

**U.S. FISH AND WILDLIFE SERVICE  
SPOTLIGHT SPECIES 5-YEAR ACTION PLAN  
(2010-2014)**

**Common Name:** Desert Tortoise

**Scientific Name:** *Gopherus agassizii*

**Lead Region:** 8

**Lead Field Office:** Nevada Fish and Wildlife Office (NFWO)

**Species Information:**

Status: Threatened

Recovery Priority Number (RPN): 12C (modified in revised recovery plan)

Recovery Plan: Desert Tortoise (Mojave Population) Recovery Plan, June 28, 1994

Most Recent 5-year Review: In process

Other: Draft Revised Recovery Plan for the Mojave Population of the Desert Tortoise (*Gopherus agassizii*), August 4, 2008.

Threats: Individual threats to the Desert Tortoise or its habitat include urbanization, proliferation of roads and highways, military operations, off-highway vehicle activity, grazing, habitat invasion by non-native invasive species, increased frequency of wildfire due to invasion of desert habitats by non-native plant species, disease, predation, and deliberate maiming, killing, or collecting. Global climate change and drought are potentially important long-term considerations with respect to recovery of the Desert Tortoise. Unauthorized breeding of pet tortoises can lead to pressures on wild tortoise populations as well as management agencies.

**Target:** The 5-year goal for the Desert Tortoise is to improve the population status of the species.

Despite clear demonstration that the threats described above impact individual tortoises, few data are available to evaluate or quantify the effects of threats on Desert Tortoise populations. A particular threat or subset of threats with discernable solutions that could be targeted to the exclusion of other threats have not been identified for the Desert Tortoise. In the revised recovery plan, we underscore the need to build on our understanding of individual threats, yet place new emphasis on understanding their multiple and synergistic effects due to the failure of simple threat models to inform us about tortoise abundance.

**Measures:** Over the next 5 years, progress towards improving the species' status will be measured by:

1) Improved understanding and mitigation of threats. As described in the revised recovery plan, the RPN has been downgraded from 8C to 12C largely because of "uncertainties about various threats and our ability to manage them." Over the next five years, progress in the development of a spatial decision support system will clarify relationships between threats and Desert Tortoise population status, allow for more effective threat-mitigation efforts, and provide for improved recovery progress. Implementation of the actions described below, especially with respect to establishment of the RITs and development of the SDSS, is expected to address this uncertainty to the point that the RPN can be improved after 5 years.

2) Reduce specific threats to the Desert Tortoise or its habitat. While the RITs will outline and prioritize most recovery actions through the development of regional recovery action plans, several are in progress and will be completed within the term of this plan.

3) Change RPN from 12C to 9C. The new RPN will reflect resolution of key uncertainties about threats and management through recovery plan implementation, especially as determined by Measure 1, thereby improving recovery potential.

4) Monitoring population status. Current work in refining the range-wide monitoring program will provide better regional and range-wide estimates of Desert Tortoise abundance and a better baseline from which to evaluate recovery, which is itself an improvement in the recovery program. After five years of recovery plan implementation, we will be able to quantitatively document maintenance of this baseline.

**Actions:** The following six actions, among others, will be implemented over the next 5 years to meet the target. Implementation of these specific actions is necessary in order for the Service to improve understanding and mitigation of threats, change the species' RPN, maintain baseline population numbers, and prioritize additional actions for most efficient and effective progress toward recovery of the species. Recovery of the Desert Tortoise is a multi-agency effort under direction of the Desert Tortoise Recovery Office (DTRO) and future, regional Recovery Implementation Teams (RITs). Agencies expected to participate on the RITs include the U.S. Fish and Wildlife Service (FWS), State wildlife agencies, U.S. Geological Survey-Biological Resources Discipline (USGS-BRD), Bureau of Land Management (BLM), National Park Service (NPS), Department of Defense (DOD), local governments, academic institutions, and other interested parties. Various agencies are the primary coordinators and/or funding sources for some of these actions.

- 1) Publish the final revised recovery plan for the species. This action addresses Measures 1-4 by providing the framework for the overall recovery program.
- 2) Establish regional, inter-organizational RITs to prioritize and coordinate implementation of recovery actions. This action (1.1 in the draft revised recovery plan) addresses Measure 1 and addresses all threats and listing factors in that RITs will encourage cross-jurisdictional, landscape-level action that will be tracked, monitored, and evaluated. This action is a necessary prerequisite to action number 4, as well as successful completion of action number 3.
- 3) Work with partners to revise and continue development of a recovery decision support system. This action (6.1 in the draft revised recovery plan) addresses Measures 1 and 3 and addresses all threats and listing factors because the recovery decision support system will incorporate a range-wide, geospatial database of current management activities, threats, and tortoise populations, providing managers a better framework for recognizing and implementing successful recovery actions. Through the use of conceptual models and research and monitoring results (action 5, below), the decision support system will provide

an explicit, well-documented process for making decisions while clarifying key uncertainties about the relationship of threats and management to Desert Tortoise population status.

- 4) Work with partners to develop/revise recovery action plans. This is action 6.2 in the draft revised recovery plan and addresses Measures 1 and 3. RITs should use the decision support system to tier off the recovery plan by developing 5-year action plans and budget needs with priorities for management scaled down to local or jurisdictional levels. Five-year action plans should be coordinated with the Management Oversight Group and completed within the first year of publication of the revised recovery plan. On-the-ground recovery actions, addressing multiple threats and listing factors, will be implemented by appropriate parties according to the RIT five-year action plans and during the term of this plan. Initial application of the decision support system for prioritizing actions at the local or regional level will vary among recovery units according to the timeline for updating the system, as described above.
- 5) Work with partners to monitor Desert Tortoise population growth and distribution. Through regular monitoring, this action (4.1 and 4.2 in the draft revised recovery plan) addresses Measure 4, and all threats and listing factors, by feeding information into the recovery decision support system described in action 3.
- 6) Work with partners to develop protocols and guidelines for a population augmentation program. This is action 3.1 in the draft revised recovery plan and addresses Measures 1 and 3. Population augmentation in conjunction with threats management and restoration activities prioritized by the RITs, as well as research designed to investigate the effectiveness of these actions, is a means to gain insights into causes of declines (i.e., addressing all threats and listing factors) and to increase the rate at which depleted populations could be revived. Specific guidelines and protocols will be developed by the DTRO in conjunction with the Science Advisory Committee, topical experts, and representatives from pertinent regulatory and land management agencies. Within the first year after publication of the revised recovery plan, draft guidelines and protocols for the strategic population augmentation program will be developed (action 3.1 in the revised recovery plan). Subsequent actions entail identifying sites at which to implement strategic population augmentation efforts (action 3.2), securing facilities and obtaining tortoises for use in augmentation efforts (action 3.3), and implementing translocations in target areas to augment populations using a scientifically rigorous, research-based approach (action 3.4). Recovery plan actions 3.2 and 3.3 may be conducted at least partially concurrent with 3.1.
- 7) Work with partners to develop the Desert Tortoise Conservation Center into a regional recovery facility. The Desert Tortoise Conservation Center (DTCC) has great potential to function as a center for scientific research, training, and education. In support of these functions, facility upgrades will be required. The DTCC should also be renovated to house head-starting facilities in a secure location in support of action number 6, above. Minimally, this action entails completing a needs assessment for the DTCC, identifying any new partners, and identifying potential funding sources within the next 5 years. This action is related to actions 2.3, 2.9, 2.11, 3.3, and various actions under strategic element 5 in the draft revised recovery plan, and addresses Measures 1 and 3.

- 8) Minimize effects of livestock grazing. This action addresses Measure 2 and recovery plan action 2.16 by inventorying, analyzing, and resolving trespass cattle issues in the North-East Mojave Recovery Unit.
- 9) Limit mining and minimize its effects. This action addresses Measure 2 and recovery plan action 2.12 by withdrawing approximately 944,343 acres of public lands in the North-East Mojave Recovery Unit from settlement, sale, location, entry, or patent under the United States mining laws.
- 10) Minimize excessive predation on Desert Tortoises. This action addresses Measure 2 and recovery plan action 2.14 through the implementation of the *Environmental Assessment to Implement a Desert Tortoise Recovery Plan Task: Reduce Common Raven Predation on the Desert Tortoise*. This action will reduce raven predation on Desert Tortoises through direct removal of ravens and by implementing cultural and mechanical methods to reduce human subsidies to ravens.

*Estimated costs of the actions* (cumulative, 5-year costs; costs primarily taken from implementation schedule estimates in the draft revised recovery plan):

- |   |              |
|---|--------------|
| 1) Publish final revised recovery plan<br>USFWS -   | \$unknown    |
| 2) Establish RITs<br>Land managers, scientists, and stakeholders range-wide (USFWS lead) –  | \$2,500,000  |
| 3) Revise recovery decision support system<br>Land managers, scientists, and stakeholders range-wide (USFWS lead) –                 | \$75,000     |
| 4) Develop recovery action plans<br>Land managers, scientists, and stakeholders range-wide (USFWS lead) –<br>(costs included in #2) |              |
| 5) Monitor desert tortoise populations<br>Land managers, scientists, and stakeholders range-wide (USFWS lead) –                     | \$15,000,000 |
| 6) Develop population augmentation strategy<br>USFWS, scientists –  | \$50,000     |
| 7) Develop the DTCC into regional recovery facility<br>USFWS, San Diego Zoo, land managers –  | \$6,000,000  |
| 8) Minimize effects of livestock grazing<br>BLM (Southern Nevada District Office) -   | \$740,000    |
| 9) Limit mining and minimize its effects<br>BLM (Southern Nevada District Office) -   | \$unknown    |

10) Minimize excessive predation  
USFWS, land managers, stakeholders -

\$500,000

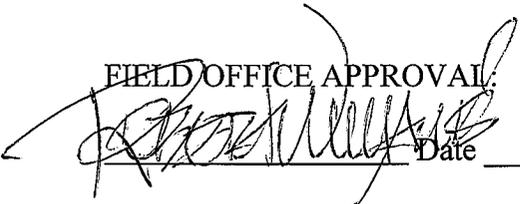
**Role of other agencies:** The inter-agency RITs are critical in the recovery of the Desert Tortoise and in completing each of the actions described above. The DTRO is the primary coordinator for the RITs, in developing the recovery decision support system, and in developing the regional recovery action plans and population augmentation strategy. The Redlands Institute is a primary cooperater in the development of the recovery decision support system. The DTRO is the lead in implementing the range-wide monitoring program. Each of these actions requires time and funding commitments from the associated land managers within the range of the Desert Tortoise. The DTRO is also the lead, working with the San Diego Zoo, for managing the DTCC; BLM and the Nevada Department of Wildlife are also involved in various planning and implementation aspects.

**Role of other ESA programs:** Section 7 consultations and Habitat Conservation Plans will be completed for funding and implementation of various management activities related to the RITs' recovery action plans and DTCC. Section 6 grants may contribute to population monitoring.

**Role of other FWS programs:** The Refuges program may be involved in aspects of management of the DTCC.

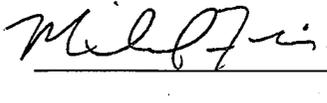
**Additional funding analysis:** Specific on-the-ground actions prioritized within the RIT recovery action plans will be implemented as funding becomes available.

FIELD OFFICE APPROVAL:

 Date 9/2/09

State Supervisor, NFWO, Fish and Wildlife Service

REGIONAL OFFICE CONCURRENCE:

 Date 9/23/09

Assistant Regional Director, Ecological Services, Fish and Wildlife Service