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AZ CORP COMMISSION
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MEMORANDUM

TO: Colleen Ryan, Supervisor
Docket Control
Arizona Corporation Commission

FROM: Carol A. Gilbert
Assistant to Chairman
Laurie A. Woodall

DATE: July 22, 2003

RE: West Valley South - Docket 122

L-000000D-03-0122

Colleen - please file the attached letters by the Game and Fish Department, in public comment in the above-referenced matter. They need to be filed together.

Thank you.

Enclosures

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Arizona Corporation Commission
DOCKETED

JUL 22 2003

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THE STATE OF ARIZONA

GAME AND FISH DEPARTMENT

2221 WEST GREENWAY ROAD, PHOENIX, AZ 85023-4399
(602) 942-3000 • AZGFD.COM

GOVERNOR
JANET NAPOLITANO
COMMISSIONERS
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JOE MELTON, YUMA
MICHAEL M. GOLIGHTLY, FLAGSTAFF
DIRECTOR
DUANE L. SHROUFE
DEPUTY DIRECTOR
STEVE K. FERRELL



July 14, 2003

Ms. Laurie A. Woodall, Chairman
Power Plant and Transmission Line Siting Committee
Office of the Attorney General
1275 West Washington
Phoenix, Arizona 85007

Re: Certificate of Environmental Compatibility Application; Arizona Public Service West Valley- South Power Line and Substation Project

Dear Chairman Woodall:

The Arizona Game and Fish Department (Department) reviewed the above-referenced Certificate of Environmental Compatibility (CEC) for potential impacts to fish and wildlife resources. We understand that APS is proposing to install a 230KV transmission line and associated substations to provide reliable electricity to current and future customers in the West Valley. The Department provides the following comments for your consideration.

Based on the application, it appears that the majority of proposed route will be located along roadways and other areas of previously disturbed or low value wildlife habitats. We support locating transmission lines along previously disturbed routes to minimize any impacts to wildlife habitat. Since various raptor species may use transmission line support structures for perching and/or nesting, the Department recommends that APS incorporate, if necessary, the established guidelines within their Raptor Protection Program to ensure that necessary preventative measures are incorporated into the project to minimize the potential for electrocution to raptors.

The Department appreciates the opportunity to review this CEC application prior to consideration by the Power Plant and Transmission Line Siting Committee. We look forward to working closely with the Committee in the future during the review of future powerplant and transmission line projects. If you have any questions or require any additional information regarding this letter, please contact Mr. Bob Broscheid, Project Evaluation Program Supervisor, at (602) 789-3605.

Sincerely,

A handwritten signature in black ink that reads "John Kennedy".

John Kennedy
Habitat Branch Chief

cc: Steve Goodman, Project Manager, Arizona Public Service
Russ Haughey, Habitat Program Manager, Region VI, Mesa



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July 17, 2003

Ms. Laurie A. Woodall, Chairman
Power Plant and Transmission Line Siting Committee
Office of the Attorney General
1275 West Washington
Phoenix, Arizona 85007

Re: Case Number 122, Docket number L-00000 D-03-0122; Application for Certificate of Environmental Compatibility; Arizona Public Service West Valley- South Power Line and Substation Project

Dear Chairman Woodall:

The Arizona Game and Fish Department (Department) reviewed the above-referenced application and provided a letter, dated July 14, 2003, that included our general comments on the project. The Department would like to take this opportunity to clarify our previous comments in that letter.

Proposed Alignment

Based on the application, it appears that the proposed route will be located along existing roadways. We support this alignment option since it is located in previously disturbed areas (roadways), areas of high human disturbance, and will not result in the removal of native desert vegetation. As a result, the Department does not anticipate any significant adverse impacts to wildlife or wildlife habitats as a result of the proposed alignment.

Alternative Alignment

Under the alternative alignment, APS is proposing to follow the same route as the Proposed alignment from SR 85 to the proposed TS3 substation. The route diverts west towards the base of the White Tank Mountains, then north along the Regional Park boundary to the proposed TS2 substation. The Department believes the construction of a transmission line (e.g., vegetation clearing, ground disturbance, etc.) through this area has the potential to directly impact habitat for several wildlife species, including the Sonoran desert tortoise. If this alternative route is selected, the Department recommends that APS follow the attached Sonoran desert tortoise handling guidelines if tortoises are encountered in the project area. In addition, the Department is providing additional information regarding the Sonoran desert tortoise for the Committee's consideration (see attachment).

Additionally, access and/or maintenance roads that are developed during the construction of transmission lines can provide access for trespass Off-Highway Vehicles (OHV). Illegal and/or unregulated OHV use has the potential to negatively impact wildlife and their habitats through

Ms. Laurie Woodall, Chairman

July 17, 2003

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direct mortality, harassment, increased soil erosion, and degradation of habitat through the loss of vegetation. Based on the potential negative impacts to wildlife, the Department does not support the location of the alternative alignment option.

General Comments for Both Alignments

Based on the application, APS explains that the design of the 230KV transmission structures provide adequate spacing between electrified and grounded parts to prevent electrocution of raptors. However, it is unclear in the application whether additional minimization measures, as identified in APS's Raptor Protection Program, will be utilized or are necessary for these types of structures (e.g., mounting Polyvinyl Chloride (PVC) triangles on pole crossarms, and placing rubberized "bird guards" over the wires entering into transformers).

Again, the Department appreciates the opportunity to provide additional comments on this application. We look forward to working closely with the Committee in the future during the review of future powerplant and transmission line projects. If you have any questions or require any additional information regarding this letter, please contact Mr. Bob Broscheid, Project Evaluation Program Supervisor, at (602) 789-3605.

Sincerely,



John Kennedy
Habitat Branch Chief

cc: Steve Goodman, Project Manager, Arizona Public Service
Russ Haughey, Habitat Program Manager, Region VI, Mesa

APPENDIX 1

GUIDELINES FOR HANDLING SONORAN DESERT TORTOISES ENCOUNTERED ON DEVELOPMENT PROJECTS

Arizona Game and Fish Department

Revised January 17, 1997

The Arizona Game and Fish Department (Department) has developed the following guidelines to reduce potential impacts to desert tortoises, and to promote the continued existence of tortoises throughout the state. These guidelines apply to short-term and/or small-scale projects, depending on the number of affected tortoises and specific type of project.

Desert tortoises of the Sonoran population are those occurring south and east of the Colorado River. Tortoises encountered in the open should be moved out of harm's way to adjacent appropriate habitat. If an occupied burrow is determined to be in jeopardy of destruction, the tortoise should be relocated to the nearest appropriate alternate burrow or other appropriate shelter, as determined by a qualified biologist. Tortoises should be moved less than 48 hours in advance of the habitat disturbance so they do not return to the area in the interim. Tortoises should be moved quickly, kept in an upright position at all times and placed in the shade. Separate disposable gloves should be worn for each tortoise handled to avoid potential transfer of disease between tortoises. Tortoises must not be moved if the ambient air temperature exceeds 105 degrees fahrenheit unless an alternate burrow is available or the tortoise is in imminent danger.

A tortoise may be moved up to two miles, but no further than necessary from its original location. If a release site, or alternate burrow, is unavailable within this distance, and ambient air temperature exceeds 105 degrees fahrenheit, the Department should be contacted to place the tortoise into a Department-regulated desert tortoise adoption program. Tortoises salvaged from projects which result in substantial permanent habitat loss (e.g. housing and highway projects), or those requiring removal during long-term (longer than one week) construction projects, will also be placed in desert tortoise adoption programs. *Managers of projects likely to affect desert tortoises should obtain a scientific collecting permit from the Department to facilitate temporary possession of tortoises.* Likewise, if large numbers of tortoises (>5) are expected to be displaced by a project, the project manager should contact the Department for guidance and/or assistance.

Please keep in mind the following points:

- These guidelines do not apply to the Mohave population of desert tortoises (north and west of the Colorado River). Mohave desert tortoises are specifically protected under the Endangered Species Act, as administered by the U.S. Fish and Wildlife Service.
- These guidelines are subject to revision at the discretion of the Department. We recommend that the Department be contacted during the planning stages of any project that may affect desert tortoises.
- Take, possession, or harassment of wild desert tortoises is prohibited by state law. Unless specifically authorized by the Department, or as noted above, project personnel should avoid disturbing any tortoise.

RAC:NLO:rc

FURTHER INFORMATION

Bureau of Land Management
www.az.blm.gov

Arizona State Office
222 N. Central Avenue
Phoenix, AZ 85004
(602) 417-9200

Safford Field Office
711 14th Avenue
Safford, AZ 85546
(520) 348-4400

Arizona Strip Field Office
345 East Riverside Drive
St. George, UT 84790
(801) 688-3200

San Pedro Project Office
1763 Paseo San Luis
Sierra Vista, AZ 85635
(520) 458-3559

Kingman Field Office
2475 Beverly Avenue
Kingman, AZ 86401
(520) 692-4400

Tucson Field Office
12661 East Broadway
Tucson, AZ 85748
(520) 722-4289

Lake Havasu Field Office
2610 Sweetwater Avenue
Lake Havasu City, AZ 86406
(520) 505-1200

Yuma Field Office
2555 East Gila Ridge Road
Yuma, AZ 85365
(520) 317-3200

Phoenix Field Office
2015 West Deer Valley Rd.
Phoenix, AZ 85027
(602) 580-5500

U.S. Fish and Wildlife Service
2321 W. Royal Palm Rd. #103
Phoenix, AZ 85021
(602) 640-2720

Arizona Game and Fish Department
2221 West Greenway Rd.
Phoenix, AZ 85023
(602) 942-3000

Arizona-Sonora Desert Museum
2021 North Kinney Rd.
Tucson, AZ 85743
(602) 883-1380

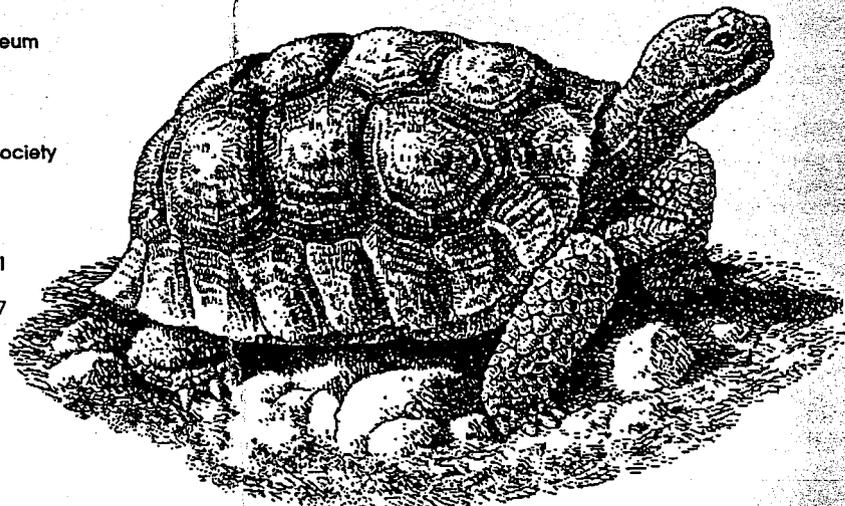
National Turtle and Tortoise Society
PO Box 9806
Phoenix, AZ 85068
(602) 967-6265

Desert Tortoise Council
PO Box 3141
Wrightwood, CA 92397

BLM

THE DESERT TORTOISE

A R I Z O N A



BLM/AZ/GI-99/003

DINOSAUR RELATIVES

Where can a dinosaur relative be found today? Possible in your neighborhood! This creature is none other than the desert tortoise, a cousin to the earliest dinosaurs and whose body shape has remained virtually unchanged for millions of years. Fossil evidence of tortoises appear from more than 200 million years ago, before birds, mammals, lizards, snakes, or crocodiles evolved. Today, reptiles number about 6,000 species, less numerous than either birds, fish or mammals. Characteristics that desert tortoises share with their reptilian relatives include a coarse, dry scaly skin, hard-shelled egg and a dependency on the external environment to maintain an internal body temperature.

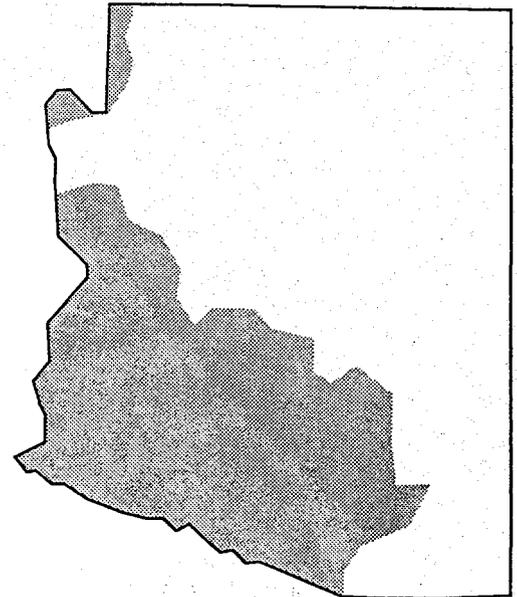
DISTRIBUTION OF THE DESERT TORTOISE

The desert tortoise, a dry land turtle, is found throughout western and south central Arizona, southeastern California, southern Nevada, extreme southwestern Utah, Sonora, and northern Sinaloa, Mexico. The desert tortoise is one of only three tortoise species in the United States.

Two distinct populations of desert tortoises, the Sonoran and Mojave, occur in the United States and are isolated from each other by the Colorado River. The Mojave tortoise is found north and west of the Colorado River and the Sonoran tortoise occurs south and east of the Colorado River. Although these populations are geographically separated by the Colorado River, both are considered the same species, *Gopherus agassizii*. The two populations differ in size and shape, in the kinds of habitat they use, and in their behavior.

Within Arizona, the desert tortoise can be found in several mountain ranges, from the Black and Cerbat mountains in the

north, to the Kofa and Tinajas Altas mountains in the south and east to the Galiuro Mountains.



Desert Tortoise Distribution within Arizona.

ADAPTATIONS OF THE DESERT TORTOISE

The Sonoran tortoise can be found primarily on boulder-strewn hills and steep, rocky terrain. It occurs in habitats dominated by ocotillo, saguaro and paloverde vegetation. In contrast, the Mojave tortoise is typically found in flat areas dominated by creosote and bursage.

The tortoise has special adaptations allowing it to survive in a harsh climate. It has powerful front feet for digging sheltersites and tough, heavily scaled skin for the dry, desert environment. The upper and lower shell are light to medium brown, which blends into the surrounding habitat.

The tortoise uses sheltersites (dug out areas under boulders, vegetation or soil) to protect it from the extreme temperatures of

the environment and from predators. Each tortoise can use several sheltersites over the course of a year and may occasionally share sheltersites. In addition, many other animals from rattlesnakes to crickets take advantage of the cool, humid and relatively stable environment inside these sheltersites.

BEHAVIOR AND MOVEMENT PATTERNS

Since the desert tortoise does not create its own body heat, it must alternately bask in the sun and seek shelter in the shade to maintain its body temperature. Sonoran desert tortoises are most active from July to October during the monsoon season. During these times, the tortoise is mainly active in the early morning, late afternoon and especially during rains, when it drinks from small pools of rain water. At times, the tortoise can easily travel over a mile in a day or two. As the weather turns cool, the tortoise will gradually become less active, its appetite will decrease, and it will begin to hibernate in sheltersites.

FORAGING HABITS OF TORTOISE

The desert tortoise is an herbivore feeding on a variety of plants including grasses, forbs, cacti and shrubs. Cacti, succulents and green vegetation high in water content provide an important source of water as well as energy for the tortoise. It also has been observed feeding on bones and soil. Important feeding times are during spring "bloom" and the desert greenup following summer rains.

FROM NEST TO MATURITY

Eggs are laid before the summer monsoons in June and July. Nests are usually made within a sheltersite, in deep soil. The female digs a hole in the soil, lays 2

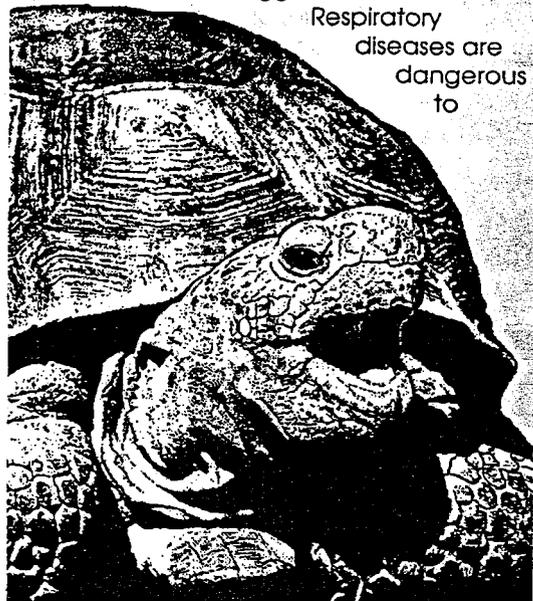
to 14 white, ping pong ball-sized eggs, and covers them with soil. From this point, the offspring are on their own. After several months (often in September or late August), the babies begin to crack the shell with their eggtooth, a temporary protrusion on the upper jaw which is lost after hatching. The baby eventually emerges from the shell and digs its way to the surface. The hatchling is the size of a silver dollar and its shell will remain soft for up to three years. Its chance of survival into adulthood may be less than one in a hundred.

Sexual maturity or adulthood is reached at approximately 12 to 20 years of age. The adult tortoise can weigh up to 11 pounds and may reach a length of 9 to 13 inches. The species is long-lived, spanning 60 to 80 years or more.

NATURAL PREDATORS

There are several natural predators of the desert tortoise. Some of these include the raven and red-tail hawk, which eat hatchlings and small tortoises. Mountain lions, coyotes, foxes, snakes and the gila monster also prey upon tortoises or their eggs.

Respiratory
diseases are
dangerous
to



tortoises. The highly contagious Upper Respiratory Tract Disease, a major threat to the Mojave population, is considered rare in Arizona. Not much is known about this disease except that it is usually fatal. Stress in wild tortoises from inadequate nutrition or drought may make them more susceptible to respiratory and other diseases.

CONFLICT

There are a variety of threats to desert tortoise populations and their habitat. Roads, canals, farmland, urbanization and other development fragment tortoise populations by disrupting movement patterns among populations. Exposure on roads increases the chance of vandalistic shooting, road kill or capture. All-terrain and recreational vehicles driven off roads can destroy valuable tortoise habitat and crush tortoises. Humans releasing captive individuals may cause harmful genetic mixing and stress and increase transmittal of disease. Mining can cause locally severe effects, trapping tortoises in mine shafts or disturbing habitat so intensely that they have little chance of recovering. Finally, livestock, burros and wild horses may cause trampling of tortoises vegetation and shelter sites.

STATUS OF THE DESERT TORTOISE

The Mojave population is federally listed as threatened under the Endangered Species Act of 1973. The Sonoran tortoise population, as listed as a Category 2 Federal candidate species. That is, if additional information documents threats to or a decline in this population, it may be listed as endangered or threatened. In addition, Arizona state laws protect all populations of tortoises.

WHAT YOU CAN DO TO HELP

- It is illegal to remove a desert tortoise from the wild. If you observe someone destroying habitat or taking tortoises, contact Operation Game Thief at 1-800-352-0700 or 1-800-Vandals. For information on adopting a pet tortoise, contact the local Arizona Game and Fish office or the Arizona Sonora Desert Museum.
- Enjoy a wild desert tortoise from a distance. Pickup up a tortoise "just to look" can cause the tortoise to lose all of its stored water, resulting in dehydration and possible death.
- Protect fragile desert tortoise habitat by using all-terrain or recreational vehicles on existing roads.
- Releasing a pet tortoise to the wild is illegal and increases the risk of disease transmittal and stress on wild tortoise populations. Instead, contact the local Arizona Game and Fish Department or the Arizona Sonora Desert Museum to place your pet in an "Adopt-a-Tortoise" program.
- Learn about proper care for your pet desert tortoise by obtaining information from the Arizona Sonora Desert Museum, Arizona Game and Fish Department, or National Turtle and Tortoise Society.
- Use your public lands carefully and wisely as a legacy to our future generations.