

SUMMARY
BIOLOGICAL OPINION FOR MOHAVE COUNTY
R&PP LEASE/CONVEYANCE PUBLIC WORKS
MAINTENANCE FACILITY, NEAR BEAVER DAM,
MOHAVE COUNTY, ARIZONA

Date of Opinion: October 21, 1996

Action Agency: Bureau of Land Management, Shivwits Resource Area, St. George, Utah

Project: The Bureau of Land Management proposes granting a Recreation and Public Purposes lease or conveyance of up to 15 acres to Mohave County for construction of a County Road Maintenance Facility, approximately 0.2 mile northeast of Beaver Dam, Arizona.

Listed Species Affected: Mojave population of the desert tortoise, *Gopherus agassizii*, a federally listed threatened species.

Biological Opinion: Non-jeopardy, no adverse modification or destruction of critical habitat.

Incidental Take Statement:

Level of take anticipated: Anticipated take includes no more than one desert tortoise injured or killed as a result of project construction and operation, and no more than three desert tortoises through harassment associated with excavation of occupied burrows and movement of desert tortoises out of harm's way.

Reasonable and Prudent Measures: The biological opinion presents five measures for reducing incidental take. Implementation of these measures through the terms and conditions are mandatory.

Terms and Conditions: Seventeen mandatory terms and conditions are included to implement the reasonable and prudent measures. They include a variety of measures to reduce incidental take of desert tortoises, such as avoiding take of individual animals (but moving animals out of harm's way when necessary), education of project personnel, reducing the potential for predation on desert tortoises, monitoring and preconstruction surveys, construction of a chain link perimeter fence, and monitoring of take and habitat loss.

Conservation Recommendations: The Arizona Strip District should promptly complete an amendment of their Resource Management Plan to implement the Desert Tortoise Recovery Plan. The amendment should include tortoise barrier fencing in the Beaver Dam area. The Bureau should also evaluate the need for requiring compensation from Mohave County, and should enter into a joint, programmatic consultation with the Service on road maintenance activities within the Bureau's discretion.



United States Department of the Interior
Fish and Wildlife Service

Arizona Ecological Services Field Office

2321 W. Royal Palm Road, Suite 103

Phoenix, Arizona 85021-4951

(602) 640-2720 Fax (602) 640-2730



In Reply Refer To:

AESO/ES

2-21-97-F-011

October 21, 1996

TO: Area Manager, Shivwits Resource Area, Bureau of Land Management,
St. George, Utah

FROM: Field Supervisor

SUBJECT: Biological Opinion for a Proposed Recreation and Public Purposes Lease or
Conveyance to Mohave County for Construction of a Road Maintenance Facility
Site near Beaver Dam, Mohave County, Arizona

This biological opinion responds to your request for initiation of formal consultation with the Fish and Wildlife Service pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), as amended (Act). Your request was dated August 26, 1996, and received by us on August 28, 1996. At issue are impacts that may result from issuance of a Recreation and Public Purposes (R&PP) lease or to convey public lands to Mohave County for construction of a road maintenance facility near Beaver Dam, Arizona. These impacts may affect the Mojave population of the desert tortoise, *Gopherus agassizii*, a federally listed threatened species, and critical habitat designated for the species.

This biological opinion was prepared using information from the following sources: your August 26, 1996, request for initiation of consultation, an environmental assessment for the project (EA AZ-010-95-28)(Bureau 1996a), informal consultation between our staffs, and our files. Literature cited in this biological opinion is not a complete bibliography of all literature available on the desert tortoise, nor is it a complete review of the effects of construction projects on the species. A complete administrative record of this consultation is on file in this office.

In this biological opinion the Service finds that the effects of the proposed R&PP lease or conveyance and subsequent proposed construction are not likely to jeopardize the continued existence of the desert tortoise, nor are they likely to result in destruction or adverse modification of critical habitat designated for this species. Nineteen terms and conditions are described to reduce take associated with the proposed action.

BIOLOGICAL OPINION

DESCRIPTION OF PROPOSED ACTION

The Bureau of Land Management proposes to grant a R&PP lease for up to nine acres of land or to convey up to 15 acres of public land to Mohave County for construction of a road maintenance facility approximately 0.2 mile northeast of Beaver Dam, Arizona (Figure 1). The site would be located immediately north of the Arizona Department of Transportation maintenance facility just east of Highway 91 in T41N, R15W, section 33, NE1/4SW1/4. The purpose of the lease/conveyance and subsequent construction is to facilitate maintenance of local County roads and highways. Within the site, Mohave County proposes to construct a highway maintenance shop, offices, material storage, and upon patent, could include the Beaver Dam/Littlefield Transfer/Collection Station Right-of-Way A-27202. The Transfer/Collection Station Right-of-Way was issued to Mohave County in 1992 within the subject parcel of land. The right-of-way is for less than one acre and has not been developed. This right-of-way could be terminated and the land patented along with land for a maintenance facility to Mohave County under the special pricing program, according to BLM Handbook H-2740-1, Chapter V, updated October 20, 1994 (Bureau 1996a). The entire site would eventually be developed.

Proposed Mitigation Measures

The Bureau (1996a) proposes the following measures to reduce the possibility of take of desert tortoises and destruction of tortoise habitat as a result of the proposed action.

1. All activity associated with the maintenance facility will occur on lands within the boundaries of the R&PP lease or patent.
2. At no time shall vehicle or equipment fluids be released on public lands. All accidental spills must be reported to the Bureau and be cleaned up immediately, using best available practices. All spills of federally or State listed hazardous materials that exceed reportable quantities shall be promptly reported to the appropriate State agency and the Arizona Strip District.
3. Construction sites shall be maintained in a sanitary condition at all times. Waste materials shall be placed in covered receptacles to avoid attracting predators of the desert tortoise and be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash garbage, refuse, oil drums, petroleum products, ashes and equipment.
4. The project shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event Mohave County shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et seq.) with regard to any toxic substances that are used, generated by, or stored on the site. (See

40 CFR, part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any Federal agency or state government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

5. If a tortoise wanders onto the site during the project, all activity will cease until the tortoise wanders off the site or a qualified person can move it safely.

6. A desert tortoise biologist would be responsible for informing all employees working on this project about tortoises (including its status, protocols for dealing with tortoises if and when they are encountered, and the definition of take).

7. Desert tortoises encountered during pre-work clearances or during project activities will be relocated by the qualified biologist, a minimum of 150 yards into an off site burrow on public land. If a burrow is not available, one will be constructed by the biologist.

8. The entire lease/patent would be fenced with chain link fencing. An alternative to fencing the entire lease would be to construct a tortoise barrier fence along the boundary line of the Desert Wildlife Management Area just north of the maintenance facility or another area identified by the Authorized Officer.

9. Mohave County shall coordinate with downslope land users/owners to plan for runoff and drainage paths.

STATUS OF THE SPECIES

On August 4, 1989, the Service published an emergency rule listing the Mojave population of the desert tortoise as endangered. In a final rule dated April 2, 1990, the Service determined the Mojave population of the desert tortoise to be threatened. The desert tortoise is a large, herbivorous reptile found in portions of the California, Arizona, Nevada, and Utah deserts, and in Sonora and northern Sinaloa, Mexico. The threatened Mojave population is found in California, Nevada, and north of the Colorado River in Arizona and southwestern Utah. In Arizona, desert tortoises of the Mojave population are most active during the spring and early summer when annual plants are most common. Additional activity occurs during warmer fall months and after infrequent summer monsoons. Desert tortoises spend the remainder of the year in burrows, escaping the extreme weather conditions of the desert.

The desert tortoise is threatened by numerous factors, most of which are human-caused. These factors include destruction, degradation, and fragmentation of desert tortoise habitat resulting from habitat conversion to urban or agricultural development, construction of roads, mining, sheep and cattle grazing, and other activities; direct mortality or removal of animals from populations due to collecting, road kills, etc.; and mortality due to an upper respiratory tract disease (URTD), particularly in the western Mojave Desert (Service 1994a). Fire is an increasingly important threat to desert tortoise habitat. Over 500,000 acres of desert lands burned in the Mojave Desert in the 1980s. Fires in Mojave Desert scrub degrade or eliminate habitat for desert tortoises (Appendix D of Service 1994a).

The recovery plan for the Mojave population of the desert tortoise (Service 1994a) proposes the establishment of 14 Desert Wildlife Management Areas (DWMAs) in six recovery units. Land management in DWMAs would target the reduction or elimination of those factors that have caused declines in desert tortoise populations. The boundaries of proposed DWMAs are not precisely defined in the recovery plan, but would be established by the Bureau and other land management agencies in coordination with the Service, State wildlife agencies, and others. The Bureau has proposed to establish the Beaver Dam Slope DWMA north of Interstate 15, but excluding private lands near Beaver Dam and to the northwest of Beaver Dam (Bureau 1996b). The project site lies outside of the proposed DWMA, the boundary of which is located approximately 0.5 mile to the north. The northern boundary of the proposed Virgin Slope DWMA lies approximately 3.5 miles to the south of the project site (Bureau 1996b).

The Service designated critical habitat for the Mojave population of the desert tortoise in a Federal Register notice dated February 8, 1994 (59 FR 5820-5846, also see corrections at 59 FR 9032-9036). The proposed action is not located in critical habitat. However, the southern boundary of critical habitat lies approximately 0.6 mile north of the project area in T41N, R15W, section 28.

Further information on the range, biology, and ecology of the desert tortoise can be found in Luckenbach (1982), Turner et al. (1984), Weinstein et al. (1987), Ernst et al. 1994, various papers by J.R. Spotila and others in *Herpetological Monographs* published June 30, 1994, various papers in Bury and Germano (eds.) (1994), and Service (1994a).

ENVIRONMENTAL BASELINE

General Vegetation Communities and Habitat Condition:

The proposed action would occur on the Beaver Dam Slope within a vegetation community referred to as the creosote series of Mohave desert scrub (Turner 1982). The dominant perennial plant species include creosote, *Larrea tridentata*; white bursage, *Ambrosia dumosa*; and Joshua tree, *Yucca brevifolia*. The entire project site has been disturbed by various human activities, particularly use of the area as a gravel pit and a material storage site (Bureau 1996a). Tortoise habitat at the project site and in adjacent areas near Beaver Dam

has been adversely affected by these activities, and tortoise populations on the Beaver Dam Slope in general have been reduced by illegal collecting and URTD (Brussard et al. 1994).

Annual vegetation assemblages have been altered by the introduction of nonnative herbaceous species such as filaree, *Erodium cicutarium*, and red brome, *Bromus rubens*. A tortoise barrier fence is currently being constructed a short distance to the east and north of the project site. The fence will prevent tortoises from moving from the east into the developed areas near Beaver Dam and Highway 91. Construction of this fence was addressed in consultation #2-21-94-F-531 (Service 1994b).

Status of the Desert Tortoise in the Project Area:

The project area is in a portion of the Beaver Dam Slope that was surveyed extensively from 1978 to 1990 for desert tortoises by way of triangular, 1.5 mile by 10-yard, line transects (Bureau 1991). Data from transects located within approximately two miles of the proposed project are presented in Table 1. These data provide distributional information and rough estimates of relative tortoise density. Areas of the Arizona Strip with relatively dense tortoise populations may yield 10 to 40 corrected sign per transect. Approximately 10 percent of all transects conducted on the Arizona Strip through 1990 yielded 10 or more corrected sign. Approximately 12 percent of all transects yielded one or more live tortoises (Bureau 1991).

The vicinity of the project area is one of the more intensively surveyed areas on the Arizona Strip. Mean total corrected sign for 46 transects conducted within two miles of the project site was 8.8 (Table 1). Fifteen live tortoise have been found within two miles of the project site; however, no tortoises have been found in the section in which the project is proposed. That section was surveyed once, in 1982, at which time five sheltersites were found. These data suggest tortoises are widely distributed in varying relative densities in the area of the proposed project. All these survey data are at least six years old, and tortoise densities may have declined somewhat since then due to increasing human disturbance in the Beaver Dam area and URTD; however, relatively high sign counts were registered in T41N, R15W, sections 27 and 28, to the north of the project site in 1990 (Table 1), and numbers of tortoises registered at two study plots, one in section 27 (Littlefield Plot), and another approximately 5 miles to the north (Exclosure Plot), have shown no significant declines from 1977/78 to 1993 (Littlefield Plot)(Bureau 1995) and from 1977/78 to 1996 (Exclosure Plot) (Bureau 1995; Jeff Howland, Arizona Game and Fish Department, Phoenix, AZ, pers. comm. 1996). At the Littlefield Plot, located approximately one mile northeast of the project site, tortoise densities have been determined on four occasions (1977/78, 1980/82, 1987, and 1993). Density estimates have ranged from 53 to 46 tortoises per square mile.

The project site has been extensively disturbed by sand and gravel extraction and a material storage site, as well as other forms of human activity. Tortoises are unlikely to occur on the site, except for individuals that may wander onto the site from adjacent habitats. The site is

Table 1: Results of triangular line transects within two miles of the proposed project¹

Section Surveyed	Year Surveyed	Total Corrected Sign	Number of Live Tortoises
T40N, R15W, S3	1982	0	0
T40N, R15W, S4	1982	1	0
T40N, R15W, S5	1982	2	0
	1982	1	0
T40N, R15W, S6	1982	4	0
	1982	6	0
	1982	5	0
	?	4	0
T40N, R15W, S8	1982	2	0
T40N, R15W, S9	1982	4	0
T41N, R15W, S20	1982	2	0
T41N, R15W, S21	1982	6	0
	1990	4	0
	1990	8	0
	1990	8	0
	1990	4	1
	1990	6	0
	1990	2	0
	1990	1	0
	1990	3	0
T41N, R15W, S22	1982	5	0
T41N, R15W, S26	1982	3	0
T41N, R15W, S27	1981	11	1
	1978	34	0
	1978	38	0
	1978	27	0
	1978	22	1
	1981	10	3
	1981	6	0
	1981	6	0
	1981	13	1
	1981	4	1
	1981	15	0
	?	12	1
	1986	8	1
	1986	9	1
	1990	18	1

	1990	29	2
T41N, R15W, S28	1982	10	1
	1982	14	0
	1990	3	0
T41N, R15W, S31	1982	8	0
T41N, R15W, S32	1982	9	0
T41N, R15W, S33	1982	5	0
T41N, R15W, S34	1982	6	0
T41N, R15W, S35	1982	6	0

¹From Appendix 2 of Bureau 1991

located in category 3 desert tortoise habitat. Category 3 habitats typically support low to medium density populations of desert tortoise (Spang et al. 1988).

EFFECTS OF THE PROPOSED ACTION

The proposed action would occupy up to 15 acres of highly disturbed category 3 desert tortoise habitat (Bureau 1996a). Project activities would permanently remove the site from desert tortoise habitat and preclude future restoration of the site. Although tortoises are unlikely to occur onsite, animals could move to the site before or during construction. Tortoises at the project site could be injured or killed by construction activities, collected by construction workers, or crushed on roads by workers accessing the site. Workers are most likely to encounter tortoises when these animals are active (primarily March 15 to October 15), but construction could also affect animals in burrows at other times of the year.

After construction of the facility, tortoises could potentially enter the site through open gates, and hatchling tortoises could enter through the chain-link fence. These animals would be subject to death or injury as a result of maintenance activities, or collection by workers. Adult tortoises that have moved from adjacent, less-disturbed, areas perhaps up to several miles away, are the most likely individuals to occur at the project site. Hatchling tortoises have limited mobility, and the probability of an egg clutch being deposited at or near the site is low because of low tortoise densities in the immediate vicinity. Thus, the likelihood of hatchling tortoises entering through the chain-link fence is probably very low.

Interrelated and Interdependent Effects:

The proposed action is part of the County's road maintenance activities. In accordance with 50 CFR 402.14(g), the Service is required to consider all effects of the proposed action, which refers to "the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline." "Interrelated actions are those that are part of a larger action and depend on the larger action for their justification.

Interdependent actions are those that have no independent utility apart from the action under consideration" (50 CFR 402.02). The Service's Section 7 Handbook provides further guidance on the definition of "interrelated and interdependent actions" by establishing the following rule: Determining if an action is interrelated or interdependent depends on the "but for" test; asking whether the Federal, State, or private activity could occur "but for" the proposed action.

Road maintenance activities have occurred and would continue to occur in the absence of this proposed facility. Thus, although the proposed action is clearly part of the County's road maintenance program, that program is not interrelated or interdependent to the proposed action. Although the effects of the County's road maintenance program will not be considered herein as effects of the action, the Service is concerned that other road maintenance activities may adversely affect the desert tortoise, and may result in occasional take of tortoises that wander onto roads, road shoulders, or other areas where maintenance activities occur. If take occurs during these maintenance activities, such take would represent a violation of section 9(a)(1)(B) of the Act.

Effects to Critical Habitat:

This opinion must determine whether the proposed action may result in destruction or adverse modification of critical habitat. "Destruction or adverse modification" means a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of the species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical." (50 CFR 402.02). The proposed action is located outside of and no closer than 0.6 mile from desert tortoise critical habitat. No direct or indirect effects to critical habitat are anticipated.

Cumulative Effects:

Cumulative effects are those adverse effects of future non-Federal (State, local government, and private) actions that are reasonably certain to occur in the project area. Future Federal actions would be subject to the consultation requirements established in section 7 of the Act and, therefore, are not considered cumulative to the proposed project. Effects of past Federal and private actions are considered in the Environmental Baseline. Due to the extent of the lands in this area of the Mojave Desert administered by the Bureau, most of the actions that are reasonably expected to occur in the general area of the project (Beaver Dam and Virgin slopes) would be subject to section 7 consultations. However, in the immediate vicinity of the project site, considerable non-Federal lands are present; particularly sections of land at and to the north and northwest of Beaver Dam, and properties south of the project site to the Virgin River and Littlefield. Development of these non-Federal lands is likely. The Service has been approached recently by a land owner and the U.S. Army Corps of Engineers concerning development of approximately 2,000 acres to the south of the project site along Interstate 15. Compliance with the Act for this proposed development may be

addressed through the section 7 process if a section 404 permit is required from the Corps, pursuant to the Federal Water Pollution Control Act (33 U.S.C 1251-1376), or may be addressed through section 10(a)(1)(B) of the Act. Other projects that may affect the desert tortoise on these non-Federal lands shall be addressed through section 7 of the Act, if a Federal nexus exists, or through the section 10(a)(1)(B) permit process. Cumulative impacts of future State and private projects will be addressed through those subsequent compliance processes.

Effectiveness of Proposed Mitigation

The Bureau has proposed a number of actions that would act to limit or mitigate many of the adverse effects described above. Briefing personnel on the desert tortoise, limiting disturbance to the project site, waste/trash control, relocation of tortoises on the site by a qualified biologist, fencing and other measures as described in Bureau (1996a), as summarized in the "Proposed Mitigation Measures" herein, should all contribute to reduced incidence of mortality or injury of desert tortoises and lessen habitat damage directly attributable to proposed construction. Compensation for residual impacts is required by Service and Bureau policy (Desert Tortoise Compensation Team 1991), although residual impacts and compensation were not addressed in the environmental assessment for the project (Bureau 1996a).

SUMMARY OF EFFECTS

The Service believes the effects described above are neither likely to jeopardize the continued existence of the desert tortoise nor result in adverse modification or destruction of desert tortoise critical habitat. We present this conclusion for the following reasons:

1. The proponent's project description includes features to minimize take of desert tortoises and mitigate the direct and indirect impacts of the proposed action on the tortoise.
2. Desert tortoise habitat that would be disturbed by the project is already highly disturbed with limited or no habitat value. No indirect or direct effects to critical habitat are anticipated; and the project site is not being considered for inclusion in a DWMA.
3. The project and its effects are limited in areal extent, and would not contribute to the fragmentation of desert tortoise habitat.

CONCLUSION

After reviewing the current status of the Mojave population of the desert tortoise, the environmental baseline for the action area, and the anticipated effects of the proposed R&PP lease/conveyance to Mohave County and subsequent construction of a road maintenance facility, and the cumulative effects of these actions, it is the Service's biological opinion that

the proposed action is not likely to jeopardize the continued existence of the desert tortoise and is not likely to destroy or adversely modify desert tortoise critical habitat.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act prohibits the take of listed species without special exemption. Taking is defined as harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, collecting, or attempting to engage in any such conduct. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering (50 CFR 17.3). Harass is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns that include, but are not limited to, breeding, feeding, or sheltering. Incidental take is any take of a listed animal species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or the applicant. Under the terms of sections 7(b)(4) and 7(o)(2) of the Act, taking that is incidental to and not intended as part of the agency action is not considered to be prohibited under the Act provided that such taking is in compliance with this incidental take statement.

The measures described below are non-discretionary, and must be implemented by the agency so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, in order for the exemption in section 7(o)(2) to apply. The Bureau has a continuing duty to regulate the activity covered by this incidental take statement. If the Bureau (1) fails to require any applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, and/or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

AMOUNT OR EXTENT OF TAKE

The Service anticipates the following forms of take as a result of the proposed action:

- 1) One desert tortoise in the form of direct mortality or injury resulting from project construction and operation.
- 2) Three desert tortoises through harassment associated with excavation of occupied burrows and movement of desert tortoises out of harm's way during construction activities.

This biological opinion does not authorize any form of take not incidental to granting the R&PP lease/conveyance and subsequent construction and operation of the road maintenance facility by Mohave County. If the incidental take authorized by this opinion is met, the Bureau shall immediately notify the Service in writing. If the incidental take authorized by this opinion is exceeded, the Bureau must immediately reinstate consultation with the Service to avoid a violation of section 9 of the Act. In the interim, the Bureau must cease the

activity resulting in the take if it is determined that the impact of additional taking will cause an irreversible and adverse impact on the species, as required by 50 CFR 402.14(i). The Bureau should provide to this office an explanation of the cause of the taking.

EFFECT OF THE TAKE

In this biological opinion, the Service finds that this level of anticipated take is not likely to result in jeopardy to the species.

REASONABLE AND PRUDENT MEASURES

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize the incidental take authorized by this biological opinion:

1. Personnel education programs, defined construction areas, and well-defined operational procedures shall be implemented.
2. Activities that may result in a take of desert tortoise or destruction of desert tortoise habitat shall be closely monitored to ensure compliance with the terms and conditions of this biological opinion. Where adverse effects to an individual tortoise cannot be avoided, the animal shall be moved from harm's way.
3. Attraction of common ravens and other potential desert tortoise predators to the project area shall be reduced to the maximum extent possible.
4. A chain-link perimeter fence shall be installed to prevent movement of tortoises onto the property during construction or operation of the facility.
5. The Bureau shall monitor incidental take resulting from the proposed action and report to the Service the findings of that monitoring.

TERMS AND CONDITIONS

In order to be exempt from the prohibitions of section 9 of the Act, the Bureau must comply with the following terms and conditions in regards to lease/conveyance of public lands to Mohave County and subsequent construction and operation of a road maintenance facility. These terms and conditions implement the reasonable and prudent measures described above. Terms and conditions are nondiscretionary. Terms and conditions 1.a. through e., 2.b., 2.c., 3.a., and 4.b. are adapted from Bureau (1996a).

1. The following terms and conditions implement reasonable and prudent measure number one:

- a. All activity associated with the maintenance facility shall occur on lands within the boundaries of the R&PP lease or patent.
- b. At no time shall vehicle or equipment fluids be released on public lands. All accidental spills must be reported to the Bureau and be cleaned up immediately, using best available practices. All spills of federally or State listed hazardous materials that exceed reportable quantities shall be promptly reported to the appropriate State agency and the Arizona Strip District.
- c. The project shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event Mohave County shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et seq.) with regard to any toxic substances that are used, generated by, or stored on the site. (See 40 CFR, part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
- d. Mohave County shall coordinate with downslope land users/owners to plan for runoff and drainage paths.
- e. A desert tortoise biologist shall be responsible for informing all employees working on this project about tortoises (including information provided by the Service and the Bureau on the life history of the tortoise, its status, protocols for dealing with tortoises if and when they are encountered, and the definition of and penalties for take).
- f. The project site shall be flagged or marked on the ground prior to construction. All construction workers shall strictly limit their activities and vehicles to areas that have been marked. Construction personnel shall be trained to recognize markers and understand the equipment movement restrictions involved.
- g. The Bureau shall designate a field contact representative (FCR) who shall be responsible for overseeing compliance with these terms and conditions and for coordination on compliance with the Service. The FCR, authorized biologist(s) (see term and condition 2.c.), and any qualified biologists shall have the authority and the responsibility to halt all project activities that are in violation of these terms and conditions. These individuals shall have a copy of the terms and conditions of this biological opinion while on the work site.

2. The following terms and conditions implement reasonable and prudent measure number 2.
 - a. A pre-construction survey and relocation of any desert tortoises that might be taken as a result of fence construction shall be conducted. An authorized biologist (see term and condition 2.d. for definition) shall accompany crews during installation of the perimeter fence. Burrows within 40 feet of the fenceline shall be inspected for occupancy. Occupied burrows shall be excavated by an authorized biologist. Any tortoises found on the surface or in burrows shall be relocated in accordance with terms and conditions 2.d. and 2.e. All burrows within 40 feet of the fence shall be collapsed to prevent reoccupancy, but only after tortoises have been removed and relocated.
 - b. Following construction of the perimeter fence (the fence is to be constructed before any other surface disturbing activities - term and condition 4.a.), a 100-percent pre-construction survey, in compliance with Service protocol (Appendix B of Service 1992), shall be conducted of the project site. Any tortoises found onsite shall be relocated in accordance with terms and conditions 2.d. and 2.e. After surveys are complete and any tortoises are relocated, construction may proceed in the absence of a biological monitor.
 - c. If a tortoise is found on the project site during construction or operation of the facility, activities that may result in a take shall cease until the tortoise is moved out of harm's way in accordance with terms and conditions 2.d. and 2.e. If a tortoise is found onsite after the authorized biologist has completed surveys, relocations, and monitoring, and is no longer onsite, activities that may result in take shall cease until the tortoise has moved out of harm's way on its own, or until an authorized biologist can be called to the site and the tortoise can be relocated.
 - d. Only biologists authorized by the Service shall handle desert tortoises. The Service authorizes Tim Duck and Dustin Haines to handle desert tortoises pursuant to these terms and conditions. If other personnel are to be authorized for handling desert tortoises, the Bureau shall submit the name(s) of the proposed authorized biologist(s) to the Service for review and approval at least 15 days prior to the onset of activities that could result in a take.
 - e. If a desert tortoise is found on the project site, the tortoise shall be relocated by an authorized biologist into the closest suitable habitat in the proposed Beaver Dam Slope DWMA that will ensure the animal is reasonably safe from death, injury, or collection associated with the project or other activities. The authorized biologist shall be allowed some discretion to ensure that survival of each relocated tortoise is likely. Desert tortoises shall not be placed on lands outside the administration of the Federal government without the written permission of the landowner. Handling procedures for tortoises shall adhere to protocols outlined in Desert Tortoise Council (1994 with 1996 revisions).

f. The authorized biologist shall maintain a record of all desert tortoises encountered during project activities. This information shall include for each desert tortoise:

- The locations and dates of observation
- General condition and health, including injuries and state of healing and whether animals voided their bladders
- Location moved from and location moved to
- Diagnostic markings (i.e. identification numbers of marked lateral scutes)

No notching of scutes or replacement of fluids with a syringe is authorized.

3. The following term and condition implements reasonable and prudent measure number 3.
 - a. Construction sites shall be maintained in a sanitary condition at all times. Waste materials shall be placed in covered receptacles to avoid attracting predators of the desert tortoise and be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash garbage, refuse, oil drums, petroleum products, ashes, and equipment.
4. The following terms and conditions implement reasonable and prudent measure number 4:
 - a. The entire lease/patent shall be enclosed with chain-link fencing, which shall be constructed prior to any other surface disturbing activities. Gates through the fence shall be kept closed. The fence and any gates shall be installed with zero clearance between the fence and the ground. The fence shall be inspected at least quarterly and maintenance performed as needed to ensure its effectiveness at excluding tortoises.
5. The following terms and conditions implement reasonable and prudent measure number 5:
 - a. Within 90 days after completion of construction, the Bureau shall submit a monitoring report to the Arizona Ecological Services Field Office. The report shall briefly document the effectiveness of the desert tortoise mitigation measures, actual acreage of desert tortoise habitat disturbed, the number of desert tortoises excavated from burrows, the number of desert tortoises moved from construction sites, and information on individual desert tortoise encounters as stipulated in term and condition 2.f. The report shall make recommendations for modifying or refining these terms and conditions to enhance desert tortoise protection and reduce needless hardship on the Bureau.
 - b. Anticipated take limits that would require reinitiation are addressed in "AMOUNT OR EXTENT OF TAKE" and are based on implementation of the proposed action without these terms and conditions. With implementation of terms and conditions the Service believes that no tortoises will be taken in the form of direct mortality or injury during construction and operation of the road maintenance facility; and no more than

three tortoises will be taken in the form of harassment associated with moving animals out of harm's way. If, during the course of the proposed action, this minimized level of incidental take is exceeded, such incidental take would represent new information requiring review of the reasonable and prudent measures. The Bureau must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

DISPOSITION OF DEAD, INJURED, OR SICK DESERT TORTOISES

Upon locating a dead, injured, or sick desert tortoise, initial notification must be made to the Service's Law Enforcement Office, Federal Building, Room 105, 26 North McDonald, Mesa, Arizona, 85201 (Telephone: 602/379-6443) within three working days of its finding. Written notification must be made within five calendar days and include the date, time, and location of the animal, a photograph, and any other pertinent information. The notification shall be sent to the Law Enforcement Office with a copy to the Phoenix Office. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state. If possible, the remains of intact desert tortoises shall be placed with educational or research institutions holding appropriate State and Federal permits. If such institutions are not available, the information noted above shall be obtained and the carcass left in place.

Arrangements regarding proper disposition of potential museum specimens shall be made with the institution prior to implementation of the action. Injured animals should be transported to a qualified veterinarian by an authorized biologist. Should any treated desert tortoise survive, the Service should be contacted regarding the final disposition of the animal.

CONSERVATION RECOMMENDATIONS

Sections 2(c) and 7(a)(1) of the Act direct Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of listed species. Conservation recommendations are discretionary agency activities to minimize or avoid effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information on listed species. The recommendations provided here do not necessarily represent complete fulfillment of the agency's section 2(c) or 7(a)(1) responsibilities for the desert tortoise. In furtherance of the purposes of the Act, we recommend implementing the following actions:

1. The Bureau should promptly complete an amendment to the Arizona Strip District Resource Management Plan to implement the Desert Tortoise (Mojave Population) Recovery Plan (Service 1994a).
2. An integral part of a Beaver Dam Slope DWMA management plan should be construction of tortoise barrier fencing as needed to reduce tortoise mortality and collection in developed areas in and near Beaver Dam.

3. As required by the document "Compensation for the Desert Tortoise" (Desert Tortoise Compensation Team 1991), signed by the Bureau's Arizona State Director and other Management Oversight Group representatives, the Bureau should assess the impacts of the proposed action and collect compensation funds from Mohave County if any residual effects remain after mitigation.

4. The Bureau should discuss with Mohave County and the Service initiation of a joint Bureau/County consultation with the Service on road maintenance activities in Mojave desert tortoise habitat.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitat, the Service requests notification of the implementation of any conservation recommendations.

CLOSING STATEMENT

This concludes formal consultation on proposed granting of a R&PP lease or conveyance and subsequent development by Mohave County of a road maintenance facility near Beaver Dam, Mohave County, Arizona. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: 1) the amount or extent of incidental take (from page 11) is exceeded; 2) new information reveals effects of the agency action that may adversely affect listed species or critical habitat in a manner or to an extent not considered in this opinion; 3) the agency action is subsequently modified in a manner that causes an effect to a listed species or critical habitat that was not considered in this opinion; or 4) a new species is listed or critical habitat designated that may be affected by this action. In instances where the amount or extent of incidental take (page 11) is exceeded, any operations causing such take must cease pending reinitiation. Any questions or comments should be directed to Jim Rorabaugh or Ted Cordery of my staff.



Sam F. Spiller

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (GM-AZ)
State Director, Bureau of Land Management, Phoenix, AZ

Director, Arizona Game and Fish Department, Phoenix, AZ

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