Appendix Q

RAVEN MANAGEMENT PLAN

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Easley Renewable Energy Project

Prepared for

Intersect Power

IP Easley I, LLC,
IP Easley II, LLC, &
IP Easley III, LLC
subsidiaries of Intersect Power, LLC

Submitted by

Aspen environmental group

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

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ATTACHMENTS

LIST OF ACRONYMS

AC	alternating current
BLM	Bureau of Land Management
BO	Biological Opinion
CDCA	California Desert Conservation Area
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
DFA	Development Focus Area
DPV	Devers–Palo Verde
DRECP	Desert Renewable Energy Conservation Plan
DSSF	Desert Sunlight Solar Farm
DWMA	Desert Wildlife Management Area
FEIS	Environmental Impact Statement
I-10	Interstate 10
ITP	Incidental Take Permit
kV	kilovolt
LUPA	Land Use Plan Amendment
MW	megawatt
MWD	Metropolitan Water District of Southern California
NECO	Northern and Eastern Colorado Desert Coordinated Management
NEPA	National Environmental Policy Act
O&M	Operations and Maintenance
PV	solar photovoltaic
SCE	Southern California Edison
SR 177	State Route 177
TCA	Desert Tortoise Conservation Area
USFWS	United States Fish and Wildlife Service
WEAP	Worker Environmental Awareness Program

1. INTRODUCTION

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

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

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

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

This Raven Management Plan has been prepared to conform to the Desert Renewable Energy Conservation Plan (DRECP) Conservation and Management Action (CMA) LUPA-BIO-6 (Subsidized Predators Standards). Ravens are predators of juvenile desert tortoises, which are federally and state listed as endangered, and thrive in areas of human activity. The Project site supports suitable desert tortoise (*Gopherus agassizii*) habitat, and sign has been observed. Common raven (*Corvus corax*) occurs throughout the region, and is the only raven species in the area. The terms “raven” and “common raven” are used interchangeably in this plan. Native birds, including the common raven, are protected from take under the federal Migratory Bird Treaty Act and California Fish and Game Code Sections 3503 and 3513. This Plan conforms to these statutes.

This Plan will be implemented by IP Easley I, LLC, IP Easley II, LLC, and IP Easley III, LLC (or any future Project owner) to prevent unwanted indirect impacts of the Project to the resident desert tortoise population. The Applicant will also submit payment to the Project sub-account of the Renewable Energy Action Team (REAT) Account held by the National Fish and Wildlife Foundation (NFWF) to support the Service’s Regional Raven Management Program. The one-time fee will be as described in the cost allocation methodology, or more current guidance as provided by the Service or CDFW. The contribution to the regional raven management plan will be $105 per acre impacted. Please also see the Project Desert

Tortoise Protection and Translocation Plan (see POD Appendix I) for additional desert tortoise protection measures.

At the direction of the BLM, Riverside County, CDFW, and/or U.S. Fish and Wildlife Service (USFWS), this Plan may be revised to conform to requirements of: (1) mitigation requirements of the Project's Final Environmental Impact Report or Environmental Assessment, (2) any USFWS Biological Opinion (BO) or CDFW Consistency Determination or Incidental Take Permit (ITP) issued for the Project, (3) any revisions to relevant mitigation measures (MMs) that may be adopted in the BLM Decision Record and/or by Riverside County, or (4) any further direction from the resource agencies.

2. BACKGROUND

Predation by ravens has become a major problem for some tortoise populations. Common raven populations in the California desert have increased in response to expanding human land uses, as ravens habituate to human activities and are subsidized by human-provided resources including food (e.g., trash, road killed animals), water (irrigation or dust control overspray), and perching, roosting, and nesting sites (transmission towers and other structures). The increased raven population has caused the level of raven predation on juvenile desert tortoises to increase unnaturally as evidenced by direct observations, remains of tortoise carcasses under raven nests, and carcasses with distinctive raven damage (USFWS, 2011; Boarman, 1992).

Common ravens regularly nest, roost, or perch on structures such as buildings, fences, and the steel lattice towers of transmission lines. From these perches, they often feed opportunistically on road-killed animals or live prey such as reptiles and small mammals that cross open, disturbed areas. The majority of raven predation on tortoises can be expected during the spring (April and May) when tortoises are most active, and ravens are feeding their young (Boarman, 2003), and whereby the establishment of a new nest can have significant adverse effects on the local juvenile tortoise population. Ravens feeding chicks spend most of their time foraging within 400 meters (1/4 mile) of their nest (Boarman, 2002a; Kristan and Boarman, 2003).

2.1. Biological Context

Common ravens and desert tortoises may use all habitats in and around the Project site, including Sonoran creosote bush scrub and desert dry wash woodland, a subtype of microphyll woodland (POD Appendix G [Ironwood, 2022]). Desert tortoise habitat has the highest predicted occupancy levels of 0.5-0.6 in the southwest portion of the Project site, per the desert tortoise occupancy model (Nussear et al., 2009). The areas with higher occupancy levels are also closest to desert tortoise conservation areas. Most of the desert tortoise sign was also concentrated within the southwest portion of the Project site. No live desert tortoises or active sign were documented. Nine locations of tortoise class 4 or class 5 carcasses were observed.

The Project area overlaps with a DRECP-designated multi-species linkage within the gen-tie line ROW and a desert tortoise linkage (Pinto Wash linkage) within the solar facility site. The Project site is outside of, but adjacent to, desert tortoise critical habitat, which is located approximately 0.8 mile west of Kaiser Road (see POD Appendix I, Figure 8).

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

Due to the modelling, the lack of active sign, and the surrounding land uses, the expectation for desert tortoise occupancy on the Project site is moderately low. However, there is potential for desert tortoises, including juveniles, to occur given the proximity of the Project site to DRECP linkages, desert tortoise critical habitat, ACECs, and Joshua Tree National Park.

2.2. Existing and Potential Raven Subsidies in the Project Area

There are numerous anthropogenic (human-caused) subsidies for ravens and other predators already present in the Project vicinity. Thus, tortoises may already be subject to elevated raven predation. Existing subsidies are shown on Figure 4 in POD Appendix A and include:

- **Roads.** There are multiple roads and highways in the upper Chuckwalla Valley, including Interstate 10 (I-10) to the south, State Route 177 (SR 177) to the east, and Kaiser Road to the west. Maintained and unmaintained dirt roads also traverse the area surrounding the Project site. Roadkill and food waste are common along roads.
- **Lake Tamarisk Golf Club, housing development, and artificial lakes**. Lake Tamarisk Resort is located adjacent to the solar facility site at the southwestern Project boundary. This community provides subsidies that would not otherwise be available to ravens. The golf course, lakes, and pool provide water subsidies, and the camping and housing areas likely provide food subsidies such as uncovered trash and pet food. Further, the community is landscaped with trees that provide nest and roost sites.
- **Eagle Mountain community.** The inactive Eagle Mountain Mine was active from 1948 through the 1980s, and there is still a small community near the inactive quarry. The former mining site is located approximately 6.5 miles from the Project site and the present community continue to provide potential raven subsidies, such as nesting and roosting substrates on quarry rock faces; disused structures; and still-active housing, transmission lines, and a school. Trash and irrigation water sources could also provide food and water subsidies for ravens.
- **Other local communities.** A few buildings, including a former café and a general store are present in the rural community of Desert Center. Much like the nearby community of Lake Tamarisk, Desert Center has a small population that provides subsidies for ravens, including nesting sites on structures and landscaped trees, water tanks that may provide a water source for ravens, and the potential for trash as a food source.
- **Chuckwalla Valley Raceway.** The former Desert Center Airport has been redeveloped for use as a private automotive racetrack, with spaces for recreational vehicles. The raceway is located approximately 1.25 miles from the Project site and use of the facility could lead to trash or water subsidies, and structures on the site provide potential nest, roost, or perch sites.
- **Adjacent Solar Projects.** Several solar projects in the vicinity are either constructed, under construction, or under agency review and may be built in coming years. These include Desert Sunlight, Desert Harvest, Athos I and II, Arica and Victory Pass, Oberon, and Sapphire. The potential raven subsidies at these projects are similar to those described in Section 3.0 of this Raven Management Plan, and are being mitigated or minimized through similar measures under mitigation described in those project environmental documents (NEPA/CEQA) (BLM, 2011, 2012, 2022). Like the Easley Project, these projects would incorporate similar measures to minimize raven activity.
- **Utility Infrastructure and Transmission Lines.** There are numerous transmission lines and other utility infrastructure throughout the upper Chuckwalla Valley that provide nesting, roosting, and perching sites for ravens. An SCE 161 kV transmission line crosses Eagle Mountain Road, Kaiser Road, and Desert Center Rice Road from the northwest to the southeast, from about 1 mile north of the Eagle Mountain Substation toward Blythe. The SCE Devers–Palo Verde (DPV) transmission line crosses the valley parallel to the I-10 Freeway. The DPV2 transmission line is parallel to the existing DPV transmission line (raven

subsidies from DPV2 would be mitigated or minimized according to measures described in that project's Biological Opinion). The Metropolitan Water District (MWD) of Southern California operates the Eagle Mountain Substation west of the Project site, as well as the 230 kV transmission line and 33 kV distribution line along Powerline Road (BLM, 2011). The MWD's Colorado River Aqueduct and its components may supply water subsidies to ravens. Other local utility infrastructure such as waste management and telecommunications may also subsidize ravens in the area.

It is the intention to obtain data from, and share data with, the surrounding, active solar projects to learn more about raven impacts and subsidies.

3. POTENTIAL EASLEY PROJECT SUBSIDIES AND SUBSIDY CONTROL MEASURES

The following section describes the potential raven subsidies that could occur during all phases of the Easley Renewable Energy Project. These potential subsidies, along with the Applicant's subsidy control and monitoring measures, are summarized in Table 1. These measures will be implemented and monitored by a pre-approved Lead Biologist and Biological Monitors (see Section 4).

Table 1. Project Subsidies and Subsidy Control Measures

Subsidy	Subsidy Control Measures
Food Sources	
Trash and Waste Management (Construction, O&M, Decommissioning). Food waste can become a raven subsidy if it is either left on the ground (i.e., litter) or left in accessible open containers. Food waste is a potential raven subsidy during all phases of the Project, including operations when the workforce would be small.	The Applicant will ensure that all workers or visitors to the facility dispose of all food waste, wrappers, and any other trash that could subsidize or attract ravens, in self-closing raven-proof containers. The only exception will be for temporary waste storage kept within closed vehicles until the end of a shift. No food or food waste will be combined with uncovered construction waste or debris, and workers will not be permitted to dispose of food waste or trash in piles or containers of construction debris. At least one self-closing waste container will be located at any break area, any temporary or permanent building, and in parking areas and any other area where workers or visitors congregate. During Project construction, waste containers will be checked daily and emptied regularly. Any food waste temporarily stored on site will be kept indoors (e.g., in a temporary construction management office or permanent O&M structure) or enclosed within inaccessible dumpsters or similar containers. All waste will be regularly removed from the site and disposed of in a licensed landfill. The Applicant will also ensure that all work vehicles will carry strong garbage bags for collection of any refuse found on site. At the end of each day, staff will place bagged refuse into the inaccessible containers.
Surface Disturbance (Construction, O&M, Decommissioning). Grading during site preparation, O&M, and decommissioning phases can injure or kill wildlife, especially small mammals, and reptiles, and can unearth burrowing animals. These animals can provide a food subsidy for ravens. Grading and other earthwork will be most prevalent during the construction and decommissioning Project phases. Grading activities during O&M will be minimal and generally	The Applicant will minimize injury and mortality to animals during all Project phases by relocating wildlife from harm's way as feasible during ground-disturbing activities, minimizing traffic and vehicle impacts, avoiding pitfalls or other traps to wildlife, and reporting injured or dead animals and disposing of road-killed animals. In addition, IP Oberon, LLC's Lead Biologist and Biological Monitors will collect and dispose of any animal remains found in any part of the Project area throughout the life of the Project.

Subsidy	Subsidy Control Measures
limited to access route maintenance or repair.	
Roadkill on Access Roads (Construction, O&M, Decommissioning). The Project will account for increased traffic along paved access routes between I-10 and the Project site. The traffic increase will be greatest during construction and decommissioning phases, when the workforce and equipment and materials deliveries and pickups are greatest. In addition, vehicle traffic on unpaved roads throughout the site may cause roadkill during all phases of the Project, but especially during construction and decommissioning phases due to higher vehicle traffic volume. Road killed wildlife, including small to medium-sized mammals, reptiles, and (uncommonly) birds, all may serve as raven food subsidies.	The Applicant will limit vehicle speeds and check beneath vehicles on Project-related roads where desert tortoise exclusion fencing, and surveys have not been completed and report or dispose of dead or injured wildlife.
Standing or Ponding Water	
Dust abatement (i.e., road watering during construction, O&M, and decommissioning)	The Applicant will minimize water usage for dust control and will monitor to identify and correct standing water conditions as needed.
Leaking pumps, water lines, storage tanks during construction, O&M, and decommissioning	The Applicant will ensure that water tanks are sealed and free of leaks at all times, and that trucks are not overfilled. The Applicant will direct all workers to report any water leaks. Any leak causing standing surface water that could be available to ravens will be promptly repaired. The Applicant's Lead Biologist and Biological Monitors will be directed to note any leaking or standing water, for inclusion in regular monitoring reports.
Irrigation for landscaping and revegetation during construction, O&M, and decommissioning	If irrigation is used at any revegetation or landscaping site, the Applicant will monitor and manage the irrigation to use only the minimum amount of water needed, and no accumulation of standing surface water would be allowed to occur.
Solar panel washing (O&M)	Maintenance crews will use only the minimum amount of water needed for panel washing. The wash water will be allowed to run off the panels to the ground below where it is expected to percolate into the soil. No ponding or standing water is expected to result from panel washing. The Applicant's Lead Biologist and Biological Monitors will be directed to note any standing water resulting from panel washing, for inclusion in regular monitoring reports.
Wastewater (e.g., food preparation, restrooms, hand washing; during construction, O&M, and decommissioning)	No ponding or standing water is expected to result from domestic water use. Wastewater from food preparation, rest rooms, hand washing, or other sources during construction, O&M, or decommissioning would be managed according to requirements of the Riverside County Department of Environmental Health. The Applicant's Lead Biologist and Biological Monitors will be directed to note any standing water around Project facilities, for inclusion in regular monitoring reports.

Subsidy	Subsidy Control Measures
Nesting, Roosting, and Perching Sites	
Project Facilities and Structures (Construction, O&M, Decommissioning). All Project facilities, including gen-tie line towers, solar panels, fences, structures, and electrical infrastructure may provide nesting, roosting, or perching site subsidies throughout the life of the Project.	Gen-tie support structures and other facility structures will be designed in compliance with current standards and practices to discourage their use by raptors for perching and nesting (e.g., by the use of anti-perching devices). This design will also reduce the potential for increased predation of special-status species, such as the desert tortoise. If nesting does occur, the Applicant will coordinate with CDFW and USFWS to remove inactive raven nests or other suitable stick nests consistent with gen-tie operation safety and with applicable regulations, and by minimizing availability of food and water subsidies throughout the Project facility. No nesting platforms or similar structures will be installed on the structures. However, ravens cannot be fully prevented from nesting, roosting, or perching on Project facilities. In compliance with the federal Migratory Bird Treaty Act and California Fish and Game Code Sections 3503 and 3513, the Applicant will not remove active bird nests at any time. Instead, the CDFW and USFWS will be notified of any active raven nests on Project facilities, and the Lead Biologist or Biological Monitors will monitor the nests to identify any evidence of predation on desert tortoises. As permitted by the USFWS Regional Office, ravens and/or nests may be removed after submittal and approval of a Federal Migratory Bird Depredation Permit (50 CFR 21.100) (see Section 4, below).

4. MONITORING

4.1. Lead Biologist and Biological Monitors

The Project's Lead Biologist will be responsible for implementing and managing the monitoring plan described below and providing monitoring reports to the Applicant, BLM, Riverside County, CDFW, and USFWS. Many of the monitoring tasks may be completed by Biological Monitors, overseen by the Lead Biologist. Specific qualifications for the Lead Biologist and Biological Monitors are provided in the mitigation measures presented in Attachment 1.

The biological monitoring team would consist of:

- **Lead Biologist:** The Applicant shall assign a Lead Biologist, approved by BLM, Riverside County, CDFW, and USFWS as the primary point of contact for the BLM and resource agencies regarding biological resources mitigation and compliance.
- **Biological Monitor:** Biological monitors will be overseen by the Lead Biologist and will perform any required surveys, ground disturbance and construction monitoring, wildlife monitoring, inspections, marking sensitive resource buffers, and revegetation monitoring during Project activities. Biological monitors would include trained desert tortoise monitors and nest monitors.
- **Authorized Desert Tortoise Biologist:** For desert tortoise protection measures, the Applicant will nominate a qualified individual to serve as Authorized Desert Tortoise Biologist, for approval by the USFWS.

4.2. Monitoring Tasks: Food and Water Subsidies

Daily construction and decommissioning monitoring: The Lead Biologist, Biological Monitor, or another compliance monitor (supervised and assigned by the Lead Biologist) will conduct daily monitoring inspections of Project activities and potential subsidies (e.g., trash containers, water lines) throughout the solar facility site and gen-tie route during the construction and decommissioning phases of the Project. In addition, they will periodically inspect any Project activities or potential raven subsidies on the solar facility site and gen-tie alignment during any O&M activities. Inspections may be skipped on holidays or weekends only if no Project-related activities are scheduled; otherwise, inspections will be made daily. The Lead Biologist, Biological Monitor, or compliance monitor will complete a daily monitoring report form, to confirm inspection of items listed below. A draft report form is provided (see Attachment 2). Daily inspections will include the following:

- Trash receptacles (locking lids; any exposed or overflowing trash)
- Food waste or food-related trash on ground or open vehicle (any time or location)
- Trash storage area (dumpsters)
- Vehicle speed (vehicle description, license number or other ID, time, and location)
- Standing water (any time or location, including tanks, pumps, pipes, irrigation sites, trucks, road watering, and panel washing areas)
- Dead or injured animals (any time or location)
- Raven observation (record time, date, location, number of ravens, and activity for each raven observation)

In addition to daily inspections, the Lead Biologist or Biological Monitor will be responsible for the following activities to minimize food subsidies for ravens:

- During all soil disturbing activities, attempt to relocate animals from the area prior to disturbance, and remove any dead or injured wildlife from the work area
- Remove road killed or injured wildlife on direction from CDFW

Daily monitoring logs will be submitted to the Site Supervisor upon completion of monitoring tasks. The log will include fields to confirm inspection of each facility. For any facility or condition in need of review or repair, the log will include fields to record the location, date and time of inspection, and any specific problem. The Lead Biologist or Biological Monitor will also highlight any condition or facility in need of correction for the Site Supervisor's attention. Completed daily logs will be available to the Lead Biologist and Biological Monitors during follow-up monitoring visits. Follow-up daily inspections will document correction of the problem. All daily monitoring logs will be included as electronic attachments to the annual monitoring reports. Success criteria for all these daily tasks will be that each problem identified/ reported will be corrected or resolved within 24 hours or one full working day after the daily report is filed.

During Project O&M, Project personnel will identify and correct potential raven subsidies (food waste, water leakage, etc.) as part of routine O&M activities.

4.3. Monitoring Tasks: Raven Nesting or Nest Availability

Preconstruction Raven Monitoring: As outlined in the Nesting Bird Management Plan (NBMP) (see POD Appendix M), any nesting surveys involving passerines should be conducted within 4 days of the initiation of any vegetation clearance or grading, whereas surveys involving raptors will be within 7 days prior. An additional preconstruction survey will be conducted immediately prior to initial Project-related ground disturbing activities to confirm no new nests are found. These surveys will confirm the presence/absence of all nesting birds.

Nest Monitoring. Project biologists will complete nest searches of Project facilities and within a 0.25-mile radius as part of normal site maintenance and line patrols of the gen-tie line. A 0.25-mile radius would include nearby raven nests that, although not within the Project footprint, could have impacts to desert tortoise within the Project footprint. Raven monitoring (nests/individuals) would be part of the quarterly inspections as required by the NBMP (see POD Appendix M). Any raven nest or possible raven nest will be recorded on data forms provided in the Bird and Bat Conservation Strategy (see POD Appendix M). Any nesting activity observed incidentally on non-Project trees or structures, such as parallel transmission or distribution lines, or ornamental trees will also be noted. The Lead Biologist or Biological Monitor will follow-up to document the progress and success of any stick nests on the structures and inspect for any evidence of predation on desert tortoises. All nest monitoring data will be summarized in annual reports and the data itself will be provided in electronic format as an electronic appendix.

The Lead Biologist will report any active raven nest to the Applicant, BLM, Riverside County, CDFW, and USFWS. The Lead Biologist will also report any evidence of raven predation on desert tortoises to the agencies.

Nest Removal. During early nest construction and before eggs are present, or after nesting activity has ceased at any stick nest suitable for future use by common ravens on Project facilities, the Lead Biologist will coordinate with CDFW, USFWS, and the Applicant to remove the nests, consistent with operation safety and applicable regulations. Nest removal will be supervised and confirmed by the Lead Biologist or Biological Monitor and reported in the annual monitoring report. As part of annual operations training, construction crews are trained to notify biologists if they identify nests and to not remove or touch any nests.

Errors can occur related to false positive or negative nesting determinations, misidentification of species, and variable searcher's efficiency. In order to account for errors, biologists will take the necessary time to ensure that all determinations are as accurate as possible. Additional biologists may be included to confirm nesting status or species identification and nest removal may be delayed until determinations can be confirmed.

Based on nest monitoring and evidence of raven predation on desert tortoises, the Lead Biologist may determine that non-lethal raven deterrents are unsuccessful and that lethal control methods are necessary. If so, the Lead Biologist may recommend that a Federal Migratory Bird Depredation Permit be obtained to remove ravens and/or active nests. The USFWS issues Federal Migratory Bird Depredation Permits (50 CFR 21.100) (USFWS, 2023) to individuals and entities for lethal take of migratory birds to reduce depredation (damage or loss caused by birds), including threats to recovery of protected wildlife. These permits designate the species, methods, and the number of birds that may be taken, and are valid for the individuals named on the permits, permit locations, and dates of the permit. Submittal of an annual report form is required to document any lethal control activities. For full details on permit application and reporting requirements, see 50 CFR 21.100 (USFWS, 2023).

4.4. Reporting

During construction and decommissioning, the Applicant will submit annual reports to BLM, Riverside County, CDFW, and USFWS no later than December 31 of each year, documenting monitoring and management measures undertaken during the year, and comparing raven activity to previous years. The first year's observations of raven activity will serve as the baseline data for comparison with future years. Reports will include all observations for O&M activities.

The annual report will include:

- Summary of raven observations and behavior (from daily monitoring report forms)
- Summary of annual nesting season monitoring, including locations and species for all observed stick nests on Project facilities and within 0.25 mile
- Documented raven nesting, roosting, and perching locations
- Number and locations of any stick nests removed from Project facilities
- Recommendations by the Lead Biologist for improving raven management

All monitoring data will be provided electronically. The report itself will be brief, describing any deviations from monitoring requirements in this Plan and summarizing any problems and how they were corrected. For nest monitoring, reports will list dates of fieldwork and map locations (GPS coordinates) of all nests found; for each nest, the name of the species, the active dates, and the eventual result of the nest (such as abandonment or fledged young) will be recorded.

During Project O&M, observations of active raven nests and evidence of raven predation on juvenile tortoises will be reported to the Project contacts at BLM, Riverside County, CDFW, and USFWS by an electronic mail message within 2 days of the observation. Quarterly compliance inspections and reporting will be submitted to the BLM, to document the condition of exclusion fencing, wildlife mortality, and any biological resource issues of note.

During O&M, a compliance monitor may perform the duties of the Lead Biologist, as approved by BLM, Riverside County, CDFW, and USFWS, to ensure that they are adequately trained to carry out the appropriate activities. The monitor would ensure compliance with biological mitigation measures, such as performing inspections for entrapped wildlife and fence condition, reporting dead or injured wildlife, and avoiding nesting birds.

To be able to understand year-to-year comparisons of raven data, the Lead Biologist will include statistical analyses in the annual reports beginning with basic statistics such as frequency distribution, analysis of variance, and significant difference tests. Later, when more data has been collected, a more robust analysis will be included after reviewing the site-specific field data collected within the first couple years. Any data and analyses will be included in the annual report for the year in which it was gathered.

5. ADAPTIVE MANAGEMENT

Adaptive management measures may be necessary if the Project facilities and related activities provide significant unavoidable subsidies to ravens as quantified during bird surveys and compliance monitoring, or if a future increase in local raven nesting activity is observed and attributable to the Project. Baseline surveys that occurred between 2019 and 2022 will be used to detect any increase. Unavoidable subsidies could include nesting, roosting, or perching sites on Project facilities. If raven monitoring data indicate a clear increase in local raven nesting activity attributed to the Project, then the Applicant and its Lead Biologist will confer with the BLM, Riverside County, CDFW, and USFWS to develop and implement further raven control measures. Adaptive management measures may include additional worker education, more stringent restrictions on water use or trash disposal, installation of nest-prevention or roost-prevention devices on Project facilities (depending on availability of effective devices), or specific measures to “haze” ravens from Project facilities or subsidies. Hazing is only used if ravens become a nuisance to desert tortoises or other bird species and would be implemented on a case-by-case basis.

6. EDUCATION

The Applicant will prepare and implement a Worker Environmental Awareness Program (WEAP). The WEAP will include the following specific instructions for on-site workers to prevent or minimize raven subsidies:

- Review of raven biology, including desert tortoise predation and dependence on human subsidies.
- Specific responsibilities and consequences for all workers.
- Trash and food waste disposal and control.
- Reporting road killed wildlife, water leaks, or other subsidies.

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Attachment 1

MITIGATION MEASURES

TO BE COMPLETED DURING NEPA/CEQA PROCESSES

Attachment 2

COMMON RAVEN MANAGEMENT PLAN DAILY MONITORING FORM

General Location:		Date:	
		Surveyor:	

Checked? Y/N	Task	Compliance? Y/N	If non-compliance, Issue and Location	How was the issue Resolved?
	Trash Receptacles (locking lids, exposed or overflowing trash)			
	Dumpsters (locking lids, exposed or overflowing trash)			
	Vehicle speed (limit on project roads: 15 mph; note vehicle number/description)			
	Standing water (any time or location: tanks, pumps, pipes, irrigation sites, trucks, road watering, and panel washing areas)			
	Evaporation pond netting and wildlife access prevention			
	Dead or injured animals (list species; any time or location)			

Date and Time	Location, GPS Coordinates	Number Observed	Activities Observed