



U.S. Fish and Wildlife Service
DESERT TORTOISE RECOVERY OFFICE
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California Recovery Planning Work Group

Threat Session Summary March 7-8, 2007 University of Redlands

Desired Outcomes

- Geospatial inventory of threats within each work group's region
- Geospatial inventory of existing recovery actions within each work group's region
- Contacts for and direction to provide additional data to Redlands Institute
- Baseline information for prototype recovery decision support system
- Start thinking about recovery action plans

Day 1

The workshop began with an overview of the recovery planning process, mainly focused on the steps between this workshop and the deadline to complete a revised draft recovery plan by September 2007, as well as sideboards within which the work group will be operating (attached to this summary and approved by consensus of the work group). The concept of the recovery decision support system was introduced, particularly with regard to its role in compiling and using available information, along with various decision-making criteria and conceptual models, to help evaluate various management alternatives and in providing a framework for adaptive management throughout the process of recovery implementation. Importantly, the decision support system is expected to be developed to the "prototype" stage during the current planning process, with revision and improvement to occur over time, especially as new information becomes available. Redlands Institute staff also presented an overview of the threat and recovery action data that they have compiled in preparation for the workshop. Copies of the presentations are currently available on the Redlands Institute's recovery planning website at www2.institute.redlands.edu/DTRO/, but will ultimately to be transferred to deserttortoise.gov.

After a break, during which the work group reviewed the threat maps posted on the walls, the group elected to discuss the available threat data, projected on a screen, together rather than by breaking into smaller groups and delineating additional information directly on maps and associated forms. The group was hesitant to identify directly and geographically areas for which additional threat information was available, but they did identify several specific sources of additional or more recent information, which Redlands Institute staff will follow up:

- Invasive plant species distribution for Joshua Tree National Park
- Dr. Tasha LaDoux has spatial information on invasive plants
- California Exotic Pest Plant Council and California Department of Food and Agriculture may have spatial data on invasive plants
- Recent papers in the Journal of Arid Environments, Vol. 67, Supplement 2006, contain spatial information on threats, including
 - Chafee and Berry, Abundance and distribution of selected elements in soils, stream sediments, and selected forage plants from desert tortoise habitats in the Mojave and

Colorado deserts, USA (maps may need to be digitized, as GIS data may not be available)

- Brooks and Matchett, Spatial and temporal patterns of wildfires in the Mojave Desert, 1980-2004 (GIS data may be available from the authors or references cited)
- John Key, BLM State office, might have a map of hazardous waste sites
- Kern County might have a biosolids waste map
- Bobby Tuttle, consultant, can provide proposed route for the desert express rail line between Las Vegas and Victorville
- BLM and CDFG can provide a lot of additional data (see Moreno Valley office)
- Other threats that were not mapped include disease (data unavailable?) and large-scale energy projects

Several issues related to the maps were also raised:

- We need to identify protocols for the collection of threat data (especially those in Dr. Jill Heaton's report from the 2005 range-wide monitoring surveys), as well as do the best job of QA/QC we can, identify assumptions, limitations, caveats, etc. of any mapped data.
- The urban growth data inappropriately expanded the MCAGCC and Ft. Irwin bases
- Landfill data do not indicate status of landfill (e.g., active, capped, etc.)
- Providing a summary of the metadata (e.g., map source, date) to participants would facilitate review and feedback on gaps or more recent data.
- Multiple datasets can be used/combined for particular threats.
- Closed grazing allotments need to be updated.
- Double-track roads in the Heaton study include Patton-era tank tracks.

Day 2, Morning Session with Stakeholders

Day 2 began with a parallel introduction to yesterday afternoon. Again, copies of the introductory presentations are currently available on the Redlands Institute's recovery planning website at www2.institute.redlands.edu/DTRO/, but will ultimately to be transferred to deserttortoise.gov. Several questions were raised about the decision support system, including about decision criteria scoring and weighting (to be defined by work group, customizable, transparent), applicability to current management actions and plans (help evaluate/prioritize/customize management alternatives and provide framework for adaptive management), and measuring issues that are not geographically based (almost everything can be tied to a map in some way to help capture that information). As the prototype decision support system takes shape, people should be able to better understand how available information is tied together and how uncertainty is reflected in the decision-making process.

Review of threats maps resulted in the following comments:

- Open and closed routes should be differentiated. BLM (Moreno Valley) can provide up-to-date data.
- MOG representatives should review the existing data compiled by the Redlands Institute and identify where gaps or updates can be provided from within their jurisdictions. Otherwise, Redlands staff will never be able to track everything down during this planning process.
- Extensive GIS data should be available from BLM from the WEMO, NEMO, and NECO planning processes.
- CDFG, Caltrans, and/or Ventura FWS may have data on tortoise fencing along highways.

A “threats interaction” survey organized by the Science Advisory Committee is available online (www2.institute.redlands.edu/DTRO/) to help develop preliminary models of how different human activities and threats to the desert tortoise interact with each other. This information will help identify critical nodes between threats for research or management attention and could be incorporated into the decision support system. Anyone with knowledge of human activities/tortoise threats on the ground is encouraged to fill out the survey.

Day 2, Afternoon Session

The afternoon session focused on current or potential recovery actions available to land managers. The workgroup spent about an hour indicating where current recovery actions are occurring on maps and filling out associated forms. Redlands Institute staff will digitize this information for future use as new/revised recovery actions are developed and in association with the decision support system.

The workgroup then started the process of associated specific recovery actions with specific threats to the desert tortoise. Until now, these linkages and assumptions have generally been implicit rather than explicitly. Making explicit connections between threats and recovery actions will improve the decision-making process in the recovery decision support system. This exercise will continue into the next workshop and as the decision support system is developed and modified.

The workgroup also brainstormed a list of criteria that managers consider when choosing management actions to implement. These criteria can be customized by agency and input (and weighted) into the decision support system to help filter various management alternatives, which will be initiated prior to the next workshop. Criteria or considerations identified by the workgroup included:

Funding availability - All

Cost - All

Priority relative to mission - All

Is this a mitigation requirement - BLM, FS, NPS, County, DOD, DFG

Time available for implementing - NPS, BLM, DFG

Extent of environmental review required - BIA, DFG, NPS

Public perception - DFG, FWS, BLM, DOD

Least controversial politically - FWS, DOI

Political will - DOD, BLM, FWS, BIA

Aesthetics (e.g., viewsheds) - NPS

Maintenance requirements (e.g., staff, cost) - All

Already in an existing management plan - All

Liability for not doing or for doing such an action - BLM

Within agency's regulatory authority - All

Ability to prosecute, likelihood of conviction (law enforcement) - NPS, DFG, FWS, BLM

Unilateral action or additional partners required - more likely if with partners - FWS, BLM, DOD

Perceived effectiveness of the action - All

Require tribal council support? - All

Require community support? - All

Building/losing political capital for the future - All

Potential benefit for broader application - All

Will investment now, save time and money later? - BIA, DOD, BLM

Effects on other species (e.g., on a migration corridor)? - All

Communication strategies vary with different audience - NPS

Willing seller for land acquisition? – All

Finally, the specific objectives and agenda of the next workshop will be determined in coordination with the Redlands Institute and their decision support system contractor depending on progress in compiling the information collected from this workshop and in developing the prototype decision support system. The focus will generally be on developing specific recovery actions for the revised plan, however. The workgroup scheduled the next workshop for **April 23-24** at the University of Redlands, anticipating that the first day will begin at 1pm, and the second day will run from 8am to approximately 5pm with an open session for stakeholders in the morning.

In the meantime, additional threat or recovery action data should be sent to Lisa Benvenuti at Lisa_Benvenuti@institute.redlands.edu.



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Recovery Plan Revision Sideboards

- The goal of the Recovery Plan revision process is to identify actions to improve the status of the desert tortoise and its habitat to the point that the species is no longer threatened and can be removed from the list of threatened and endangered species.
- Substantial uncertainty surrounds the scientific basis for the relative importance of various threats affecting the desert tortoise and the effectiveness of specific recovery actions in mitigating threats. The “foundation for recovery plan revision” summarizes the general scientific basis, assumptions, and conclusions relevant to the current status of desert tortoise recovery.
- *Where specific scientific data do not exist*, workshop participants will not debate the factual basis for the importance of particular threats or recovery actions (e.g., from the listing decision, 1994 recovery plan). Instead, participants will focus on suggesting ways to resolve relevant scientific uncertainty.
- Provisional areas of emphasis for recovery will be based on a new habitat model and a spatial analysis of the 2001-2005 range-wide monitoring data, as forwarded by the SAC (projected from its March 31-April 1 meeting).
- Any disagreements over the nature of identified threats or recovery actions will be documented, but the FWS retains the ultimate decision-making authority to move the work group’s process forward.
- Workshop results (i.e., recommended recovery action plans) will be used by FWS to revise the desert tortoise Recovery Plan, including any revisions to recovery unit boundaries recommended by the SAC. Public and scientific review, including but not limited to the Science Advisory Committee, will be provided for as part of the Recovery Plan revision process.
- Given the scientific uncertainty noted above, the Recovery Plan revision process is not expected to produce definitive recovery action plans that prescribe the ultimate recovery strategy for the next 25 years. Rather, this revision of the recovery plan should lay the groundwork to specifically address this uncertainty through adaptive management.
- All recovery actions will be subject to appropriate NEPA/CEQA compliance and associated public review requirements prior to implementation.