WORKER ENVIRONMENTAL AWARENESS PROGRAM (WEAP)

GENESIS SOLAR ENERGY PROJECT

Submitted to:

California Energy Commission
Sacramento, California

Prepared by:

TETRA TECH EC, INC.

143 Union Boulevard, Suite 1010

Lakewood, CO 80228

Submitted by:

GENESIS SOLAR, LLC

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1.0 INTRODUCTION

Genesis Solar, LLC (Genesis Solar) intends to construct the Genesis Solar Energy Project (GSEP, or Project), a 250-megawatt (MW) solar thermal power generating facility located in Riverside County, CA. The Project is located between the community of Desert Center and the city of Blythe on 1,820 acres of land managed by the Bureau of Land Management (BLM).

Project construction is expected to occur over a total of approximately 37 months. The Plant Site will include the solar arrays, power blocks, power generating equipment, support facilities, and evaporation ponds. The Linear Facilities include a transmission line, distribution line, natural gas pipeline, and a main access road that would be mostly co-located for approximately 6.5 miles.

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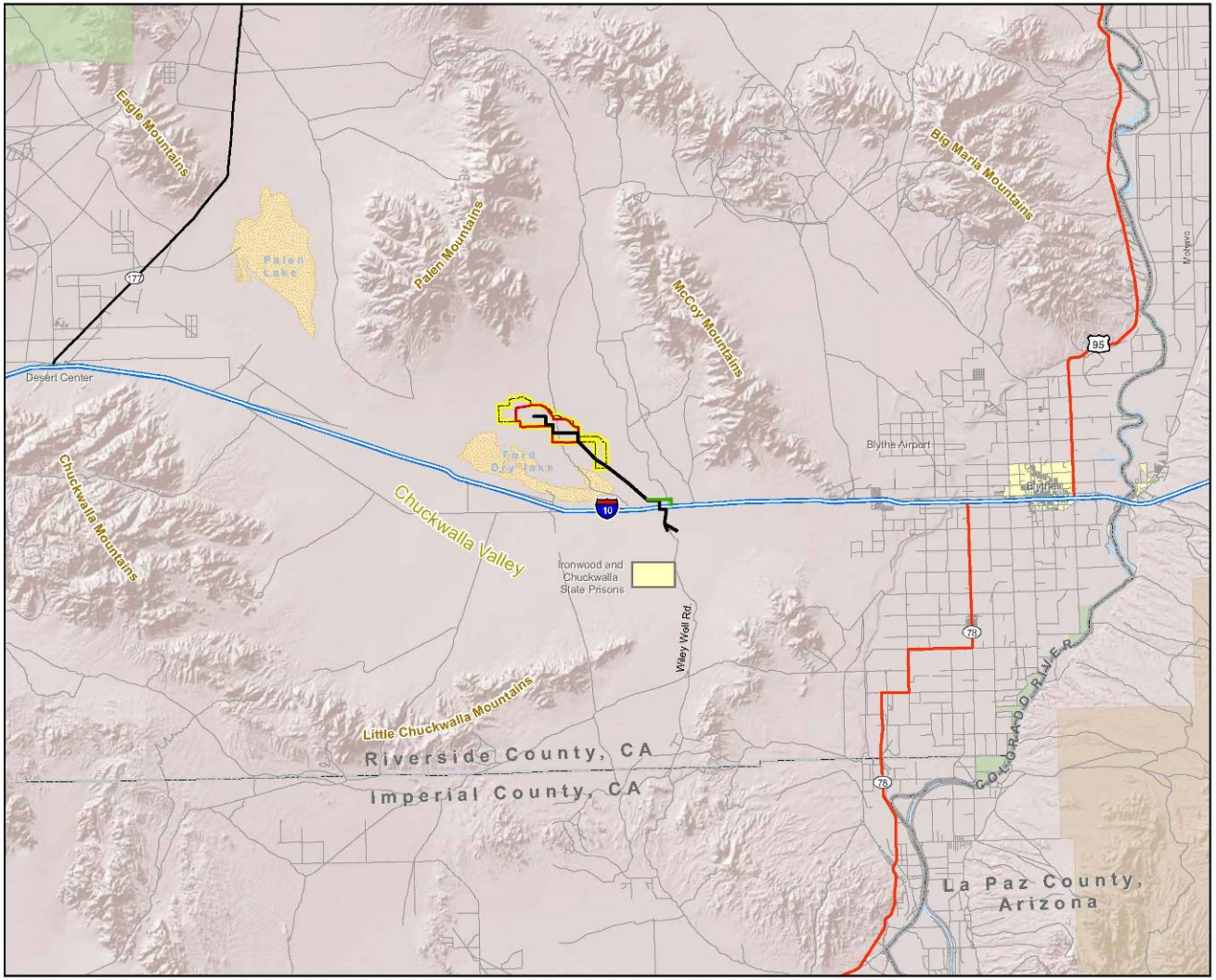


GENESIS SOLAR, LLC

GENESIS SOLAR ENERGY PROJECT
RIVERSIDE COUNTY,
CALIFORNIA

Legend

- Project Requested ROW
- Interstate
- Highway
- Major Road
- Local Road
- State Boundary
- County Boundary
- Plant Site
- Runways (500 to 250k)
- Lake/River
- Intermittent Lake
- Local Park
- Military Installation
- Urban Area
- Proposed Transmission Interconnect
- Proposed Access Road

N

0 2.5 5 7.5 10
Miles

Notes:
(a) UTM Zone 11, NAD 1983 Projection.
(b) Source data: ESRI, BLM, TTEC

FIGURE 1
REGIONAL LOCATION MAP

TETRA TECH EC, INC.

Construction of the Project could result in adverse environmental impacts unless all on-site construction personnel actively participate in the implementation of compliance and mitigation measures needed to protect these resources.

To ensure proper training of project personnel during construction and operation, the California Energy Commission (CEC) requires Genesis Solar to implement this Workers Environmental Awareness Program (WEAP) throughout construction and operation. All workers are required to attend this training and sign a training acknowledgement form upon completion.

The measures outlined in this WEAP were developed based on the CEC's and BLM's requirements put forth in their respective environmental assessment documents. This training will review all requirements that pertain to biological, cultural and paleontological resources in the Project area.

It is important for each member of the construction team to understand that their actions and behavior in the field are critical for keeping the project in compliance and avoiding unnecessary delays or work shutdowns. Failure to comply with the environmental requirements can result in discipline including, but not limited to, dismissal from the job site.

ALL CONSTRUCTION PERSONNEL ARE RESPONIBLE FOR MINIMIZING IMPACTS TO SENSITIVE PLANTS AND ANIMALS AT ALL TIMES !

2.0 BIOLOGICAL RESOURCES

2.1 Setting, Regulations and Protection of Resources

At first glance, the Project site may seem sparse and uninhabited; but there are many species of plants, birds, reptiles, amphibians and mammals that survive in this harsh environment.

The Project site includes sensitive habitat that could support protected species. These areas are referred to as Environmentally Sensitive Areas (ESAs) and are marked throughout the Project site as exclusion zones. These habitats 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.

STAY OUT OF EXCLUSION ZONES. THEY ARE PROTECTED SENSITIVE HABITATS !

The following agencies have regulatory authority of the Project and will be monitoring construction activities carefully. Representatives of these agencies may visit the site at any time:

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

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 for individuals** and can be even greater for corporations. Violations can result in costly stop work orders and construction delays.

2.2 Onsite Environmental Staff

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.

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.

2.3 Sensitive Biological Resources

Sensitive species that may be present in the project vicinity include Burrowing Owl, Desert tortoise, Mojave fringe-toed lizard, Couch's spadefoot toad, desert kit fox, American badger, nesting birds, and several rare plants.

2.3.1 Desert Tortoise *(Gopherus agassizii)*

Desert tortoises reach up to 15 inches in length and 6 inches in height. Their shells are high-domed and greenish-tan to dark brown in color with rectangular markings. They weigh up to 15 pounds when fully grown.

Hatchlings emerging from eggs can be as small as a half-dollar coin and have very soft shells. The color and patterns of the desert tortoise are effective camouflaging in the desert environment.

Where and When Desert Tortoises are Found

Desert tortoises live throughout the deserts of the southwest, including the region of the Project. Desert tortoises are generally found on gently-sloping terrain with sandy-gravely soils, as often seen in dry washes. They spend most of their time in underground burrows, sheltered from extreme temperatures and predators such as coyotes, ravens and foxes.

On construction sites, tortoises often take refuge under parked vehicles, equipment or under stored materials.

Tortoises are most active from early March to late October for foraging and mating; except during the hottest and driest days of summer when they stay in their burrows. Tortoises are especially active during and following rain events any time of year, including the summer monsoons during July and August.

Despite hot or cold temperatures, tortoises are especially likely to be out right after a rain so they can get a drink.

Legal Protection of Desert Tortoises

Due to habitat loss, disease, poaching, off-road vehicle use and increased predation, desert tortoise populations have been in decline for the last 25+ years. Because of this, the Mojave Population of the desert tortoise has been listed as a "Threatened Species" by the Federal Government and by the State of California. Federal Law forbids any "Take" of Threatened species and defines "Take" as:

"harassment, harm, pursuit, hunting, shooting, wounding, killing, trapping, capturing, collecting or attempting to engage in any such conduct.

"Harm" is further defined as significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavior patterns including breeding, feeding or sheltering."

Illegal "Take" is punishable by fines of up to **$50,000 and one year in prison** for each count. If a federal or state agency, such as the BLM or The California Department of Fish and Game, finds that a "Take" was caused by negligence, they could shut down the project for days, weeks, or even permanently.

What You Must Do to Protect Desert Tortoise:

- Stay on designated access roads and work areas
- Check under and around your parked vehicle before moving
- Obey project speed limits
- Do not litter, keep all food and water contained
- No pets are allowed on the project site
- If you encounter a tortoise in or adjacent to the work area, leave it alone and immediately notify the Designated Biologist, a Biological Monitor or a supervisor.

2.3.2 Mojave Fringe-Toed Lizard *(Uma scoparia)*

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.

Where and When Mojave Fringe-Toed Lizards are Found

This species is found only in sand dunes, fields, hummocks, and other areas with sand deposits. Fringe-toed lizards use rodent burrows for cover and hide from predators by burrowing in the sand.

Generally, these lizards are active all day in the spring and fall, and in the mornings and late afternoons in the summer.

Legal Protection Mojave of Fringe-Toed Lizards

Mojave fringe-toed lizard is a California Species of Special Concern and BLM Sensitive Species; as such they are protected by California Fish and Game Codes and BLM regulation. Penalties or fines could be imposed if construction workers are found harassing or harming this species.

What You Must Do to Protect Mojave Fringe-Toed Lizards

- Stay on designated access roads and work areas
- Check under and around your parked vehicle before moving
- Obey project speed limits
- No pets are allowed on the project site

2.3.3 Burrowing Owl *(Athene cunicularia)*

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 eye-brows and yellow eyes.

Where and When Burrowing Owls are Found

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 desert habitats.

Legal Protection Burrowing Owls

Burrowing Owl is a California Species of Special Concern and BLM Sensitive Species; as such they are protected by California Fish and Game Codes and BLM regulation. Penalties or fines could be imposed if construction workers are found harassing or harming this species.

What You Must Do to Protect Burrowing Owls

- Stay on designated access roads and work areas
- Comply with ESAs (Environmentally Sensitive Areas) and exclusion zone buffers
- Obey project speed limits
- No pets are allowed on the project site

2.3.4 Couch's Spadefoot Toad *(Scaphiopus couchii)*

Couch's spadefoot is a 3 inch long, 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.

Where and When Couch's Spadefoot Toads Are Found

Couch's spadefoot toads do well in extremely dry conditions in areas with sandy, well-drained soils. They emerge from their underground burrow to breed in low-lying areas where water pools after large summer thunderstorms. They are also found along desert roadways during summer thunderstorms.

Legal Protection Couch's Spadefoot Toads

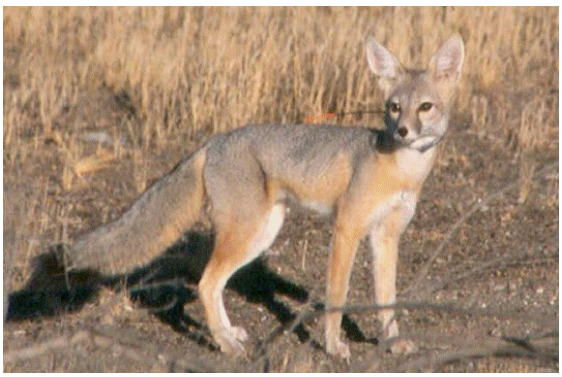
Couch's Spadefoot Toad is a California Species of Special Concern; as such they are protected by California Fish and Game Codes. Penalties or fines could be imposed if construction workers are found harassing or harming this species.

What You Must Do to Protect Couch's Spadefoot Toads

- Stay on designated access roads and work areas
- Comply with ESAs (Environmentally Sensitive Areas) and exclusion zone buffers
- Obey project speed limits
- No pets are allowed on the project site

2.3.5 Desert Kit Fox (*Vulpes macrotis*)

The Desert Kit Fox is a small mammal with long ears and legs, averaging about 30 inches (including tail). Its coat is light grey with orange-tan coloring on the sides and legs. The throat, chest and underside is creamy white. The bushy tail has a black tip. The snout has black markings on either side.



Where and When Kit Foxes Are Found

Kit fox live in earthen dens, or burrows up to 6 feet underground. They use these dens for shelter and raising young throughout the year, coming out mostly at night to hunt. Kit fox may be active during the day in cool weather.

Legal Protection Kit Foxes

Desert Kit Fox is a California Species of Special Concern; as such they are protected by California Fish and Game Codes. Penalties or fines could be imposed if construction workers are found harassing or harming this species.

What You Must Do to Protect Kit Foxes

- Stay on designated access roads and work areas
- Comply with ESAs (Environmentally Sensitive Areas) and exclusion zone buffers
- Obey project speed limits
- No pets are allowed on the project site

2.3.6 American Badger (*Taxidea taxus*)

The American Badger is a stocky mammal with short legs, thick gray/brown fur and distinct white markings on the head. Badgers average about 2 feet in length and have large front claws.

Where and When American Badgers Are Found

American Badgers live in earthen dens, or burrows in herbaceous, shrub and open habitats with loose soils. They use burrows for shelter and raising young throughout the year, coming out mostly at night to hunt though they sometimes surface during daytime.

Legal Protection for American Badgers

American Badger is a California Species of Special Concern; as such they are protected by California Fish and Game Codes. Penalties or fines could be imposed if construction workers are found harassing or harming this species.

What You Must Do to Protect American Badgers

- Stay on designated access roads and work areas
- Comply with ESAs (Environmentally Sensitive Areas) and exclusion zone buffers
- Obey project speed limits
- No pets are allowed on the project site

2.3.7 Nesting Birds

Migratory desert nesting birds are common throughout the greater project area. These birds vary greatly in color and size.

Legal Protection for Nesting Birds

The Migratory Bird Treaty Act (MBTA) makes it illegal to "take" migratory birds, their eggs, feathers or nests. Take is defined in the MBTA to include by any means or in any manner, any attempt at hunting, pursuing, wounding, killing, possessing or transporting any migratory bird, nest, egg, or part thereof. Penalties or fines could be imposed if construction workers are found harassing or harming migratory birds

Where and When Nesting Birds are Found

Many nesting birds build their nests at ground level, and breed between January 1 and July 31 of each year. During this period, nests and juvenile birds are at risk of being killed or disturbed by noise.

What You Must Do to Protect Nesting Birds

- Stay on designated access roads and work areas
- Comply with ESAs (Environmentally Sensitive Areas) and exclusion zone buffers
- Obey project speed limits
- No pets are allowed on the project site

2.3.8 Other Mammals, Reptiles, Amphibians or Birds

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.

2.4 Mitigation Measures to Protect Animals and Habitat

Construction site personnel are responsible for implementing the following construction practices to minimize impacts on the environment:

TRAFFIC

- **OBEY SPEED LIMITS – 25 ON DIRT ROADS AND 45 ON PAVED ROADS.**
- **TRAFFIC IS RESTRICTED TO DESIGNATED AREAS AND MAY NOT LEAVE PREVIOUSLY DISTURBED GROUND. THIS INCLUDES TURNING OR PASSING MANEUVERS.**
- **STAKES, FLAGGING, SILT FENCING, ROPE, AND "KEEP OUT" SIGNS MARK ACCESS BOUNDARIES – BE AWARE OF YOUR LIMITS.**
- **ALL EQUIPMENT STORAGE IS RESTRICTED TO DESIGNATED CONSTRUCTION OR STORAGE ZONES.**
- **MINIMIZE WATER USED IN DUST ABATEMENT TO PREVENT THE FORMATION OF PUDDLES THAT MIGHT ATTRACT WILDLIFE TO ROADWAYS AND CONSTRUCTION AREAS.**
- **CHECK UNDER ALL EQUIPMENT STOPPED IN UNFENCED AREAS FOR WILDLIFE SEEKING REFUGE IN THE SHADE.**
- **REPORT ANY ROAD KILL TO A BIOLOGICAL MONITOR IMMEDIATELY.**

GENERAL

- **DISPOSE OF CIGARETTES AND CIGARS APPROPRIATELY.**
- **FIREARMS ARE PROHIBITED ON THE PROJECT SITE.**
- **DISPOSE OF ALL FOOD-RELATED TRASH IN CLOSED CONTAINERS AND REMOVED DAILY.**
- **DO NOT FOR ANY REASON FEED WILDLIFE.**
- **REPORT ANY DEATH OR INJURY OF A SENSITIVE SPECIES TO A BIOLOGICAL MONITOR.**
- **COMPLY WITH ESA AND ANY OTHER EXCLUSION ZONE BUFFERS.**
- **BACKFILL OR SLOPE (3:1) POTENTIAL WILDLIFE PITFALLS (TRENCHES, BORES, AND OTHER EXCAVATIONS) IN UNFENCED AREAS AT THE END OF EACH DAY.**
- **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.**
- **INSPECT 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 FOR TORTOISE OR OTHER WILDLIFE PRESENCE BEFORE MOVING IT.**
- **REPORT ANY SIGHTINGS OF SPECIAL-STATUS SPECIES OR THEIR BURROWS OR NESTS TO THE DESIGNATED BIOLOGIST OR BIOLOGICAL MONITOR. IF AT ALL UNCERTAIN, ASK.**
- **NOTIFY THE DESIGNATED BIOLOGIST OF ANY HAZARDOUS SPILLS AND CLEAN UP THE SPILL IMMEDIATELY.**

2.5 Sensitive Plant Species at the Genesis Site

A number of rare plant species occur at the Genesis site and are most often associated with sensitive habitats such as vegetated sand dunes, desert washes, and the margins of the Ford Dry Lake. These rare plants are primarily protected by state regulations including several California Fish and Game Codes, the California Native Plant Protection Act of 1977, and the California Desert Native Plants Act of 1981.

The largest rare plant populations at the Genesis site will be surveyed and fenced off PRIOR to the start of construction activities. By paying close attention to the FLAGGED and clearly labeled boundaries of 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*)

- Las Animas Colubrina *(Colubrina californica)*

- Harwood's eriastrum (Eriastrum harwoodii)

- Ribbed Cryptantha (*Cryptantha costata)*

- Desert unicorn plant (*Proboscidea althaeifolia*)

2.5.1 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, site personnel will follow these precautions:

- Prior to construction, the Designated Botanist must delineated, flag and clearly label the boundaries of ESAs in the field and on construction drawings to protect special-status plants that occur outside and within 100 feet of Project disturbance areas.

- Boundaries of the ESA exclusion zones must not be crossed by any construction workers.

- The Designated Biologist and Monitors are required to observe construction and advise activity timing or location so as to reduce construction impacts on rare plants.

- Inspect equipment prior to entering the project work areas, to ensure it is free of any dirt or mud that could contain weed seeds. The tracks, feet, tires, and undercarriage must be carefully washed, and special attention must be paid to axles, frame, cross members, motor mounts, underneath steps, running boards, and front bumper/brush guard assemblies.

- Avoid all undisturbed areas and preserve vegetation by staying on designated roads and within the staked project limits.

2.6 Waters of the State and Erosion Control Measures

The construction team is committed to restoring temporarily disturbed work areas. 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.

Construction workers and all site personnel must take the following precautions to minimize erosion:

- Limit clearing, grading and excavation to the minimum space required to provide a safe construction area.

- If possible, leave plant root systems in place when clearing vegetation.

- Do not disturb vegetation beyond the disturbance boundaries.

- All trench spoil should be kept free of other construction debris.

- Install erosion control devices such as straw waddles, silt fencing, etc., 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 - Know the locations of spoil sites.