

BIOLOGY SECTION
Of the
WORKER ENVIRONMENTAL AWARENESS
PROGRAM (WEAP)
GENESIS SOLAR ENERGY PROJECT

Submitted to:

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1.1 Biological Resources

1.1.1 Sensitive Biological Species and Habitat Information

This section describes information regarding sensitive species and habitat identification and occurrence within the project area. The sensitive species that may be present in the project vicinity include Burrowing Owl, Desert tortoise, Mojave fringe-toed lizard, and Couch's spadefoot toad. Photographs of these species will be provided during the training sessions. These photographs are incorporated into pocket-sized cards that will be distributed to each site employee. The cards include species information as well the avoidance and minimization measures related to that species that are the direct responsibility of the worker. Whereas the above species are particularly sensitive to human disturbance in this area and involve special regulations and attention, it is important to remember that no snakes, lizards, or other wildlife are to be harmed.

Desert Tortoise (*Gopherus agassizii*)

State Status: Threatened, Federal Status: Threatened

The desert tortoise, a large herbivorous reptile, is widely distributed throughout the Mojave and Colorado deserts from below sea level to elevations of about 4,130 feet or higher. It is most common in desert scrub, desert wash, and Joshua tree habitats, but occurs in almost every desert habitat except on the most precipitous slopes. The highest tortoise densities are found in creosote bush communities with extensive annual wildflower blooms. This species requires friable soil for burrow construction, and does not occupy areas of blown sand or very sandy soils because the burrows collapse. Adult tortoises are most active during the spring and early summer; however, juvenile tortoises have been observed outside burrows throughout the year (BLM 2002).



Mojave Fringe-Toed Lizard (*Uma scoparia*)

State Status – California Species of Concern

The Mojave fringe-toed lizard is a medium-sized, flat-bodied, smooth-skinned lizard that inhabits areas of loose sand. This lizard is white or grayish in color, with a contrasting pattern of black blotches and eye-like spots. This species is found only in sand dunes, fields, hummocks, and other areas with sand deposits between 300 and 3,000 feet in elevation. Generally, these lizards are active all day in the spring and fall, and in the mornings and late afternoons in the summer. Fringe-toed lizards use rodent burrows for cover and hide from predators by burrowing in the sand.



Burrowing Owl (*Athene cunicularia*)

State Status – California Species of Concern

The burrowing owl is distinguished by its golden-brown color, long, stilt-like legs, and small size. These owls have white-to-cream colored barring on the breast and belly, white eyebrows, and yellow eyes. Burrowing owls are widely distributed throughout the lowlands of California and are fairly common in agricultural areas in Riverside County. Burrowing owls make their homes in the ground, primarily by taking over burrows abandoned by squirrels and other small rodents or debris piles. They are commonly found perched near the ground in open, dry grasslands, agricultural and range lands, and desert habitats.



Couch's Spadefoot Toad (*Scaphiopus couchii*)

Status – California: Species of Concern, Federal Status: BLM Sensitive Species

Couch's spadefoot is a 3 inch (8 cm), smooth-skinned, greenish, yellowish, or olive toad with irregular blotches or spots of black, brown, or dark green. The belly is white and without markings. At the base of each hind foot is a dark, sickle-shaped keratinous "spade," hence the name spadefoot. The width of the eyelids is approximately the same as the distance between the eyes. The pupils are vertical. Couch's spadefoot toads do well in extremely xeric (dry) conditions in areas with sandy, well-drained soils often occupied by creosote bush and mesquite trees. They emerge from their underground burrow to breed in low-lying areas where water pools after large summer thunderstorms. They are also found in short grass prairies and grasslands, cultivated lands, and along desert roadways during summer thunderstorms.



1.1.2 Environmental Laws, Regulations, and Penalties

Many of the biological resources in the project area are protected by state and federal laws, including the following:

- **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 (hunt, pursue, catch, capture, kill) of state-listed endangered and threatened wildlife.
- **Migratory Bird Treaty Act:** Prohibits the take or possession of migratory birds, eggs, and parts.

- **California Fish and Game Code:** Prohibits take (hunt, pursue, capture, or kill) 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.

Violation of state and/or federal environmental laws can result in fines as high as \$100,000 and/or up to 1 year in jail. Violations can involve corporate and individual penalties.

1.1.3 Designated Biologist and Biological Monitors

In accordance with COC BIO-1, Genesis Solar has assigned a Designated Biologist and Designated Botanist to ensure compliance with permit conditions during construction. The Designated Biologist will be onsite throughout the duration of construction and will be supported by Biological Monitors. Both the Designated Biologist and the Biological Monitors have the authority to stop construction activity in the event that a protected species or habitat is at risk of adverse effect. The Biologists are available to answer questions or provide clarification on any of the environmental requirements and should be contacted if there is any question whether a plant or animal is a special-status species. Contact information for the onsite biologists will be distributed to construction crew foreman.

1.1.4 Mitigation Measures to Protect Animals and Habitat

The following construction practices will minimize construction impacts:

- Appropriate avoidance and minimization measures will be in place before site mobilization of a particular area, or activity that may impact sensitive biological resources. Typical measures include staking of the right-of-way and other acceptable work areas. Areas to be avoided will be flagged, staked, and signed.
- Construction area boundaries will be clearly marked with stakes, flagging, silt fencing, and/or rope or cord to minimize inadvertent degradation or loss of adjacent habitat during facility construction.
- All equipment storage will be restricted to designated construction zones or areas that are currently not habitat for special-status species.
- Traffic will be restricted to designated existing roads, designated access roads, construction storage and staging areas, and parking areas.
- Passing or turning vehicles may not leave previously disturbed areas.
- Workers should dispose of cigarettes and cigars appropriately and not leave them on the ground or buried where they pose a direct risk to wildlife through ingestion or fire.
- Dust control measures during construction and operation will be implemented. A minimum of water will be used in dust abatement to prevent the formation of puddles that might attract wildlife to roadways and construction areas.
- All food-related trash will be disposed of in closed containers and removed daily. Feeding of wildlife will be prohibited.
- Firearms are prohibited on the project site. Only certified law enforcement personnel are allowed to possess firearms at the project site.
- All pets will be prohibited anywhere on the project.
- All deaths and injury of sensitive species will be reported to the Biological Monitor who will in turn report to the Designated Biologist.



- Areas that are flagged as exclusion areas for the protection of special-status wildlife species will include appropriate setbacks and buffers.
- The Designated Biologist or a Biological Monitor must be present during initial grading or disturbance activity in unfenced areas.
- Potential wildlife pitfalls (trenches, bores, and other excavations) in unfenced areas must be either backfilled or sloped (3:1) at the end of each day.
- Any construction pipe, culvert, or similar structure with a diameter greater than 3 inches that is not capped and is stored less than 8 inches aboveground outside the fenced area overnight must be inspected for tortoise presence before moving it.

1.1.5 Site Worker Responsibilities

It is important that each person on the jobsite remembers the following basic rules for protecting special-status wildlife species:

- Maintain vehicle speed below the speed limits and watch for animals that may approach the road.
- Check under all equipment stopped in unfenced areas for wildlife seeking refuge in the shade.
- Report any sightings of special-status species or their burrows or nests. If at all uncertain, ask.
- Report any road kill immediately.
- Any special-status wildlife species encountered shall be relocated by the Designated Biologist or a Biological Monitor in accordance with the Biological Resources Mitigation Implementation and Management Plan (BRMIMP).
- Do not approach or feed wildlife. Keep away from their burrows and nests.
- If an animal is harmed or found harmed, contact the Construction Supervisor or the Biological Monitor. Do not attempt to move the animal. Failure to report the death or injury of any member of a listed species is a violation of state and federal law.
- Stay in the designated work areas; avoid all Environmentally Sensitive Areas (ESAs).
- Do not enter or disturb vegetation within exclusion areas.
- Look for trapped animals in any excavation or stored equipment at the start of each day and before backfilling or conducting any activity that could harm an animal in an excavation.
- Notify the Designated Biologist of any hazardous spills and clean up the spill immediately.

1.2 Sensitive Plant Species

This section describes information regarding sensitive plant species and habitat considerations within the Project area and lists the species of concern. The Project area is potential habitat for many desert-adapted plant species found in the region and, due to the harsh environments that define this habitat type, native vegetation is often highly vulnerable to unusual disturbance activities. By paying close attention to the flagged and clearly



labeled boundaries of Environmentally Sensitive Areas (ESAs) within the Project, impacts to sensitive plant species outside of the Project Disturbance area can be minimized.

The following plant species are of special concern within the Project area:

- Harwood's milkvetch (*Astragalus insularis* var. *harwoodii*)
- Harwood's eriastrum (*Eriastrum harwoodii*)
- Abram's spurge (*Chamaesyce abramsiana*)
- Sand evening primrose (*Camissonia arenaria*)
- Desert unicorn plant (*Proboscidea althaeifolia*)
- Arizona spurge (*Chamaesyce arizonica*)
- Graham's fishhook cactus (*Mammillaria grahamii* var. *grahamii*)
- Pointed Dodder (*Cuscuta californica* var. *apiculata*)
- Dwarf germander (*Teucrium cubense* ssp. *Depressum*)
- Flat-seeded spurge (*Chamaesyce platysperma*)
- Glandular ditaxis (*Ditaxis claryana*)
- Jackass clover (*Wislizenia refracta* ssp. *Refracta*)
- Palmer's jackass clover (*Wislizenia refracta* ssp. *Palmeri*)

1.2.1 Special-Status Plant Impact Avoidance and Minimization Measures

To protect special-status plants located outside of the Project Disturbance Area and within 100 feet of the permitted Project Disturbance Area from accidental and indirect impacts during construction, Genesis Solar will implement the following measures:

- Genesis Solar has assigned a Designated Botanist to the Project. The Designated Botanist is an experienced botanist who is knowledgeable in the complex biology of the local flora will oversee compliance with all special-status plant avoidance, minimization, and compensation measures. All Biological Monitors will be trained by the Designated Botanist to identify the plant species and habitats of concern.
- Prior to construction, the Designated Botanist delineated, flagged and clearly labeled the boundaries of Environmentally Sensitive Areas (ESAs) to protect special-status plants that occur outside and within 100 feet of Project disturbance areas. The locations of ESAs are clearly depicted on construction drawings, which also include all avoidance and minimization measures on the margins of the construction plans. Do not move or cross the ESA boundaries!
- Additional protection measures, such as silt-fencing and sediment controls, may be employed to protect the ESAs.
- Equipment and vehicle maintenance areas, and wash areas, must be located 100 feet from the uphill side of any ESAs.



- Prior to entering the project work areas, equipment will be inspected to ensure they are free of any dirt or mud that could contain weed seeds. The tracks, feet, tires, and undercarriage will be carefully washed, and special attention will be paid to axles, frame, cross members, motor mounts, underneath steps, running boards, and front bumper/brush guard assemblies.
- Erosion and sediment control measures must not inadvertently impact special-status plants (e.g., by using invasive or non-native plants in seed mixes, introducing pest plants through contaminated seed or straw, etc.).
- Avoid Special-Status Plant Occurrences. Areas for spoils, equipment, vehicles, and materials storage areas; parking; equipment and vehicle maintenance areas, and wash areas will be placed at least 100 feet from any ESAs.

1.3 Waters of the State and Erosion Control Measures

The construction team is committed to leave the temporarily disturbed work areas as they were found. One of the most important things the team will do to meet this goal is to minimize the clearing and soil disturbance that can contribute to erosion. The following precautions will be taken to minimize erosion:

- Clearing will be limited to the minimum required to provide a safe construction area. Make sure the clearing limits are known and, if possible, leave plant root systems in place when clearing vegetation.
- The construction crew will be instructed to do everything possible to prevent damage to vegetation outside of the clearing limits.
- Grading and excavation will also be limited to the minimum required for safe construction. All trench spoil should be kept free of other construction debris.
- Install erosion control devices where sediment run-off from exposed slopes threatens to enter "Waters of the State".
- Do not allow water containing mud, silt, or other pollutants from grading, aggregate washing, or other activities to enter drainages or be placed in locations that may be subjected to high storm flows.
- Spoil sites must be located at least 30 feet from the boundaries and drainages or in locations that may be subjected to high storm flows, where spoils might be washed back into drainages.

2.0 REFERENCES

BLM (Bureau of Land Management). 2002. Northern and Eastern Colorado Desert Coordinated Management Plan.

