

Rice Solar Energy Project (RSEP)

Worker Environmental Awareness Program
Handbook for Biological, Cultural,
and Paleontological Resources,
and Stormwater Management



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Sacramento, California 95833

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RSE Commitment

Rice Solar Energy, LLC (RSE) is committed to protecting all sensitive resources (biological, cultural and paleontological) during construction and operation of the Rice Solar Energy Project (RSEP). This Worker Environmental Awareness Program (WEAP) is required by the Conditions of Certification BIO-6, CUL-5 and PAL-4.

This WEAP handbook includes an overview of the sensitive biological, cultural and paleontological resources that may be encountered during construction and operation—and guidelines for protecting these resources. The project has authorized specialists and monitors to support you with this effort. Remember, the Designated Biologist is your onsite contact for all biological resources; the Cultural Resource Specialist is your contact for all cultural resources, and the Paleontological Resource Specialist is your contact for all paleontological resources.

Please sign the training acknowledgement form verifying that you received this training and shall abide by the guidelines provided. This training is valid for one year.



***Cooperation and communication are key to success.
Always ask before you act.***

Environmental Laws, Regulations, and Penalties

Many of the resources found in the project area are protected by state and federal laws.

Federal Endangered Species Act: Provides protection for federal-listed threatened and endangered plant and animal species. It also prohibits the destruction of habitat critical to their recovery.

California Endangered Species Act: Similar to the federal act, it prohibits the take of state-listed endangered and threatened wildlife.

Migratory Bird Treaty Act: Prohibits the take of migratory birds. “Take” is defined as to pursue, hunt, take, kill, capture, or harass. This includes eggs, nests, and feathers of any bird, which are fully protected.

California Fish and Game Code: Prohibits take of protected plants and animals in California, and protects areas designated as significant habitat.

The Clean Water Act: Oversees protection of jurisdictional wetlands and waterways.

The following agencies have regulatory authority in the area and will also monitor construction activities. They could be on site at any time:

- California Energy Commission
- U.S. Fish and Wildlife Service
- California Department of Fish and Game
- Bureau of Land Management
- County Officials



Stay out of exclusion zones. They protect sensitive habitats.

Violation of state and/or federal environmental laws can result in penalties including fines as high as \$100,000 and/or up to one year in jail.

Violations can involve corporate and individual penalties.

Violations can result in stop work orders and construction delays.

Environmental Impacts and Mitigation Measures

Minimizing Construction Impacts:

- Open trenches must have escape ramps so wild animals, such as desert tortoise or other special-status wildlife, won't get trapped.
- Minimize the need for restoration by minimizing disturbance.
- Avoid the possible disturbance of nesting birds by staying 500 feet away. Have the Designated Biologist clear the area before you begin any and all work.
- Project construction boundaries are positioned to protect sensitive biological resources, and must not be crossed at any time.
- Stormwater runoff must not contain hazardous waste, debris, or sediment that could affect biological resources.
- To prevent hazardous materials from impacting stormwater, areas susceptible to potential leaks and/or spills will be paved and bermed. Containment areas will drain to a collection area, such as an oil/water separator or a waste collection tank.

Mitigation Measures:

- The Designated Biologist and Biological Monitors must be onsite or on-call during construction.
- Construction exclusion zones must be clearly marked to protect sensitive habitats. Cyclone, silt, and orange fencing with Keep Out signs mark your access boundaries—be aware of your limits.
- Preconstruction surveys must be conducted by the Biological Monitor prior to all ground disturbance.
- Erosion control and revegetation will be implemented for the project according to approved plans.
- Impacts to biological resources will be monitored and reported to the appropriate agencies

Designated Biologists and Biological Monitors

The RSEP Designated Biologists are responsible for implementing the project's Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) and providing direct assistance to avoid impacts to natural resources. **The Designated Biologists have the authority to stop work if activities do not comply with protection measures outlined in the project's BRMIMP.**

Duties of the Designated Biologists:

- Advise Site Superintendent, Construction Manager or Operations Manager, and RSE Compliance Manager on the implementation of the biological resources Conditions of Certification; and report monthly to the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG), the California Energy Commission (CEC) Compliance Project Manager (CPM), Western Area Power Administration (Western), and the U.S. Bureau of Land Management (BLM).
- Prepare and supervise the implementation of this WEAP.
- Supervise or conduct monitoring, and other biological resource compliance efforts, including implementation of protection measures.
- Consult with natural resource agencies (including BLM, USFWS, and CDFG) on potential biological issues and remedial actions.
- Advise project construction workers if there are changes in the environmental protection plans.
- Notify RSE and the CEC CPM of non-compliance with any condition and the corrective actions taken, and advise the construction and operations manager when to stop and resume construction in sensitive areas, and has the authority to stop construction work at any time.
- Maintain written records for inclusion in Monthly Compliance Reports.
- Submit monthly and annual compliance reports to the CEC.
- Supervise and support the efforts of the Biological Monitor.
- Coordinate with wildlife agencies for compliance of protection measures.
- Consult on the preparation of the BRMIMP to be submitted by the project owner.
- Clearly mark sensitive biological resource areas and inspect these areas at appropriate intervals for compliance with regulatory terms and conditions.

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- Inspect active construction areas where animals may have become trapped prior to construction commencing each day. At the end of the day, inspect for the installation of structures that prevent entrapment or allow escape during periods of construction inactivity. Periodically inspect areas with high vehicle activity (e.g., parking lots) for animals in harm's way.
 - Respond directly to inquiries of natural resource agencies and the CPM regarding biological resource issues.
 - Train the Biological Monitors as appropriate, and ensure their familiarity with the BRMIMP, WEAP training, and USFWS guidelines on desert tortoise surveys and handling procedures.

The Designated Biologists and Biological Monitors will be onsite during earthwork activities and will clear areas before any and all surface disturbance begins. **The Designated Biologists and Biological Monitors have the authority to stop work if any violation of mitigation measures occurs in the project area.** Mitigation measures for the project are described in the BRMIMP, available for review from the CPM.

Duties of the Biological Monitors:

- Supervise construction in sensitive habitat areas to monitor compliance with mitigation measures. The Biological Monitors shall assist the Designated Biologists in conducting surveys and in monitoring of mobilization, ground disturbances, grading construction, operations, and closure activities.
- Advise RSE on how best to avoid adverse impacts to biological resources.
- Assist the Designated Biologists in preparing construction zone limits in sensitive habitats—including flagging and signage.
- Immediately notify the Designated Biologists, RSE, and the Environmental Compliance Manager (ECM) of non-compliance and the corrective actions taken, and advise the construction and operations engineer when to resume construction.
- Notify onsite personnel if there are any changes in the plan.
- Submit monthly and annual reports to the CEC that document implementation of the Conditions of Certification.

Remember: The Designated Biologists and Biological Monitors have the authority to stop work if construction activities are non-compliant.

Wildlife Observation Form

It is the responsibility of all personnel to complete a wildlife observation form whenever they encounter an injured animal or an animal nest, burrow, or other animal sign onsite that requires displacement. These forms will be available in the Environmental Compliance Manager's trailer and the safety training trailer. Sightings will also be reported to the Biological Monitor. The monitor will assist you if you have any questions about completing these forms.

WILDLIFE OBSERVATION FORM To Record Animals Found In The RSEP Area	
To be filled out by personell who find active nest sites and burrows, dens, and dead or injured wildlife, or other biological resources during daily construction activities.	
Name of employee:	
Date:	
Location of observation:	
Wildlife species:	
Condition of wildlife: <input type="checkbox"/> Alive <input type="checkbox"/> Dead	
Possible cause of injury or death:	
Where is the animal currently?	
Is the resource in danger of project (or other) impacts?	
Comments:	
Please contact the Designated Biologist for questions and to report any wildlife, nest, or den in the project area that could be disturbed. The Designated Biologist will advise personnel on measures required by California Department of Fish and Game (CDFG) and United States Fish and Wildlife Service (USFWS) to protect fish, wildlife and vegetation from construction impacts.	
LEAD DESIGNATED BIOLOGIST Jim Marble: Cell (775) 764-0353 Office (714) 435-6208 x36208	
LEAD FIELD DESIGNATED BIOLOGIST Stephen Boland: Office (928) 380-8850	
DESIGNATED BIOLOGISTS Mercy Vaughn: Office (928) 380-5507 Kelly Herbinson: Office (714) 394-1563 Bryan Reiley: Office (760) 515-0272 Thomas Jackson: Cell (251) 605-3322 Home (559) 561-4340	
CH2MHILL - 2485 Natomas Park Drive, Suite 600, Sacramento, California 95833 - (916) 920-0300	

Your Responsibility

- All personnel, equipment, and vehicles are to remain inside fenced areas and previously cleared sites.
- If wildlife is accidentally harmed, immediately notify a Designated Biologist or Biological Monitor.
- Do not handle wildlife.
- Do not feed or disturb wildlife.
- Notify the Designated Biologists or Biological Monitors if you observe any of the following:
 - Any injured, wounded, or dead animal.
 - Any animal impacting work activity (in harm's way and needs moving).
 - Any breach or tear in tortoise fencing.
 - Any breach or tear in fencing surrounding protected rare plant areas.
 - A desert tortoise, snake, Mojave fringe-toed lizard, burrowing owl, nesting birds, or raptors foraging or nesting onsite.
 - Anyone not following the procedures set forth in this manual.

General Work Practices

- Stay in approved work areas (construction zone limits).
- Use only approved access roads.
- Keep out of designated exclusion areas such as Sensitive Biological Resource Areas.
- Inspect open trenches for wildlife each morning before starting work.
- Do not litter.
- No pets or hunting allowed on the project site or in the project area.
- Except for law enforcement personnel, no workers or visitors to the site shall bring firearms or weapons.
- No fires allowed.
- Smoke only in posted and designated areas. Cigarette butts must be disposed of in the butt containers provided.
- Do not feed, touch, or disturb wildlife.
- Clean up and report all hazardous material spills immediately.

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- Do not discharge water into unapproved areas.
 - Protect waterways and storm drains by implementing protective measures, such as silt fencing.
 - Report wildlife observations to the Designated Biologists or Biological Monitors.
 - Report trapped, injured, or dead wildlife to the Designated Biologists or Biological Monitors and record the specifics on a Wildlife Observation Form. Forms are available in the CPM's office and Safety Orientation office.
 - During construction, all trash and food-related waste shall be placed in self-closing containers and removed daily from the site.
 - Keep fluid spill containment and clean up materials readily available.
 - Equipment and vehicle fueling must occur either within a designated refueling area or must use accepted spill protection and be in compliance with the Spill Protection, Control and Countermeasures Plan (SPCC).
 - Vehicular traffic shall be confined to existing routes of travel to and from the project site, and cross-country vehicle and equipment use outside designated work areas is prohibited. The speed limit on dirt access routes within desert tortoise habitat shall not exceed 20 mph.
 - If ground-disturbing activities are required prior to site mobilization, such as for geotechnical borings or hazardous waste evaluations, the Designated Biologists or Biological Monitors shall be present to monitor any action that could disturb soil, vegetation, or wildlife.



Remember: Always ask before you act.

Sensitive Biological Resources

The RSEP site and vicinity include features that provide habitat for sensitive plants and wildlife. Of particular concern is the desert tortoise.

Desert Tortoise

The RSEP site and vicinity is habitat for the federally and state threatened **desert tortoise** (*Gopherus agassizii*).

Desert tortoises are known to be present at the project site and vicinity. Any construction activity involving equipment or vehicle movement anywhere in the project site or vicinity is a potential threat to the desert



tortoise. **All construction activities, project vehicles, and equipment must stay within the fenced construction areas that biologists have *identified and cleared* of desert tortoises. All work areas are to be confined to the smallest practical area, considering topography, placement of facilities, public health and safety, and other limiting factors. Use previously disturbed areas to the extent feasible.**

What you should know about Desert Tortoise

The desert tortoise is the largest reptile in the southwestern United States. It is distinguished by a domed shell. Shell color is brownish, with yellow to tan scute centers. Adults can be over one foot long. Juveniles and hatchlings are smaller but resemble adults. Hatchlings can be as small as 1½ inches. Tortoise can live to be 50 to 100 years old and take 15 to 20 years to reach sexual maturity.

Although tortoises have existed for millions of years, the number of these animals is declining. The reasons for the drop in numbers includes loss of habitat through urban development, disease, roads, introduction of exotic plants, increased predation by ravens, and collecting as pets.

Legal Protection

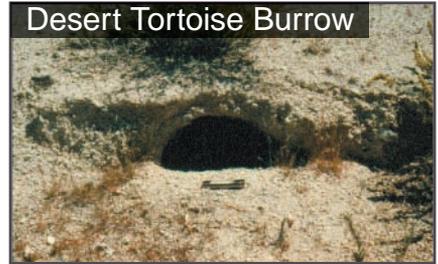
Desert tortoises are protected by the Federal and California Endangered Species Act. Federal and state protection makes it illegal to “take” desert tortoises or destroy habitat without an exemption. Take means to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” If you encounter a desert tortoise DO NOT TOUCH IT – JUST LEAVE IT ALONE! Report the observation immediately to the Lead Designated Biologist, Jim Marble, at (775) 764-0353 and to the Lead Field Designated Biologist, Stephen Boland, at (928) 380-8850, or the project office in the Construction Logistics Area.

You can be penalized for damaging tortoise habitat, if it is the result of unauthorized activity. An example is driving off designated roads. Maximum fines are \$100,000 for an individual, \$200,000 for an organization (include a business/corporation etc.) and up to one year in prison.

You and your company are responsible for obeying the law.

Where Desert Tortoises are Found

Desert tortoise could be encountered anywhere on the RSEP site. Be particularly watchful on roads. Desert tortoises may be found in burrows up to 30 feet in length. Burrows are difficult to detect and therefore driving and walking will be limited to designated roads and within the fence line of the project.



Tortoise Activity

Tortoises are most active from mid-February through late June and again during September and October. They may also be active during the summer, but don't range far from their burrows when temperatures are very hot. Tortoises are particularly active during or following rainfall.

Be aware that tortoises may use parked vehicles and construction equipment for shade during the heat of the day.

Juvenile and adult tortoises may be active throughout the year and at night; activity is seasonally variable. Hatchling tortoises are about the size of a silver dollar and may be abundant in the fall. For this reason, speed limits should be observed because these small tortoises are hard to see.

What you must do

- Stay within the fenced construction areas that have been cleared of tortoise and on existing roads. Travel outside of the fenced area is strictly prohibited.
- Preconstruction tortoise clearance surveys must be conducted prior to all ground disturbances. Be sure the area has been cleared of desert tortoises and approved for ground-disturbing activities by the Lead Designated Biologist before starting work.
- Areas cleared of tortoise and available for construction will be clearly marked with signs or other markers.
- Avoid all undisturbed areas and preserve vegetation by staying on designated roads and within the staked project limits.
- Firearms and pets are prohibited while on the job site.

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- Remove left-over food and garbage that could provide food for ravens or other predators and place in raven-proof containers. Otherwise, this garbage could attract ravens and other predators that feed on young tortoises.
 - Check under/around your vehicle and all equipment before moving it because a tortoise may be using it for shade. If one is observed, the tortoise must be allowed to move away on its own and immediately reported to the Designated Biologist. Only a Designated Biologist with a permit for this species can move the tortoise out of the construction area. Designated Biologists serve as additional contacts to report tortoise sightings or accidents.
 - Obey the posted speed limit signs along SR 62 and 20 MPH within the project boundary.
 - If you encounter a desert tortoise DO NOT TOUCH IT – JUST LEAVE IT ALONE, AND NOTIFY THE DESIGNATED BIOLOGIST.
 - Report any observations of tortoises or incidents involving a desert tortoise immediately to the Designated Biologist.

Mojave Fringe Toed Lizard

The **Mojave Fringe-Toed Lizard** is a medium-sized, white or grayish, black-spotted lizard. It has scaly hind toes that keep it from sinking into the sand and has been clocked at speeds of 23 miles per hour. Be cautious, as this lizard may dart in front of your vehicle. The lizard also tends to plunge into the sand to hide from enemies. However, they do not burrow deep enough to be out of harm's way from vehicles.



The lizard lives in windblown sandy habitats, most notably the dunes. Although there is no dune habitat within the project footprint, this lizard may wander up sandy washes into the RSEP site. Due to their coloring, the lizard may blend into the sand. Lizards could be harassed, crushed, buried, or stranded if they wander into the site during construction.

American Badger

American Badgers, a California Species of Special Concern, were once fairly widespread throughout open grassland habitats of California. They are now uncommon, permanent residents throughout most of the state, with the exception of the northern North Coast area. They are most



abundant in the drier open stages of most shrub, forest, and herbaceous habitats with friable soils.

The American badger may den in the vicinity of the project site and could potentially den or forage within the gas pipeline alignment.

Desert Kit Fox

The **Desert Kit Fox** can be found in similar habitats as the American badger. Kit foxes are primarily nocturnal and inhabit open, level areas with patchy vegetation cover. This species also requires friable soils for construction of dens. Kit foxes have been observed within the proposed project area.



What You Must Do

- Stay within the designated construction areas.
- Avoid all undisturbed areas and preserve vegetation by staying on designated roads and within the staked project limits.
- If you see a Species of Concern, report it to your Designated Biologist immediately.
- Do not touch the Species of Concern.
- Obey posted speed limit signs within the project site.

Nesting and Foraging Birds

The RSEP site and vicinity supports various nesting opportunities for native raptors (hawks and owls) and songbirds.

What you should know about Nesting and Foraging Birds

Birds generally breed and nest between February 1st and September 1st. Except for a limited few, all birds, nests, eggs, and young are protected under California Fish and Game laws and by the Federal Migratory Bird Treaty Act. An offense is considered criminal and can include substantial fines and possible jail time. Be mindful that not all nests are in trees.

The **Prairie Falcon**, a grey-brown medium-sized bird, and the **Golden Eagle**, a larger bird with a



Golden Eagle



dark brown body and lighter golden-brown head, often nest in the surrounding Turtle Mountains to the north and the Maria Mountains to the south, the West Riverside and Riverside Mountains to the east and southeast, and the Iron Mountains to the west. Due to the fact that these birds often nest in the surrounding mountains, the RSEP site provides foraging habitat for them.



Loggerhead Shrike

The **Loggerhead Shrike** has a large hooked bill and is mostly grey and black with some white patches. It can be found within open habitat types and may also be seen at this project site.

The **Western Burrowing Owl**, a California species of special concern, inhabits dry open grasslands and typically nests in small burrows that have been constructed and abandoned by burrowing mammals such as ground squirrels or badgers. Burrowing owls could nest onsite and may opportunistically forage throughout the project area. Burrowing



Burrowing Owl

owls are year-long residents; their breeding season is late February through August. Direct mortality of juvenile and adult burrowing owls has been known to result from destruction, plugging, and flooding of occupied burrows, collisions with motor vehicles and construction equipment, predation by native and domestic animals, exposure to certain insecticides and rodenticides, and shooting. A buffer zone of 160 feet from owl burrows will be maintained during the non-breeding seasons (September 1–January 31). The buffer will be increased to 250 feet during the breeding season (February 1–August 31).

What you must do

- Stay out of designated areas that are temporarily off limits because of nesting birds. Work areas will be surveyed for nesting birds prior to and during construction. If an active nest is found, the immediate area will be temporarily off limits. Active nests will be cordoned off and monitored by the Designated Biologist who will also give approval to re-enter the area following fledging of nestling birds.
- If you see nests prior to or during construction, please notify a Designated Biologist or Biological Monitor immediately. Nests may be found in trees, bushes, man-made structures (e.g., storage areas), non-moving equipment, or on the ground in burrows (e.g., burrowing owls).

Other Wildlife

Other wildlife species are also protected by federal and state law. These include the Western Tanager, Great-tailed Grackle, and Yellow-headed Blackbird, snakes, other reptiles, or wildlife. Please report any observations of snakes or other reptiles immediately to the Designated Biologist.

What you must do

- All personnel, equipment, and vehicles are to remain inside the identified and cleared work area. Do not enter any area of undisturbed vegetation unless it is inside a fenced and cleared area.
- Do not handle, feed, or disturb wildlife. Some snakes are venomous!
- If wildlife is accidentally harmed, immediately notify the Designated Biologists or Biological Monitors.
- Inform the Designated Biologists or Biological Monitors about injured, entrapped or dead wildlife observed on site and fill out a Wildlife Observation Form.
- No cross-country travel outside designated and/or fenced areas is authorized. Keep out of designated exclusion areas.
- No fires. Smoke only in posted designated smoking areas. Cigarette butts must be disposed of in the butt containers provided in the designated smoking area.
- Keep fluid spill containment and clean up materials readily available.
- The Designated Biologists or Biological Monitors will be onsite or on-call during construction to answer questions regarding desert tortoises and other wildlife. Biologists are available any time during construction or ground-disturbing activities to remove tortoises, or respond to any construction worker calls regarding wildlife or plants.

Conclusion

Many of the resources found in the project area are protected by state and federal laws. There is the potential for anyone involved with the project to encounter special-status species; particularly desert tortoise and nesting birds. Protect yourself, your supervisor, and your company from legal and financial liability by following the guidelines presented in this handbook.

Rare and Protected Plants at the RSEP Site



Harwood's Milk-Vetch



Fish-Hook Cactus



Beavertail Cactus

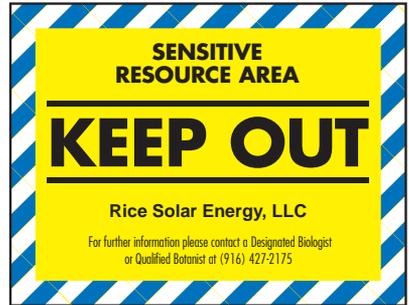


Hedgehog Cactus



Environmentally Sensitive Area

Harwood's Milk Vetch has been identified on the transmission line route. To protect this species, and any other protected plant species, an Environmentally Sensitive Area or ESA will be set up surrounding the plant and a 250 foot buffer. This ESA will consist of fencing and several "Sensitive Resource Area, Keep Out" signs. Only the Qualified Botanist will be able to access the ESA, and no foot or vehicular traffic will be allowed within the fencing.



What You Must Do

- Stay within the designated construction areas.
- Avoid all undisturbed areas and preserve vegetation by staying on designated roads and within the staked project limits.
- It is your responsibility to be aware of these project requirements and comply with them.
- The Designated Biologist, Biological Monitors, and Qualified Botanists are there to help. If you have questions about anything, please ask before you act.

Weed Avoidance and Control

Under direction of the Bureau of Land Management, RSE has prepared a comprehensive Weed Control Plan to assure that construction activities, as well as operation of RSEP, do not promote weed growth in the area, nor lead to the establishment of new weed species in the Rice Valley. Weeds are usually annual plants that prefer disturbed soil conditions, and their seeds commonly hitch-hike on the tires and undercarriage of heavy equipment as well as cars and trucks. They can have devastating effects to local ecosystems because a heavy growth of weeds promotes wildfires in vegetation not adapted to fire. Such a catastrophe could seriously affect the facility, and the surrounding native vegetation may never return after such a fire. Weeds can also poison cattle, and even lead to the local extinction of native plant species. Therefore, for the safety of the facility as well as the health of the surrounding ecosystem, RSE has adopted strict weed-control measures that you are required to follow.

These include the following:

- **Vehicle and Equipment Inspection**

Vehicles arriving from off-site locations will be required to stop for cleaning before entering the site. Heavy equipment entering the site on trailers must also be cleaned. Wash stations will be located near the entrance to the RSEP site from SR 62.

- **Biological Monitors**

Biological monitors will be present at the site and they have the authority to send any vehicle or piece of equipment to the wash station if they appear to harbor weed seed.

Project workers will also be required to inspect, remove, and dispose of all seed and plant parts found on their clothing, shoes, and personal equipment (this also applies to all hand tools). The material will be bagged and disposed in a landfill or incinerated.

- **Exclusion Areas**

The Designated Biologists, Biological Monitors, or Qualified Botanists may identify areas where weeds appear to be taking over and, if so, they will be cordoned off with temporary fencing and signage for control measures that may include the application of herbicides. You must not enter these marked exclusion zones.

- **Limiting Disturbance**

Because weeds thrive on recently disturbed soils, the areas subject to construction disturbance need to be kept as small as possible and still allow room for efficient work activities. **All disturbances, project vehicles, and equipment shall be confined to flagged areas.**



Sahara Mustard
(*Brassica tournefortii*)



Filaree
(*Erodium cicutarium*)



Mediterranean Grass
(*Schismus arabicus*)



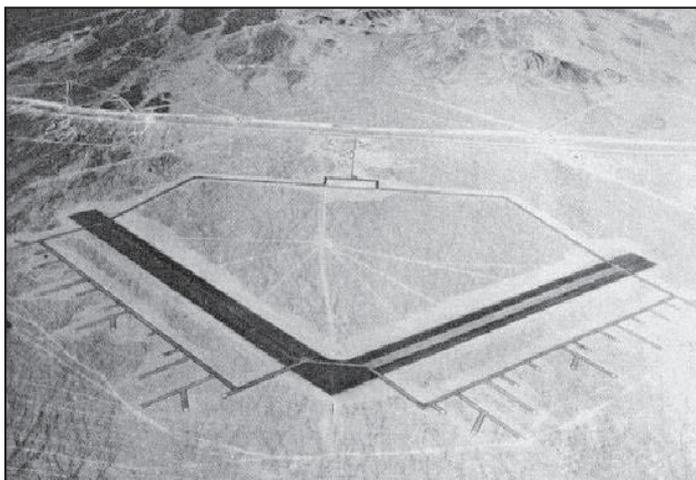
Mediterranean Grass
(*Schismus barbatus*)

Cultural Resources

Any trace of past human activity greater than 50 years old may be an important cultural resource. Places or sites where these traces occur are a part of a proud heritage that belongs to all of us. In the general vicinity of the project area, there are archaeological remains that represent over 11,000 years of Native American prehistory and continue until 1769, when Spanish settlement occurred in California. Historical archaeological features, deposits, and architectural structural resources may also be found in the area. Significant cultural resources represent historical events, engineering achievements, and art or architecture styles that define what Americans have experienced. Ethnographic resources are also cultural resources and they may include traditional plant gathering areas, shrines and ceremonial areas, cemeteries, natural landscape features, and ethnic structures or districts. Because these achievements define what we are and affect what we become, the past belongs to us all and we all have a responsibility to help preserve significant cultural resources.

Archaeological and historical sites are a non-renewable resource. Though we are always creating new cultural resources for people of the future to interpret or preserve for posterity, historical and archaeological sites, once destroyed, cannot be recreated.

The RSEP site occupies private land that was historically used during World War II as Rice Army Airfield. The Rice Army Airfield and adjacent Camp Rice were part of a three-state ad hoc training environment established to acclimatize troops to desert warfare between 1942 and 1944. Training involved infantry, artillery, and air support forces. Due to the known use of the RSEP site for live fire military training, please avoid ordnance materials and unidentifiable military items for crew safety!



Archaeological remains are often so fragmentary that it is possible to scrape, dig, or bulldoze right through a buried site without realizing it. Here's what to look for:

- Discolored soil, particularly gray-black soil with a “greasy” feel to it, in an area of lighter colored soils.
- Any animal or human bone. The proper treatment of Native American graves is of great concern. Possession of artifacts or human remains from a Native American grave is a felony (PRC 5097.99).
- A thin layer, or series of layers, particularly dark layers containing charcoal or ash, in an excavation side wall.
- Shell, freshwater or marine, or shell artifacts
- Any unusual concentration of rocks, particularly if they seem to form a pattern (such as a campfire).
- A concentration of small pieces of broken rock, particularly obsidian or chert with sharp edges.
- A concentration of historic-era trash, including bottles, broken glass, broken ceramic, bone, and metal pieces.
- A concentration of brick, concrete, or mortared stone that might indicate a structural foundation.

Cultural Resources Monitors

A Cultural Resources Monitor will be present to observe all ground-disturbing construction activity. It is the monitor's job to evaluate any cultural resources discovered, and to stop work in the vicinity of the discovery if any important cultural resources are found.

In addition to the Cultural Resources Monitor, a Special Interest Monitor (SIM), designated by the General Patton Memorial Museum, may also be on-site to monitor construction activity. This individual will strictly observe construction activity and will report any concerns or observations to the Cultural Resources Specialist.

Examples of Cultural Resources

The remains of Rice Army Air Field include remnants of runways and dispersal pads, a cement parade ground, and concrete pads that were foundations for administrative structures and barracks. Historic-period artifacts that may be encountered during construction include glass, burned ration debris, construction debris and remains of structural features such as concrete foundations, stone aerial markers, rock alignments, rock lined pits, and other various pits.

Glass Bottles



Building Foundation



Prehistoric and historic artifacts could also be discovered; these include such things as grinding stones, arrowheads, and stone flakes, glass bottles, metal objects, animal bones and building foundations. Human skeletons may also be exposed.

The following are examples of cultural resources that could be uncovered in the project area. The first seven examples are all stone tools shaped for specific functions.

The first example is a small **hammer stone**. Hammer stones were used for a wide range of tasks and may show wear at one or both ends.



Hammer Stone



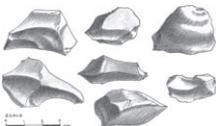
Flaked Cobble

Flaked cobbles were used for scraping, digging, or cutting. They can occur in a variety of shapes and sizes with a smooth end for holding.

Scrapers had a variety of uses including preparing animal skins, shaping wood, or preparing food. Depending on their function, scrapers come in many shapes and sizes.



Scraper



Lithic Debitage

Lithic debitage is the waste material produced during the manufacture of flaked stone tools such as knives and projectile points. Debitage may be found in a variety of shapes and sizes, often as a concentration of small flakes of stone.



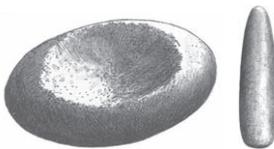
Flaked Knives

Flaked knives are very distinctive and easily identified by shape and flaking pattern. Flaked knives can be found in a large number of shapes and sizes.



Arrowheads

Projectile Points are also very distinctive, and are commonly referred to as arrowheads. Projectile points can range in size from one to six inches long and several inches wide.



Mortar and Pestle

The **Mortar** and **Pestle** were used together as a grinding tool. They were used to prepare foods, pigments, medicines, and potions.

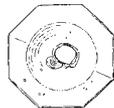
Historic artifacts that may be present include glass bottles, bone, ceramics, metal cans and other metal objects, including wire, nails, and building hardware, as well as the remains of former building foundations and underground utilities.



Medicine Bottle



Glass Ink Bottle
Clear glass octagonal
ink bottle
early 20th century



Glass Milk Bottle
One quart milk bottle
Hester Dairy, San Jose, CA
circa 1935

Your Responsibility

If a Cultural Resources Monitor is present when a cultural resource is exposed, he or she will direct you to stop work at the location of the “find.”

The RSEP's Cultural Resource Specialist, Alternate Cultural Resource Specialist, and Cultural Resource Monitors have the authority to halt construction in the area of a discovery to an extent sufficient to ensure that the resource is protected from further impacts, as determined by the CRS. Stopping construction in the vicinity of an archaeological find is an important condition of the project's permit from the California Energy Commission and one with which we expect you to comply. Work may be stopped or redirected for only a few minutes, or it may be shut down for an extended period of time, depending on what is found.

If a Cultural Resources Monitor is not present when a cultural resource is found, it is your responsibility to stop work and notify your supervisor, and the Cultural Resource Specialist or Cultural Resource Monitor. Work shall not resume until the construction supervisor and the CRS determine how to redirect the halted work.

It is illegal for you to collect any objects, including old bottles, from public land according to the California Public Resources Code (sections 5097.5 and 5097.9). Disturbing Native American burial sites is a felony under California Public Resources Code Section 5097.99. In addition, the deliberate destruction and removal of cultural resources on private land is prohibited under the conditions of RSEP's permit from the CEC. The following state and federal laws and regulations affect the management of cultural resources:

- Archaeological Resources Protection Act
- National Historic Preservation Act
- California Environmental Quality Act
- California Public Resources Code (Sections 5097.5, 5097.9, and 5097.99)

Violations of these regulations can result in federal indictment, and are punishable by civil and criminal penalties, including both fines and/or imprisonment, and could result in the revocation of project certifications, and shut-down of the project at the direction of the appropriate state agency.

Only authorized personnel may handle cultural resources. Notify the Cultural Resources Monitor or Site Superintendent if you think you may have found a cultural resource. Do not touch or move the object.

If you have any questions about these procedures, please ask your Site Superintendent or Cultural Resources Monitor for more information.

Paleontological Resources

Paleontological resources are fossils; the remains of prehistoric plants and animals, and they are protected by State and Federal Laws. Fossils include animal bones and teeth, and plant remains such as logs and even prehistoric seeds. Fossils also include such things as ancient burrows and tracks, and even really small remains like bird bones or rodent teeth of rodents.

Fossils are non-renewable resources because they represent life and environments that no longer exist. If they're destroyed or taken without proper, scientifically controlled collection, the detailed evidence of that past life is lost forever. It doesn't help if the fossil is in somebody's private collection because scientists won't know that, and they won't have access to it. However, when properly collected fossils provide evidence not only of the types of animals or plants that grew here in the distant past, but also valuable data on past environments and even on climate change.

As important scientific and educational resources, fossils are protected by State and Federal law. It's those laws that require all of us to specifically watch for and take steps to protect fossils during excavations for the Rice Solar Energy Project. The laws protecting fossils are specific: NO individual can disturb fossils except in the course of their scientific investigation and controlled recovery. So we need to take care during excavations to identify and protect any fossils that may be uncovered until they are examined and removed by a qualified paleontologist.

Because fossils may be encountered during excavations, this project includes a paleontological resources protection program managed by a designated Paleontological Resources Specialist (PRS). If a potential fossil is discovered, the PRS will evaluate it to determine whether or not it is a scientifically fossil. **The PRS will have the authority to stop or redirect work in the immediate vicinity of a significant find until the fossils are properly recorded and recovered.**

Examples of Paleontological Resources

Should significant fossil be encountered, they are likely to be the remains of large mammals that occurred in the deserts of California during the Ice Age. Some examples of fossils that may be found on the project site include the teeth and bones of extinct horses and camels, and of mammoths. Remember that they look much less obvious when they are covered with dirt, so be on the lookout for things that look strange, or that look like they might be a bone, or a log, or even sea shells.

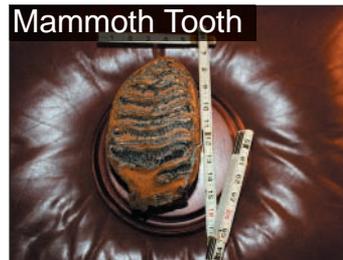
The track of an extinct trilobite preserved in mica-rich shale with the fossil of a trilobite of about the same size. These animals went extinct some 250 million years ago.



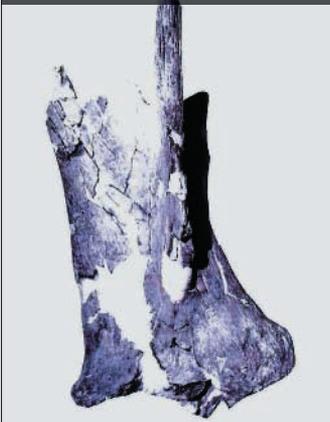
Two ammonites which were essentially squids living in shells a lot like the modern nautilus of the South Pacific.



A mammoth tooth similar to those found along the Colorado River not far to the east.



Camel Shoulder Blade



A shoulder blade of the extinct North American camel, an animal that was once common in this region.

Snail Shell

A snail shell, indicating the former presence of water.



Horse Tooth



A tooth of the extinct North American horse, about 30,000 years old.

Your Responsibility

RSE is committed to the protection of fossil resources. **Remember: it is your duty to help with this protection effort.** If you think you have found a fossil, **stop work in the immediate area of the find** and ask your Site Superintendent to notify the Environmental Compliance Manager and/or the Paleontological Resources Specialist so that your “find” can be evaluated as quickly as possible. In the meantime, make sure that the immediate vicinity of the find is staked off for construction avoidance so that others may know to avoid the area.

The following state and federal laws and regulations affect the management of paleontological resources on public lands:

- Federal Antiquities Act of 1906
- Omnibus Public Lands Management Act of 2009
- California Environmental Quality Act
- California Public Resources Code (Sections 5097.5 and 5097.9)

Violation of these regulations is punishable by civil and criminal penalties, including both fines and/or imprisonment, and could result in the revocation of project certification and shut-down of the project at the direction of the appropriate state agency.

Conclusion

There is the potential for anyone involved with the excavation to find paleontological resources on the RSEP construction site. These resources have considerable value to us all and once removed, that value is diminished. Protect yourself, your supervisor, and your company from legal and financial liability by reporting all possible finds of historic and prehistoric remains.

Stormwater Management

Polluted runoff can harm birds, aquatic life, livestock, recreation, pipe systems, navigation in waterways, and sources of drinking water. The primary stormwater pollutant at construction sites is excess sediment. At the national level, the U.S. EPA states that 40% of all U.S. waters are not fishable or swimmable, and has identified sediment from construction sites as the #1 non-point source pollutant. Sediment also transports other pollutants such as pesticides, metals, and oils and greases.



National Pollutant Discharge Elimination System General Permit Order No. 2009-0009-DWQ, also known as the Construction General Permit, regulates discharges of pollutants in stormwater discharges to waters of the U.S. from construction sites that disturb one or more acres of land surface. It is illegal to pollute local waterways, and fines and criminal charges are becoming more common. Members of regulatory agencies with jurisdiction over stormwater discharges from a construction site, such as the Regional Water Quality Control Board, can arrive at the site unannounced at any time to inspect all areas for compliance with the Construction General Permit.

The Stormwater Pollution Prevention Plan

A Stormwater Pollution Prevention Plan, also known as a SWPPP, was developed to address the construction activities associated with the RSEP and identify Best Management Practices (BMPs), for stormwater pollution prevention. Adherence by you to the BMPs is required in order to keep the project site in compliance with applicable regulations and prevent the levying of fines or even an Immediate Cease and Desist Order.

The Site Supervisor has primary responsibility for the implementation, inspection, and maintenance of the BMPs identified in the SWPPP. BMPs implemented on-site include controls for erosion, sedimentation, tracking, wind erosion, non-stormwater discharges, and waste management.

Best Management Practices

Erosion control, also referred to as soil stabilization, is a source control measure that is designed to prevent soil particles from detaching and becoming transported in stormwater runoff. Erosion control BMPs protect the soil surface by covering or binding soil particles. Examples of erosion controls are the use of mulch or geotextiles.

- Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water. Examples of sediment controls are the use of silt fence or fiber rolls.



- Tracking controls prevent sediment and other loose construction materials from being tracked off the project site. An example of a tracking control is the use of a stabilized construction entrance or exit.

- Dust erosion control measures, such as watering the disturbed areas at the construction site, are implemented to minimize the wind-blown loss of soil from the site.
- Non-stormwater control measures address the storage, use, and disposal of materials such as vehicle fluids and curing compounds.
- Waste management controls manage the various waste streams generated from construction activities, such as the disposal of excess concrete.



Worker Responsibilities

At the job site, you can assist in the effort to prevent pollutant-laden stormwater from discharging off-site by:

- Installing fencing to protect sensitive resources and limit construction areas in coordination with the Site Supervisor and Biological Monitor. Respect the boundaries of these fenced areas, and only open or remove them upon direction of the Site Supervisor and Biological Monitor.
- Installing fiber rolls, silt fence, covers on stockpiled materials, and other BMPs as directed by the Site Supervisor.
- Only moving, adjusting, or removing BMPs in coordination with the Site Supervisor.
- Immediately contacting the Site Supervisor if you see fiber rolls, silt fence, or other BMPs in need of maintenance or repair.

To minimize dust:

- Drive vehicles onsite at the posted speed limit.
- Use the stabilized construction entrances/exits to prevent dirt on tires from being tracked-out onto public or paved roads.
- Inspect equipment vehicle tires and wash as necessary to be free of dust prior to entering paved roadways.
- Sweep or vacuum tracked dirt from paved roads daily and as directed by the Air Quality Construction Mitigation Manager.
- Water the project site as directed by the Site Supervisor to control dust associated with vehicle traffic and construction activities.
- Cover and berm stockpiles of loose construction materials, such as soil, that are not actively being used.

To minimize the potential of a release of pollutants into stormwater:

- Use the designated concrete washout area, material storage areas, and vehicle maintenance and fueling areas as specified in the SWPPP.
- Walk, drive, and park only in designated areas and paths.
- Inspect your vehicles and equipment daily for leaks, and report leaks to the Site Supervisor.
- Refuel equipment or vehicles only in designated areas.
- Use drip pans or absorbent pads for all vehicle and equipment maintenance activities that involve grease, oil, solvents or other vehicle fluids.
- Wash equipment and vehicles only in designated areas. When feasible, wash them off-site.
- Store all materials only in their designated areas.
- Put all waste materials only in their respective designated containers.
- Close disposal containers, including trash bins, at the end of every business day and during a rain event.
- Use the designated concrete washout area when needing to wash out concrete trucks or dispose of Portland Cement Concrete or Asphalt Concrete waste.
- Park paving equipment over plastic when not in use.
- Check with the Site Supervisor before you discharge groundwater or any wastewater.
- Report leaks, spills or discovery of contaminated soil immediately to the Site Supervisor. Implement clean-up procedures as directed.

To help with the detection of pollutants in stormwater:

- Immediately report any dirty water or sedimentation or discharge of pollutants leaving the project site to the Site Supervisor.
- Immediately report the discovery of any debris in water areas to the Site Supervisor.

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Rice Solar Energy Project

