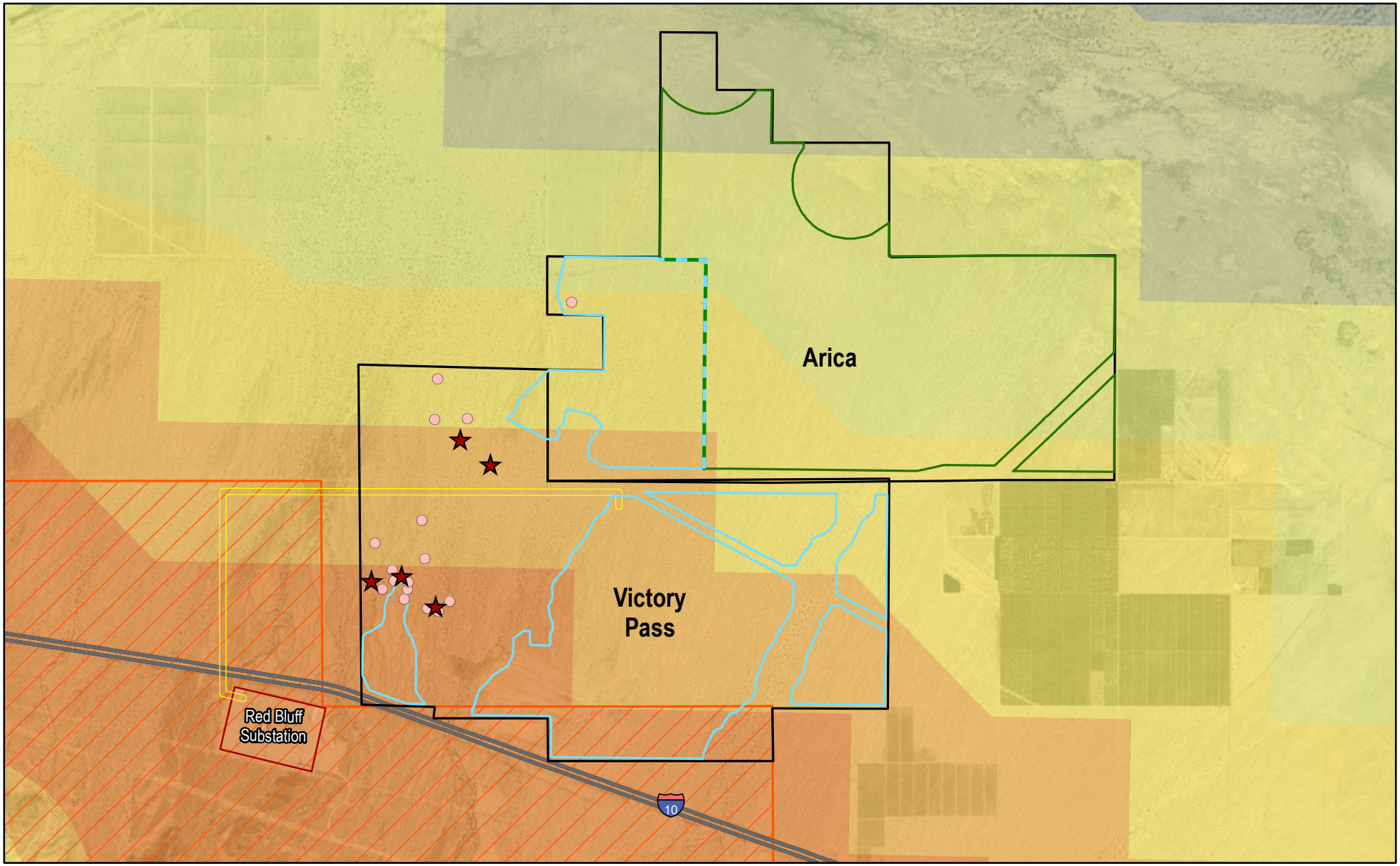
Couch's Spadefoot Toad Potential Habitat

Mojave Fringe-toed Lizard Species Distribution Model

Figure 2

Vegetation and Habitat

March 2021



Source: Ironwood, 2020; Nussear, et. al. 2009

0 0.5 1

Scale in Miles

Project Area

Shared Fenceline

Arica Fenceline (approximately 1,355 acres)

Victory Pass Fenceline (approximately 1,308 acres)

Shared Gen-tie Line

Desert Tortoise Sign

Live Desert Tortoise

Desert tortoise critical habitat

Predicted Desert Tortoise Occupancy

0.1 - 0.2

0.2 - 0.3

0.3 - 0.4

0.4 - 0.5

0.5 - 0.6

0.6 - 0.7

Figure 3

Desert Tortoise Observations and Sign

March 2021

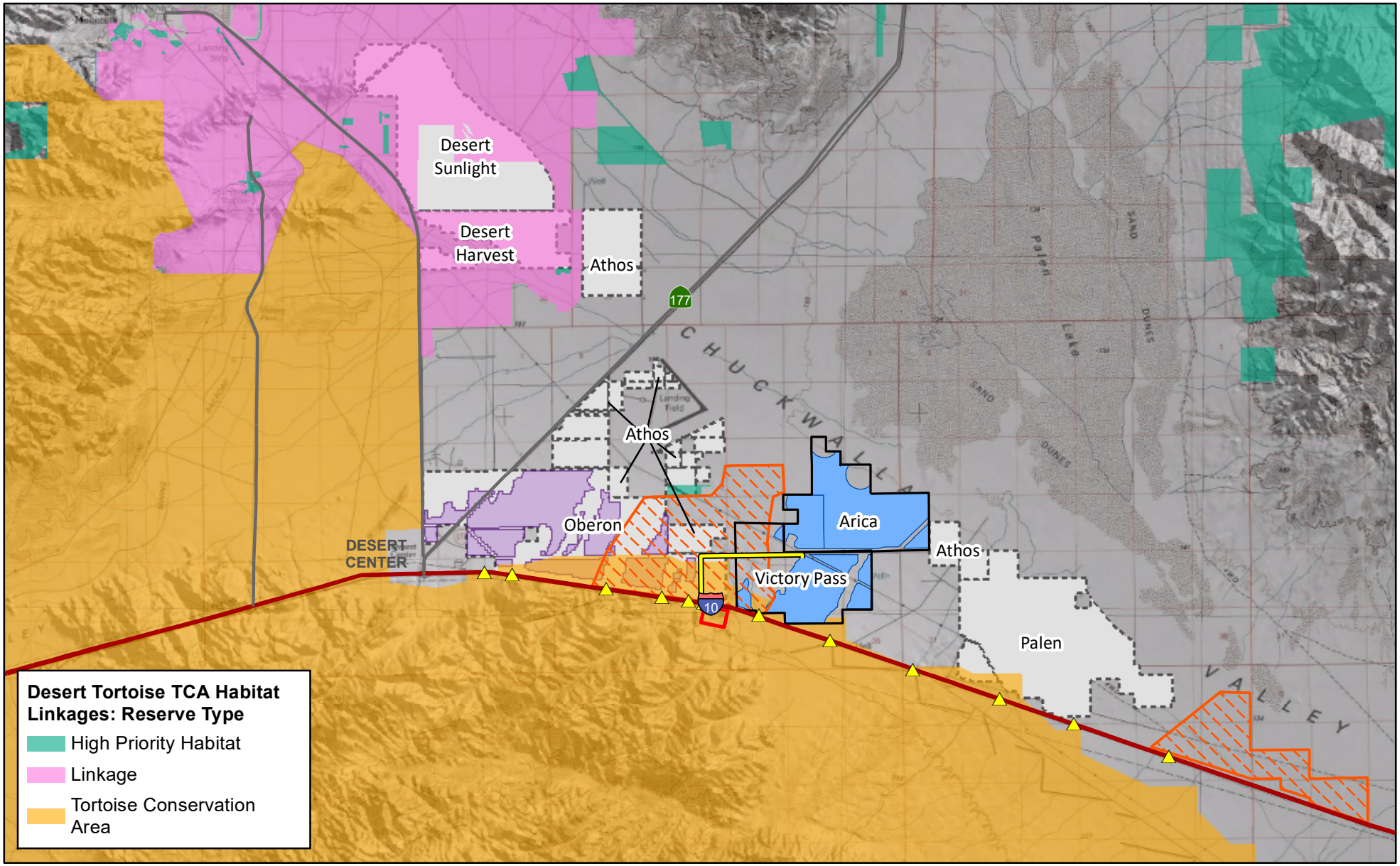


Figure 4

Habitat Connectivity

February 2021

Appendix A-2

Victory Pass Solar Project
Incidental Take Permit Application

VICTORY PASS SOLAR PROJECT
Incidental Take Permit Application (Section 2081)

Prepared for:

Victory Pass I, LLC
A subsidiary of Clearway Energy Group LLC

Clearway Energy Group LLC
100 California Street, Suite 400
San Francisco, CA 94111

Prepared by:

Aspen Environmental Group
235 Montgomery Street, Suite 640
San Francisco, CA 94104

July 2021

Contents

Tables

Attachment

List of Acronyms

ACEC	Area of Critical Environmental Concern
APM	Applicant Proposed Measure
BLM	Bureau of Land Management
BMP	Best Management Practices
BRTR	Biological Resources Technical Report
CDCA	California Desert Conservation Area
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CMA	Conservation Management Action
DFA	Development Focus Area
DRECP	Desert Renewable Energy Conservation Plan
ESA	Endangered Species Act
FEIR	Final Environmental Impact Report
FEIS	Final Environmental Impact Statement
Gen-tie	Generation tie
I-10	Interstate 10
kV	kilovolt
LUPA	Land Use Plan Amendment
MM	Mitigation Measure
MW	Megawatts
NECO	Northern and Eastern Colorado Desert Coordinated Management Plan
NEPA	National Environmental Protection Act
O&M	Operations and Maintenance
PCE	Primary Constituent Element
Project	Victory Pass Solar Project
PV	Photovoltaic
SCE	Southern California Edison
SEZ	Riverside East Solar Energy Zone
SWPPP	Stormwater Pollution Prevention Plan
USFWS	U.S. Fish and Wildlife Service
WEAP	Worker Environmental Awareness Program

Victory Pass Solar Project
Incidental Take Permit Application

1.0 Application

Applicant Address: Clearway Energy Group LLC, 100 California Street, Suite 400, San Francisco, CA 94111

Applicant's agent: John Woody, Victory Pass I, LLC, 100 California St., Suite 400, San Francisco CA 94111. Tel. (415) 627-1630, Email. John.Woody@clearwayenergy.com

Application preparer: Brigit Harvey, Aspen Environmental Group; 615 N. Benson Ave, Suite E, Upland, California 91786; Tel. (909) 568-5235; Email bharvey@aspeneg.com

2.0 Species to be Covered

Mojave desert tortoise (*Gopherus agassizii*). The Mojave desert tortoise is listed as threatened under the California Endangered Species Act (CESA). It is not subject to the rules and guidelines pursuant to sections 2112 and 2114 of the California Fish and Game Code (which pertain to the greater sandhill crane). It is also listed as threatened under the federal Endangered Species Act (ESA).

3.0 Project Description

Victory Pass I, LLC, an indirect wholly owned subsidiary of Clearway Energy Group LLC, proposes to construct, operate, and decommission the Victory Pass Solar Project (Project) entirely located on public lands managed by the Bureau of Land Management (BLM) near the Desert Center area of Riverside County (Figure 1). The proposed Project consists of utility-scale solar photovoltaic (PV) electrical generating and storage facility, including associated infrastructure, to generate and deliver renewable electricity to the statewide electricity transmission grid. The Project will be built alongside and share the Project switchyard and gen-tie with the nearby Arica Solar Project, owned by Arica Solar, LLC, another subsidiary of Clearway Energy Group LLC. The impacts attributed to the gen-tie are considered in this ITP Application.

Under California Environmental Quality Act (CEQA) and National Environmental Quality Act (NEPA) the Victory Pass and Arica Solar projects have been analyzed together. An Environmental Impact Report is being prepared with CDFW as the CEQA lead agency expected to be published in summer 2021. The BLM is preparing an Environmental Assessment (EA) under NEPA also expected to be published in summer 2021. The Project will be consistent with the Desert Renewable Energy Conservation Plan (DRECP) Land Use Plan Amendment, which is undergoing federal ESA Section 7 consultation between the BLM and U.S. Fish and Wildlife Service (USFWS). The BLM is seeking USFWS concurrence that the Project is covered under the DRECP Biological Opinion (USFWS, 2016). The USFWS has developed an Activity Form for the streamlined DRECP concurrence process. BLM will submit the completed form to confirm USFWS concurrence.

Throughout this application, the related projects are identified as follows:

- Arica Solar Project (separate application). The Arica project and shared gen-tie line (Figure 1). The shared switchyard is located within the Victory Pass parcel.
- Victory Pass Solar Project (subject of this application): The Victory Pass project site, substation, and shared gen-tie line and access road(s) (Figure 1).

The proposed Victory Pass Solar Project site consists of a solar facility, battery energy storage system, and associated facilities on BLM-administered land, and a proposed 230-kilovolt (kV) generator-tie line (gen-tie) connecting to the existing Southern California Edison (SCE) Red Bluff Substation. The Project would disturb approximately 1,310 acres and approximately 50 additional acres along a shared gen-tie corridor (Project footprint). The boundaries of the Project footprint's disturbance area were designed to avoid desert dry wash woodland and sensitive plant species to meet the BLM California Desert Conservation Area (CDCA) Plan, as Amended[1]. The Victory Pass Solar Project is expected to generate 200 megawatts (MW) of renewable energy using photovoltaic (PV) panels with up to 200 MW of storage. The Project substation is anticipated to be built within the northern section of the Project site and the Project will share a switchyard with the adjacent Arica Solar Project, owned by Arica Solar, LLC, another subsidiary of Clearway Energy Group LLC (Attachment 1, Figure 1). The gen-tie line would exit the shared switchyard near the western end of the Victory Pass site and head west for approximately 2 miles and then south for approximately one mile to reach the Red Bluff Substation's 230 kV bus at its western end. The gen-tie line right-of way would be approximately 150-feet-wide and approximately 3.2 miles long.

Construction is anticipated to occur over a 16-month period with multiple overlapping stages. Stage 1 (months 1 to 8) would include mobilization, site preparation, fencing, placement of laydown areas, and trenching. Stage 2 (months 4 to 12) would include installation of cables, pules, racking systems, inverters, and modules. Stage 3 (months 10 to 16) would include installation of modules and commissioning and testing.

For the purposes of this application, the Project area refers to the area surveyed during the 2019 and 2020 biological surveys (Ironwood, 2020); Project fence-line refers to all land anticipated to be developed within the Project area (including access roads and the gen-tie route), and the Project vicinity refers to the Desert Center region, including multiple land uses on public and private lands.

3.1 Solar Fields and On-site Facilities

Solar Fields

Panels would be arranged on the sites in solar arrays mounted on either fixed-tilt or tracking technology, depending on the PV panels ultimately selected. Structures supporting the PV modules would consist of steel piles (e.g., cylindrical pipes, H-beams, or similar), which would be driven into the soil using pneumatic techniques, such as a hydraulic rock hammer attachment on the boom of a rubber-tired or tracked equipment. The piles would be spaced 10-15 feet apart. For a single-axis tracking system, piles typically would be installed to a reveal height of approximately 4 feet above grade but could higher or lower in certain areas depending on site topography. The fixed-tilt system reveal height would vary based on the racking configuration specified in the final design. For single-axis tracking systems, following pile installation the associated motors, torque tubes, and drivelines (if applicable) would be placed and secured. Some designs allow for PV panels to be secured directly to the torque tubes using appropriate panel clamps. For some single-axis tracking systems, and for all fixed-tilt systems, a galvanized metal racking system, which secures the PV panels to the installed foundations, would be field-assembled, and attached according to the manufacturer's guidelines. Panels would be arranged in strings with a maximum height of 14 feet.

Panels would be electrically connected into panel strings using wiring secured to the panel racking system. Underground or above ground cables would be installed to convey the direct current (DC) electricity from

[1] The Desert Renewable Energy and Conservation Plan amendment to the CDCA Plan includes conservation and management actions that require avoidance of some special plant species and certain types of habitat.

the panels via combiner boxes located throughout the PV arrays, to inverters to convert the DC to alternating current (AC) electricity. The output voltage of the inverters would be stepped up to the collection system voltage via transformers located close to the inverters. The collector lines would be 34.5 kV.

The Project may include the installation of up to 200 MW of battery storage. The system is expected to be located adjacent to the Project substation. The battery system would consist of batteries housed in storage containers or similar. The containers themselves would be approximately eight feet wide by four feet long by 10 feet high (2.4 meters wide by 1.2 meters long by 2.6 meters high), with approximately 6.5 feet (2 meters) of clearance on all sides. The battery storage component would have a footprint of up to 5 acres. Site preparation required for the battery storage containers would be the same as those contemplated for storage buildings; the area for battery storage would need to be level so that the resulting pad is a flat cement or concrete foundation.

Except for the inverters and the transmission facility, the solar field development would maintain sheet flow wherever possible, with water exiting the site in existing natural contours and flows. The Project footprint's placement was modified to avoid all large washes that cross the site. A Stormwater Pollution and Prevention Plan (SWPPP) will be prepared by a qualified engineer or erosion control specialist and implemented prior to construction. The SWPPP will include Project information and identify best management practices (BMP). The BMPs would include stormwater runoff quality control measures, concrete waste management, stormwater detention, watering for dust control, and construction of perimeter silt fences, as needed.

On-Site Facilities

The Project substation is anticipated to be built within the northern section of the site as depicted in Figure 1. All interconnection equipment, including the control room if required, would be installed aboveground and within the footprint of the substation. The overall footprint of the substation is anticipated to be approximately 300 feet by 300 feet and poles up to 100 feet in height.

The substations may include a 100-kW emergency generator for use if the regional transmission system fails. If necessary, the substations would contain a control room building approximately 15 by 30 feet with an overall height up to 20 feet. The substations would be surrounded by a barbed wire chain-link fence to comply with electrical codes.

The substations must have access to communication systems in the area to comply with Federal Energy Regulatory Commission/California Independent System Operator/Utility monitoring and control requirements. Compliance may be accomplished by underground lines, aboveground lines, or wirelessly.

The Operations and Maintenance (O&M) facility for the Project would be 3,500 square feet and located near the substation. The facility would be monitored by onsite O&M personnel and/or remotely. The O&M facility may consist of offices a restroom, and a storage area. A septic system and leach field would be located at the O&M building to serve the sanitary wastewater treatment needs.

The Project site would have temporary construction staging areas and an area for construction worker parking for use throughout the 16-month construction period and then decommission and/or replaced by solar arrays. The staging areas would include material laydown and storage areas and an equipment assembly area.

The boundary of the Project would be secured by six-foot tall chain-link perimeter fences, topped by three-strands of barbed wire that would add an additional foot to the fence height. The security fence

would be collocated with a desert tortoise fence at its base, if required. The ingress/egress would be accessed via a locked remote gate.

Motion sensitive, directional security lights would be installed to provide adequate illumination around the substation areas, each inverter cluster, at gates, and along perimeter fencing. All lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties. No project component is 200 feet tall so would not require safety lighting per Federal Aviation Administration regulations. Off-site security personnel could be dispatched during nighttime hours or could be on-site, depending on security risks and operating needs. Infrared security cameras, motion detectors, and/or other similar technology may be installed to monitor the site through review of live footage 24 hours a day, 7 days a week. If such equipment were required, the equipment would be placed along the perimeter of the facility and/or at the inverters.

3.2 Shared Switchyard and 230 kV Gen-tie Transmission Line

A 230 kV shared gen-tie line would interconnect the shared switchyard with the existing Red Bluff Substation. The overall footprint of the switchyard is estimated at approximately 300 by 300 feet on the Victory Pass site. The gen-tie line would exit the shared switchyard near the western end of the Victory Pass site and head west for two miles and then south for one mile to reach the Red Bluff Substation's 230 kV bus at its western end. The gen-tie line right-of way would be 150 feet wide and approximately 3.2 miles long. New poles would be constructed of steel and would be between 100 to 140 feet tall. Because the transmission structures would be less than 200 feet tall, they would not require lighting, avoiding potential interference with aviation. The impacts of the shared gen-tie line are considered in this ITP Application.

3.3 Access Roads

Access to the sites would be from State Route (SR)-177. The Projects' construction and operation traffic would exit the I-10 at SR-177, then take SR-177 to Ragsdale Road, to BLM route DC425, to BLM route DC379. Route DC379 would reach the site boundaries. It is shared with numerous other ROW holders and ranges between 16 and 24 feet wide. Some improvements such as grading and widening may be required in areas where it has not been improved previously. The proposed access roads would be widened up to 24 feet wide.

Alternate routes to reach the solar sites include using the Corn Springs exit off the I-10 instead of the proposed Desert Center exit. After exiting at Corn Springs road, the existing BLM road DC 950 and DC 511.

The impacts of the shared access road are considered in this ITP Application regardless of whether the SR-177 or Corn Springs Road exit is used.

3.4 Construction

Construction is anticipated to occur over a 16-month period with multiple overlapping stages. Stage 1 (months 1 to 8) would include mobilization, site preparation, fencing, placement of laydown areas, and trenching. Stage 2 (months 4 to 12) would include installation of cables, pules, racking systems, inverters, and modules. Stage 3 (months 10 to 16) would include installation of modules and commissioning and testing.

The typical construction work schedule is expected to be from 7:00 a.m. to 5:00 p.m., Monday through Friday. However, to meet schedule demands or to reduce impacts, it may be necessary to work early

morning, evening, or nights and on weekends during certain construction phases. The work schedule may be modified throughout the year to account for changing weather conditions (e.g., starting the workday earlier in the summer months to avoid work during the hottest part of the day for health and safety reasons). If construction work takes place outside these typical hours, activities would comply with Riverside County standards for construction noise levels. For safety reasons, certain construction tasks, including final electrical terminations, must be performed after dark when no energy is being produced. The Projects would use restricted nighttime task lighting during construction. Lighting would include only what is needed to provide a safe workplace, and lights would be focused downward, shielded, and directed toward the interior of the site to minimize light exposure outside the construction area.

Pre-Construction Activities and Site Preparation

Surveying. Surveying includes two main objectives: (1) obtaining detailed topographic information for supporting the stormwater modeling and grading design, and (2) construction layout surveying with staking. The Projects would develop detailed topographic information for the ROWs using photogrammetry and field cross sections. Concurrent with the acquisition of topographic data, aerial photographs would be obtained and analyzed to determine changes in land use and stream channel configurations. The final site plans for the Projects would be based on the detailed topographic survey of the site that is performed as a part of the permitting and engineering design process.

Road corridors, buried electrical lines, PV array locations, and the locations of other facilities would be located and staked to guide construction activities.

Staking and Flagging. Preconstruction survey work would consist of staking and flagging the following: (1) ROW and construction area boundaries, (2) work areas (permanent and short-term), (3) cut and fill, (4) access and roads, (5) transmission structure centers, (6) foundation structure, and (7) desert tortoise or endangered plant avoidance areas, if any. Staking and flagging would be maintained until final cleanup.

Site preparation activities include installation of desert tortoise fencing and completion of pre-construction surveys, preparing and constructing site access roads, establishing temporary construction trailers and sanitary facilities, and preparing construction staging areas. Mobilization would include bringing construction equipment to the sites prior to start of construction. The Projects sites would include several temporary staging areas. These staging areas would be used in phases throughout the 16- to 18-month Project construction period.

Vegetation Removal/Clearing. Vegetation would not be removed from the Projects sites until the onset of a given construction activity. Within the solar fields, roadways, and areas around the O&M building, vegetation would be disced under, mulched or composted, and retained on site to assist in erosion control and limit waste disposal. In some areas to be graded outside of the solar field, native vegetation may be harvested for replanting to augment soil stabilization.

Vegetation would be cleared for construction of the drainage controls, including berms. Organic matter would be mulched and redistributed within the construction area (except in trenches and under equipment foundations). Plant root systems would be left in place to provide soil stability except where grading and trenching are required for placement of solar module foundations, underground electric lines, inverter and transformer pads, road and access ways, and other facilities.

Grading and Micrograding

The Projects sites are flat, nearly level, and require minimal grading to allow for installation of the PV panels. Grading would be required only for the inverter pads, substation, driveways, and other improvements,

including potentially to the access roads. Access driveways may be constructed by placing two to four inches of decomposed granite or comparable material directly on the existing soil. Soil compaction, soil strengthening agents, or geo fabric may be used for access and circulation driveways. Compaction may also be required for the construction of inverter pads, substation, control rooms, and driveways. Driveways and other work areas would be sprayed periodically with water to reduce dust. Driveways and work areas may also be treated with BLM-approved dust suppression products.

Areas comprising the solar fields would be prepared using conventional farming equipment including tractors with discing equipment and vibratory rollers, with limited use of scrapers to perform micrograd-ing within sections of the solar array field. The sites would be contour graded level; the overall topography and drainage patterns would remain unchanged, but within each solar array "high spots" would be graded, and the soil cut from these limited areas used to fill "low spots" within the same array. With this approach, rubber-tired farming tractors towing discing equipment would disc the top 5 to 7 inches of soil. A water truck would follow closely alongside the tractor to moisten the soil to keep dust at or below acceptable levels. The tractor may make several passes to fully disc the vegetation into the topsoil, preserving the underground root structure, topsoil nutrients and seed base. A drum roller would then be used to flatten the surface and return the soil to a compaction level similar to the preconstruction stage. The intent of the roller is to compact the soil under the solar field area and even out the surface after the discing is complete.

Lastly, limited use of scrapers for micrograding would be employed to only where needed to produce a more level surface than can be produced by the disc and roll technique. Very limited cut and fill would be completed within specific arrays to limit slope to within 3.0% and produce a consistent grade in each solar field area. Requirements for cut and fill grading would be defined after completion of initial site studies. Hydrology analysis would evaluate the areas that are susceptible to scour from stormwater runoff. Vegetation would be cleared from roadways, access ways, and where concrete foundations are used for inverter equipment, substations, and the O&M facilities.

Solar Array Assembly and Solar Module Electrical Construction

Construction activities would include the installation of civil infrastructure (e.g., driveways, utilities, fencing), mechanical infrastructure (e.g., piles, tracking components), and electrical infrastructure (e.g., PV panels, cable harnesses). The following would be included:

Civil Infrastructure

- Survey and Project layout, including road, panel, substations, switchyard, and support buildings;
- Driveway construction, including placement of aggregate;
- Temporary facilities, parking, and staging areas;
- Installation of the chain-link fence and gates;
- Watering for dust control and soil compaction; and
- Switchyard, skid/inverter, and control room pads.

Mechanical & Electrical Infrastructure

- Installation of tubular steel foundations and placement of a racking system on top of tubular steel;
- Placement of PV solar modules and DC collection system;
- Installation of a wire harness, fuses, and wire grounding;
- Trenching for buried wires;
- Installation of buried wiring;
- Inverter/transformer structures;

- Wiring and interconnection;
- AC collection system;
- Trenching and overhead installation of the medium-voltage collector lines from inverters/transformers to the Project substation;
- Construction of the Project substations;
- Construction of the switchyard and interconnection to the transmission/distribution system;
- Telecommunications installation;
- Installation of meteorological equipment;
- Water storage tanks; and
- On-site well for operations water.

Underground cables to connect panel strings would be installed using ordinary trenching techniques, which typically include a rubber-tired backhoe excavator or trencher. Wire depths would be in accordance with local, State, and Federal requirements, and would likely be buried at a minimum of 18 inches below grade, by excavating a trench approximately 3 to 6 feet wide to accommodate the conduits or direct buried cables. After excavation, cable rated for direct burial or cables installed inside a polyvinyl chloride (PVC) conduit would be installed in the trench, and the excavated soil would likely be used to fill the trench and lightly compressed. All cabling excavations would be to a maximum depth of 10 feet.

All electrical inverters and the transformer would be placed on concrete foundation structures or steel skids. Commissioning of equipment would include testing, calibration of equipment, and troubleshooting. The substation equipment, inverters, collector system, and PV array systems would be tested prior to commencement of commercial operations. Upon completion of successful testing, the equipment would be energized.

Certified electricians in the construction workforce would perform appropriate electrical construction activities starting with combiner box connections. Utility journeymen may be required to perform or supervise the higher-voltage electrical construction activities for the on-site substation and gen-tie line.

230 kV Gen-Tie Line Construction

The gen-tie line structures would be constructed of either tubular steel monopoles or lattice structures. Construction of the gen-tie line would cause temporary disturbance within a construction corridor estimated at a width of 150 feet. However, the long-term disturbance associated with the gen-tie line would be limited to the foundations of the transmission structures and the footprint of the access roads. Existing access roads would be used where feasible.

Pre-construction activities for the gen-tie line would consist of surveying and marking the ROW and structure locations and mobilization of equipment and materials. A laydown yard (within each Project site) would be prepared for storage of materials.

Access roads, if not existing, would be developed to access the gen-tie line facilities. This would include the permanent roads to the new transmission structure locations and temporary roads for construction. Temporary work areas around the transmission structures would be necessary during construction to accommodate pole assembly and erection. Clearing and grading would also be needed for wire setup sites. Puller and tensioner sites require a large, relatively level area to safely accommodate all the equipment required on a wire stringing operation. These sites would be determined once the wire pulls have been planned. Permanent disturbance would be limited to areas within the gen-tie corridor.

Structures would be assembled in sections on cribbing that provide for the proper alignment of the steel members. Steel sections would be laid out with hydraulic cranes. The pole base and top sections would

be assembled at each structure site. Insulators and hardware may be placed on the structure prior to erection.

Foundations would be constructed at each transmission structure location. Various foundation types are being considered, including drilled-shaft anchor-bolted foundations, drilled-shaft embedded foundations, and vibrated steel casings. A crane would be used for pole erection to set the pole base sections on foundations.

For the Projects, conventional wire stringing using tension stringing equipment has been assumed. After stringing, wires would be sagged in accordance with specified sagging data, corrections, and offsets. After sagging, the wires would be dead-ended on the dead-end structures and clipped-in on the tangent and angle structures. Final inspection, testing, would need to be coordinated with functional checkout and commissioning of the substation equipment at each end of the line.

Within the Red Bluff Substation, SCE would install equipment supporting a new 220 kV switchrack position to terminate the Projects' gen-tie. All work would occur within the substation fenceline. SCE will also install the 220 kV transmission tower structures between the Projects' last structure and the substation, and install telecommunications infrastructure, including fiber optic cable, as appropriate, into the substation.

Construction Site Stabilization and Restoration

Before construction begins, the Project would determine the appropriate site stabilization measures. A detailed geotechnical study is planned to support detailed design for each Project. The study would include survey work, drilling geotechnical borings, soil sampling, and electrical resistivity testing. Numerous bores would be drilled throughout the sites up to a depth of 20 feet. The study would provide input with respect to soil conditions and needed stabilization measures. After construction is completed, relatively minimal operations and maintenance activities are required during operations. Access roads and aisle ways would need to be maintained, but the areas covered by panels can support revegetation.

At the end of the Project's useful life, the Applicant would decommission the facility and remove above-ground facilities including the PV arrays and supporting electrical and facility systems. Following facility decommissioning and removal, the area would be reclaimed per applicable regulations in effect at the time of decommissioning.

Construction Access and Traffic

All materials for the Project's construction would be delivered by truck. Most truck traffic would occur on designated truck routes and major streets. Construction traffic would include periodic truck deliveries of materials and supplies, recyclables, trash and other truck shipments, and construction worker commuting vehicles. Most construction equipment and vehicles would be brought to the sites at the beginning of the construction process during construction mobilization and remain on-site throughout the duration of the construction activities for which they were needed. Generally, the equipment and vehicles would not be driven on public roads while in use for the Project.

The number of truck deliveries expected over the Project's construction period would be between 10 and 65 per week. Peak truck deliveries (65 per week) would likely occur between month 6 and month 10. Construction truck deliveries and shipments would typically avoid the peak traffic hours in the morning and evening. Materials would typically be delivered starting a few weeks before the start of the associated task apart from electrical gear which would be shipped prior to installation. Materials deliveries during construction would travel up to 150 miles one way from source to the Projects sites. During construction,

an average of 231 workers per day would commute to the sites with a maximum of 503 workers during peak construction.

3.5 Operation and Maintenance

Maintenance activities generally include road maintenance; vegetation restoration and management; scheduled maintenance of inverters, transformers, and other electrical equipment; and occasional replacement of faulty modules or other site electrical equipment. The access roads would be regularly inspected and any degradation due to weather or wear and tear would be repaired. The Project may apply a dust palliative on dirt access roads if indicated.

It is anticipated that maintenance of the Project would require up to six workers to perform daily visual inspections and minor repairs. Typical work schedules are expected to be in two 12-hour shifts. During operations, potable water would be trucked into the site (one truck a week from Blythe) or on-site groundwater would be used, including treatment, as necessary. The O&M workforce would generate small amounts of sanitary wastewater that would be handled by an on-site septic system and leach field. Only limited deliveries would be necessary for replacement PV modules and equipment during operations.

On occasion, the presence of 10 to 15 workers may be required for repairs or replacement of equipment and panel cleaning. Minimal maintenance requirements are anticipated. Maintenance and other operational staff would use standard size pickup trucks and vehicles.

The Project facility would have an on-site O&M building, and the Project would be monitored by onsite O&M personnel or remotely. Should the security system detect the presence of unauthorized personnel, a security representative would be dispatched to the facility, and appropriate local authorities would be notified. A Knox-Box containing keys for the Project would be installed to permit emergency access to the sites.

Washing of solar panels is expected to occur up to three times per year. Water for onsite maintenance purposes would likely be sourced from an existing nearby well but if found to not be potable, a new well may be developed, or water would be trucked from offsite.

The Project would develop a plan for vegetation management at the sites. An Integrated Weed Management Plan would be developed and implemented to control invasive exotic weeds. The plan would comply with existing BLM plans and permits including the *Vegetation Treatments Using Herbicides* (2007) and *Vegetation Treatment Final EIS* (2007).

Weed control activities include both non-mechanical and herbicide control methods. Manual non-mechanical means of vegetation management would be limited to the use of hand-operated power tools and hand tools to cut, clear, or prune species. Hand-operated tools such as hoes, shovels, and hand saws could be used under the program, as well as hand-pulling of plants. Mechanical control activities, such as chaining, disking, grubbing, and mowing using tractors or other heavy equipment may also be used.

If herbicides or pesticides are required, they would be BLM-approved herbicides to control weed populations when manual control methods are not successful in managing the spread of invasive plants. The process for treatments would be characterized in a Pesticide Use Proposal approved by the BLM. Herbicides would likely be necessary to control the spread of invasive weeds following construction disturbance as part of an integrated pest management strategy.

3.6 Decommissioning and Repowering

At the end of the BLM ROW grant term if no contract extension is available for a power purchaser and no other buyer of the energy emerges, or there is no further funding of the project, the Project would be decommissioned and dismantled. When the Project concludes operations, much of the wire, steel, and modules of which the system is comprised would be recycled to the extent feasible. The Project components would be deconstructed and recycled or disposed of safely, and the sites could be converted to other uses in accordance with applicable land use regulations in effect at the time of closure.

A detailed Decommissioning and Reclamation Plan would be developed in a manner that both protects public health and safety and is environmentally acceptable. The decommissioning and restoration process involves the removal of aboveground and belowground structures (including solar panels, electrical equipment), restoration of topsoil, revegetation, and seeding. Temporary erosion and sedimentation control BMPs would be used during the Project's decommissioning phase. All other aboveground site infrastructure including fences, awnings, and the concrete pads and related equipment, would be removed. All materials would be recycled to the greatest extent possible in appropriate recycling facilities. Debris would be removed from the area.

The site would be restored to approximate pre-project conditions, including removal of specified improvements, removal of buried infrastructure, restoration of compacted soil, and revegetation and mulching, according to a BLM-approved reclamation measures.

After closure, measures would be taken to stabilize disturbed areas once equipment and structures are decommissioned and removed. These measures would be fully outlined in the Decommissioning Plan. Disturbed soil would be stabilized using standard erosion control BMPs (e.g., use of mulch, fiber rolls, silt fences, reseeding, etc., as applicable) until final reclamation measures may be implemented. A small portion of the Project site contains structures that are in direct contact with the ground and thus would create surface disturbance during removal; these include access roads, the O&M facility, associated parking areas. Removal of the solar arrays would create minimal ground disturbance due to the small footprint of their pile foundation design. Final reclamation measures would be implemented as soon as practicable after facility closure.

4.0 Project Location

The Project site is located on two 7.5-Minute U.S. Geological Survey topographic quadrangles: Sidewinder Well and Corn Spring. The entirety of the Project footprint is located within BLM-administered land in unincorporated Riverside County, California (Figure 1). It is situated within Chuckwalla Valley near the community of Desert Center, nearly halfway between the cities of Indio and Blythe. The Project site is within the CDCA planning area and the southern Desert Tortoise Recovery Unit of the Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan. The solar facility is not located within any ACECs (Areas of Critical Environmental Concern), but Alligator Rock ACEC is almost 3 miles southwest, the Desert Lily Preserve ACEC is 3 miles north, and Joshua Tree National Park is 5 miles north of the Project site. The gen-tie line enters into the Chuckwalla ACEC within an existing utility corridor. The Project site is located partially within desert tortoise critical habitat, and a multi-species linkage area is just west of the site (Figure 3).

The entire Project site is within the boundaries of the Riverside East Solar Energy Zone (SEZ) identified in the Solar Programmatic Environmental Impact Statement (EIS) approved by a Record of Decision signed by BLM on October 12, 2012. Additionally, the Project site is within the Chuckwalla Valley ecoregion

subarea of the Desert Renewable Energy Conservation Plan (DRECP) area. The DRECP identifies the federal lands in and around the Project site in the Land Use Plan Amendment (LUPA) and Final Environmental Impact Statement (FEIS) as a Development Focus Area (DFA), as approved by a Record of Decision signed by BLM on September 14, 2016.

5.0 Project Site Description

Biological resources on the Victory Pass Solar Project site are described in the Biological Resources Technical Report (BRTR; Ironwood Consulting, Inc., 2020)

5.1 Vegetation Communities and Land Cover

The two primary natural vegetation communities within the Project site are creosote bush scrub and desert dry wash woodland. Desert pavement is also present in smaller quantities. One vegetation community (desert dry wash woodland) is identified by BLM (2002; 2021) and CDFW (2021a) as sensitive due to the association with alluvial processes. Vegetation communities on the Project site are described in further detail and mapped in the Project's BRTR (Ironwood, 2020).

Sonoran creosote bush scrub. Sonoran creosote bush scrub covers much of Project site and intergrades with desert dry wash woodland along desert washes. Within the Project site, it primarily occurs on sandy soils with a shallow clay pan. Dominant plants are creosote bush and white bursage. This vegetation community occurs throughout much of the Project site and is dominated by creosote bush, burro bush, and has an understory of annual buckwheat *(Eriogonum* sp.) and *Cryptantha* species. It also occurs in ribbons within the desert dry wash woodland on the western boundary.

Desert dry wash woodland. Desert dry wash woodland (also called microphyll woodland) is managed as a sensitive vegetation community recognized as S4 by the CNDDB (CDFW, 2021a and 2021b), the BLM California Desert District (BLM, 2002); and the DRECP (BLM, 2015). It is an open to relatively densely covered, drought-deciduous, microphyll (small compound leaves) riparian scrub woodland, often supported by braided wash channels that convey water and sediment. Within the Project site it is dominated by an open tree layer of ironwood, blue palo verde, and smoke tree (*Psorothamnus spinosus*). The understory is a modified creosote scrub with big galleta grass (*Hilaria rigida*). Desert dry wash woodland is primarily concentrated on the western portion of the site with a strip that runs through the eastern side of the Project site. Ribbons of Sonoran creosote bush scrub and desert pavement run through portions of the western desert dry wash woodland. The project disturbance area (i.e., the fence-line) avoids the desert dry wash woodland (Figure 2).

Desert pavement. The term desert pavement is primarily descriptive of soil and substrate conditions, rather than vegetation. It is sparsely vegetated, sometimes 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. Desert pavement is found primarily near the northwestern boundary with a small area near the southern boundary.

5.2 Desert Tortoise Occurrence

The Project site is located within the Colorado Desert Recovery Unit and partially within USFWS-designated critical habitat for desert tortoise that is also designated as a Desert Tortoise Conservation Area (TCA) in the Desert Renewable Energy Conservation Plan (DRECP) (Figure 3). The highest desert tortoise densities within this recovery unit occur in Chemehuevi and Ward valleys (approximately 60 miles

north of the Project site), on the Chuckwalla Bench within the Chuckwalla Desert Wildlife Management Area (DWMA) (closest border is south of the Project site), and in Joshua Tree National Park (closest border is approximately 5 miles north of the site) (Murphy et al., 2007).

The entire Project site was surveyed by Ironwood Consulting (Ironwood) biologists in fall 2019 and the spring and summer of 2020. Wildlife surveys conducted in fall 2019 conformed to full coverage desert tortoise protocol surveys (USFWS, 2010). Field survey dates and personnel are described in detail in the Project's Biological Resources Technological Report (Ironwood, 2020).

Predicted desert tortoise occupancy values of 0.3 or above are appropriate for identifying suitable habitat in this low desert region. The highest predicted occupancy levels on the Project site are between 0.6-0.7 (Nussear et al. 2009; Attachment 1, Figure 3). 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.

Five observations of live desert tortoise were detected near the Project fenceline, and numerous sign and potential burrows were detected and classified within the same portion just outside the Project site in the avoided desert dry wash woodland (USFWS, 2009a; Ironwood, 2020). This portion of the Project site ranges between 0.4 to 0.7 predicted occupancy region for desert tortoise, which supports the active presence of desert tortoise in the area.

Table 1, below, summarizes all live desert tortoise observations and sign within the Project survey area.

Table 1. Desert Tortoise Sign Observations in Project Survey Area

Date Observed	Sign Type	Class	Notes
10/15/2019	live individual	—	Adult, Female
10/15/2019	live individual	—	Adult, Male
10/16/2019	live individual	—	Adult, Male
3/17/2020	live individual	—	Adult, Male
3/20/2020	live individual	—	Adult, Female
10/15/2019	burrow	Class 1	Definitely desert tortoise; currently active
10/16/2019	burrow	Class 1	Definitely desert tortoise; currently active
10/16/2019	burrow	Class 1	Definitely desert tortoise; currently active
10/15/2019	burrow	Class 1	Definitely desert tortoise; currently active
10/15/2019	burrow	Class 2	Definitely desert tortoise; good condition
10/15/2019	burrow	Class 2	Definitely desert tortoise; good condition
10/16/2019	burrow	Class 3	Definitely desert tortoise; deteriorated/collapsed
10/16/2019	burrow	Class 3	Definitely desert tortoise; deteriorated/collapsed
10/16/2019	burrow	Class 5	Possibly desert tortoise; deteriorated/collapsed
10/15/2019	pallet	Class 1	Definitely desert tortoise; currently active
10/16/2019	pallet	Class 2	Definitely desert tortoise; good condition
3/17/2020	scat	Class 1	Wet (not from rain or dew) or freshly dried; obvious odor
10/15/2019	scat	Class 3	Dried; no glaze or odor; signs of bleaching (light brown); tightly packed material
10/15/2019	tracks	—	—

Table 1. Desert Tortoise Sign Observations in Project Survey Area

Date Observed	Sign Type	Class	Notes
10/15/2019	tracks	—	—
10/15/2019	tracks	—	—
10/15/2019	tracks	—	—
10/15/2019	tracks	—	—
3/20/2020	carcass	Class 1	< 1 year, fresh putrid, scutes mostly adhered; sheen on exposed scutes, unexposed bone waxy and solid; Adult, Male

This information is taken from the 2020 Biological Resources Technological Report by Ironwood Consulting, Inc. (Ironwood, 2020).

5.3 Critical Habitat

The Project site is located partially within the Colorado Desert Recovery Unit for desert tortoise and partially within USFWS-designated critical habitat for desert tortoises that is also designated as a Desert Tortoise Conservation Area (TCA) in the Desert Renewable Energy Conservation Plan (DRECP) (Attachment 1, Figure 3).

According to the Final Rule designating critical habitat (USFWS, 1994a); desert tortoise critical habitat consists of the following six primary constituent elements (PCEs):

- Sufficient space to support viable populations within each of the six recovery units to provide for movement, dispersal, and gene flow;
- Sufficient quantity and quality of forage species and the proper soil conditions to provide for the growth of such species;
- Suitable substrates for burrowing, nesting, and overwintering;
- Burrows, caliche caves, and other shelter sites;
- Sufficient vegetation for shelter from temperature extremes and predators; and
- Habitat protected from disturbance and human-caused mortality.

At least five of the six PCEs are met where the Project site overlaps the designated critical habitat.

The PCE requirement that habitat be "protected from disturbance and human-caused mortality" is not met due to proximity to the freeway, the Red Bluff Substation, paved and unpaved roads, off-highway vehicle use, presence of domestic and feral dogs, trash dumping, and vehicle parking. Nevertheless, the habitat is occupied and continues to support desert tortoise.

The Project fence-line and designated critical habitat overlap on approximately 118 acres in the southernmost portions of the Project site. Little or no surface disturbance is anticipated for access road construction because the route is adjacent to existing access roads. The gen-tie ROW is located on 26.7 acres of designated critical habitat but would impact fewer acres during construction. The impacts of the gen-tie ROW to critical habitat are addressed as part of this ITP Application.

5.4 Habitat Connectivity

Due to the multiple signs of desert tortoise, portions of the Project site may have a role in desert tortoise movement between populations in occupied habitat areas north and south of the site. Higher quality

desert tortoise habitat exists in the Palen Mountains to the northeast and the Chuckwalla Mountains to the south, and the Project site is located between these areas (Figure 4). Desert tortoises may use low-quality intermountain habitat, such as most of the Project site, as dispersal routes, providing connectivity between habitat areas in the surrounding mountains (Averill-Murray and Averill-Murray, 2005). Several undercrossings or large culverts cross under I-10 in the Project vicinity may provide some opportunity for wildlife movement beneath the freeway (Figure 4). The BLM's California Desert Conservation Area Plan (CDCAP), as amended by the DRECP designates specific areas within the mapped habitat linkage for multiple species habitat connectivity. The Victory Pass Solar Project site overlaps with a DRECP multi-species linkage area.

On a regional scale, the southern portion of Project site overlaps with priority habitat and linkages for desert tortoise based on the Nussear et al. (2009) habitat model and least cost paths modeled by Hagerty et al. (2011). On a local scale, desert tortoise movement may be limited due to the present of linear barriers (including the Interstate 10 Freeway, State Route 177, the Colorado River Aqueduct) and various disturbed or developed lands such as fallow agriculture, rural residential areas, and the Chuckwalla Valley Raceway.

6.0 Anticipated Desert Tortoise Take

Species Background

The desert tortoise is federally listed as threatened under the ESA (USFWS, 1990); with critical habitat designated by USFWS (USFWS, 1994a). This listing status applies to the Mojave population, located in the United States north and west of the Colorado River. All wild desert tortoises in California are part of the listed population. A recovery plan was published by USFWS (1994b) and a revised recovery plan was published in 2011. The desert tortoise is also listed as threatened under the California Endangered Species Act (CESA). The species is also covered under the NECO (BLM, 2002) and DRECP (BLM, 2016).

Desert tortoises are widely distributed in the deserts of California, southern Nevada, extreme southwestern Utah, western and southern Arizona, and throughout most of Sonora, Mexico. Suitable landscapes for desert tortoise are generally defined as alluvial fans and plains and rocky slopes at elevations of 1,969 to 3,937 feet above sea level; desert tortoise range from below sea level to 7,300 feet in elevation (USFWS, 2008). Presence of ephemeral annual plant species is an indicator of habitat suitability for desert tortoise because these species are the primary components of the tortoise diet (Esque, 1994; Jennings, 1997; Avery, 1998). Generally, desert tortoise prefers creosote bush scrub habitat with a high diversity and cover of perennial and annual plants. Within the Colorado Desert biome, where the Project site is located, desert tortoise may also use blue paloverde (*Parkinsonia florida*)-ironwood (*Olneya tesota*)-smoke tree (*Psorothamnus spinosus*) communities (USFWS, 2008). Less commonly, desert tortoise will occur in blackbrush (*Coleogyne ramosissima*), Joshua tree (*Yucca brevifolia*), and juniper (*Juniperus* spp.) vegetation communities at higher elevations, and saltbush vegetation (*Atriplex* spp.) at lower elevations (Nussear et al., 2009). Desert tortoise requires soils that are firm enough to support burrows but also friable enough to allow for burrow excavation (Andersen et al., 2000). In some cases, desert tortoise takes advantage of existing natural shelters such as rock formations or exposed calcic soil horizons (i.e., "caliche caves"; Nussear et al., 2009).

Desert tortoises are most active when plants are available for forage or when pooled water is available for drinking; they are most active in early March through early June and again between September and early November. They typically have home ranges from under 25 to 200 acres (USFWS, 2008). Individual

tortoises commonly traverse 1,500 to 2,600 feet per day within their home range, and males have been recorded to travel up to 0.6 mile within their home range (Berry, 1986). Desert tortoises disperse extended distances, up to 2.0 miles in 16 days and 4.5 miles in 15 months (Berry, 1986). Mojave Desert tortoises require 13 to 20 years to reach sexual maturity and have low reproductive rates (USFWS, 2008); individuals can live 50 to 100 years and have a long period of reproductive potential.

Threats to desert tortoise include a fatal respiratory disease; increases in raven populations that prey on juvenile tortoises; mortality associated with roads and off-highway vehicle use; and habitat destruction, degradation, and fragmentation. Populations have declined precipitously in some parts of the range, including areas within the Colorado Desert recovery unit such as the Chuckwalla Bench within the Chuckwalla ACEC (BLM, 2002).

Anticipated Take

It may become necessary to capture and move one or more desert tortoises from harm's way during project construction, constituting *take* as defined in the California Fish and Game Code Section 86 ("hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"). Therefore, the Applicant requests authorization to take up any adult, subadult, or juvenile desert tortoises or their eggs that are found on the site for the purpose of translocating them off-site, out of harm's way, during construction.

Wildlife protection measures and monitoring requirements identified in Section 9.0 (Proposed Mitigation) will minimize potential take of desert tortoise during construction and O&M. The Applicant does not anticipate lethal take during any phase of the Project. However, it is possible that accidental take may occur during either construction or O&M. Therefore, the Applicant requests authorization for take of desert tortoise during construction. Because the Project includes desert tortoise fencing, take is not anticipated during operations and maintenance and the Applicant is not requesting authorization for incidental take of Mojave desert tortoise during operations and maintenance nor decommissioning at this time.

7.0 Impact Analysis

The Project would impact the follow acres of natural habitat.

Table 2. Victory Pass Solar Project Impact Acres.

Vegetation and Habitat Types	Solar field, Substation& Storage	Gen-tie*	Access Road	Total
Sonoran creosote bush scrub	1,173.4	10	<6	1,189.4
Sonoran creosote bush scrub overlapping Critical Habitat	118	8	0	126
Desert pavement	18	3	0	21
Desert dry wash woodland	0.3	13	<1	14
Desert dry wash woodland overlapping Critical Habitat	0	16	0	16
Developed/disturbed overlapping Critical Habitat	0	2	0	2
Totals	1,310	52	7	1,369

* The gen-tie acres are for the full ROW. The actual acres impacted would be fewer. All gen-tie impacts for both the Arica and Victory Pass Projects are included in this table.

Additionally, the Pro[1-2][09][0-9][0-9]ject includes a shared access road(s). The access road will include use of existing roads only but may require ground disturbance to widen and improve it. The existing access road is between 14 and 30 feet wide and may require widening to 24 feet wide in some places which would require likely less than 7 acres of additional disturbance.

Without mitigation or avoidance measures, development of the Victory Pass Solar Project could cause mortality or injury to desert tortoises present during construction or O&M. Desert tortoises or eggs could be harmed during clearing or grading activities, or tortoises could become entrapped within open trenches and pipes. Project activities could also cause direct mortality, injury, or harassment of tortoises or eggs because of vehicle strike. Other direct effects could include individual tortoises or eggs being crushed or entombed in their burrows, disruption of tortoise behavior during construction or operation of facilities, disturbance by noise or vibrations from the heavy equipment, and injury or mortality from encounters with workers' or visitors' pets. Desert tortoises may also be attracted to the construction area by shade beneath vehicles, equipment, or materials, or the application of water to control dust, placing them at higher risk of injury or mortality.

These direct impacts to desert tortoises would be avoided through measures presented in Section 9.0 (Proposed Mitigation) of this application.

Without mitigation, Project construction and operation could create "subsidies" such as food, water, or nest sites, for common ravens. Ravens prey on juvenile desert tortoises, contributing to the overall decline in tortoise recruitment.

Project development would only minimally affect desert tortoise movement routes and access to habitat, due to existing barriers, road hazard, and habitat degradation.

The Project would minimally affect desert tortoise critical habitat as designated by the USFWS (southern and western portions of the Project site that are adjacent to the I-10 and other existing paved and unpaved roads).

8.0 Jeopardy Analysis

The USFWS and CDFW have issued take authorization for large-scale solar energy projects in the Project vicinity. The following jeopardy analysis is based on the USFWS Biological Opinion for the Palen Solar Project issued in 2018 (USFWS, 2018). Although the natural habitat impacts of the Victory Pass Solar Project are much smaller than the Palen Solar Project, and potential impacts to desert tortoise are proportionally less, the conclusions of the USFWS Palen Solar Project analysis are substantially applicable to the Victory Pass Solar Project. Based on the current status, environmental baseline for the Project area, effects of the proposed Project, and cumulative effects of the desert tortoise, the proposed Project is not likely to jeopardize the continued existence of the desert tortoise for the following reasons:

- The Applicant will implement numerous measures (see Section 9.0, Proposed Mitigation) to ensure that most tortoises are moved out of the project footprint and injury and death of tortoises is minimized (i.e., clearance surveys, exclusion fencing, relocation, translocation, and employing qualified tortoise biologists).
- The Applicant will manage potential subsidies such as trash and water to reduce the potential for increased predation by common ravens and will implement weed management and revegetation to reduce the spread of invasive, nonnative plants in the Project area.

- Given the small number of tortoises potentially affected by the Project, there is no information to indicate that development of the Project would appreciably reduce the tortoise population levels in the region.
- Few, if any, tortoises are likely to be injured or killed because of relocation or translocation.
- Though the Project would reduce the amount of available tortoise habitat and thereby result in a loss of habitat connectivity, habitat would remain to the west and east of the site to provide connectivity of tortoises in the long term.
- Movement of some tortoises into habitat adjacent to the Project site would allow those tortoises to remain in the population and contribute towards recovery of the species.
- Compensation requirements of acquisition and/or restoration/enhancement through the BLM and CDFW will result in a net increase in the quantity and quality of habitat managed for tortoise conservation.
- With implementation of the mitigation measures, the impacts of the Project are expected to be effectively minimized and offset and are not likely to diminish appreciably the conservation role and function of desert tortoise habitat in the Project area or the species' range.

9.0 Proposed Mitigation

This section lists the avoidance and minimization (i.e., biological resource protection) measures that would be implemented as part of the Victory Pass Solar Project. Implementation of these measures is expected to minimize and offset potential adverse effects to desert tortoise.

Mitigation measures are proposed to fully mitigate the Project's impacts to desert tortoises and their habitat, including any potential desert tortoise take. In summary, the Applicant Proposed Measures (APMs) and Mitigation Measures (MMs) will minimize the potential for take of desert tortoise and compensate for habitat loss. Several additional mitigation measures would minimize harm or mortality to desert tortoises and other wildlife, and minimize, mitigate, or offset adverse habitat impacts such as erosion or weed infestations. The Applicant will further ensure no inadvertent take prior to CDFW's issuance of the permit, as follows:

The following subsections provide lists and brief summaries of Applicant Proposed Mitigation Measures (APMs). They are organized to identify measures applicable during the construction phase (Section 9.1) and the operation and maintenance phase (Section 9.2). The Mitigation Measures are anticipated to be included in the EIR. The general measures are designed to minimize or avoid impacts to biological resources, including vegetation and habitat. Implementation of these measures will benefit multiple biological resources, including desert tortoise.

The summaries include APMs and additional MMs identified in the CDFW's Administrative Draft EIR (in prep.) as they apply to the desert tortoise.

In addition to the APMs and MMs, the BLM Proposed Action (i.e., gen-tie segments on BLM-administered lands) would be subject to Conservation Management Actions (CMAs) specified in the DRECP LUPA as applicable within Development Focus Areas. The private land components would not be subject to the DRECP CMAs. All applicable and non-applicable CMAs will be identified in the EA.

9.1 General Avoidance and Minimization Measures During Construction

Applicant Proposed Measures

APM BIO-1: Pre-construction Surveys. The Applicant will support pre-construction biological clearance surveys performed at all activity areas to minimize impacts on special-status plants or wildlife species.

APM BIO-2: Minimize Vegetation Removal. The Applicant will prepare a Project Revegetation Plan for areas temporarily impacted by construction and will make every effort to minimize vegetation removal and permanent loss.

APM BIO-5: Biological Monitors. Biological monitors will be assigned to the Project at key times during construction and locations. The monitors will be responsible for ensuring that impacts to special-status species, native vegetation, wildlife habitat, or unique resources will be avoided to the fullest extent possible. Where appropriate, monitors will flag the boundaries of areas where activities need to be restricted to protect native plants and wildlife, or special-status species. These restricted areas will be monitored to ensure their protection during construction.

APM BIO-6: Worker Environmental Education Program (WEEP). All construction crews and contractors will participate in WEEP training prior to starting work on the Project. The WEEP will include descriptions, locations, legal status and protections, and measures to avoid sensitive resources.

APM BIO-10: Vehicles and equipment shall be parked on pavement, existing roads, and previously disturbed areas to the extent practicable.

APM BIO-11: Speed Limit. Vehicles will not exceed 15 mph in ROWs or on unpaved roads within sensitive land-cover types.

APM BIO-13: Trash Removal. All human-related trash waste shall be contained and removed from the Project site.

APM BIO-14: Limit New Road Development. The development of new access and ROW roads and vegetation clearing will be minimized.

APM BIO-16: Habitat Management Plan. The Applicant will prepare and implement an operational Habitat Management Plan for the Project site to describe the management for sensitive biological resources found on the site.

APM BIO-19: To prevent harassment or mortality of special-status animals, or destruction of their habitats by dogs or cats, no pets should be permitted on project sites.

APM BIO-20: Removal of Food Waste. All food-related trash items will be contained and removed from the site each day.

APM BIO-22: Biological Representative. A representative shall be appointed as the main contact for any injuries or inadvertent kills, or the finding of injured or deceased special-status species within the Project site.

APM BIO-23: Sensitive-status Species Incident Reporting. Any injured or inadvertently killed special-status species shall be immediately reported to the biological representative, and then the representative will contact the USFWS by the end of the day (or beginning of next working day if the agency office is closed). Formal notification will also be provided in writing within three working days of the incident.

Mitigation Measures Identified in Administrative Draft EIR

- **Biological Monitoring (EIR MM BIO-1)**. Requires the Applicant to assign a Lead Biologist as the primary point of contact and Field Contact Representative (FCR) for the lead and resource agencies. Identifies a series of Lead Biologist responsibilities, including training and supervision of additional Biological Monitors, ensuring that all biological monitoring activities are completed properly and according to schedules, conducting and overseeing Worker Environmental Awareness Program (WEAP) training, and multiple related clearance survey, inspection, and reporting responsibilities.
- **Worker Environmental Awareness Training (EIR MM BIO-2).** Requires the Applicant to ensure that all workers at the site receive WEAP training. Specifies details of the WEAP training, including designation of authorized work areas, prohibition of activities outside designated areas, vehicle speed limits, handling hazardous substances, fire prevention, and other generalized environmental requirements. Includes ESA and CESA description and consequences of non-compliance and emphasizes special-status species including desert tortoise.
- **Minimization of Vegetation and Habitat Impacts (EIR MM BIO-3).** Requires delineating the limits of work and confining all disturbances, vehicles, and equipment to the fenced/flagged areas. Requires minimizing soil and vegetation disturbance to minimize impacts to soil and root systems, site cleanup, and hazardous materials handling and cleanup.
- **Integrated Weed Management Plan (EIR MM BIO-4).** Requires an Integrated Weed Management Plan (IWMP) to minimize or prevent invasive weeds from infesting the site or spreading into surrounding habitat. The IWMP will identify weed species occurring or potentially occurring in the Project area, means to prevent their introduction or spread (e.g., vehicle cleaning and inspections), monitoring methods to identify infestations, and timely implementation of manual or chemical (as appropriate) suppression and containment measures to control or eradicate invasive weeds.
- **Vegetation Resources Management Plan (EIR MM BIO-5).** Requires a Vegetation Resources Management Plan to revegetate temporarily disturbed areas to prevent further degradation and manage dust, erosion, and visual impacts; salvage cacti from public lands; and execute long-term vegetation management within the solar facility during its operations.
- **Compensation for Special-Status Species Habitat Impacts (EIR MM BIO-6).** The Applicant will acquire and protect, in perpetuity, compensation habitat to offset loss of natural habitat at ratios of 5:1 for desert dry wash woodland impacts, 1:1 for Sonoran creosote bush scrub and desert pavement impacts, and 5:1 for desert tortoise critical habitat.
- **Wildlife Protection (EIR MM BIO-8).** Requires multiple measures to avoid or minimize impacts to wildlife, such as wildlife avoidance; vehicle speed limits; minimizing lighting, noise and other disturbances; preventing water and food attractants; wildlife exclusion from work areas; avoiding entrapment; and handling and reporting dead or injured animals.
- **Desert Tortoise Protection (EIR MM BIO-9).** Requires an incidental take authorization, a Desert Tortoise Translocation Plan, a Raven Management Plan, a USFWS Authorized Biologist qualified to handle desert tortoises and conduct pre-construction clearance surveys, and construction phase desert tortoise exclusion fencing. Any observations of injured or deceased desert tortoise must be reported immediately to the Palm Springs Fish and Wildlife Office by email or telephone.
- **Gen-tie lines (EIR MM BIO-11)**. Requires structures to be designed to discourage their use by raptors for perching or nesting (e.g., by use of anti-perching devices), visually warn birds (permanent markers or bird flight diverters); and prevent electrocution.

- **Streambed and Watershed Protection (EIR MM BIO-14)**. Requires multiple Best Management Practices (BMPs) to minimize adverse impacts to streambeds and watersheds, such as preventing equipment operation in ponded or flowing water; preventing mud, silt, or pollutants from entering ephemeral drainages or being placed in locations that may be subjected to high storm flows, culvert or crossing designs; site clean-up; and siting of stationary equipment and vehicle maintenance work areas.

9.2 General Avoidance and Minimization Measures During Operation and Maintenance

Applicant Proposed Measures

APM BIO-5: Biological Monitors. Biological monitors will be present during key construction events and responsible for ensuring impacts to special-status species and native habitat will be avoided to the fullest extent possible, flagging-off sensitive resources as needed.

APM BIO-6: Worker Environmental Education Program (WEEP). All construction crews and contractors will participate in WEEP training prior to starting work on the Project. The WEEP will include descriptions, locations, legal status and protections, and measures to avoid sensitive resources.

APM BIO-11: Speed Limit. Vehicles will not exceed 15 mph in ROWs or on unpaved roads within sensitive land-cover types.

APM BIO-13: Trash Removal. All human-related trash waste shall be contained and removed from the Project site.

APM BIO-16: Habitat Management Plan. The Applicant will prepare and implement an operational Habitat Management Plan for the Project site to describe the management for sensitive biological resources found on the site.

APM BIO-20: Removal of Food Waste. All food-related trash items will be contained and removed from the site each day.

APM BIO-22: Biological Representative. A representative shall be appointed as the main contact for any injuries or inadvertent kills, or the finding of injured or deceased special-status species within the Project site.

APM BIO-23: Sensitive-status Species Incident Reporting. Any injured or inadvertently killed special-status species shall be immediately reported to the biological representative, and then the representative will contact the USFWS or CDFW as applicable by the end of the day (or beginning of next working day if the agency office is closed). Formal notification will also be provided in writing within three working days of the incident.

Mitigation Measures Identified in the Administrative Draft EIR

- **Biological Monitoring (EIR MM BIO-1)**. Requires the Applicant to assign a Lead Biologist as the primary point of contact and Field Contact Representative (FCR) for the lead and resource agencies. Identifies a series of Lead Biologist responsibilities, including train and supervision of additional Biological Monitors, ensuring that all biological monitoring activities are completed properly and according to schedules, conducting or overseeing Worker Environmental Awareness Program (WEAP) training, and multiple related clearance survey, inspection, and reporting responsibilities.

- **Worker Environmental Awareness Training (EIR MM BIO-2).** Requires the Applicant to ensure that all workers at the site receive WEAP training. Specifies details of the WEAP training, including designation of authorized work areas, prohibition of activities outside designated areas, vehicle speed limits, handling hazardous substances, fire prevention, and other generalized environmental requirements. Includes ESA and CESA description and consequences of non-compliance and emphasizes special-status plants potentially occurring in the area such as Emory's crucifixion thorn (*Castela emoryi*) or Harwood's eriastrum (*Eriastrum harwoodii*), desert tortoise, Mojave fringe-toed lizard, burrowing owl, golden eagle, nesting birds, desert kit fox, American badger, and burro deer.
- **Integrated Weed Management Plan (EIR MM BIO-4).** Requires an Integrated Weed Management Plan (IWMP) to minimize or prevent invasive weeds from infesting the site or spreading into surrounding habitat. The IWMP will identify weed species occurring or potentially occurring in the Project area, means to prevent their introduction or spread (e.g., vehicle cleaning and inspections), monitoring methods to identify infestations, and timely implementation of manual or chemical (as appropriate) suppression and containment measures to control or eradicate invasive weeds.
- **Vegetation Resources Management Plan (EIR MM BIO-5).** Requires a Vegetation Resources Management Plan to revegetate temporarily disturbed areas to prevent further degradation and manage dust, erosion, and visual impacts; salvage cacti from public lands; and execute long-term vegetation management within the solar facility during its operations.
- **Wildlife Protection (EIR MM BIO-8).** Requires multiple measures to avoid or minimize impacts to wildlife, such as wildlife avoidance; vehicle speed limits; minimizing lighting, noise and other disturbances; preventing water and food attractants; wildlife exclusion from work areas; avoiding entrapment; and handling and reporting dead or injured animals.
- **Gen-tie lines (EIR MM BIO-11)**. Requires structures to be designed to discourage their use by raptors for perching or nesting (e.g., by use of anti-perching devices), visually warn birds (permanent markers or bird flight diverters); and prevent electrocution.
- **Streambed and Watershed Protection (EIR MM BIO-14)**. Requires multiple Best Management Practices (BMPs) to minimize adverse impacts to streambeds and watersheds, such as preventing equipment operation in ponded or flowing water; preventing mud, silt, or pollutants from entering ephemeral drainages or being placed in locations that may be subjected to high storm flows, culvert or crossing designs; site clean-up; and siting of stationary equipment and vehicle maintenance work areas.

10.0 Mitigation Monitoring Plan

A Mitigation Monitoring and Reporting Program would be prepared and implemented for the Arica Project.

11.0 Mitigation Funding Sources

It is the financial obligation of Victory Pass I, LLC to fund all mitigation identified herein.

12.0 CEQA Documentation

The EIR is in preparation and is anticipated to be published in June 2021.

13.0 Certification

I certify that the information submitted in this application is complete and accurate to the best of my knowledge and belief. I understand that any false statement herein may subject me to suspension or revocation of this permit and to civil and criminal penalties under the laws of the State of California.

By: Victory Pass I, LLC

Signature: 

Name: John Woody

Title: Vice President

Date: July 1, 2021

14.0 Literature Cited

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Attachment 1
Figures

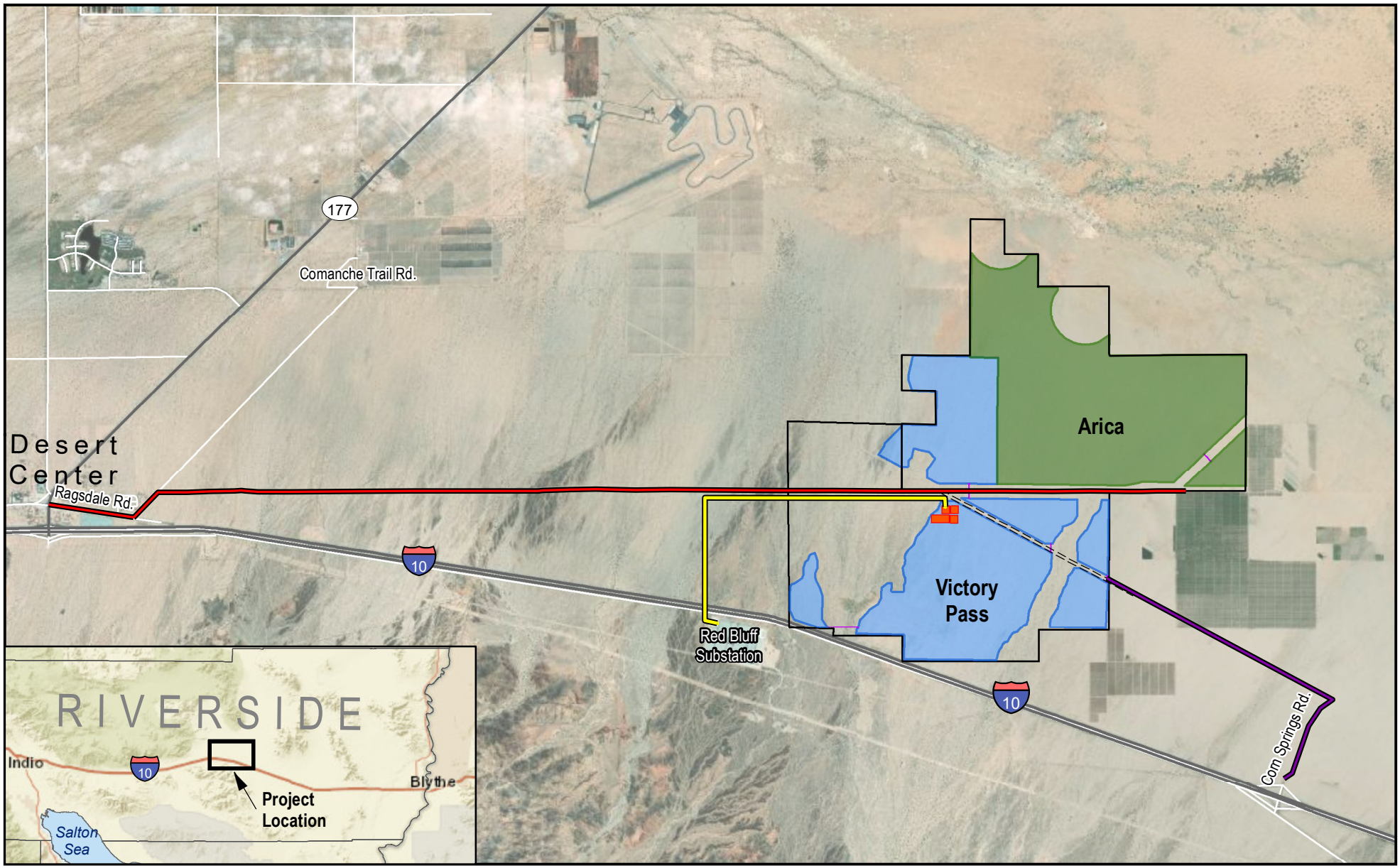
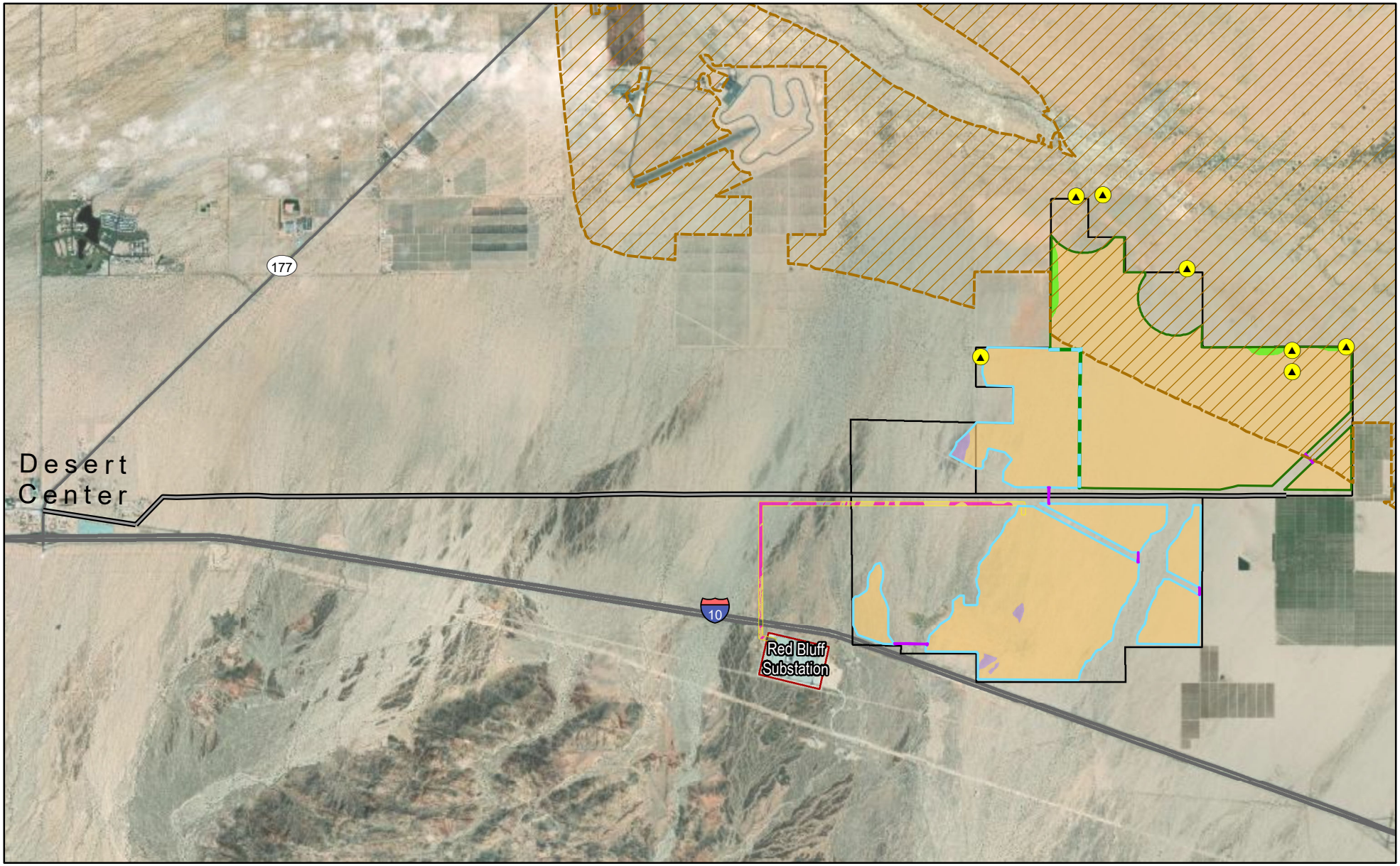


Figure 1
Proposed Arica and Victory Pass Projects

March 2021



Sources: Ironwood, 2020; DRECP, 2013

0 0.5 1

Scale in Miles

Project Area

Proposed Access Road

Shared Gen-tie Line

Shared Fenceline

Arica Fenceline

Victory Pass Fenceline

Project Roads

Vegetation and Cover Types

Desert Pavement

Developed/Disturbed

Dry Desert Wash Woodland

Saltbush Scrub

Sonoran Creosote Bush Scrub

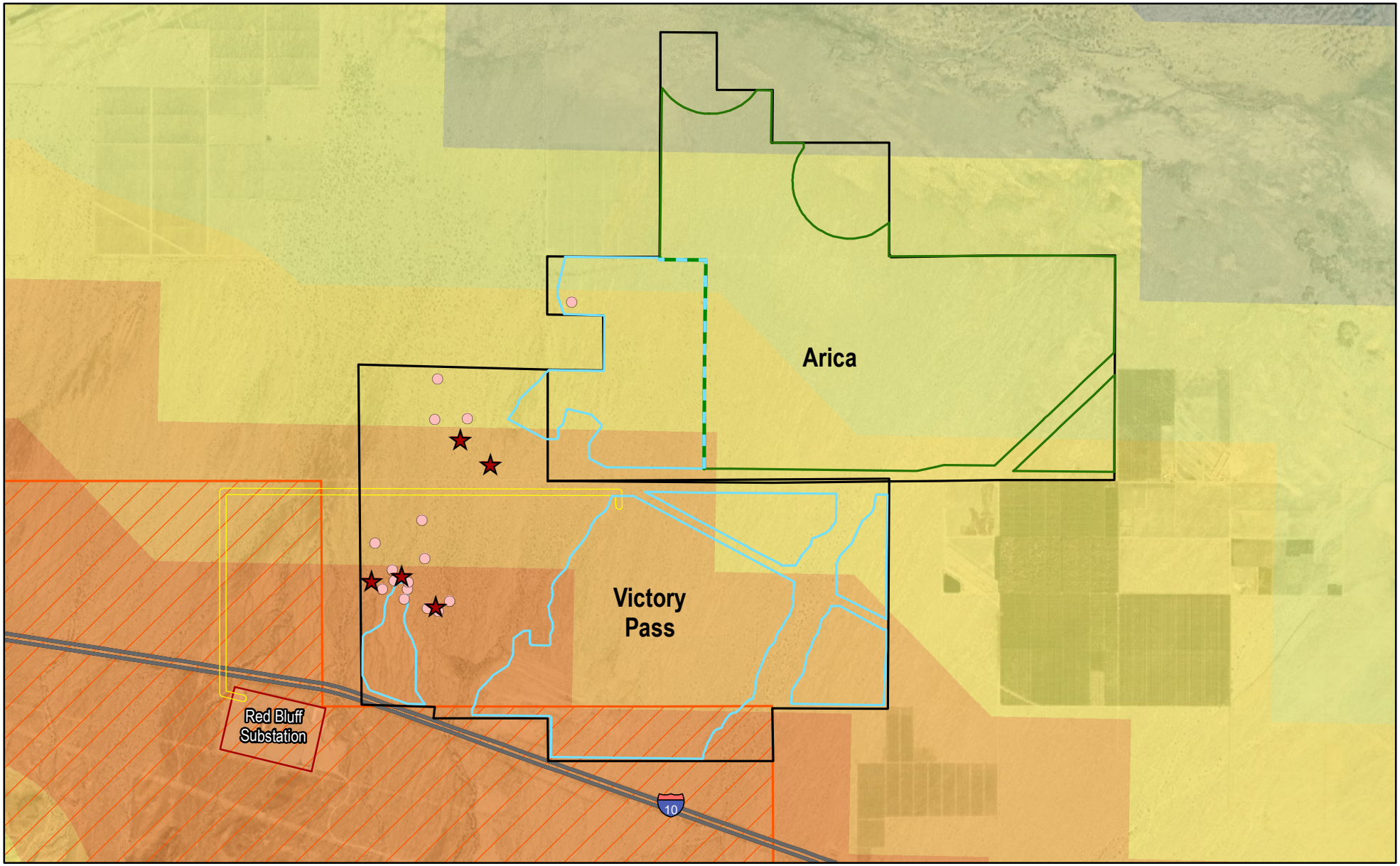
Couch's Spadefoot Toad Potential Habitat

Mojave Fringe-toed Lizard Species Distribution Model

Figure 2

Vegetation and Habitat

March 2021



Source: Ironwood, 2020; Nussear, et. al. 2009

0 0.5 1

Scale in Miles

Project Area

Shared Fenceline

Arica Fenceline (approximately 1,355 acres)

Victory Pass Fenceline (approximately 1,308 acres)

Shared Gen-tie Line

Desert Tortoise Sign

Live Desert Tortoise

Desert tortoise critical habitat

Predicted Desert Tortoise Occupancy

0.1 - 0.2

0.2 - 0.3

0.3 - 0.4

0.4 - 0.5

0.5 - 0.6

0.6 - 0.7

Figure 3

Desert Tortoise Observations and Sign

March 2021

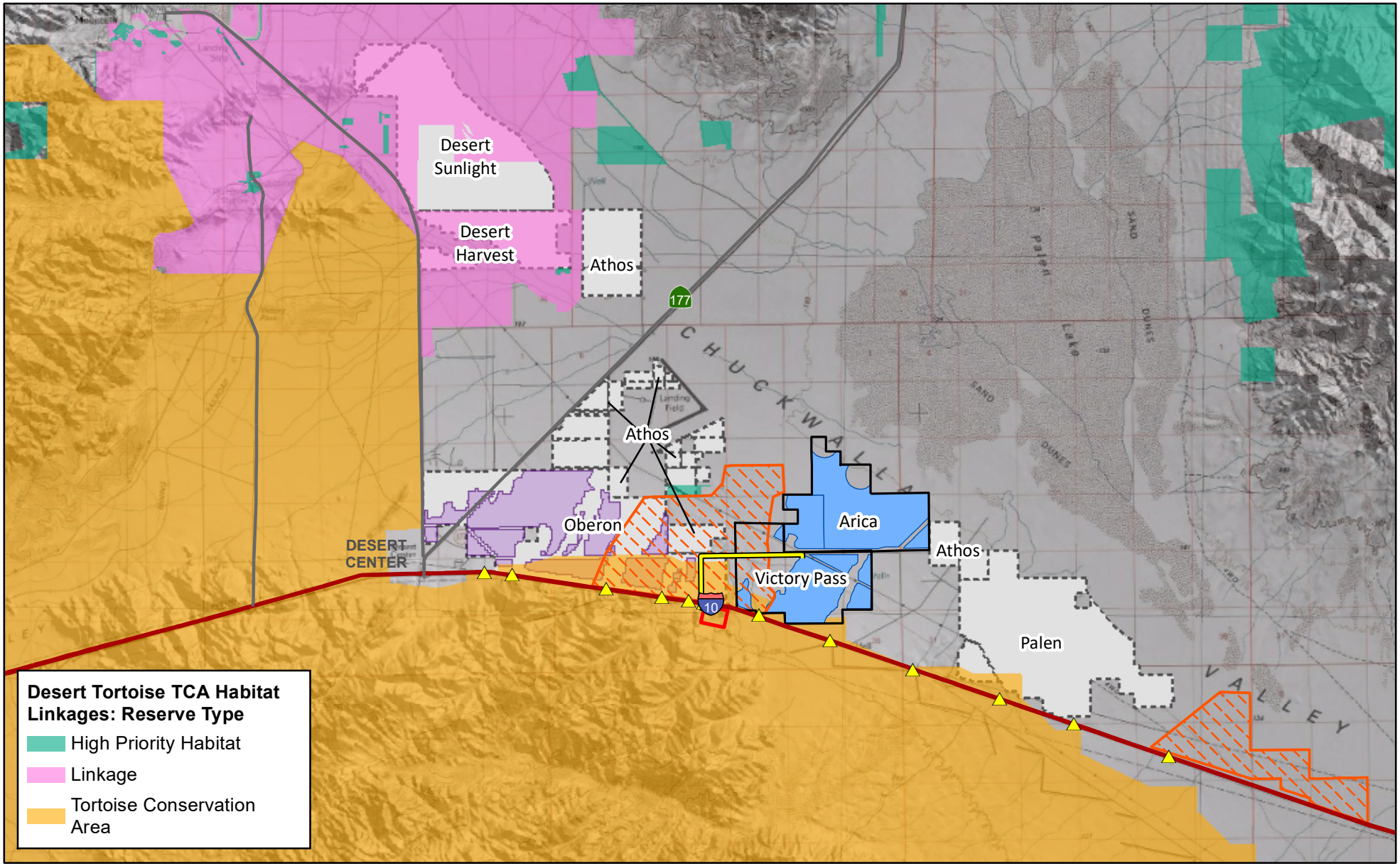


Figure 4

Habitat Connectivity

February 2021