



Desert Tortoise Recovery Office
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Desert Tortoise Science Advisory Committee Meeting
Draft Meeting Summary
July 21-22, 2005
Reno, NV

Meeting Goals and Objectives

- Develop a clear understanding of the purpose, roles, and responsibilities of the Desert Tortoise Recovery Office (DTRO) and Science Advisory Committee (SAC)
 - Need for additional members
 - 2005 “work plan”
- Clarify role of threat assessments and threat modeling relative to recovery plan revision; endorse threat assessment process
- Identify new recovery criteria for revised recovery plan

Attendees

Roy Averill-Murray, DTRO
Kristin Berry, SAC
Kim Field, DTRO
Sandy Marquez, DTRO
Katherine Ralls, SAC

Michael Reed, SAC
Amy Salveter, DTRO
Bob Steidl, SAC
Dick Tracy, SAC

Meeting Summary

1. DTRO/SAC roles and responsibilities

Roy clarified the roles of the DTRO and SAC. The DTRO will revise the recovery plan and facilitate on-the-ground recovery through direction of management actions. The SAC will provide advice and input into key elements of the recovery plan, including revisiting the recovery criteria. The SAC will review products that come out of the DTRO, develop new ideas and directions as needed, and will evaluate the effectiveness of the revised recovery plan through ongoing review with input to the DTRO.

2. Additional SAC members

Epidemiologist: The group agreed to invite an epidemiologist to join the SAC and reviewed information on potential members. Dr. Peter Hudson from the Center for Infectious Disease Dynamics at Penn State University was the group’s first choice, and Roy will extend him an invitation.

Biostatistician: The group considered the proposal to add a biostatistician. Collectively, SAC members have quite good credentials and experience in biostatistics. The group felt comfortable

with their collective expertise, but agreed that it would be valuable to consult biostatisticians with specific expertise as needed.

Action item: Roy will contact Peter Hudson.

3. 2005 “work plan”

Recovery plan

The DTRO will continue moving forward with the recovery plan revision with key input from the SAC on threats, recovery criteria, research priorities, and overall review.

Monitoring program

The principal investigators will meet 19 August to assess the monitoring data. DTRO, SAC, and managers will attend to a forum in late fall/early winter at which time data will be presented and discussed. A monitoring report will be prepared following the forum.

Research priorities

The group discussed the Fort Irwin translocation plan and made suggestions on key research questions that could be incorporated into the translocation to take advantage of the enormous opportunity advance our knowledge of recovery strategies. Roy will present the suggested research topics to the Ft. Irwin Conservation Mitigation Working Group.

Researcher meeting

DTRO will organize an annual meeting for people working under research permits to brief the DTRO and SAC on their findings.

Action item: Roy will draft a list of the SAC’s research suggestions for the Ft. Irwin translocation plan, share the suggestions with the plan’s authors (USGS), and present the suggestions to the Ft. Irwin Conservation Mitigation Working Group after final coordination with the SAC.

4. Threat assessment workshops, threat modeling, and recovery plan revision

Given the complexity of the threat assessment task, the group decided against using the TNC-based threat assessment process after reviewing and discussing a draft threats matrix that DTRO had prepared. The SAC and DTRO developed a modified process for assessing threats that provides for stakeholder and manager input on technical, on-the-ground issues, while the SAC will evaluate expected effects to tortoise populations based on scientific information. The SAC and manager/stakeholder working groups will provide feedback back and forth to develop a prioritized list of recovery actions.

Recovery Plan Revision – Threats Assessment/Recovery Action Planning Process

- 1) DTRO and SAC produce threats list (threats and sources of threats) based on the listing rule and any new information, including supporting documentation.
- 2) DTRO distributes threats list to regional working groups for review and comment.

- 3) Regional working groups use threats list to 1) document the geographic extent (GIS) of each threat based on management jurisdictions/ownership patterns within their region and 2) identify specific recovery actions, including the geographic extent that such recovery actions will be implemented, to abate those threats. Constraints to implementing identified recovery actions, such as funding, will be documented. Regional working groups will also identify additional information needs for recovery planning and implementation.
- 4) SAC categorizes threats according to severity, based on biological effects on the desert tortoise (e.g., severity to different life stages), providing documentation of process/rationale.
- 5) DTRO matches regional working group threat lists and recovery actions with SAC threat severity categories.
- 6) SAC makes scientific recommendations regarding recovery actions relative to severity of threats, geographic extent of threats identified by regional working groups, proposed recovery actions, and expected effectiveness of recovery actions. SAC also identifies information gaps and recommends research priorities.
- 7) Regional working groups consider SAC recommendations and incorporate as feasible.
- 8) DTRO distributes pertinent information relative to all five regions to individual regional working groups (i.e., keeps each group informed of the big picture).
- 9) Repeat steps 4-8, as necessary.
- 10) Recovery action plans integrated into revised recovery plan and distributed widely for review.

Action item: Sandy will develop a diagram to better represent the threats assessment/recovery action planning process.

Action item: Kim will finish compiling the draft annotated threats list.

Action item: Amy, Kim, and Sandy will proof the documentation listed for each threat and will circulate the threats list to SAC for review and additions.

Action item: Roy will develop draft threats ranking categories.

5. Recovery criteria

The SAC and DTRO discussed the need to revise the recovery criteria and specify what will be measured. The group developed a list of properties of recovered populations to facilitate thinking on the topic.

Properties of recovered populations

Broadly distributed
High abundance
High survival
High proportion of occupied habitat
“Good” age structure
Threats controlled
Retain genetic diversity
Self-sustaining
Post-delisting monitoring
Recovery criteria validation
Corridor protection
Specific sites that cannot be lost
Create core reserves
No net loss of critical (important) habitat

Bob started an outline of recovery and monitoring criteria and circulated it to the group.

Recovery and Monitoring Criteria

Linked to monitoring (data)

- Short-term targets
- Long-term targets

Linked to implementation (management)

- Reserve areas (managed specifically for tortoises)
- Management actions

Organisms

- Demographic
 - Abundance
 - Parameters that drive lambda ($N = B - D + I - E$)
 - Mortality (Survival)
 - Fecundity
 - Proportion of Females Breeding
 - Clutch Sizes,
 - Hatching Success
 - Lambda
- Occupancy / Distribution
- Trends in demographic parameters (long term)
- Point estimates (short term)

Habitat

Dick circulated a write up of his ideas on how it might be time to enhance recruitment through a hatchery and head-start program. This would be a temporary strategy that may help populations persist until we are able to successfully manage threats and reduce excess mortality. The SAC agreed that supplementation should not affect recovery criteria and that a way of determining when a population should be supplemented is needed.

Action item: The SAC will consider the properties of recovered populations brainstorm list and will draft potential recovery goals, objectives, and criteria.

Next meeting agenda/date: 1-2 Sept, 8-9 Sept., or 13-14 October; Reno or Lake Tahoe

- Threats Assessment/Recovery Planning Process
- Recovery Criteria