United States Department of the Interior

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December 2, 2011
File Nos. 84320-2012-F-0020
1-5-04-F-526.APD

Memorandum

To: Assistant Field Manager, Division of Recreation and Renewable Resources, Bureau of Land Management, Las Vegas, Nevada

From: State Supervisor, Nevada Fish and Wildlife Office, Reno, Nevada

Subject: Request to Append the Herbicide Fuel Treatment Project in Red Rock Canyon National Conservation Area (RRCNCA) to the Programmatic Biological Opinion (PBO) for the RRCNCA (1-5-04-F-526), Clark County, Nevada

This is in response to your letter dated October 13, 2011, requesting the Fish and Wildlife Service (Service) to append the subject activity to the PBO issued to the Las Vegas Field Office on September 29, 2004. On October 18, 2011, the Service determined the information provided was sufficient to initiate formal consultation regarding herbicide treatments in burned Mojave desert tortoise (*Gopherus agassizii*) habitat.

The attached biological opinion is based on information provided in your request, published and unpublished data provided by the United States Geological Survey (USGS), and associated correspondence regarding this project, and is hereby incorporated into this document by reference. The biological opinion was also informed by the following Service office files which address potential effects to the Mojave desert tortoise, a species listed as threatened under the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*): 2004 PBO for the RRCNCA (1-5-04-F-526); biological opinion for the Southern Nevada Complex Burned Area Rehabilitation Plan in Clark and Lincoln Counties (84320-2006-F-551); and the 2008 biological opinion that reinitiated formal consultation for the Southern Nevada Fire Complex Burned Area Rehabilitation Plan to address effectiveness monitoring of herbicides on rehabilitating burned Mojave Desert (84320-2008-F-0063). This consultation is prepared in accordance with 50 CFR § 402 of our interagency regulations governing section 7 of the Act. The proposed action does not involve or affect designated critical habitat for the desert tortoise and therefore, will not be discussed further in the attached document.

In order to track prior project effects, please complete the dates, as well as any take that occurred for prior projects appended to the PBO in Table 1 of the attachment. Please return the information to the Nevada Fish and Wildlife Office in Las Vegas. If we can be of further assistance, please contact Susan Cooper in the Nevada Fish and Wildlife Office in Las Vegas at (702) 515-5230. Please reference File No. 84320-2012-F-0020 in future correspondence concerning this consultation.

for

Edward T. Koch

Attachment

cc:
Supervisory Biologist – Habitat, Nevada Department of Wildlife, Las Vegas, Nevada

ATTACHMENT

APPENDED ACTION UNDER THE
RED ROCK CANYON NATIONAL CONSERVATION AREA (RRCNCA)
PROGRAMMATIC BIOLOGICAL OPINION (PBO)
File No. 84320-2012-F-0020 (1-5-04-F-526.APD)

Date of Request: October 13, 2011
Date Received: October 13, 2011
Date of Response: December 1, 2011

PBO File No.: 1-5-04-F-526
Programs: Recreation & Visitor Facilities; Vegetation Treatments

Species Affected: Mojave Desert tortoise (*Gopherus agassizii*)

PROPOSED ACTION

The Bureau of Land Management (BLM) proposes to experimentally create fuel breaks in the BLM-administered land in RRCNCA (Figure 1) by using two herbicides to treat and reduce the amount of non-native invasive annual grasses (i.e., red brome [*Bromus rubens*] and cheatgrass [*Bromus tectorum*]) and their soil seed banks. This treatment will be followed by seeding with native vegetation. A total of 4,769 acres of tortoise habitat will be treated during this project. However, annual and perennial grasses, broadleaf weeds, and vine species are expected to be the only plants affected.

Treatment Areas

The areas to be treated with herbicide would be linear strips adjacent to existing roads, hiking trails, terrain features (e.g., washes) that provide natural barriers to fire, and RRCNCA infrastructure (e.g., Visitor Center, Fire Station, Moenkopi Campground; Figure 1). Treatments along roads, trails, and natural features would be 150 feet on both sides of the feature to create a 300-foot firebreak. A 300-foot firebreak would be created around infrastructure and the area of Highway 159 just north of Blue Diamond to the intersection off Highway 160. All areas known to have two-tone beardtongue (*Penstemon bicolor*) will be avoided. A total of 1,731 acres of vegetation will be treated along linear features.

A 300-foot firebreak inside of fire scars (Figure 1) will be created to hinder a fire start from inside the non-native monoculture from escaping out into previously unburned areas and control undesirable non-native vegetation in order to aid in the establishment of preferred rangeland plant species. A total of 3,038 acres of habitat will be treated within previously burned areas.

Herbicides

BLM proposes to create 300-foot wide firebreaks using the herbicides Plateau and Journey to interrupt the "grass/fire" cycle and to release existing desirable native plant communities from the competitive pressure of undesirable non-native plant species. Plateau or Journey will be used from the edge to 300 feet inside existing fire scars. The remainder of the fire scar (center) would be sprayed with Journey. All other areas will be sprayed with Plateau. Methylated seed oil such as MSO concentrate and a penetrant and drift control agent such as Liberate may be added to the herbicide mixture. All label instructions would be strictly adhered to. Plateau (EPA Reg. No. 241-365), and Journey (EPA Reg. No. 241-417) are federally-approved herbicides previously analyzed in the Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States programmatic environmental impact statement (BLM 2007). Plateau and Journey are both commercially available pre-emergent or post-emergent herbicides used to reduce invasive annual grasses.

Herbicide Application

The application rate, following label instructions, for Plateau would be a maximum of 8 ounces per acre; and for Journey a maximum of 32 ounces per acre. These herbicides are for terrestrial use only and will not be directly applied to water, to areas where surface water is present, or in washes. No application would be conducted during windy or gusty conditions or during rain or when rain is forecasted within 48 hours of application. Adherence to label specifications for proper usage of the helicopter, backpack sprayer, herbicide, and adjuvant and drift inhibitor would be followed to ensure proper PPE usage, application rate, coverage, mixing, droplet size, storage, disposal, and reduction of runoff and drift.

Timing of the pre-emergent herbicide application would be in early to late fall (September – November) before germination and dependent on weather conditions. Timing of the post-emergent herbicide application would be during the early stages of growth when the non-natives are growing vigorously in the winter months when desert tortoises should be bromating.

Mechanism of Herbicide Application

Application will be completed by using backpacker sprayers and utility-terrain-vehicles (UTVs) or a helicopter. There will be 4,396 acres treated by hand with backpack sprayers, avoiding native vegetation to the extent possible. The use of UTVs for backpack spraying will be limited to roads and trails.

Helicopter application would be utilized for spraying a total of 373 acres of the RRCNCA Scenic Loop Drive to reduce the amount of time that it is closed to the public. Helicopters will be specially equipped for herbicide application and operated by a pilot that is qualified for herbicide application. The Pine Creek parking area within the Scenic Loop Drive would be used as the helicopter support area. This helibase is paved and is easily accessable from the Scenic Loop Drive and would serve as the base of operations where the herbicide will be mixed and the helicopter would be loaded, fueled, and secured when not in use.

Seeding

Seeding in the project area will be completed after the second year of treatment in order to allow BLM to document plant response to the herbicide application. All seeds will be native, and the seed mixture will be determined by a BLM botanist and restoration specialist.

Effectiveness Monitoring Plan

BLM has completed and will implement an effectiveness monitoring plan (Craig 2011) in association with this project to determine if applying a pre-emergent herbicide followed by a native seed mix decreases *Bromus* species fuel loads by 80 percent. Monitoring of treated areas will be conducted once each year beginning one year prior to the initiation of herbicide treatments and no less than three years post-treatment. Within sampling plots, plant data collection will include standard cover and height measurements, and biomass.

Proposed Minimization Measures

BLM has proposed measures to avoid and minimize effects to desert tortoises and their habitat, described in detail in their append request and summarized below:

1. *Speed limit*: Within Clark County, the speed limit is 25 miles per hour on unposted county roads. This speed will be established for all activities at all times unless otherwise designated.

2. *Vehicles*: All project-related individuals shall check underneath stationary vehicles before moving them.

3. *Vehicle traffic*: All project-related vehicle traffic shall be restricted to existing access roads, unless otherwise authorized by BLM and the Service.

4. *Litter control*: Litter control will be implemented and enforced by BLM. Trash containers shall remain covered, must be raven proof, and emptied frequently enough to prevent overflow of materials. Trash, litter, project debris, etc., shall be transferred to a designated solid waste disposal facility. Vehicles hauling trash must be secured to prevent litter from blowing out along the road.

5. *Previous disturbance*: Overnight parking and storage of equipment and materials, including stockpiling, shall be within previously-disturbed areas or within areas cleared by a tortoise biologist to minimize habitat destruction.

6. *Tortoise mortality/injury*: BLM wildlife staff (702/515-5000) and the Service (702/515-5230) must be notified of any desert tortoise death or injury due to project implementation by close of business on the following work day. In addition, the Service's Division of Law Enforcement shall be notified in accordance with the reporting requirements of this biological opinion.

7. *Tortoise activity*: The period of greatest tortoise activity is generally defined as March 1 – October 31. However, unseasonably warm weather and/or precipitation outside this period may result in tortoise activity, particularly by hatchling and juvenile tortoises, and thus warrant adherence to requirements established for periods of greater activity. Similarly, BLM may determine that additional measures are appropriate for projects planned for the end or beginning of either period if conditions are suitable for desert tortoises to be active.

8. *Education program*: A BLM/Service-approved biologist (as defined below) shall present a tortoise education program to all workers, permittees, and other employees or participants involved on activities covered under this opinion. The program will consist of either a presentation or fact sheet as determined by project-level consultation between BLM and the Service. The program or fact sheet will include information on the life history of the desert tortoise, legal protection for desert tortoises, penalties for violations of Federal and State laws, general tortoise activity patterns, reporting requirements, measures to protect tortoises, terms and conditions of the biological opinion, and measures employees can take to promote the conservation of desert tortoises. The definition of "take" will also be explained. Workers and project associates will be encouraged to carpool to and from project sites. Specific and detailed instructions will be provided on the proper techniques to capture and move tortoises which appear onsite if appropriate, in accordance with Service-approved protocol. Currently, the Service-approved protocol is the 1999 revised Desert Tortoise Council (DTC) protocol.

9. *Biologist qualifications*: In accordance with the Procedures for Endangered Species Act Compliance for the Mojave Desert Tortoise (Service 1992), an authorized desert tortoise biologist (authorized biologist) should possess a bachelor's degree in biology, ecology, wildlife biology, herpetology, or closely related fields as determined by BLM and the Service. The authorized biologist must have demonstrated prior field experience using accepted resource agency techniques to survey for desert tortoises and tortoise sign, which should include a minimum of 60 days field experience. All authorized biologists shall comply with the Service-approved handling protocol (DTC 1999). In addition, the authorized biologist shall have the ability to recognize and accurately record survey results and must be familiar with the terms and conditions of the biological opinion that resulted from project-level consultation between BLM and the Service.

10. *Tortoise in harm's way*: If a tortoise is located within the project/activity site in harm's way, all potentially harmful activity shall cease until the tortoise moves or is moved out of harm's way by an authorized biologist. If a desert tortoise is in *imminent danger*, the tortoise shall be moved out of harm's way and on to adjacent BLM land, using techniques described in the tortoise education program.

11. *Moving tortoises*: Tortoises that are moved offsite and released into undisturbed habitat on public land, must be placed in the shade of a shrub, in a natural unoccupied burrow

similar to the hibernaculum in which it was located, or in an artificially-constructed burrow in accordance with the tortoise handling protocol. Tortoises encountered shall be treated in a manner consistent with the appropriate measures in this biological opinion.

12. *Heat stress*: Desert tortoises encountered experiencing heat stress will be placed in a tub by an authorized biologist, with 1 inch of 76-90 degree Fahrenheit (°F) water for at least 20 minutes or until heat stress symptoms are no longer evident.

13. *Temperature restrictions*: Desert tortoises shall be treated in a manner to ensure that they do not overheat, exhibit signs of overheating (e.g., gaping, foaming at the mouth, etc.), or are placed in a situation where they cannot maintain surface and core temperatures necessary for their well-being. Desert tortoises shall be kept shaded at all times until it is safe to release them. No desert tortoise shall be captured, moved, transported, released, or purposefully caused to leave its burrow for any reason when the ambient air temperature is above 95°F. Ambient air temperature shall be measured in the shade, protected from wind, at a height of 2 inches above the ground surface. No desert tortoise shall be captured if the ambient air temperature is anticipated to exceed 95°F before handling and relocation can be completed. If the ambient air temperature exceeds 95°F during handling or processing, desert tortoises shall be kept shaded in an environment that does not exceed 95°F, and the animals shall not be released until ambient air temperature drops to below 95°F.

14. *Permits*: All appropriate State and Federal permits, including Nevada Department of Wildlife and Service permits for handling desert tortoises, or their parts, must be acquired by the authorized biologists or other personnel before project initiation and prior to handling any desert tortoise or their parts or conducting any activity requiring a permit.

15. *Project oversight*: A BLM representative(s) shall be designated who will be responsible for overseeing compliance with the reasonable and prudent measures, terms and conditions, reporting requirements, and reinitiation requirements contained in this biological opinion. The designated representative shall provide coordination among the permittee, project proponent, BLM, and the Service.

16. *Reporting*: The project lead must submit a document to the BLM wildlife biologist within 30 days of completion of the project showing the number of acres treated and number of tortoises observed or taken, which includes capture and displacement, killed, injured, or harassed by other means, during implementation of programmatic actions.

STATUS OF THE SPECIES/CRITICAL HABITAT RANGE WIDE

The rangewide status of the desert tortoise and its critical habitat consists of information on its listing history, species account, recovery plan, recovery and critical habitat units, distribution, reproduction, and numbers. This information is dated September 23, 2010, and provided on the

Service's website at: http://www.fws.gov/nevada/desert_tortoise/dt_life.html. If unavailable on this website, contact the Nevada Fish and Wildlife Office in Las Vegas at (702) 515-5230, and provide File No. 84320-2012-F-0020 along with the date of September 23, 2010. Additional information is provided in our five-year review (Service 2010b) and revised recovery plan for the Mojave desert tortoise (Service 2011).

ENVIRONMENTAL BASELINE

The area is situated at approximately 3,500-4,400 feet in elevation transitioning from creosote (*Larrea tridentata*)-bursage (*Ambrosia dumosa*) into blackbrush (*Coleogyne ramosissima*).

Although the entire action occurs in potential desert tortoise habitat, pre-project surveys were not required because no new surface disturbance will be created by this project. Between the mid-1980s and 1990, BLM conducted triangular strip transects at random locations within suitable desert tortoise habitat throughout the Las Vegas District. Standard transects consist of walking the perimeter of an equilateral triangle, 0.5-mile on each side, while recording observations of desert tortoise sign in an area 33 feet (10 meters) wide, providing approximately 6 acres of 100-percent coverage. Average total adjusted sign (TAS) is determined and relative desert tortoise density is calculated based on the formula developed by Berry and Nicholson (1984). A total of 32 transects were conducted within the current boundaries of the RRCNCA. The four vegetation types in Table 1 contain the proper characteristics known to support desert tortoises.

Table 1. Summary of desert tortoise transects conducted in the Red Rock Canyon NCA.

Vegetation Type	No.	Avg. TAS (range)	Relative density	Tortoise/mi^2
creosote-bursage	21	2.5 (0-9.5)	low	10-45
Mojave mixed scrub	4	2.4 (0-5.5)	low	10-45
grassland	1	0	very low	0-9
blackbrush	6	0.33 (0-2.0)	very low	0-9
Average for all sites	32	2	low	10-45

The majority of the project occurs in habitat classified as having very low desert tortoise density, and a few areas are classified as low or moderate (Figure 1).

EFFECTS OF THE ACTION

Direct effects of the action are the immediate, often obvious effects on the desert tortoise or its habitat resulting from the action. Indirect effects are caused by or result from the action, are later

in time, and are reasonably certain to occur. In contrast to direct effects, indirect effects can often be more subtle and may affect desert tortoise populations and habitat quality over an extended period of time, long after project activities have been completed. Indirect effects are of particular concern for long-lived species such as the desert tortoise because project-related effects may not become evident in individuals or populations until years later.

The effects of the proposed action are described in the *Effects of the Proposed Action on the Listed Species* section of the PBO, in the *Effects of the Proposed Action on the Listed Species* section of the biological opinion for reinitiation of formal consultation for the Southern Nevada Fire Complex Burned Area Rehabilitation Plan (84320-2008-F-0063), in BLM's October 13, 2011, request to append, in BLM's *Effectiveness Monitoring Plan* (Craig 2011), and in associated correspondence with BLM staff; and are hereby incorporated by reference.

Direct Effects

Application of herbicides at label application rates could result in injury and harm of individual desert tortoises given certain exposure scenarios. Although effects of these herbicides have not been studied on reptiles, toxicity data is available for birds, which have been identified as an appropriate surrogate for terrestrial reptiles and will be used in this effects analysis (U.S. EPA/OPPTS 2004). Birds were considered to be at no risk from exposure to Imazapic as a result of direct spraying, indirect contact with foliage after direct spraying, and ingestion of food items that had been direct sprayed; however, long-term exposure to Imazapic did result in reduced growth in large and small birds (BLM 2007). Similar effects to desert tortoises are expected. Glyphosate exposure differed from Imazapic. Large birds that consumed vegetation contaminated with glyphosate were at low risk (BLM 2007). At typical application rates, acute risk from exposure to glyphosate was low, and no risk was documented from chronic exposure (BLM 2007). If offsite drift of herbicides occurs, exposure risks to desert tortoises would be the same as described above.

In those areas where the herbicide is applied by hand with backpack sprayers, direct spraying of a desert tortoise is not expected because the person using the backpack sprayer will likely see the tortoise and avoid spraying it. This application method will be used in 92.2 percent (4,396 of 4,769 acres) of the project area. In addition, all workers using backpack sprayers will apply a 25-foot radius no-spray buffer around any desert tortoise that is detected during project implementation (RPM 1.d). Direct spraying of tortoises from helicopter application may be more likely because tortoises will not be seen or be able to be avoided. With either application mechanism, incidental exposure from contact with sprayed plants poses no to low risk depending on which herbicide is utilized. Because there will be no long-term exposure to herbicides during this project, risk to tortoises will be none to low depending on which herbicide is utilized.

Herbicide exposure to desert tortoises may occur from ingestion of contaminated vegetation. Based on exposure risk described above, there is no mortality risk from Imazapic. Mortality from glyphosate is unlikely because of the expected low acute risk to desert tortoises. Mortality from chronic risk is also unlikely because glyphosate has low residency time in the environment

(Honegger 2010 in Durkin 2011). Additionally, desert tortoise densities are very low to low in the project area; therefore, very few tortoises are likely to encounter areas where herbicide has been applied.

Indirect Effects

Some non-target plant species may be affected by this project because the herbicides to be used are non-selective (BLM 2007). Non-target plants may include native annual forbs and grasses, which along with non-native grasses, are consumed by desert tortoises. Studies suggest Imazapic has little effect on perennial grasses but may affect annual grass and suppress growth of annual forbs (S. Abella personal communication). Although a temporary negative consequence to desert tortoise food resources may occur, the initial response of native species tends to be followed in subsequent years by a resurgence of the native vegetation, possibly due to the release from competition with non-natives (S. Abella personal communication).

While there may be short-term and localized effects that negatively impact desert tortoise habitat, the proposed treatments are anticipated to have long-term beneficial effects on the desert tortoise. Fire has been identified as a primary threat to desert tortoises and their habitat in the Mojave Desert, and a need to control wildfires and reduce the grass-fire cycle is recognized (Service 2011). Because of the low tortoise densities and previous wildfires, RRCNCA is a low-risk area to attempt this experimental treatment of reducing fuel loads and providing breaks to prevent fire from spreading from previously-burned areas with high densities of flammable non-natives to areas of unburned native vegetation.

Cumulative Effects

Cumulative effects are those effects of future State, local government, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

There are no cumulative effects to desert tortoise in the action area since it only includes Federal lands.

CONCLUSION

After reviewing the current status of the desert tortoise, the environmental baseline for the action area, and the effects of the proposed action, it is the Service's biological opinion that the proposed action is within the scope of the PBO issued to BLM and is therefore, not likely to jeopardize the continued existence of the threatened Mojave desert tortoise because:

1. The proposed action will not result in a level of take of desert tortoise that would significantly affect the rangewide number, distribution, or reproduction of the species; desert tortoises that are located in harm's way are anticipated to remain in the wild with no long-term adverse effects.

2. Herbicide treatments are designed to increase knowledge of techniques to provide long-term benefits to recover desert tortoise habitat; and

3. Measures have been proposed by BLM to minimize the effects of project implementation to desert tortoises.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the Terms and Conditions of an incidental take statement.

The measures described below are nondiscretionary and must be implemented by BLM, or other jurisdictional Federal agencies, so that they become binding conditions of any project, contract, grant, or permit issued by BLM as appropriate, in order for the exemption in section 7(o)(2) to apply. The Service's evaluation of the effects of the proposed actions includes consideration of the measures developed by BLM, and repeated in the *Description of the Proposed Action* portion of this biological opinion, to minimize the adverse effects of the proposed action on the desert tortoise. Any subsequent changes in the minimization measures proposed by BLM, or other jurisdictional Federal agencies, may constitute a modification of the proposed action and may warrant reinitiation of formal consultation, as specified at 50 CFR § 402.16. These Reasonable and Prudent Measures (RMPs) are intended to clarify or supplement the protective measures that were proposed by BLM as part of the proposed action.

BLM, or other jurisdictional Federal agencies, have a continuing duty to regulate the activities covered by the Incidental Take Statement in the biological opinion. If BLM , or other jurisdictional Federal agencies, fail to include the Terms and Conditions of this Incidental Take Statement as enforceable conditions of its discretionary action, the protective coverage of section 7(o)(2) may lapse. To monitor the effect of incidental take, BLM must report the progress of its action and its effects on the desert tortoise to the Service as specified in the Incidental Take Statement [50 *Code of Federal Regulations* 402.14(i)(3)].

AMOUNT OR EXTENT OF TAKE

All desert tortoises located in harm's way in the action area may be harassed by capture and removal from the project area during project implementation. Based on the analysis of effects provided above, minimization measures, survey data, timing and duration of the proposed project, and description of the project, the Service anticipates that no desert tortoises would be killed or injured as a result of project activities; and no more than three desert tortoise would be taken (captured and moved from harm's way) as a result of the project.

EFFECT OF THE TAKE

After reviewing the current status of the desert tortoise, the environmental baseline for the action area, and the effects of the proposed action, it is the Service's biological opinion that the proposed action is within the scope of the PBO issued to the BLM and is therefore, not likely to jeopardize the continued existence of the threatened Mojave desert tortoise.

REASONABLE AND PRUDENT MEASURES WITH TERMS AND CONDITIONS

The following RPMs are necessary and appropriate to minimize take of desert tortoise.

RPM 1: *BLM, or other jurisdictional Federal agencies, shall ensure that agency personnel, or project proponent and their contractors implement the following measures to minimize injury or mortality of desert tortoises due to project activities.*

Terms and Conditions:

1.a. *Education Program:* A BLM- or Service-approved biologist (as defined below) shall facilitate a tortoise education program to all supervisors, workers, permittees and other employees or participants involved in project activities. Training materials and briefings will include discussion of the Act and the consequences of noncompliance with it, identification and values of wildlife and natural plant communities, hazardous substance spill prevention and containment measures, and review of all design features of the proposed action. Additionally, an authorized biologist will present a tortoise education program to all personnel who will be working on-site. The program will include information on the life history of the desert tortoise, legal protection for desert tortoises, penalties for violations of Federal and State laws, general tortoise activity patterns, reporting requirements, measures to protect tortoises, terms and conditions of the biological opinion, and measures employees can take to promote the conservation of desert tortoises. All workers will be instructed to check underneath all vehicles at project sites before moving vehicles, as tortoises are attracted to shade and often take cover under vehicles. "Take," which is defined to include any harm or

harassment to desert tortoise, including significant habitat modification, will also be explained. Workers and project associates will be encouraged to carpool to and from the project sites.

1.b. *Biologist approval:* BLM and Service wildlife staff shall approve the biologists who will be assigned to implement the terms and conditions of the biological opinion, or permit issued by BLM. Any biologist not previously approved must submit a statement of qualifications in the Service-developed format and be approved by the wildlife staff, before authorized to represent BLM in meeting compliance with the terms and conditions of the biological opinion. Other personnel may assist with implementing conservation measures, but must be under direct field supervision by the authorized biologist. All authorized biologists shall comply with the Service-approved handling protocol (DTC 1999). In addition, the authorized biologist shall have the ability to recognize and accurately record survey results and must be familiar with the terms and conditions of the biological opinion that resulted from project-level consultation between BLM and the Service.

1.c. *Tortoises in harm's way:* If a tortoise is located within the project/activity site in harm's way, all potentially harmful activity shall cease until the tortoise moves or is moved out of harm's way by an authorized biologist. If a desert tortoise is in *imminent danger*, the tortoise shall be moved out of harm's way and on to adjacent BLM land, using techniques described in the tortoise education program.

1.d. *No-spray buffer zone*: Any desert tortoise or active/intact desert tortoise burrow that is observed by workers utilizing backpack sprayers will be avoided by a minimum of 25 feet.

1.e. *Moving tortoises:* Tortoises that are moved offsite and released into undisturbed habitat on public land, shall be placed in the shade of a shrub, in a natural unoccupied burrow similar to the hibernaculum in which it was found, or in an artificially constructed burrow in accordance with the tortoise handling protocol. Tortoises encountered shall be treated in a manner consistent with the appropriate measures in this biological opinion.

1.f. *Permits:* All appropriate State and Federal permits, including Nevada Department of Wildlife permits for handling desert tortoises or their parts, shall be acquired by the authorized biologists or other personnel before project initiation and prior to handling any desert tortoise or their parts, or conducting any activity requiring a permit.

1.g. *Project oversight:* One or more BLM representatives shall be designated and will be responsible for overseeing compliance with the RPMs, terms and conditions,

reporting requirements, and reinitiation requirements identified in this biological opinion. The designated representatives shall provide coordination among the permittee, project proponent, BLM, and the Service.

1.h. *Heat stress:* Desert tortoises encountered experiencing heat stress shall be placed in a tub, by an authorized biologist, with 1 inch of 76-90°F (24-32°C) water for at least 20 minutes or until heat stress symptoms are no longer evident.

1.i. *Temperature restrictions:* Desert tortoises shall be treated in a manner to ensure that they do not overheat, exhibit signs of overheating (*e.g.*, gaping, foaming at the mouth, etc.), or are placed in a situation where they cannot maintain surface and core temperatures necessary to their well-being. Desert tortoises shall be kept shaded at all times until it is safe to release them. No desert tortoise shall be captured, moved, transported, released, or purposefully caused to leave its burrow for whatever reason when the ambient air temperature is above 95°F (35°C). Ambient air temperature shall be measured in the shade, protected from wind, at a height of 2 inches (5 centimeters) above the ground surface. No desert tortoise shall be captured if the ambient air temperature is anticipated to exceed 95°F before handling and relocation can be completed. If the ambient air temperature exceeds 95°F during handling or processing, desert tortoises shall be kept shaded in an environment that does not exceed 95°F, and the animals shall not be released until ambient air temperature declines to below 95°F.

RPM 2: *BLM, or other jurisdictional Federal agencies, shall ensure that agency personnel, or project proponent and their contractors implement the following measures to minimize predation on desert tortoises by predators drawn to the project area.*

Term and Condition:

Litter-control: Shall be implemented and enforced by the project proponent or BLM. Trash containers shall remain covered, must be raven-proof, and emptied frequently enough to prevent overflow of materials. Trash, litter, project debris, etc., shall be transferred to a designated solid waste disposal facility. Vehicles hauling trash must be secured to prevent litter from blowing out along the road.

RPM 3: *BLM, or other jurisdictional Federal agencies, shall ensure that agency personnel, or project proponent and their contractors implement the following measures to minimize loss and long-term degradation and fragmentation of desert tortoise habitat, such as soil compaction, erosion, crushed vegetation, and introduction of weeds or contaminants:*

Terms and Conditions:

3.a. *Vehicle traffic*: All vehicle use in desert tortoise habitat associated with wild horse and burro management, shall be restricted to existing roads, trails, large sandy washes, and ways. Contractors and associated workers shall comply with the posted speed limits on access roads. Within Clark County, the speed limit is 25 miles per hour on unposted county roads. All project/event-related individuals shall check underneath stationary vehicles for desert tortoises before moving them. No new access roads shall be created.

3.b. *Previous disturbance:* Overnight parking and storage of equipment and materials shall be within previously-disturbed areas or within areas cleared by a tortoise biologist to minimize habitat destruction.

RPM 4. *BLM, or other jurisdictional Federal agencies, shall ensure their agency personnel, or project proponent and their contractors implement the following measure to comply with the RPMs, terms and conditions, reporting requirements, and reinitiation requirements contained in this biological opinion.*

Terms and Conditions:

4.a. *Tortoise mortality/injury:* BLM wildlife staff (702/515-5000) and the Service (702/515-5230) must be notified of any desert tortoise death or injury in the NCA by close of business on the following work day. In addition, the Service's Division of Law Enforcement shall be notified in accordance with the reporting requirements of this biological opinion.

4.b. *Reporting:* Within 30 days of completion of a project, the project lead shall submit a document to a BLM wildlife biologist and the Service showing the number of acres disturbed, and number of tortoises observed or taken, which includes capture and displacement, killed, injured, or harassed by other means, during implementation of programmatic actions.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. At this time, the Service recommends the following conservation measure:

> ***Because information regarding native plant response to these herbicides is limited, we recommend determining from monitoring data what the response of native vegetation is to the herbicide treatment.***

This concludes formal consultation on the action outlined in your October 13, 2011, request. Information in the request and this consultation document are hereby appended to the PBO issued to fulfill their consultation requirements pursuant to section 7(a)(2) of the Act.

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Table 1. Appended actions under the Red Rock Canyon NCA PBO affecting the desert tortoise PBO File No. 1-5-04-F-526

File No.	Date Consultation Completed	Program Affected	Project/Action Name	Date Project/Action Completed	HABITAT				TAKE					
					Program Threshold - DTCH Acres disturbed	Program Threshold - Non-DTCH Acres	Project Acres affected-DTCH	Project Acres affected - Non-DTCH	Program- Lethal Take Exempted	Program- Non-Lethal Take Estimate	Project- Lethal Take Exempted	Project - Non-Lethal Take Estimated	Project- Lethal Take Reported	Project - Non-lethal Take Reported
1-5-04-F-526.APD1	3/18/2005	Commercial activities and organized recreation events	SRP for mountain bike race	3/20/2005	0	5,000	0	8 linear miles of trail	2/yr	351	0	2	0	0
1-5-04-F-526.APD2	9/14/2005	Fire response activities	Fire Station Utility Line Installation		0	5,000	0	7	2/yr	351	1	2		
1-5-04-F-526.APD3	10/25/2005	Dispersed casual recreation	Campground Improvements and Utility Line Installation		0	5,000	0	82	2/yr	351	1	2		
1-5-04-F-526.APD4	7/7/2006	Recreation and visitor facilities	Visitor Center Septic System Repairs/Upgrade		0	5,000	0	0.3	2/yr	351	0	2	0	0
1-5-04-F-526.APD5	12/14/2006	Recreation and visitor facilities	Parking Lot Upgrade/Expansion		0	5,000	0	4	2/yr	351	1	1 + 1/year	0	0

File No.	Date Consultation Completed	Program Affected	Project/Action Name	Date Project/Action Completed	HABITAT				TAKE					
					Program Threshold - DTCH Acres disturbed	Program Threshold - Non-DTCH Acres	Project Acres affected-DTCH	Project Acres affected - Non-DTCH	Program- Lethal Take Exempted	Program- Non-Lethal Take Estimate	Project- Lethal Take Exempted	Project - Non-Lethal Take Estimated	Project- Lethal Take Reported	Project - Non-lethal Take Reported
1-5-04-F-526.APD6	1/18/2007	Recreation and visitor facilities	Construction of New Visitor's Center	pending	0	5,000	0	49	2/yr	351	1	2 + 1/year		
1-5-04-F-526.APD7	6/20/2007	Recreation and Visitor Facilities; Transportation system	Repairs and upgrades to the Scenic Loop Trail and parking areas	pending	0	5,000	0	0	2/yr	351	0	2		
2008-F-0057	12/3/2007	Recreation and visitor facilities	Construction of Desert Learning Center and Wild Horse and Burro Facility	cancelled	0	5,000	0	30	2/yr	351	1	2 + 1/year		
2009-F-0506	Pending	Recreation and Visitor Facilities; Transportation system	9.4 Miles of Non-Motorized Trails	pending	0	5,000	0	108	2/yr	351				

File No.	Date Consultation Completed	Program Affected	Project/Action Name	Date Project/Action Completed	HABITAT				TAKE					
					Program Threshold - DTCH Acres disturbed	Program Threshold - Non-DTCH Acres	Project Acres affected-DTCH	Project Acres affected - Non-DTCH	Program- Lethal Take Exempted	Program- Non-Lethal Take Estimate	Project- Lethal Take Exempted	Project - Non-Lethal Take Estimated	Project- Lethal Take Reported	Project - Non-lethal Take Reported
2010-F-0153	Pending	Recreation and visitor facilities	Mojave Discovery Center	pending	0	5,000	0	1.75	2/yr	351	0	1		
2012-F-0020	Pending	Recreation & Visitor Facilities; Vegetation Treatments	Herbicide Fuel Treatments	pending	0	5,000	0	N/A	2/yr	351	0	2		

Red Rock Fuels Treatment

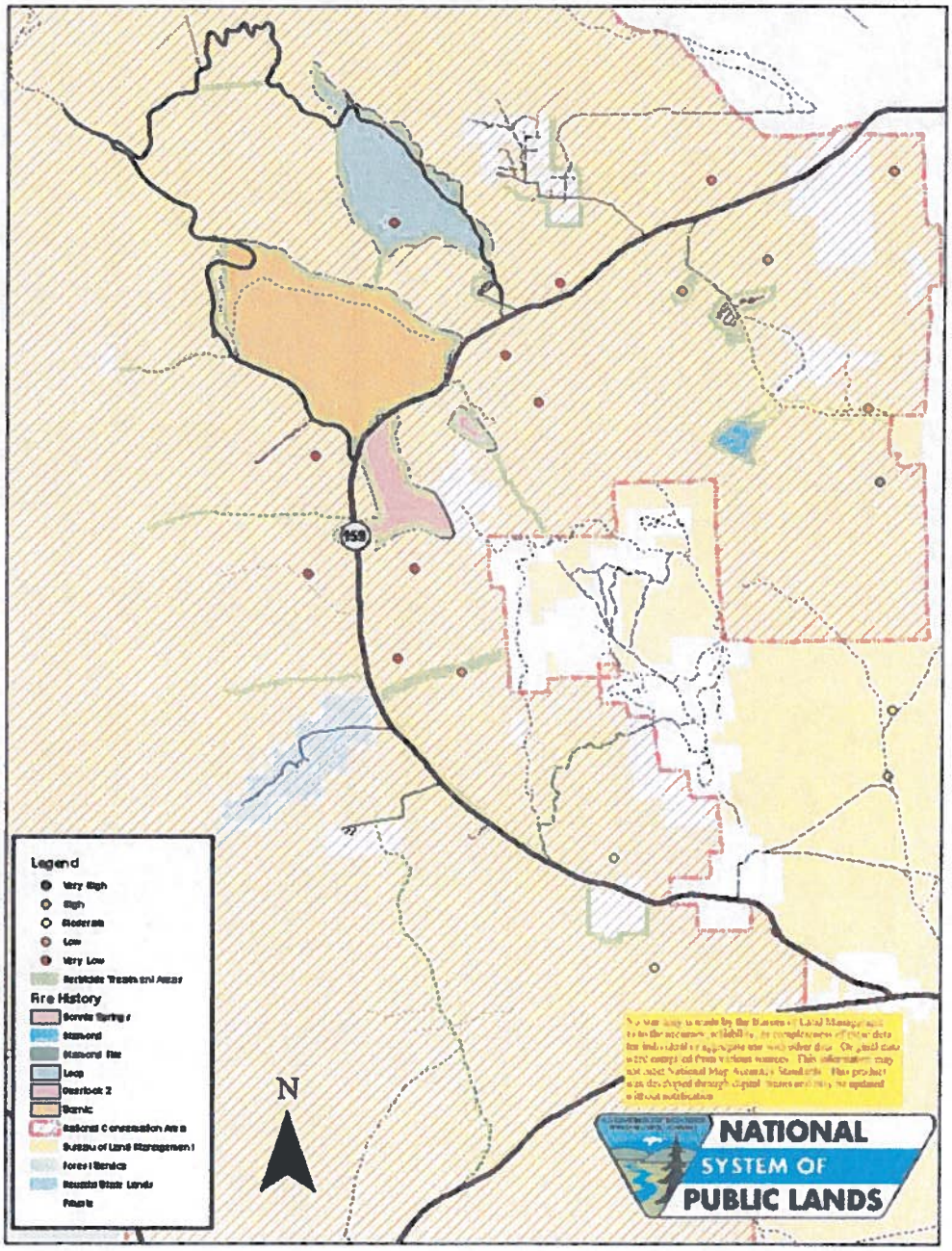

Figure 1. Desert tortoise densities found in the project area and locations for herbicide treatments to reduce fuel loads, Red Rock Canyon National Conservation Area, Clark County, Nevada.