

**Billing Code 4310-55**

**DEPARTMENT OF THE INTERIOR**

**Fish and Wildlife Service**

**[FWS-R8-ES-2010-N198]**

**[80221-1113-0000-C2]**

**Endangered and Threatened Wildlife and Plants; Notice of Availability of a Revised Recovery Plan for the Mojave Population of the Desert Tortoise (*Gopherus agassizii*)**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Notice of document availability.

**SUMMARY:** We, the Fish and Wildlife Service (Service), announce the availability of a revised recovery plan for the Mojave population of the desert tortoise under the Endangered Species Act of 1973, as amended (Act). This species is found in the Mojave and Sonoran deserts in southern California, southern Nevada, Arizona, and the southwestern tip of Utah in the United States, as well as in Sonora and northern Sinaloa in Mexico. The listed Mojave population of the desert tortoise includes those animals

living north and west of the Colorado River in the Mojave Desert of California, Nevada, Arizona, and southwestern Utah, and in the Sonoran (Colorado) Desert in California.

**ADDRESSES:** An electronic copy of the revised recovery plan is available at <http://www.fws.gov/endangered/species/recovery-plans.html>. Alternatively, the revised recovery plan and reference materials are available by appointment, during normal business hours, at the following location: U.S. Fish and Wildlife Service, Nevada Fish and Wildlife Office, 1340 Financial Boulevard, Suite 234, Reno, NV 89502 (telephone: 775-861-6300). Requests for copies of the revised recovery plan should be addressed to the State Supervisor at the above address.

**FOR FURTHER INFORMATION CONTACT:** Roy Averill-Murray, Desert Tortoise Recovery Coordinator, at the above address or telephone number.

**SUPPLEMENTARY INFORMATION:**

Recovery of endangered or threatened animals and plants is a primary goal of the Endangered Species Act (Act) (16 U.S.C. 1531 *et seq.*) and our endangered species program. Recovery means improvement of the status of listed species to the point at which listing is no longer required under the criteria set out in section 4(a)(1) of the Act. Recovery plans describe actions considered necessary for the conservation of the species, establish criteria for downlisting or delisting listed species, and estimate time and cost for implementing the measures needed for recovery. The Recovery Plan for the Mojave

Population of the Desert Tortoise (*Gopherus agassizii*) was first published in 1994, and presented the status of the species, along with threats, recovery actions, and recovery criteria. Since that time a great deal of effort has been dedicated to recovery and conservation activities, and additional information has been obtained through research and observation that allows us to better focus our recovery strategy. The revised recovery plan for the Mojave Population of the desert tortoise is the focus of this notice.

Section 4(f) of the Act directs the Secretaries of Interior and Commerce to develop and implement recovery plans for species listed as endangered or threatened, unless such plans will not promote the conservation of the species. We and the National Marine Fisheries Service, as appropriate, have been delegated responsibility for administering the Act. As per Section 4(f) of the Act, we published a notice of availability for public review and comment on the draft revised recovery plan on August 4, 2008. We considered all information we received during the public comment period and revised the recovery plan accordingly.

The desert tortoise is a large, herbivorous reptile that can reach 20 to 38 centimeters (cm) (8 to 15 inches (in)) in carapace (upper shell) length and 10 to 15 cm (4 to 6 in) in shell height. Hatchlings emerge from eggs at about 5 cm (2 in) in length. Adults have a domed carapace and relatively flat, unhinged plastrons (lower shells). Their shells are high-domed and greenish-tan to dark brown in color, with tan scute (horny plate on the shell) centers. Adult desert tortoises weigh 3.6 to 6.8 kilograms (8 to

15 pounds). The forelimbs have heavy, claw-like scales and are flattened for digging. Hind limbs are more elephantine.

Throughout most of the Mojave Desert, the desert tortoise occupies a variety of habitats: From flats and slopes dominated by creosote bush (*Larrea tridentata*) scrub at lower elevations, to rocky slopes in the blackbrush (*Coleogyne ramosissima*) scrub, and juniper (*Juniperus* spp.) woodland interface at higher elevations. Records of desert tortoises range from below sea level to an elevation of 2,225 meters (7,300 feet), with typical habitat characterized as creosote bush scrub below 1,677 meters (5,500 feet). Desert tortoises most commonly occur on gently sloping terrain with sandy gravel soils that are friable for burrowing and where there is sparse cover of low-growing shrubs and a high diversity of both perennial and annual plants.

The desert tortoise occurs in the Mojave and Sonoran deserts in southern California, southern Nevada, Arizona, and the southwestern tip of Utah in the United States, as well as in Sonora and northern Sinaloa in Mexico. The listed Mojave population of the desert tortoise includes those animals living north and west of the Colorado River in the Mojave Desert of California, Nevada, Arizona, and southwestern Utah, and in the Sonoran (Colorado) Desert in California. The first recovery plan was published in 1994, and critical habitat was also designated in all four States supporting the species.

Three tortoise species in the genus *Gopherus* occur in the United States, and another occurs in Mexico; however, all are geographically separated from the Mojave population. With the exception of a geographically undefined Mojave-genotype population (that also shares Mojave phenotype and habitat-use characteristics with the Mojave population) in the vicinity of the Black Mountains in Mohave County, Arizona, the Sonoran population of the desert tortoise is significantly different both genetically and ecologically, but it could be confused visually with tortoises of the Mojave population; therefore, the Service determined the Sonoran population also warranted protection as a threatened species under section 4(e) of the Endangered Species Act (similarity of appearance) when located outside of its natural range. On December 14, 2010, in response to a petition to list the Sonoran population of the desert tortoise under the Endangered Species Act, the Service found that listing the Sonoran population is warranted but precluded by higher priority actions to amend the Lists of Endangered and Threatened Wildlife and Plants.

The vast majority of threats to the desert tortoise or its habitat are associated with human land uses. The threats identified in the 1994 Recovery Plan, and that formed the basis for listing the tortoise as a threatened species, continue to affect the species. Habitat loss, degradation, and fragmentation from urbanization, off-highway vehicle use in the desert, linear features such as roads and utility corridors, poor grazing management and mining, and military activities were cited as some of the primary reasons for the decline in desert tortoise populations. Disease and increased incidence of fire in the Mojave Desert have also been implicated in desert tortoise declines.

Despite clear demonstration that these threats impact individual tortoises, there are few data available to evaluate or quantify the effects of threats on desert tortoise populations. While current research results can lead to predictions about how local tortoise abundance should be affected by the presence of threats, quantitative estimates of the magnitude of these threats, or of their relative importance, have not yet been developed. Thus, it would be challenging to recover the desert tortoise by singling out a particular threat or subset of threats to the exclusion of others. In the revised recovery plan, we underscore the need to build on our understanding of individual threats but also place new emphasis on understanding their multiple and synergistic effects, due to the failure of simple threat models to inform us about tortoise abundance.

The revised strategy emphasizes partnerships to direct and maintain focus on implementing recovery actions, and a system to track implementation and effectiveness of those actions. The strategic elements listed in the revised Recovery Plan are part of a multi-faceted approach designed to improve the 1994 Recovery Plan. The goals of the revised recovery plan are recovery and delisting of the desert tortoise. The objectives and recovery criteria address demography (maintain self-sustaining populations of desert tortoises within each recovery unit into the future); distribution (maintain well-distributed populations of desert tortoises throughout each recovery unit); and habitat (ensure that habitat within each recovery unit is protected and managed to support long-term viability of desert tortoise populations).

The strategic elements include the following: (1) Develop, support, and build partnerships to facilitate recovery; (2) protect existing populations and habitat, instituting habitat restoration where necessary; (3) augment depleted populations in a strategic manner; (4) monitor progress toward recovery; (5) conduct applied research and modeling in support of recovery efforts within a strategic framework; and (6) implement a formal adaptive management program through which information gained while implementing the above strategic elements is used to revise and improve the recovery plan and recommend management actions on a regular basis. The success of this revised recovery strategy will rely heavily upon the involvement of our partners and our

commitment to implementing the strategic elements listed above, coupled with a functioning adaptive management program.

We developed our recovery plan under the authority of section 4(f) of the Endangered Species Act, 16 U.S.C. 1533(f). We publish this notice under section 4(f) Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

August 22, 2011

Dated: \_\_\_\_\_

Signed: \_\_\_\_\_

Ren Lohofener

Regional Director,

Pacific Southwest Region

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