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Subject: 09-AFC-5C
Condition Number: BIO-5, CUL-5, PAL-4
Description: Worker Environmental Awareness Program (BIO, CUL, and PAL)
Submittal Number: BIO5-01-02

March 9, 2011

Joe Douglas, CPM
(09-AFC-5C)
California Energy Commission
1516 Ninth Street (MS-2000)
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Dear Mr. Douglas,

Attached for you review and approval is the Worker Environmental Awareness Program (WEAP) covering biological, cultural, and paleontological resources, pursuant to Conditions of Certification BIO-5, CUL-5, and PAL-4. It has been revised in response to Biological Resources staff comments received from the CEC on March 7, 2011.

Thank you.

Matt Stucky, PE
ABENGOA SOLAR
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Attachment: WEAP training materials (BIO, CUL, and PAL)

**WORKER ENVIRONMENTAL
AWARENESS PROGRAM (WEAP)
FOR THE MOJAVE SOLAR PROJECT,
SAN BERNARDINO COUNTY, CALIFORNIA**



Prepared for:

Mojave Solar, LLC
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March 2011

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INTRODUCTION

The Mojave Solar Project (Project) is a solar electric-generating facility to be located on approximately 1,765 acres in unincorporated San Bernardino County, California, approximately 26 miles northwest of Barstow. Mojave Solar LLC (Mojave Solar), a subsidiary of Abengoa Solar Inc. will own and operate the Project. The Project is committed to avoid, minimize, and compensate for adverse impacts to sensitive resources.

Mojave Solar filed an Application for Certification (AFC) with the California Energy Commission (CEC) for the Project on August 10, 2009. CEC issued a Final Permit Decision adopting the Presiding Member's Proposed Decision (PMPD) to recommend licensing the Project on September 8, 2010. The PMPD issued by CEC for the Project includes three conditions of certification (BIO-5, CUL-5, and PAL-4) that require the development and implementation of a Workers Environmental Awareness Program (WEAP). In accordance with these conditions, Mojave Solar prepared this WEAP for review and approval by the CEC Compliance Project Manager (CPM).

WEAP OBJECTIVES

The purpose of the WEAP is to educate personnel about the existing on-site and surrounding resources and the measures required to protect these resources. With this information, appropriate personnel will be equipped to make appropriate decisions in the field to satisfy and achieve compliance with the applicable LORS (laws, ordinances, regulations, and standards).

The WEAP focuses on three environmental issues: biological resources, cultural resources, and paleontological resources. The program highlights known or potentially occurring resources that may be encountered during Project implementation. The program explains measures required to avoid impacts to such resources, and the consequences of not complying with protection measures.

Several components make up the overall WEAP. The following items have been prepared for the CEC CPM's review and approval:

- Training video script for biological, cultural, and paleontological resources (Attachment A)
- WEAP Worker Brochure, which summarizes actions and avoidance measures detailed in the WEAP (Attachment B)

- Hard Hat Decal (Attachment C)
- Resources Identification Cards (Attachment D)
- Training Attendance Acknowledgement Form (Attachment E)

Mojave Solar has retained technical specialists to verify compliance with the CEC's conditions of certification. Although contracted by Mojave Solar, these specialists will act independently and responsibly in verifying all resource-specific conditions of certifications are carried out in totality and in a timely manner. The WEAP and associated training materials have been prepared under the direction of these technical specialists. It is expected that these specialists will be on-site during construction or otherwise available by phone. In the event that biological, cultural, or paleontological resources are encountered the following personnel should be contacted immediately:

Designated Biologist

Peggy Wood
Cell: (435) 881-6444

Cultural Resource Specialist

Patrick McGinnis
Cell: (619) 756-3479

Paleontological Resources Specialist

Cara Corsetti
Cell: (562) 355-2862

Contact information for all biological, cultural, and paleontological resource specialists and monitors will be clearly posted in the Project's construction trailer onsite.

TRAINING REQUIREMENTS

The WEAP must be administered to all onsite personnel, including surveyors, construction engineers, employees, contractors, contractor's employees, supervisors, inspectors, subcontractors, and delivery personnel. Permanent employees will receive training annually, whereas new personnel working in the project area will receive training within one week of arrival on the Project site. The initial WEAP training will be supplemented throughout construction by on-going tailgate training sessions. These brief tailgate meetings will be held in the field in order to update or alert onsite personnel to issues that may have occurred during the past week. Resource specialists will also use mandatory tailgate trainings as a tool to manage noncompliance incidents when they occur. The WEAP training will be implemented throughout the life of the Project, including site preconstruction, construction, operation, and closure.

Prior to working on the Project, all personnel will view the training video within the first week of their commencing work on the site, and sign the training attendance acknowledgement form to indicate that the contents are understood. A take-home brochure (Attachment B) will be available to all attendees at the training sessions. A WEAP decal (Attachment C) will be provided to each trained worker as an acknowledgment of participation, and must be adhered to the worker's hardhat prior to beginning work on site. Resource identification cards (Attachment D) will be used for "refresher" training as part of regular tailgate and other personnel meetings. A list of personnel trained will be kept on site and copies of the WEAP sign-in sheets (Attachment E) will be included in the Monthly Compliance Report submitted to the CEC CPM.

CONTACT INFORMATION

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ATTACHMENT A

**BIOLOGICAL, CULTURAL, AND PALEONTOLOGICAL
RESOURCES VIDEO SCRIPT**

Biological Resources Script

Good morning. My name is Peggy Wood, and I am the Designated Biologist for the Mojave Solar Project (Project). We are here today to discuss the Project's potential impacts to sensitive biological resources, and the measures to be implemented that will help avoid or minimize adverse impacts to these sensitive resources. During construction and operation of the Project, we all have a commitment to protect the natural environment, and today's discussion will give you the information you need to do so.

All Project staff members and contractor and subcontractor personnel must be aware of environmental compliance measures associated with the Project. Violation of these protection measures could result in a Project delay or complete shutdown of construction. Penalties for an individual caught in violation of these protection measures could include loss of employment, monetary fines, or prison time.

This presentation provides an overview of the sensitive biological resources that may be affected by the Project. It also includes a description of laws, protection measures, responsibilities, and penalties associated with those resources and this Project.

As part of the Worker Environmental Awareness Program, this training is designed to summarize responsibilities and proper precautions on the job, and provide the appropriate contact person when questions arise. A Designated Biologist and a team of biological monitors will be on site during construction to verify that the Project maintains environmental compliance. The Designated Biologist and biological monitors will have the terms "Designated Biologist" or "biological monitor" clearly labeled on their hard hats, which are blue so that they can be easily identified. You must always seek their advice before taking any action that may endanger sensitive biological resources. Construction and operation of this Project requires care and conscientious actions to protect natural resources.

Designated Biologist

As the Designated Biologist assigned to this Project, it is my job to implement the Project's Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP), and provide direct assistance in avoiding impacts to natural resources. In the event of a noncompliance situation, I have the authority to stop work until a resolution is achieved.

Assisting me will be several biological monitors who will be on site during earthwork activities. The biological monitors will also have the authority to stop work if any violation of protection measures occurs in the Project area.

Environmental Laws, Regulations, and Penalties

The Project site and vicinity comprise diverse habitats that are home to sensitive and protected plants and animals such as birds, mammals, and reptiles. Some of the biological resources found in the Project area are protected by state and federal laws, including the federal Endangered Species Act, the federal Migratory Bird Treaty Act, the California Department of Fish and Game Code, and the California Endangered Species Act. For the purpose of this training, “Take” is defined broadly, using the federal Endangered Species Act definition. “Take” is defined as to “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill” wildlife officially listed as threatened or endangered. Protection extends to the animals, dead or alive, and all their body parts.

Violation of state and/or federal environmental laws can result in fines as much as \$100,000 and/or up to 1 year in jail. Consequences can involve Project penalties and penalties for the responsible individual.

Nesting Birds

To begin with, we may encounter nesting birds within the Project site. Potential nesting areas within the Project include trees, shrubs, on the ground, and on equipment if left idle long enough. Most nesting birds are protected under Section 10 of the Migratory Bird Treaty Act. Preconstruction nesting bird surveys will be conducted to avoid impacts to nesting birds. If nesting birds are detected during the surveys, a no disturbance buffer zone will be established around the nest and monitoring plan will be developed.

Although numerous surveys have already been conducted in advance of construction, there is always the possibility that birds may initiate nesting subsequent to our surveys. All of the biologists on site will be documenting any indications of nesting behaviors throughout the Project. If any personnel on site observe birds displaying behaviors that may suggest nesting, notify the Designated Biologist or a biological monitor as soon as possible. Appropriate measures can be implemented to discourage further nesting activity if timing allows, or a nest can be protected if the eggs are already laid.

Golden Eagle

A Golden Eagle pair was observed within 10 miles of the Project area. The Golden Eagle is protected under the federal Bald and Golden Eagle Protection Act and by the California Department of Fish & Game as a Fully Protected Species. The Project owner is coordinating with USFWS to document compliance with protective measures for Golden Eagles. Golden Eagles are most common in the western half of North America

near open spaces that provide hunting habitat, and generally with cliffs present for nesting sites. Long-term surveys of Golden Eagle populations have shown declines in nesting populations throughout the western United States. Population declines can be attributed to reduced foraging habitat, and potentially, a reduction in the prey base also caused by habitat loss for prey species. If you observe a Golden Eagle or other large raptor near the Project area, please contact the Designated Biologist or biological monitors immediately.

Western Burrowing Owl

Western burrowing owls are a state Species of Special Concern protected under the federal Migratory Bird Treaty Act and the California Fish and Game Code. Burrowing owls typically use burrows made by mammals such as kit foxes, ground squirrels, and badgers, or by desert tortoises, but can also use human-made structures such as cement culverts; cement, asphalt, or wood debris piles; and openings beneath cement or asphalt pavement.

Burrowing owls were observed during biological surveys conducted during the Project's permitting process. Before vegetation clearing and during construction of the Project, the Designated Biologist and biological monitors will conduct surveys for burrowing owls. Any active owl burrows detected within 500 feet of the Project disturbance area will require a protective buffer zone. Construction fencing will be installed with a 250-foot-radius around the active burrow. However, no access will be granted within the buffer of an active nesting pair. If there are any questions about an area, check with a biological monitor first.



Golden Eagle



Western Burrowing Owl

American Badger and Desert Kit Fox

The Project area consists of suitable habitat for the American badger and desert kit fox. American badgers are listed by the California Department of Fish and Game as a Species of Special Concern. The desert kit fox is protected by the California Code of Regulations. To avoid direct impacts to these species, a biological monitor will assist the Designated Biologist to conduct preconstruction surveys for American badger and kit fox dens in the Project disturbance area, including a 250-foot wide swath beyond the disturbed area, utility corridors, and access roads.

If dens are detected, each den will be classified as inactive, potentially active, or definitely active. Inactive dens that would be directly impacted by construction activities will be excavated by hand and backfilled to prevent reuse by American badgers or kit fox. Any burrow or den being used by kit fox or American badger females raising pups will be protected until the young have dispersed from the area.



Desert Kit Fox



American Badger

Mohave Ground Squirrel

The Project site also occurs within the limited range of the protected Mohave ground squirrel, a small brown ground squirrel found only in the western Mojave Desert. The Mohave ground squirrel has long been listed as Threatened under the California Endangered Species Act. These critters are most easily distinguished from the more common Antelope ground squirrel by their thin tail that does not have a white underside. Mohave ground squirrels are difficult to find and observe due to their rare and elusive nature. Mohave ground squirrels are active only in the spring and summer. By mid-

summer, they settle into their underground nests; allow their body temperature, heart rate, and metabolic rate to fall; and remain dormant until the next winters' rain brings new growth of green vegetation.

Although only one Mohave ground squirrel has been trapped on this site since 2007, the site is immediately adjacent to the Mohave Ground Squirrel Conservation Area designated by the Bureau of Land Management, and there is the possibility of individuals moving into the area.



Mojave Ground Squirrel

Desert Tortoise

Desert tortoises are protected under the Federal Endangered Species Act and the California Endangered Species Act as a Threatened species. Under these laws it is illegal to harass, harm, take, possess, transport, or shoot any projectile at a desert tortoise. Violations can result in monetary penalties, prison time, and loss of employment.

The desert tortoise is an herbivore that is able to live where ground temperatures may exceed 140 degrees Fahrenheit because of its ability to dig underground burrows to escape the heat. Desert tortoises are typically dormant mid-November through February, and are usually most active early March through early June, and again from September through early November.



Desert Tortoise

A little information about tortoises helps to put the protection measures into perspective, and provides an understanding that regulations are based on what we know about tortoises. Tortoises have been in the Mojave a very long time—longer than humans—

and are well adapted to live in the desert. Over the last several decades, however, a number of variables have made it increasingly more challenging for tortoises to survive, and many of these variables are associated with humans.

First, there is habitat loss through the conversion and use of land from what it was to what humans want. Tortoises are losing places to live. This is a result of the increasing human population. With increasing numbers of people, there are more people out and about in the desert doing the things people do. This includes moving around in vehicles on roads that already exist, on new roads built, and, often, off road. With more people moving about in vehicles, the risks for a tortoise getting run over increases. In addition, with more people, there is higher risk to tortoises from people who might collect them for pets or other activity, harm tortoises directly or indirectly, or have dogs that may harass tortoises. More people generally means higher risk to any wild species.

Second, there are increasing numbers of predators on tortoises, including coyotes, kit foxes, and ravens. Ravens are effective predators of young and adult tortoises, and raven numbers have been increasing exponentially over the past decades due to the availability of “free food” from human landfills and garbage dumps. When tortoises are hatched, their shell is not yet ossified, and this makes them very vulnerable to ravens with their air-borne searching patterns, who find them, and easily break through their shells.

Third, there is a disease tortoises get called Upper Respiratory Tract Disease that, once contracted, is invariably fatal. They get symptoms like a runny nose and watery eyes, which causes water loss that then weakens an individual through dehydration, making them more susceptible to either predators or harsh environmental conditions.

With these and other variables making it more difficult than ever for tortoises to survive, the objectives of these protection measures are to minimize any contribution to the reasons why tortoises are struggling to survive.

To avoid impacts to desert tortoises, permanent exclusionary fencing will be installed along the permanent perimeter security fence boundaries as Project phases begin. At no time should the exclusionary fencing be breached. If there are any questions about an area, check with a biological monitor first. During construction of the Project, the Designated Biologist and biological monitors will clear an area for desert tortoise before any ground-disturbing activities. No vegetation will be cleared prior to being surveyed by a biologist. The Designated Biologist will be responsible for reporting all desert tortoise observations to the California Energy Commission Compliance Project Manager, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game.

Other Desert Species

The Mojave Desert is also home to several venomous species such as rattlesnake and scorpions and harmless snakes like the gopher snake. It is not uncommon to encounter snakes while in the outdoors. What is uncommon is for people to react to the presence of a snake with calm. Most people fear snakes because they do not understand them or their importance in the natural world. While several species are potentially dangerous to humans, most are harmless creatures that form vital links in their ecosystems as highly efficient predators of rodents. Common sense is the best protection against dangerous species when in the Project area: watch where you place your hands, where you place your feet, and where you sit. If you find a snake LEAVE IT ALONE! Contact the Designated Biologist or biological monitors if any snakes or venomous species are encountered.



Mojave Rattlesnake

General Work Practices

- The boundaries of all areas to be temporarily or permanently disturbed will be clearly delineated with stakes and flagging.
- All ground disturbance, Project vehicles, and equipment will be confined to approved work areas (construction zone limits).
- Be aware of all applicable environmental requirements before entering Project site. It is the responsibilities of each person working on the Project to understand and comply with the environmental requirements that affect your job. If there are any questions ask your supervisor, the Designated Biologist or a biological monitor before starting work.
- Always check underneath any vehicle or piece of construction equipment prior to moving it for a tortoise or any other animal that may have taken shelter underneath. If a tortoise or any animal is underneath, do not, under any circumstances, move the vehicle, and contact a biologist immediately.
- Stickers will be distributed as a reminder to Project personnel to always check for tortoises or wildlife before operating vehicles or equipment. Visitors will be informed as they enter the project site.

- Use only approved access roads. No off-road-vehicle activity is allowed. Do not run over any shrub unless the vegetation has been cleared by a biologist.
- The Designated Biologist will monitor during construction in areas that have not been fenced to prevent unauthorized impacts to any species of animal or plant.
- The Designated Biologist will be present at the construction site during all project activities that have potential to disturb soil, vegetation, and wildlife.
- Minimize impacts of transmission/pipeline alignments, roads, and staging areas by staying within Project limits.
- Avoid using toxic substances that could potentially harm wildlife. Keep fluid spill containment and clean-up materials readily available.
- Clean up and report all hazardous material spills immediately.
- Do not litter, including food scraps. Trash and food items will be contained in closed, secured containers and removed daily.
- Do not bring pets, firearms, or weapons to the Project site; they are prohibited. Firearms are allowed by law enforcement officials only.
- Hunting and fires on the Project site are prohibited.
- Do not discharge water into unapproved areas. Minimize standing water.
- Do not touch any wildlife, especially tortoises. They have the habit of responding by urinating when disturbed, and their water balance is an essential part of their survival. They store water in their bladder for extended periods of time, and causing them to lose their reservoir of water might compromise their ability to survive long periods without water.
- Report road-killed animals to the Designated Biologist or biological monitors immediately. Report any desert tortoise sightings along project roadways to the Designated Biologist or biological monitors.
- At no time should snakes, including rattlesnakes; reptiles; or other wildlife be harmed. If a rattlesnake is observed, report the location to a biologist immediately. A biologist will remove the snake or any other species with a snake stick or shovel without harm to the animal.
- Observe speed limits on Harper Lake Road and within the fenced area of the Project of 25 miles per hour. Outside of the fence perimeter on unpaved roads, a speed limit of 15 miles per hour must be observed.

- There will be no handling, feeding, or disturbing wildlife.
- Report all entrapments, injuries, and deaths of wildlife to the Designated Biologist or biological monitor. Fill out wildlife observation forms when any wildlife species has been injured or killed.
- Workers must attend the WEAP training and show proof of completion. Each worker must sign the WEAP certification of completion form.

Special-Status Plants

Although not detected within the Project impact area, several species of special-status plants are found adjacent to the Project. Special-status plants are protected under federal and/or state laws. These special-status plants include Desert cymopterus, Mojave spineflower, and Mojave fish-hook cactus.

Desert cymopterus is considered by the California Native Plant Society (CNPS) rare and endangered in California, but is more common elsewhere. Desert cymopterus is a perennial herb found primarily in Joshua tree woodland and Mojave desert scrub, and blooms March through May.

Mojave spineflower is on the CNPS watch list, and is considered fairly threatened. It is an annual herb that is found in Creosote bush scrub and Joshua tree woodland, and blooms April through July.



Desert cymopterus



Mojave spineflower

Mojave fish-hook cactus is also on the CNPS watch list and considered to be a fairly threatened species. It is a perennial succulent, and can be found in Creosote bush scrub and Joshua tree woodland. This cactus blooms April through July, depending on rainfall season.



Mojave fish-hook cactus

Notify the Designated Biologist or biological monitors if you observe this plant within or near the project site.

Weed Management

Invasive weed recognition and management will be implemented during Project construction and operation. Invasive weeds are often quick to colonize disturbed areas, including construction sites, roadsides, irrigated sites, and any other area with altered hydrology, soil structure, or soil chemistry.



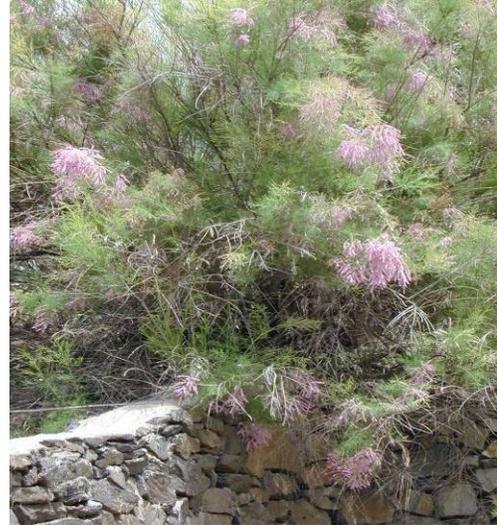
Saharan mustard

Biological monitors will be responsible for inspecting all construction areas, identifying the presence of invasive weeds, and inspecting equipment cleaning facilities for weed seed removal. The Project shall implement the following Best Management Practices during construction and operation to prevent the spread and propagation of noxious weeds:

- Limit the size of any vegetation and/or ground disturbance to the absolute minimum and limit ingress and egress to defined routes;
- Reestablish vegetation quickly on temporarily disturbed areas, including pipelines, transmission lines, and staging areas
- Prevent spread of non-native plants via vehicular sources by implementing Trackclean™ or other methods of vehicle cleaning for vehicles coming and going from construction sites. Earth-moving equipment and construction vehicles shall be cleaned within an approved area or commercial facility prior to transport to the

construction site. The number of cleaning stations shall be limited and weed control/herbicide application shall be used at the cleaning station(s);

- Use only weed-free straw, hay bales, and seed for erosion control and sediment barrier installations;
- Invasive non-native species shall not be used in landscaping plans and erosion control; and
- Monitor and rapidly implement control measure to ensure early detection and eradication of weed invasions.



Tamarisk

Fire Prevention

- Smoking is limited to designated smoking areas.
- Cigarette butts and cigars will be disposed of appropriately and not left on the ground or buried.
- Fire extinguishers will be near all welding, soldering, or other sources of ignition.
- Fire extinguishers will be easy to see and reach in case of an emergency.
- Gasoline and other flammable liquids will be stored in an approved storage facility.
- All vehicles and equipment within the Project site must have adequate fire tools. For additional information regarding fire prevention, refer to the Fire Protection Plan.

Protection Measures

To minimize construction impacts, the following will be observed:

- At the end of each work day, the Designated Biologist shall ensure that all potential wildlife pitfalls (trenches, bores, or other excavations) outside the permanently fenced area have been backfilled. If backfilling is not feasible, all trenches, bores, and other excavations shall be sloped at a 3:1 ratio at the ends to provide wildlife escape ramps, or covered completely to prevent wildlife access, or fully enclosed with tortoise-exclusion fencing.

- All open trenches, bores or other excavations outside the areas permanently fenced with desert tortoise exclusion fencing will be inspected at the beginning of each workday, periodically throughout, and at the end of each workday by the Designated Biologist or a biological monitor.
- Pipes, culverts, or similar structures greater than 3 inches in diameter will be inspected for wildlife before moving or capping. All such structures will not be left open over night. Alternatively, they will be capped before being stored or placed on above ground pipe racks.
- Ground disturbance will be minimized to lessen the need for restoration.
- Areas temporarily disturbed for construction access or staging will be re-vegetated with native species.
- Avoid the possible disturbance of nesting birds by staying 500 feet away. Let the biological monitor clear the area before you begin work.
- Do not allow anything that could contain hazardous waste or debris into an area that could enter the storm water system and/or could affect biological resources.
- Follow weed management protocols, including vehicle wash requirements, weed recognition, acceptable weed treatment, and use of weed-free products.

If you have any questions regarding any protection measures, what is required as a part of every person's responsibilities on the Project site, or any information regarding animal or plant species, please ask one of the biologists. We are here to keep everything progressing smoothly without harm to living creatures within the scope of building this facility.

In closing, I would like to thank everyone for participating in today's environmental awareness training. Please take a moment to complete the sign-in sheet for today's training. If you ever have any questions or concerns, do not hesitate to contact me directly at (435) 881-6444. An alternate Designated Biologist, Craig Knowles, will also be available at (406) 439-0191.

Cultural Resources Script

My name is Patrick McGinnis, and I am the Cultural Resources Specialist for the Mojave Solar Project (Project). The purpose of this training is to inform you of your responsibility to protect any cultural resources within the Project area, in compliance with the California Energy Commission Conditions of Certification and Federal and state laws. Cultural resources have been identified in the Project area, and the Project has been designed to minimize impacts to these resources. However, previously unidentified cultural resources may be exposed during the construction process, and these require protection. Knowledge and practice of the protective measures that I will discuss today is the responsibility of all on-site personnel. Violation of these protection measures can result in costly Project delays, as well as serious consequences for the responsible individuals. Please remember, the biological, cultural, and paleontological monitors are here to help you.

Today, I'm going to talk about the following:

1. applicable laws and regulations protecting cultural resources;
2. the history of the project area;
3. what cultural resources are, and also show you some examples; and
4. what to do if cultural resources are discovered.

Laws Covering Cultural Resources

Cultural resources are protected by Federal, state, and local laws. It is *illegal* for you to collect any cultural objects such as old bottles or arrowheads. These are a few of the laws and regulations that protect cultural resources on a Federal and state level:

- Archaeological Resources Protection Act, or ARPA: This act protects archaeological resources from vandalism and unauthorized collecting on Federal land. Maximum penalties are a fine up to \$250,000 and five years in jail.
- California Public Resources Code (Sections 5097.5, 5097.9, and 5097.99): Under these codes it is a crime to disturb or remove archaeological, historic, or paleontological resources that are located on public lands, and that it is a felony to obtain or possess Native American grave artifacts or human remains. The unlawful and malicious excavation, removal, or destruction of such resources is punishable by up to a \$10,000 fine or both fine and imprisonment.

These codes also discuss the procedures that need to be followed upon the discovery of Native American human remains. It is possible that human burials or cremations may be discovered in the Project area. If this occurs, stop work

immediately and notify your supervisor and the Cultural Resources Monitor. Protect the area from all disturbance, and do not inspect the material yourself. It is a felony under California law to disturb Native American burial sites, punishable by imprisonment in state prison.

It is important to realize that violations of the Project's conditions of certification may result in construction delays, fines, jail time, or loss of jobs.

Project History

The Project area is located in the western Mojave Desert, an arid relatively harsh environment that has never supported large populations, although people have lived in the region for approximately 12,000 years. Prehistorically it provided food resources such as grass seeds and other plants, as well as some game. When Europeans first arrived, this area fell within the territory of the Native American group known as the Vanyume, a subgroup of the Serrano, but other groups such as the Kitanemuk, Desert Kawaiisu, Chemehuevi/Southern Paiute, and Mohave also lived nearby.

Evidence of prehistoric habitation is expected to be limited, and would likely occur near the base of the mountains or on the margins of the only dry lake shoreline in the valley. No substantial archaeological deposits are expected, although buried cultural deposits have been found in regions where they were not expected (Gardner 2002), and ancient lakeshores have potential for buried cultural resources (Sutton 1996). Historically, the Project area and surrounding region are associated with early 20th century homesteads, farming and ranching, and power and water conveyance. Anticipated historic-period archaeological sites include refuse scatters, farming features and equipment, and possibly early historic dwelling sites or camps associated with the construction of the railroad or the aqueduct.

Cultural Resources

Cultural resources include both prehistoric and historic artifacts, objects, structures, or locations and areas culturally important to a group of people. Cultural resources are an important part of American and our state's heritage.

Cultural resources that may be discovered in the Project area include prehistoric artifacts such as stone tools, grinding stones, and stone arrowheads, as well as prehistoric features such as hearths. These may have a different appearance depending on where they are found: on the ground surface, partly buried, or wholly buried and freshly exposed.

Historic artifacts such as metal cans, glass bottles, ceramic dishes, and food remains may also be encountered, as well as historic features such as roads, water lines, building foundations, and trash concentrations.

Stone tools include rocks that have been used as tools to kill or butcher animals or process plants. Stone cultural resources also include the materials created by the tool-making process (debitage). They can range in size from as small as your fingernail to larger than your two hands put together.

This is an example of:

- A scraper¹ - which was used to process hides or food.
- Here we have a finely shaped biface, or arrowhead. These were used for hunting animals.
- This piece of stone is chipping waste created in the process of making a tool.
- Ground stone tools—like manos and metates, and mortars and pestles—were used to process plant foods. They usually have a smooth surface. This is an example of a hand-sized mano and a large mortar. Metates and mortars were often left upside-down to protect their grinding surfaces. These may appear like ordinary rocks, especially when they are partially buried.

In this area, historic materials over 50 years old—like this glass bottle, ceramic bottle, and tin can—as well as foundations, may be associated with homesteading, early roadways, or farming and ranching.

In this region, most of these materials are found on or near the ground surface. However, buried cultural resources may also be encountered during Project construction.

- Watch for midden, which is discolored soil, often gray-black and greasy feeling. It can contain ash, charcoal, or bone fragments. When midden is found on the surface it is often confined to one area, and stands out as being much darker than the surrounding soil. When it has been buried and is exposed during excavation or grading, it can appear in a sidecut as a distinct layer, or “lens.”
- Watch for unusual concentration of rocks, particularly if they seem to form a circular or linear pattern. Small concentrations of rock with sharp breaks or chipping scars, including chert and obsidian (volcanic glass), may also be archaeological remains. Concentrations of burned rocks, either on the surface or

¹ The specific examples held up for the camera may be revised, depending on availability at the time of filming. Alternately, we can insert the photos from the cultural resources brochure as the examples.

exposed by grading, may represent a cooking feature. A rock cairn or pile of stacked rocks may be Native American in origin, or may represent a historic mining claim. Rock concentrations or alignments can occur on the ground surface where they are easily visible, or be buried as clusters of rock that are visible in freshly exposed soil cuts.

- Watch for concentrations of historic-era artifacts, including bottles, cans, glass fragments, ceramic or porcelain fragments, or other artifacts that appear to be at least 50 years old. Historic refuse often differs in appearance from modern trash in its weathered appearance and use of antiquated technologies. For example, sun-colored purple glass, thick glass bottles with cork closures, heavily rusted metal objects, and cans opened without the use of a modern can opener may be of historic age. Sometimes these artifacts are encountered during excavation or grading as a dense, distinct concentration of trash. These buried concentrations may represent a privy (outhouse pit) or trash pit.

One or more Cultural Resources Monitors will be on site during all earth-disturbing activities in native soils. The Cultural Resources Specialist, alternate Cultural Resources Specialist, and Cultural Resources Monitors have the authority to stop work if cultural resources are discovered or threatened, or if compliance measures are violated. These specialists will work with the construction supervisor to determine whether work can continue elsewhere.

A Native American monitor will assist in monitoring construction activities where prehistoric artifacts are discovered to help protect Native American cultural heritage in the Project area.

What to Do if Cultural Resources Are Discovered

There are four steps you should take if you find a cultural resource or anything that you think could be a cultural resource:

- First, **stop work** in the immediate area.
- Second, **do not touch it**, move it, or disturb it in any way. The reason for this is that the way that it is positioned in the ground provides data vitally important to archaeologists.
- Third, **mark the area with flagging** to make sure no one else working in the area disturbs the find.
- Fourth, **immediately contact a Cultural Resources Monitor or your supervisor**. The Cultural Resources Monitor or Cultural Resources Specialist will

examine the find, document and evaluate it, and inform your supervisor when it is OK to resume work in the area.

PLEASE REMEMBER:

You are part of our compliance team and we need your help in protecting California's cultural heritage.

Please show respect for any Native American monitors and their rich cultural heritage.

If you think you see an artifact, let your supervisor and the Cultural Resources Monitor or Cultural Resources Specialist know.

Do not inspect, pick up, or pocket any artifacts.

Please remember, once a prehistoric or historic object, structure, or place has been destroyed, it can never be replaced.

Paleontological Resources Script

My name is Cara Corsetti, and I am the Paleontological Resources Specialist for the Mojave Solar Project (Project). We are here today to discuss the Project's potential impacts to nonrenewable paleontological resources and the measures to be implemented that will help avoid or minimize adverse impacts to fossil resources. My job is to help you stay in compliance with the paleontological Conditions of Certification set forth by the California Energy Commission for this Project.

This training will be conducted for all project managers, construction supervisors, foremen, and general workers who are involved with or operate ground-disturbing equipment or tools. Participation in this training is required prior to any excavation in sensitive paleontological areas.

Paleontology is a multidisciplinary science that combines elements of geology, biology, chemistry, and physics in an effort to explain the history of life on earth. Paleontological resources, or fossils, are the remains, imprints, or traces of once-living organisms preserved in rocks and sediments. These resources include mineralized, partially mineralized, or unmineralized bones and teeth, soft tissues, shells, wood, leaf impressions, footprints, burrows, and microscopic remains.

Construction of the Project will require ground disturbances within geologic sediments that have a demonstrated potential to yield significant fossil resources. In the vicinity of the Project area, fossilized remains of large mammals such as mammoth, camel, horse, and llama; small mammals such as pocket mouse and gopher; turtles; invertebrates; and petrified wood have been recovered from within the same sediments that will be impacted during construction activities.

During ground-disturbing activities you may find:

- Bone
- Tusk material
- Turtle carapace (shell)
- Teeth
- Shells
- Petrified wood or plant material

Environmental Laws, Regulations, and Penalties

Fossils are protected by federal, state, and local laws and agency guidelines across the country. Unauthorized collecting or disturbing of fossils is illegal and can result in fines

and imprisonment. Collecting or even disturbing a fossil within the Project area may result in construction delays, fines, jail time, or loss of your job.

The following are laws, regulations, and codes that affect paleontological resources in the Project area:

- National Environmental Policy Act: Recognizes the continuing responsibility of the federal government to “preserve important historic, cultural, and natural aspects of our national heritage ...”
- Paleontological Resources Preservation Act: Sets forth regulations and provisions pertaining to paleontological resources on all federally administered lands and affirms the authority of the U.S. Bureau of Land Management policies already in place.
- Federal Land Management and Policy Act: Does not refer specifically to fossils; however, “significant fossils” are understood and recognized in policy as scientific resources. Permits that authorize the collection of significant fossils for scientific purposes are issued under its authority.
- American Antiquities Act of 1906: Establishes a penalty for disturbing or excavating any historic or prehistoric ruin or monument or object of antiquity on federal lands as a maximum fine of \$500 or 90 days in jail.
- National Historic Preservation Act of 1966: Provides for the survey, recovery, and preservation of significant paleontological data when such data may be destroyed or lost due to a federal, federally licensed, or federally funded project.
- Code of Federal Regulations Title 43: Prohibits, without a permit, the collection of scientific resources, including vertebrate fossils. Also prohibits the use of fossils found on federal lands for commercial purposes.

Paleontological Resource Specialist

As the designated Paleontological Resource Specialist, I am responsible for verifying implementation of the Project’s Paleontological Resources Monitoring and Mitigation Plan (PRMMP) and providing direct assistance in avoiding impacts to fossil resources.

My duties include:

- Advising MSP construction and operations managers on the implementation of the paleontological resources Conditions of Certification.
- Supervising, conducting, and coordinating the implementation of the PRMMP.

- Notifying MSP construction and operation managers and the CEC Compliance Project Manager (CPM) of any noncompliance with any paleontological resources Condition of Certification.
- Responding directly to inquiries of the CPM regarding paleontological resource issues.
- Maintaining written records for inclusion in the Monthly Compliance Report and the Annual Compliance Report.
- Supervising and supporting the efforts of the Paleontological Resource Monitors (PRMs).
- Coordinating with resource agencies for compliance of protection measures.

Paleontological Resource Monitors

A PRM will be onsite to respond to discoveries made during the course of ground disturbances within the Project area. Paleontological resource monitoring will take place where (1) construction activities will disturb previously undisturbed sediment that is determined to have a high paleontological resource potential (paleontological sensitivity), and (2) in areas where the depth of prior disturbance is determined to be shallower than the planned depth of excavation. Areas where sediment, if any, will be buried but not otherwise disturbed, will not be monitored.

In the event that a fossil resource is discovered, the PRM has the authority to halt or redirect work until the significance of the find is determined. If the fossil is determined to be significant, the PRM will collect the material and associated data (which might include bulk matrix samples). Once the area is cleared by the Paleontological Resource Specialist, the Project's Construction Manager will be notified that the area is available to continue construction activities.

Your Responsibility

Follow these four steps if you find a fossil or anything that could be a fossil:

- First, **stop work** in the immediate area (20-foot radius).
- Second, **do not touch the fossil**, move it, or disturb it in any way. The reason for this is that the way that the fossil is positioned in the ground provides data vitally important to paleontologists.
- Third, **mark the area with flagging** to make sure no one else working in the area disturbs the fossil.

- Fourth, **immediately contact a PRM and your supervisor.** The PRM will examine the fossil remains and contact the Paleontological Resource Specialist to make a determination of whether the material is scientifically significant. If it is, then the material will be collected along with the associated data. Your supervisor will be informed when to resume work in the area.

I would like to thank everyone for participating in this environmental awareness training. If you ever have any questions please do not hesitate to contact me directly at 626-240-0587.

Photos



Miscellaneous small vertebrate bones



Fossil tusk fragments



Pocket Gopher (*Thomomys bottae*) femurs and humeri,



Mule Deer (*Odocoileus hemionus*) lower second premolar



Hare (*Lepus*) tibia



Horse (*Equidae*) tooth

ATTACHMENT B

WEAP WORKER BROCHURE

Biological Resources

The Project site and vicinity comprise diverse habitats that are home to sensitive and protected animals such as birds, mammals, and reptiles. Many of these biological resources are protected by federal, state, and local laws. If any wildlife are observed or if you have any questions about an area of the project, contact the Designated Biologist or biological monitors immediately.

Violation of state and/or federal environmental laws can result in fines as much as \$100,000 and/or up to 1 year in jail. Consequences can involve Project penalties and penalties for the responsible individual.

General Work Practices

- The boundaries of all areas to be temporarily or permanently disturbed will be clearly delineated with stakes and flagging.
- All ground disturbance, Project vehicles, and equipment will be confined to approved work areas (construction zone limits).
- Be aware of all applicable environmental requirements before entering Project site. It is your responsibility to understand and comply with the environmental requirements
- Always check underneath vehicles or equipment for tortoises prior to moving it. Contact a biologist immediately if any are observed.
- Use only approved access roads. No off-road vehicle activity is allowed.
- Do not run over any shrub unless the vegetation has been cleared by a biologist.
- The Designated Biologist will be present at the construction site during all project activities that have potential to disturb soil, vegetation, and wildlife.
- Minimize impacts of transmission/pipeline alignments, roads, and staging areas by staying within Project limits.
- Avoid using toxic substances that could potentially harm wildlife. Keep fluid spill containment and clean-up materials readily available.
- Clean up and report all hazardous material spills immediately.
- Do not litter, including food scraps. Trash and food items will be contained in closed, secured containers and removed daily.
- Do not bring pets, firearms, or weapons to the Project site; they are prohibited. Firearms are allowed by law enforcement officials only.
- Hunting and fires on the Project site are prohibited.
- Do not discharge water into unapproved areas. Minimize standing water.
- Do not touch any wildlife, especially tortoises.
- Report road-killed animals to the Designated Biologist or biological monitors immediately.
- Report any desert tortoise sightings along project roadways to the Designated Biologist or biological monitors.
- At no time should snakes, including rattlesnakes, reptiles, or other wildlife be harmed. If a rattlesnake is observed, report the location to a biologist immediately.
- Observe speed limit of 25 miles per hour on Harper Lake Road and within fenced areas.
- Observe speed limit of 15 miles per hour within unfenced areas and secondary unpaved access roads.
- There will be no handling, feeding, or disturbing wildlife.
- Report all entrapments, injuries, and deaths of wildlife to the Designated Biologist or biological monitor. Complete a wildlife observation form when any wildlife species has been injured or killed.
- Workers must attend the WEAP training and show proof of completion. Each worker must sign the WEAP certification of completion form.

Special-Status Plants

The Project area is home to several species of special-status plants that are protected under federal and/or state laws. These include Desert cymopterus, Mojave spineflower, and Mojave fish-hook cactus. Notify the Designated Biologist or biological monitors if you observe these plants within or near the project site.

Weed Management

Invasive weed recognition and management will be implemented during Project construction and operation. To prevent the spread and propagation of noxious weeds:

- Limit the size of any vegetation and/or ground disturbance to the absolute minimum and limit ingress and egress to defined routes.
- Reestablish vegetation quickly on temporarily disturbed areas, including pipelines, transmission lines, and staging areas.
- Prevent spread of non-native plants via vehicular sources by implementing methods of vehicle cleaning for vehicles coming and going from the construction site.
- Earth-moving equipment and construction vehicles shall be cleaned within an approved area or commercial facility prior to transport to the construction site.
- The number of cleaning stations shall be limited and weed control/herbicide application shall be used at the cleaning station(s).
- Use only weed-free straw, hay bales, and seed for erosion control and sediment barrier installations.
- Invasive non-native species shall not be used in landscaping plans and erosion control.
- Monitor and rapidly implement control measures to ensure early detection and eradication of weed invasions.

Fire Prevention

- Smoking is limited to designated smoking areas.
- Cigarette butts and cigars will be disposed of appropriately and not left on the ground or buried.
- Fire extinguishers will be near all welding, soldering, or other sources of ignition.
- Fire extinguishers will be easy to see and reach in case of an emergency.
- Gasoline and other flammable liquids will be stored in an approved storage facility.
- All vehicles and equipment within the Project site must have adequate fire tools.

Cultural Resources

Cultural resources are protected by federal, state, and local laws. It is illegal for you to collect any cultural objects such as old bottles or arrowheads.

There are four steps to take if you find a cultural resource or anything that you think could be a cultural resource:

- First, stop work in the immediate area.
- Second, do not touch it, move it, or disturb it in any way. The reason for this is that the way that it is positioned in the ground provides data vitally important to archaeologists.
- Third, mark the area with flagging to make sure no one else working in the area disturbs the find.
- Fourth, immediately contact a Cultural Resource Monitor (CRM) or your supervisor. The CRM or Cultural Resource Specialist will examine the find, document and evaluate it, and inform your supervisor when it is OK to resume work in the area.

Paleontological Resources

Fossils are protected by federal, state, and local laws and agency guidelines across the country. Unauthorized collecting or disturbing of fossils is illegal and can result in fines and imprisonment. If you collect or even disturb a fossil within the Project area, it may result in construction delays, fines, jail time, or loss of your job.

There are four steps to take if you find a fossil or anything that you think could be a fossil:

- First, stop work in the immediate area (20-foot radius).
- Second, do not touch it, move it, or disturb it in any way. The reason for this is that the way that it is positioned in the ground provides data vitally important to paleontologists.
- Third, mark the area with flagging to make sure no one else working in the area disturbs the fossil.
- Fourth, immediately contact a Paleontological Resource Monitor (PRM) and your supervisor. The PRM will examine the fossil remains and contact the Paleontological Resource Specialist to make a determination of whether or not the material is scientifically significant. If it is, then the material will be collected along with the associated data. Your supervisor will be informed when it is OK to resume work in the area.

Inspectors and Monitors

Environmental Compliance Monitors will be on the job site during construction to verify compliance with the Project's environmental protection measures.

Why Comply ?

Construction of Mojave Solar Project occurs in, adjacent to, and near sensitive environmental resources. These resources are protected by federal, state, and local laws such as the Endangered Species Act, Migratory Bird Treaty Act, California Native Plant Protection Act, Archaeological Resources Protection Act, and the Paleontological Resources Preservation Act. Being familiar with the sensitive resources and related environmental compliance issues will help avoid serious consequences to individual workers and the Project as a whole.

Penalties for Non-Compliance

This brochure outlines tips to avoid disturbing or destroying environmentally sensitive resources and to prevent violations of federal, state, and local laws. Failure to comply with these protection measures may result in penalties such as fines or time in jail.

MOJAVE SOLAR PROJECT

Worker Environmental Awareness Program

Point of Contact

Designated Biologist

Peggy Wood
Cell: (435) 881-6444

Cultural Resource Specialist

Patrick McGinnis
Cell: (619) 756-3479
Office: (619) 233-1454

Paleontological Resource Specialist

Cara Corsetti
Cell: (562) 355-2862
Office: (626) 240-0587

Note: This WEAP brochure was compiled by AECOM as a worker guide to the environmental requirements for the Mojave solar Project construction activities. It is not intended to be a complete list of conditions of certifications or protective measures. Consult local, state, and federal laws, Project approvals, and permits requirements for additional information.

MOJAVE SOLAR PROJECT



ATTACHMENT C

HARD HAT STICKER (DECAL)

**Environmental
Awareness**



**Mojave
Solar Project**

ATTACHMENT D

**RESOURCES IDENTIFICATION CARDS
(SPECIES CARDS)**

MOJAVE SOLAR PROJECT SPECIES AWARENESS



Mojave desert tortoise
Gopherus agassizii

USFWS Threatened
CDFG Threatened

Mojave Desert Tortoise

The desert tortoise is an herbivore that may attain a length of 9 to 15 inches in upper shell (carapace) length. The species is able to live where ground temperatures may exceed 140 degrees Fahrenheit, because of its ability to dig underground burrows and escape the heat. At least 95% of its life is spent in burrows. Desert tortoises are typically dormant November through February, and are usually most active early March through early June and again between September and early November.

HABITAT

Desert tortoises are widely distributed throughout the Mojave and Sonoran deserts of southeastern California, southern Nevada, and south through Arizona into Mexico. The species generally occurs below 4,000 feet elevation in firm but not hard ground, usually in soft sand to allow for burrow construction.

BREEDING SEASON

Courting and copulation typically occurs in late summer and early fall. Nests are often dug near the burrow opening early in the season, and farther inside late in the season. Some nests are dug away from the burrow, usually under a shrub. Females lay eggs in May, June, and July. The number of eggs varies from 4 to 8 white, hard-shelled eggs in a clutch; a tortoise can produce 2 to 3 clutches in a season. After laying, the female leaves the nest and the soil temperatures support growth of the embryos. Incubation periods of 90 to 120 days are typical. Only a few hatchlings out of every hundred eggs actually make it to adulthood.

PROTECTION MEASURES

Parking and storage areas will occur within desert tortoise exclusionary fencing. Any materials stored one or more nights must be inspected for desert tortoise prior to moving. Do not touch, harass, or harm any desert tortoise found on the Project. Contact the Designated Biologist if a desert tortoise is encountered.

MOJAVE SOLAR PROJECT SPECIES AWARENESS



Western Burrowing Owl
Athene cunicularia

CDFG Species of Special Concern

Western Burrowing Owl

The western burrowing owl is a small ground-dwelling owl with a round head, white eyebrows, yellow eyes, and long stilt-like legs. They measure 9 to 11 inches in height. The adult is boldly spotted and barred, with males paler in color and proportionately larger in size than females.

HABITAT

Burrowing owls are found in open dry grasslands, agricultural and range lands, and desert habitats associated with burrowing animals. The owl commonly perches on top of mounds outside its burrow or on a nearby fence post.

BREEDING SEASON

March through August, with peak activity in April and May.

PROTECTION MEASURES

Preconstruction surveys will be conducted prior to initial construction activities. A 250-foot radius non-disturbance buffer will be established for active burrows. No entry or disturbance is permitted within the buffer. A Designated Biologist or Biological Monitor will monitor construction activities to determine impacts, if any, on active burrows.

MOJAVE SOLAR PROJECT SPECIES AWARENESS



Mohave Ground Squirrel
Spermophilus mohavensis

CDFG Threatened

Mohave Ground Squirrel

The Mohave ground squirrel (MGS) is a medium-sized ground squirrel that measures 8.3 to 9.1 inches in total length, 2.2 to 2.8 inches in tail length, and 1.3 to 1.5 inches in hind foot length. There is little difference in size between the sexes. Dorsal coloration is uniformly light gray or brown, often with a wash of cinnamon or pink, while ventral coloration is creamy. The ears are small and the eyelids are white.

HABITAT

Mohave ground squirrel inhabits desert areas, including alluvial fans, basins, and plains with deep sandy or gravelly friable soils with an abundance of native herbaceous vegetation. This species is typically associated with a variety of habitats, including Mojave creosote bush scrub, shadscale desert scrub, alkali scrub, and Joshua tree woodland. Mohave ground squirrels feed on a variety of foods, but primarily on the leaves and seeds of forbs and shrubs. The MGS remains underground from August through February or March and is active during the spring and summer.

BREEDING SEASON

Males emerge from hibernation in early February and females are soon to follow. Reproduction occurs in early March and gestation lasts for about 4 weeks. Litters range from 4 to 6 individuals. Juveniles emerge from the natal burrows in late May to mid-June. Predators include badgers, coyotes, snakes, falcons, and hawks.

PROTECTION MEASURES

Preconstruction surveys will be conducted prior to ground-disturbing activities for MGS and their burrows. If potentially occupied burrows are identified, an attempt will be made to trap and relocate the individual(s). Potentially occupied burrows will be excavated by hand. The Designated Biologist will maintain records of each MGS handled. Any MGS captured shall be relocated to suitable habitat adjacent to the Project site.

MOJAVE SOLAR PROJECT SPECIES AWARENESS



Desert kit fox
Vulpes macrotis

California Code of Regulations: Protected

Desert kit fox

The desert kit fox is about the size of a well-grown house cat (about 20-30 inches long including a 9-12 inch tail). The kit fox has very large ears and a thick, sandy-yellow coat that enables it to blend effortlessly into the desert environment. Its bushy tail has a black tip, and its short, stout legs are good for putting on a burst of speed.

HABITAT

The desert kit fox occupies open desert, areas of desert scrub, grasslands, and sand dunes. It digs large burrows in open, level areas, typically in sandy and loamy soils. Kit foxes are primarily nocturnal, with home ranges ranging between 1.0 to 2.0 square miles. Kit foxes use multiple dens throughout the year, and may move between dens on a nightly basis during the nonbreeding season. The desert kit fox feeds primarily on jackrabbits, cottontails, and rodents.

STATUS ONSITE

Two kit fox natal den sites were detected during 2009 surveys within the Project Area.

PROTECTION MEASURES

Biological Monitors shall perform pre-construction surveys for kit fox burrows in the project area, including areas within 250 feet of the project site. If burrows are detected, each burrow shall be classified as inactive, potentially active, or definitely active. Inactive burrows that would be directly impacted by construction activities shall be excavated by hand and backfilled to prevent reuse by kit fox. Potentially and definitely active burrows shall not be disturbed during the whelping/pupping season (February 1 – September 30).

MOJAVE SOLAR PROJECT SPECIES AWARENESS



American Badger
Taxidea taxus

CDFG: Species of Special Concern

American Badger

The badger's fur is grayish and grizzled with black. It has a "badge-like" black marking on its face, which is accentuated by white that extends from the face rearward. The badger body is well suited for digging; it is short and stout and somewhat flattened. Its ears are rather short and its snout appears slightly upturned. Its legs are short and stout, black colored and well suited for digging. The foreclaws are long and curved and its hind claws are shovel-like. Total length is 24 to 30 inches, their tail is about 4 to 6 inches, and they weigh up to 26 pounds.

Badgers feed primarily on small rodents such as ground squirrels, pocket gophers, kangaroo rats, prairie dogs, and mice, most of which they capture by digging into the burrows of these small mammals. But, they will also eat scorpions, insects, snakes (even rattlesnakes), lizards, and birds, especially when rodent population is low.

HABITAT

The badger is a resident of level, open areas in grasslands, agricultural areas, and open shrub habitats, desert scrub, desert wash, and sandy soils. Badgers are primarily active during the day but may become more nocturnal in close proximity to humans.

STATUS ONSITE

One badger den was detected within the Project's biological resources survey area in 2006. The den was partially filled in and no recent badger sign was evident indicating that the den likely had not been used recently.

PROTECTION MEASURES

Biological Monitors shall perform pre-construction surveys for badger setts (burrows/dens) in the project area, including areas within 250 feet of the project site. If badger setts are detected, each shall be classified as inactive, potentially active, or definitely active. Inactive setts that would be directly impacted by construction activities shall be excavated by hand and backfilled to prevent reuse by badgers. Potentially and definitely active setts shall not be disturbed during the whelping/pupping season (February 1 – September 30).

MOJAVE SOLAR PROJECT

SPECIES AWARENESS



Desert cymopterus
Cymopterus deserticola

CNPS: Rare/endangered in California

Desert cymopterus

Desert cymopterus is a perennial herb that typically blooms March through May.

HABITAT

Desert cymopterus is found primarily in Joshua tree woodland and Mojave desert scrub.

STATUS ONSITE

Marginal habitat occurs onsite; observed 0.75 miles south of project area during surveys.

PROTECTION MEASURES

Notify a biological monitor if you observe this plant within or near the project site.

MOJAVE SOLAR PROJECT

SPECIES AWARENESS



Mojave spineflower
Chorizanthe spinosa

CNPS watch list; fairly threatened in California

Mojave spineflower

Mojave spineflower is an annual herb that typically blooms April through July.

HABITAT

Mojave spineflower is found in Creosote bush scrub and Joshua tree woodland.

STATUS ONSITE

Marginal habitat occurs onsite; two populations observed 0.8 mile east and west of project area during surveys.

PROTECTION MEASURES

Notify a biological monitor if you observe this plant within or near the project site.

MOJAVE SOLAR PROJECT

SPECIES AWARENESS



Mojave Fish-hook cactus
Sclerocactus polyancistrus

CNPS watch list; fairly endangered in California

Mojave Fish-hook cactus

Mojave fish-hook cactus is a perennial succulent that typically blooms April through July, depending on rainfall season.

HABITAT

Mojave fish-hook cactus can be found in creosote bush scrub and Joshua tree woodland.

STATUS ONSITE

Marginal habitat occurs onsite; observed 0.95 mile south of project area during surveys.

PROTECTION MEASURES

Notify a biological monitor if you observe this plant within or near the project site.

MOJAVE SOLAR PROJECT

SPECIES AWARENESS



Tamarisk
Tamarix spp.

Invasive Weed

Tamarisk

Invasive weeds are often quick to colonize disturbed areas, including construction sites, roadsides, irrigated sites, and any other area with altered hydrology, soil structure, or soil chemistry.

PREVENTION MEASURES

The Project shall implement the following Best Management Practices during construction and operation to prevent the spread and propagation of noxious weeds:

- Limit the size of any vegetation and/or ground disturbance to the absolute minimum and limit ingress and egress to defined routes;
- Reestablish vegetation quickly on temporarily disturbed areas, including pipelines, transmission lines, and staging areas;
- Prevent spread of nonnative plants via vehicular sources by implementing Trackclean™ or other methods of vehicle cleaning for vehicles coming and going from construction sites. Earth-moving equipment and construction vehicles shall be cleaned within an approved area or commercial facility prior to transport to the construction site. The number of cleaning stations shall be limited and weed control/herbicide application shall be used at the cleaning station(s);
- Use only weed-free straw, hay bales, and seed for erosion control and sediment barrier installations;
- Invasive nonnative species shall not be used in landscaping plans and erosion control; and Monitor and rapidly implement control measure to ensure early detection and eradication of weed invasions.

MOJAVE SOLAR PROJECT

SPECIES AWARENESS



Saharan Mustard
Brassica tournefortii

Invasive Weed

Saharan Mustard

Invasive weeds are often quick to colonize disturbed areas, including construction sites, roadsides, irrigated sites, and any other area with altered hydrology, soil structure, or soil chemistry.

PREVENTION MEASURES

The Project shall implement the following Best Management Practices during construction and operation to prevent the spread and propagation of noxious weeds:

- Limit the size of any vegetation and/or ground disturbance to the absolute minimum and limit ingress and egress to defined routes;
- Reestablish vegetation quickly on temporarily disturbed areas, including pipelines, transmission lines, and staging areas;
- Prevent spread of nonnative plants via vehicular sources by implementing Trackclean™ or other methods of vehicle cleaning for vehicles coming and going from construction sites. Earth-moving equipment and construction vehicles shall be cleaned within an approved area or commercial facility prior to transport to the construction site. The number of cleaning stations shall be limited and weed control/herbicide application shall be used at the cleaning station(s);
- Use only weed-free straw, hay bales, and seed for erosion control and sediment barrier installations;
- Invasive nonnative species shall not be used in landscaping plans and erosion control; and Monitor and rapidly implement control measure to ensure early detection and eradication of weed invasions.

ATTACHMENT E

WEAP TRAINING SIGN-IN SHEET

Certification of Completion Worker Environmental Awareness Program Mojave Solar Project (09-AFC-5)

This is to acknowledge these individuals have completed a mandatory California Energy Commission-approved Worker Environmental Awareness Program (WEAP). The WEAP includes pertinent information on biological, cultural, and paleontological resources for all personnel (that is, construction supervisors, crews, and plant operators) working on site or at related facilities. By signing below, the participant indicates that he/she understands and shall abide by the guidelines set forth in the program materials. Include this completed form in the Monthly Compliance Report.

No.	Employee Name	Title/Company	Signature
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Biological Trainer: _____ Signature: _____ Date: ___/___/___

Cultural Trainer: _____ Signature: _____ Date: ___/___/___

Paleo Trainer: _____ Signature: _____ Date: ___/___/___

