

**PRE-CONSTRUCTION SURVEY
PLAN FOR WILDLIFE
BIG SANDY ENERGY PROJECT**

Prepared for:

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PRE-CONSTRUCTION SURVEY PLAN FOR WILDLIFE BIG SANDY ENERGY PROJECT

As part of the construction and operation efforts associated with the Big Sandy Energy Project, wildlife mitigation measures will be applied. These measures will include the performance of pre-construction surveys for certain wildlife species or groups. These surveys will be performed prior to ground disturbance activities with the precise timing of surveys dependent on the target species and the specific construction activity.

Several surveys have been performed to determine occurrence or potential occurrence for several wildlife species of particular interest. These included surveys for desert tortoise Southwestern willow flycatcher, breeding raptors. Detailed results of these efforts were presented in the Big Sandy Wildlife Technical Report (Greystone, November 2000). Information from these surveys will support pre-construction survey efforts. These surveys are intended to avoid unnecessary impacts to species of concern and their specific habitats and are not intended to supplement efforts associated with the environmental impact statement process.

The following is a presentation of proposed pre-construction surveys and mitigation efforts for several wildlife species and groups.

Desert Tortoise

The Sonoran desert tortoise are primarily found in rocky crevices, washes, and other broken rocky terrain. Marginal habitat requirements for the Sonoran desert tortoise are met within the project area. This is based upon site reconnaissance and subsequent focused biological studies. The entire project site and utility corridors are located in Category III or non-designated Sonoran desert tortoise habitats. However, no discrete populations, breeding grounds, or dispersal grounds have been identified within the project area. As provided in the *Management Plan for the Sonoran Desert Population of the Desert Tortoise in Arizona* (Murray et al. 1996), Categories I and II support medium to high densities of tortoise existing in populations that are stable or expanding. Category III habitat offers limited desert tortoise habitat and supports low to medium densities. No aspect of the proposed project occurs in desert tortoise habitat Categories I or II. The construction and operation of the proposed project is not expected to have any adverse impacts on the Sonoran desert tortoise.

Since the probability of encountering desert tortoises in the project area is low, pre-construction surveys will be undertaken within 48-hours prior to the onset of construction activities to remove and relocate any Sonoran desert tortoises found within the project area. The pre-construction survey will provide full coverage of the project area (i.e. the designated right-of-way) and will focus on locating all desert tortoises above and below ground within the designated disturbance areas. The pre-construction survey will be conducted by a qualified biologist certified in USFWS survey methodology and desert tortoise handling.

The following measures are provided for avoiding injury or death to desert tortoise individuals and restoration of habitat following construction activities and have been developed and accepted for other similar projects in the region.

- There will be a biological monitor supervisor for the project. A qualified desert tortoise surveyor is a biologist with a bachelor's degree or graduate degree in biology, ecology, wildlife biology, herpetology, or related fields. It is preferred that the biologist have specific experience using accepted resource agency techniques to survey for desert tortoise. The surveyor will be able to recognize and accurately identify all types of desert tortoise sign (e.g., burrows, dens, scat, and shells), and be able to carefully, legibly, and completely record all sign including size of shelter sites, shells, and estimated size of live tortoises. Previous survey experience in suitable habitats and attendance to annual tortoise seminars is beneficial.
- Within 48 hours prior to onset of surface disturbing activities, the construction right-of-way (ROW) within desert tortoise habitat that is subject to immediate disturbance will be inspected by a qualified biologist for tortoise and their burrows.
- A pre-construction desert tortoise survey by a trained biologist is required in all tortoise habitats no earlier than forty-five (preferably two to fourteen days) days prior to construction. Identified desert tortoise burrows and other high use areas will be appropriately marked.
- Between the dates of March 15 and November 15, biologists each morning and evening will perform a walking clearance of working areas. A qualified biologist or any worker who has completed the tortoise orientation may perform this clearance.
- All tortoise found on the ground surface within construction areas shall be moved a minimum of 500 feet (preferably not more than ¼ mile, but up to two miles from their original location) and placed in a shaded location. Tortoises that wander onto the construction areas during construction periods also shall be removed to a safe location.
- Reasonable effort will be taken to avoid damage to or destruction of desert tortoise burrows during construction activities. Such avoidance measures may include localized reduction in construction disturbance zones.
- Prior to any disturbance, burrows within the ROW that would be destroyed or disturbed by construction activities must be cleared of tortoises, then collapsed, destroyed or barricaded to prevent further entrance by tortoises. Tortoises within these burrows shall be moved to a safe location. The tortoise shall be placed in a natural or artificial burrow by a qualified worker. Tortoise burrows within construction rights-of way that are avoidable shall be protected by installation of welded wire fencing placed at a maximum distance allowable from the burrow. If a minimum distance from such burrows is less than 15 feet, the burrow shall be excavated

- Artificial burrows shall be of similar size, shape, orientation, and depth as original burrows.
- All desert tortoises handled will be examined for symptoms of upper respiratory disease syndrome. The presence or absence of respiratory disease symptoms shall be noted on desert tortoise data sheets and the results indicated in a final report.
- If a desert tortoise cannot be relocated within two miles of where it was collected, then such a tortoise must be salvaged in accordance with the Arizona Game and Fish Department (AGFD) Salvage Techniques for Desert Tortoise (Murray et al. 1996).
- All locations of desert tortoise and their sign will be mapped on a 7½ minute topographic map with noting appropriate Township, Range, Section, date, observers name, and vegetation type. Copies of this information will be provided to the BLM authorized officer and to the AGFD in Phoenix.
- All necessary permits for handling and collecting desert tortoise must be obtained prior to construction.
- No pets will be permitted in any project construction area.
- Dust control watering of the ROW within desert tortoise habitat shall be conducted in a manner that will not result in development of ponds that could attract desert tortoises. If ponding is unavoidable, the ponded area and a 5 meter wide buffer area around the pond will be clearly marked to prevent vehicle entry. Alternatively, ponded areas shall be regularly checked by biological monitors. All desert tortoises found in ponds shall be removed and appropriately relocated.
- During blasting activities, any desert tortoise burrow that is outside the ROW and is not excavated, but may be affected by the blasting, will be appropriately marked. Occupying desert tortoises will be removed by a qualified individual. If desert tortoise cannot be removed from the burrows, crumpled newspaper will be placed into the burrow prior to blasting and removed immediately following blasting activities. Any tortoises that are removed from burrows shall be held in clean cardboard boxes, until they can be safely returned to their collection sites. One tortoise per box.
- To limit desert tortoise habitat degradation all construction vehicles and equipment will be restricted to the ROW and other areas to be disturbed. If necessary, ROW boundaries and other areas to be disturbed outside of the ROW shall be marked to alert work crews.
- A worker education program will be implemented and will address (a) the occurrence and distribution of the desert tortoise; (b) measures being implemented to protect the tortoise and its habitat in the construction area; (c) specific protocols to observe should desert tortoises be encountered in the field.

- In desert tortoise habitat, vehicle speed limits will be restricted to 20 mph. Construction and maintenance employees will be advised that care should be exercised when commuting to and from the project area to reduce road mortality.
- Surface disturbing activities will be minimized along the entire length of the ROW. Access to roads not needed after construction will be restricted and the roads will be scarified. Access roads scheduled for upgrading in desert tortoise habitat will not be widened, if possible, nor will berms be disturbed during grading. New, permanent access roads will not be created in desert tortoise habitat except where the ROW is not adjacent to an existing ROW or road. Stockpile areas in desert tortoise habitat will either be placed in less valuable habitat or minimized in size.
- All trenches or other excavations with the potential to entrap desert tortoises shall be inspected daily by qualified personnel for entrapped tortoises at the following construction schedule points: (a) immediately prior to initiation of construction activities; b) at the end of each workday in all areas, and c) prior to final backfilling of the trenches and other excavations. All tortoises found inside trenches during these inspections shall be removed immediately by qualified personnel.
- Gap plugs of earthen fill or wooden ramps will be installed every ¼ mile along the open pipeline trench to allow for the escape of entrapped tortoises.
- All pipe ends between three and twelve inches in diameter will be capped with burlap. All pipes not capped will be inspected daily.
- Following the completion of construction activities, the landscape will be restored to pre-construction conditions using techniques such as recontouring, topsoil replacement and reseeded. Seed mixtures will include only native species that have the greatest potential for establishment and wildlife use.

Southwestern Willow Flycatcher

During the months of May through July 2000, suitable Southwestern willow flycatcher (WIFL) habitats within the proposed Big Sandy Energy Project were identified and subsequently surveyed for the presence of WIFL. These surveys followed the specific guidelines mandated by the US Fish and Wildlife Service and Arizona Game and Fish Department (Sogge et al. 1997). The results of these surveys indicated a considerable breeding population located in habitats proximal to the Hwy 93 Big Sandy Bridge. No other populations were identified.

Breeding Raptors

Species of breeding raptors within the project area are diverse and occur across a variety of habitats. A survey of breeding raptors was conducted in the spring of 2000 and results are presented in Big Sandy Energy Project Wildlife Technical Report (Greystone, November 2000).

To supplement the current information regarding breeding raptor use patterns collected in the Big Sandy Energy Project area, a qualitative pre-construction survey of potential breeding habitats should be performed during mid-spring and early summer months of 2001. Collection of

this information will facilitate project construction planning by designating sensitive or active breeding habitats. To ensure sufficient effort and characterization during the 2001 raptor surveys, species with unique ecologies or sensitivities will be identified by the appropriate agencies and experts. Species of potential interest will include but not limited to: common black hawk, zone-tailed hawk, ferruginous hawk, Swainson's hawk, and golden eagle.

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