

MEMORANDUM

October 2, 2015

To: Desert Tortoise Management Oversight Group

From: Ren Lohofener, Regional Director, Pacific Southwest Region

Subject: June 30, 2015, Meeting Summary

The Desert Tortoise Management Oversight Group (MOG) met on June 30, 2015, at the Springs Preserve in Las Vegas, Nevada. The meeting focused on development of recovery goals and priorities for the coming fiscal year, identifying funding opportunities and initiatives, and an update on the Recovery Plan Addendum. Presentations from the meeting are posted at http://www.fws.gov/nevada/desert_tortoise/dtro_meet_events.html.

***Next meeting: DECEMBER 8, 2015, 9:00 a.m. – 4:00 p.m.**

| Action Items | Owner(s) | Due Date |
|--|---|--------------------------------------|
| 1. Update MOG contact list - ANNUALLY | Mike Senn and Roy Averill-Murray | MAR. 1, 2016 |
| 2. MOG members to sign final MOG Charter and submit signature page to M. Senn | MOG members | OCT. 1 |
| 3. MOG members to discuss MOG priorities with their staff and attempt to fund agency projects consistent with MOG priorities using appropriated and mitigation funds. | MOG members | DEC. 1, 2015 |
| 4. Make RIT projects "shovel ready" a. Update project status b. Include more detail for each project where needed | RITs Roy Averill-Murray | OCT. 1, 2015 |
| 5. Email presentation handouts to MOG members (RIT project ranking and research summary and needs) | Roy Averill-Murray | OCT. 1, 2015 |
| 6. Range-wide Monitoring a. Schedule discussion at next MOG meeting b. Send link to Range-wide Monitoring Report c. Develop agreement to accept funding from partners d. Organize subcommittee to report back at next meeting options for short (FY16) and long-term funding | Mike Senn Roy A-M Mike Senn Mike Senn | DEC. 8 OCT. 1 DEC. 8 DEC. 8 |
| 7. Develop a short presentation on current research, priorities and unmet needs | Roy Averill-Murray and Todd Esque | DEC. 8, 2015 |
| 8. Develop alternatives on roles and function for Science Advisory Committee for MOG action. | Mike Senn, Roy Averill-Murray, Marci Henson, Larry Whalon, Cristina Jones, Cris Tomlinson | DEC. 1, 2015 |

| | | |
|--|-----------|--------------|
| 9. Agenda discussion what actions are we currently implementing and how do we improve status range-wide at December meeting. | Mike Senn | DEC. 1, 2015 |
| 10. Send an official letter from Service to MOG members on recovery priorities | Mike Senn | NOV. 1, 2015 |

Meeting Minutes

1. Welcome and Introductions: Welcome provided by Mike Fris, ARD Ecological Service, Region 8, USFWS.
2. Purpose and Agenda Review
3. Opening Remarks

All agency executives provided opening remarks about the need for the MOG and reiterated the need to provide overall guidance and direction for range-wide recovery actions for the Mojave desert tortoise. Specific items mentioned included:

- Update on DRECP development.
- Appears DOD is reengaging on Mojave desert issues through the Western Regional Partnership and the Desert Managers Group (Jim McKenna, BLM California).
- A desire to implemented coordinated and prioritized research, stay focused (Gerry Hillier, Quad State).
- Utah is establishing reserves through development of National Conservation Areas (NCAs) and land use plans, specifically the St. George RMP. Pursuing land acquisition in the Red Cliffs Reserve.

4. Developing Recovery Goals and Priorities for the Coming Fiscal Year

- a. Top Range-wide Recovery Actions from RITs (see handout *High-Priority Recovery Actions*, March 31, 2015)
 - i) Based on RIT recovery action plans the highest priority recovery actions are: 1) restore habitat; *2) education (highly variable); 3) decrease human subsidies; 4) targeted predator control; and 5) install and maintain tortoise barrier fencing.
 - ii) Additional discussion and input from the RITs identified the top three priorities for the coming year as: 1) habitat restoration; 2) fencing highways; and 3) predator control, primarily raven control.
 - iii) Discussion:
 - MOG members unanimously accepted the top five range-wide recovery actions proposed by the RITs (e.g, restore habitat, education, decrease human subsidies, targeted predator control and fencing) as the highest priorities for implementation.
 - MOG members should be working with their staff to identify projects that can be implemented within their own agency through appropriated and mitigation funding to implement projects consistent with these priorities (see action item #3 above).

- Projects should go through some form of effectiveness evaluation (by RITs).
 - Agencies may adopt and implement some management actions (interim actions) if funding is available.
- b. Research Priorities from RITs
- i) An overarching emphasis from the RITs was the need to determine effectiveness of management actions and impact of threats.
 - ii) Top needs identified by the RITs: 1) determine the most effective techniques for habitat restoration and management; 2) evaluate effectiveness of management actions; 3) better understand tortoise demography and threats; 4) habitat quality and climate change e.g., what are the most important elements parameters of high quality habitat and impacts from climate change; and 5) disease epidemiology and tools for disease management in wild tortoise populations and translocations (noted as the most addressed topic in research).
 - iii) Discussion:
 - Value of research versus recovery actions and restoration?
 - We need to implement strategic, site-based projects at an appropriate scale across the landscape to increase effectiveness.
 - We want a range-wide positive population response
 - Develop an overall strategy that can be implemented at a local scale
 - We currently lack common biological goals and objectives
 - Develop goals and actions similar to sage grouse
 - Where is the best place to put our money? How do we know?
 - Need to ensure there is durability in areas where we invest in land management actions, and policies to ensure durability.
 - Route designation and travel management are important to protect intact habitat and management investments.
 - Land use planning needs to incorporate appropriate restoration.
 - iv) **Next Meeting: need to discuss what are we doing and how do we get there (see action item 7).**
- c. Range-wide Monitoring
- i) Roy presented a brief overview on the results of the range-wide monitoring program 2004 to present (see handout *Update on Mojave Desert Tortoise Population Trends*, March 10, 2014).
 - ii) Discussion:
 - Do we have any understanding about results in the NE Mojave Unit and grazing management (only unit with increasing trend)?
 - Is there a way to tie this to past management actions and utilize for effectiveness monitoring?
 - How do we fund? Might be best for a subcommittee to address and bring back recommendations for discussion at the next MOG meeting (see below).
 - Develop a subcommittee to address and report back at next meeting (see action item 6):
 - Mechanism for funding transfer to make it easy for partners to participate.

- Make it a strategic and programmatic priority – include in Recovery Action Plans?
- Can it be tied to effectiveness monitoring for recovery actions? Can we saw project benefitted X number of tortoises?

5. Identifying Shared Resources, Funding Opportunities and Possible Initiatives

- a. Update on BLM Healthy Lands Initiative and Burned Area Restoration in Nevada
 - i) Working to address Mojave desert fuel breaks and connectivity; no effectiveness monitoring.
 - ii) FY 16-20: \$250,000 to allocate to focal areas

b. Shared Resources Discussion:

General agreement that current need cannot be met with appropriated funding alone. We need to leverage agency appropriated funding with other funds. Possible funding sources:

- i) Counties and local governments
- ii) Caltrans, NDOT: require highway fencing for new projects and upgrades
- iii) Mitigation funding from projects
- iv) Raven management fund
 - Currently limited on how this funding can be used (does not include research)
 - Can it be used range-wide?
 - REAT meets monthly and could propose projects?
- v) Section 7 mitigation funding – can it be used to buy-out grazing allotments or habitat acquisition? Probably not.
- vi) BLM HQ – potential to reallocate funding (recovery, NFWF) for Mojave tortoise
- vii) Corporate funding?
- viii) Clark County MSHCP
 - Next biennial budget process to kick-off in 2016
 - Identify priorities to be carried forward
 - Approximately \$2-8 million/year
- ix) SNPLMA MSHCP funds
- x) Predator subsidies
 - Are county code/state statute changes and education needed?
- xi) Competitive State Wildlife Grant Projects
 - May be eligible as multi-state efforts
 - Effectiveness evaluation on range-wide recovery techniques or highway fencing possible options for submission?
 - Incorporate in State Wildlife Action Plans
- xii) Possible USGS resources for research?
 - Todd to follow-up with Keith Miles

c. Possible Funding Initiatives (see action item 7 above):

- i) Caltrans – Jim McKenna
- ii) Raven projects – Ken Corey
- iii) BLM Headquarters (NFWF) – Mike Senn
- iv) BIA – Chip Lewis & Mike Senn
- v) Clark Co. MSHCP (align with high priority activities) – Mari Henson

- vi) SNPLMA MSHCP – Raul Morales and Marci Henson
- vii) BLM Nevada Section 7 Fee Structure – Mike Senn and Raul Morales
- viii) Predator Subsidies – Daryl Lacey, Cris Tomlinson and Julie Ervin-Holoubek
- ix) State Wildlife Grants – Mike Rabe, Leslie MacNair and Cris Tomlinson
- x) USGS – Todd Esque

6. Recovery Plan Addendum Update

- a. USFWS is currently developing a new chapter focused on renewable energy
 - i) Working to identify corridors and connected areas; unclear how these will be displayed.
 - ii) Intended to be more of a way of doing business through partnerships and collaborative efforts.
 - iii) Attempting to identify appropriate land uses and management latitude at a land-scape level; focus on long-term progress.
 - iv) Corridors are attempting to identify “soft” lines and acceptable uses rather than hard lines on a map.

MOG Attendees (not including agency support staff or other stakeholders)

| Agency | Name | Title |
|---------------------------------------|-----------------------------|--|
| Clark County | Marci Henson | Desert Conservation Program Administrator |
| Nye County | Levi Kryder | HCP Administrator |
| Washington County | Robert Sandberg | HCP Administrator |
| QuadState Local Governments Authority | Gerry Hillier | Executive Director |
| Arizona Game and Fish Department | Cristina Jones | Turtles Project Coordinator |
| Nevada Department of Wildlife | Cris Tomlinson | Wildlife Diversity Supervisor |
| BLM, Arizona | June Shoemaker | Deputy State Director, Resources |
| BLM, California | Jim Kenna | State Director |
| BLM, Nevada | Amy Lueders | State Director |
| BLM, Utah | Juan Palma | State Director |
| FWS, Region 2 | Steve Spangle | Field Supervisor, Arizona Ecological Services Office |
| FWS, Region 8 | Ren Lohofener | Regional Director |
| FWS, Region 8 | Mike Senn (MOG facilitator) | Field Supervisor, Las Vegas Fish & Wildlife Office |
| Mojave National Preserve | Larry Whalon | Deputy Superintendent |



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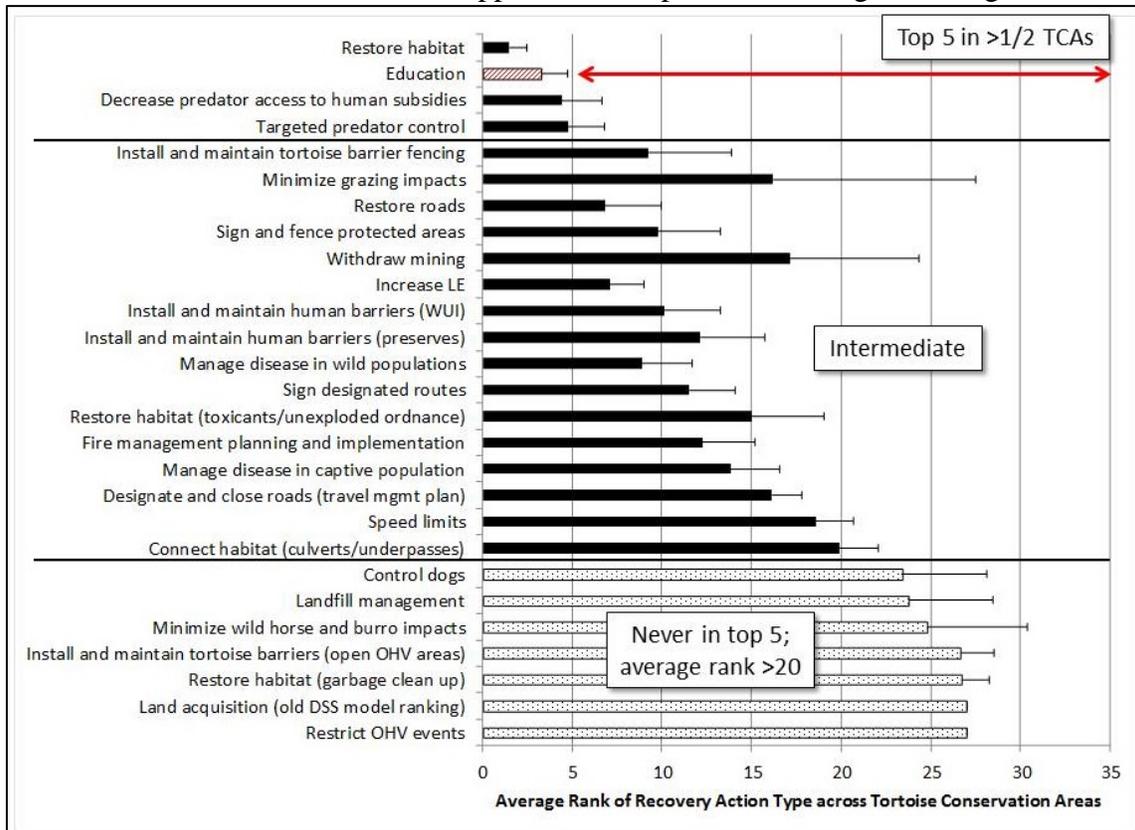


HIGH-PRIORITY RECOVERY ACTIONS
 March 1, 2015

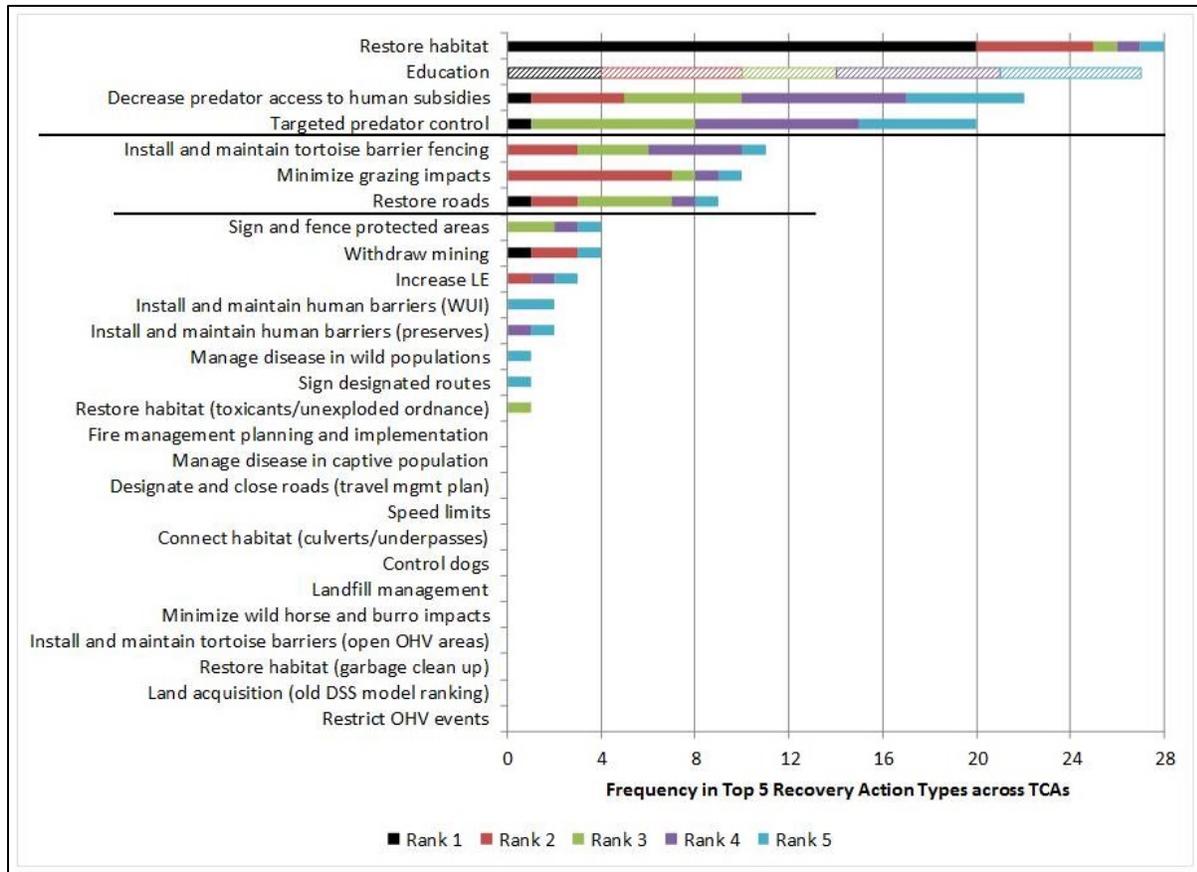
Summary: The top 3 range-wide recovery actions are: restore habitat, decrease predator access to human subsidies, and targeted predator control. Other actions may be of relatively high priority in addressing particular threats in specific areas.

Recovery Implementation Teams developed recovery action plans based on output from a spatial decision support system for recovery of the Mojave desert tortoise, which ranks recovery actions for each tortoise conservation area according to the relative effect at reducing risk to tortoise populations within those conservation areas. The rankings for each conservation area are available via http://www.fws.gov/nevada/desert_tortoise/dtro/dtro_rits.html (click each RIT's webpage). At its December 18, 2014, meeting, the MOG tasked the Desert Tortoise Recovery Office to identify the top 5 range-wide recovery-action priorities.

The graph below illustrates the average rank and standard deviation for each recovery action across the 28 conservation areas. Environmental Education is highlighted because effectiveness of actions within this category was judged to be most variable, with the worst-case scenario being completely ineffective. Three other actions occur in the top 5 in over 1/2 the tortoise conservation areas; seven actions never appear in the top 5, each having an average rank over 20.



The next graph illustrates the number of times each recovery action type occurs in the top 5 in each of the 28 conservation areas. Below the 3 most highly-ranked actions (plus education) is another cluster of 3 actions that appear in the top 5 relatively frequently.



Given the wide range in effectiveness of Environmental Education in reducing threats to the tortoise, it is appropriate to prioritize other, on-the-ground recovery actions for direct funding while incorporating *targeted* education messages into agency outreach efforts relevant to recovery progress, objectives, and results; this is also consistent with discussion among MOG members on December 18. This leaves 3 recovery action categories (habitat restoration, reducing predator subsidies, targeted predator control) of high priority across most of the range of the desert tortoise. Other actions may be of relatively high priority in addressing particular threats in specific areas.



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Update on Mojave Desert Tortoise Population Trends March 10, 2014

Line distance sampling has been used in Utah since 1999 and range-wide since 2004 to estimate density of Mojave desert tortoises. Annual density estimates through 2012 describe different trends in each recovery unit (Figure 1). We estimated surprisingly large annual increases (+13.6%) in the Northeastern Mojave Recovery Unit since 2004, with the rate of increase apparently resulting from increased survival of adults and subadult tortoises growing into the adult size class. Populations in the other 4 recovery units are declining: Upper Virgin River (-5.1%), Eastern Mojave (-6.0%), Western Mojave (-8.6%), and Colorado Desert (-3.4%; however, 2 TCAs in this recovery unit, Joshua Tree and Piute Valley, appear to be stable or increasing). By applying estimated densities within TCAs to all potential habitat in each recovery unit, we estimate that there has been a loss of up to 106,000 adult tortoises range-wide since 2004 (Table 1). Most of this decline has occurred within the Western Mojave, while the smaller population in the Northeastern Mojave increased. Populations in the other recovery units showed intermediate declines during this period.

Estimates of juvenile tortoise density are unavailable due to difficulties in sampling smaller sizes, but we have some information about changes in juvenile numbers relative to adult densities. Declining proportions of juvenile tortoises observed in the Western Mojave and Colorado Desert recovery units reinforce concerns about the status of tortoise populations in those units due to an apparent reduction in younger cohorts that might otherwise have bolstered declining adult numbers.

A manuscript on these results co-authored by a member of the Utah Division of Wildlife Resources has been reviewed by Science Advisory Committee members and soon will be submitted to a journal for further peer review and publication. In addition, data from the project are being used to develop density surfaces *within* TCAs in order to provide spatial information about the distribution of tortoises in each area.

By describing the trajectory of tortoise populations, the monitoring program provides an integrated measure of the effectiveness of past recovery measures. The Desert Tortoise Recovery Office plans to investigate potential relationships between trends in different TCAs and spatial patterns of threats or risk to tortoise populations, as depicted by the Spatial Decision Support System, to further inform managers on what appears to be working in some areas or what may be contributing to declines in others. As part of an adaptive management program to recover the Mojave desert tortoise, this information will address final criteria for success of the recovery program; in the interim, prevailing trends indicate the need for more aggressive recovery implementation. However, the ability to assess progress toward meeting the recovery criteria is in jeopardy as funding for range-wide monitoring declines; reduced surveys in only a few areas were conducted in 2013 and are planned for 2014.

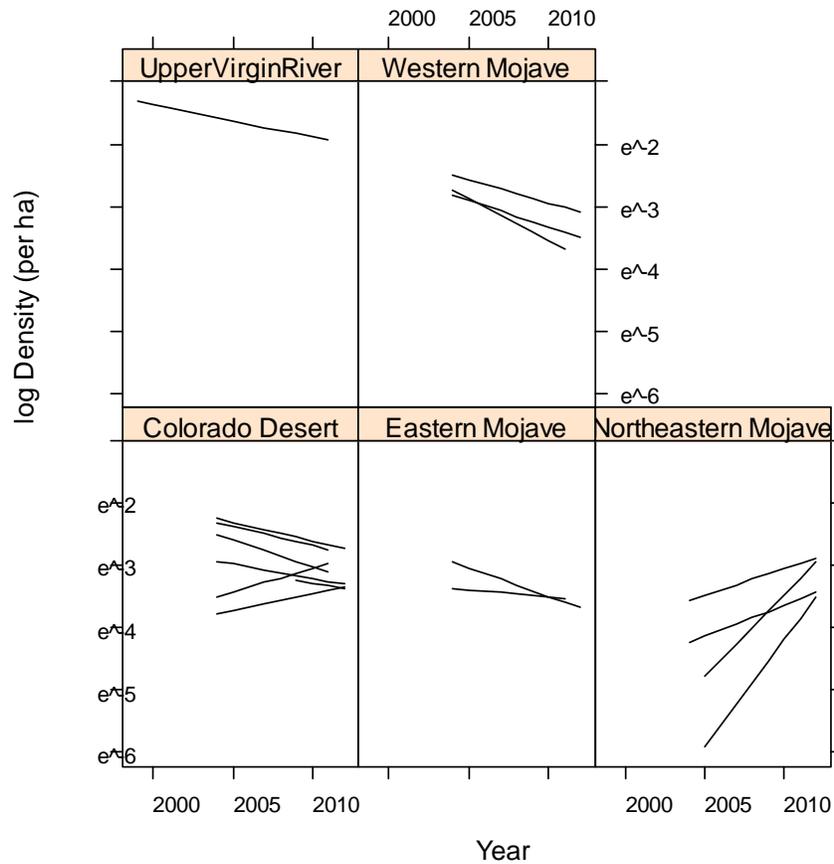


Figure 1. Linear trends in the log-transformed densities of Mojave desert tortoises in each TCA by recovery unit. Trends are reported since 1999 in the Upper Virgin River Recovery Unit and for all others since 2004. Separate panels are used for TCAs in each of the 5 recovery units.

Table 1. Estimated change in abundance of Mojave Desert Tortoises across all modeled habitat in each recovery unit.

| Recovery Unit | 2004 | 2012 | Change |
|---------------------|---------|---------|----------|
| Northeastern Mojave | 13,709 | 40,838 | +27,129 |
| Upper Virgin River | 12,678 | 8,399 | -4,280 |
| Eastern Mojave | 68,138 | 42,055 | -26,083 |
| Colorado Desert | 111,749 | 85,306 | -26,443 |
| Western Mojave | 152,967 | 76,644 | -76,323 |
| Total | 359,242 | 253,242 | -106,000 |