

January 16, 2017

To: Desert Tortoise Management Oversight Group

From: Paul Souza, Regional Director, Pacific Southwest Region

Subject: December 7, 2017, MOG Meeting Summary

The Desert Tortoise Management Oversight Group (MOG) met on December 7, 2017, at the Springs Preserve in Las Vegas, Nevada. The meeting included review, updates, and discussion on the recovery strategies in the 2011 Desert Tortoise Recovery Plan, activity of the Recovery Implementation Teams and their recommendations to the MOG, and a presentation from the Living Desert on their recently funded education program, among other topics.

Upcoming Meetings

Desert Tortoise Council Symposium: February 23-25, 2018, Sam's Town, Las Vegas, Nevada (numerous presentations on current research and management relative to tortoise recovery).

	Action Items	Owner(s)	Due Date
1	Provide project descriptions/budgets from RIT to MOG	DTRO	ASAP, ongoing
2	Share PowerPoint presentations from meeting with MOG: link to Meetings tab on DTRO webpage	Roy A-M	Completed
3	Send to MOG list of feedback items from RITs: see "RIT Feedback" presentation at website address above	Roy A-M	Completed
4	Monitoring funding commitments for 2018 to Linda Allison/DTRO	All	12/31
5	Alert MOG of new research publications quarterly	Roy A-M	March, ongoing
6	Have Science Advisory Committee identify research needs not being addressed	Roy A-M	June meeting
7	Convene interim conference calls to maintain continuity between meetings and prepare for upcoming meeting	Glen Knowles	March

	Future Agenda Items
1	Normal, standing items for summer meeting
2	California raven EA update
3	EOY funds for desert tortoise projects
4	Presentation on climate refugia models (suggested at June meeting)
5	First-year translocation results from MCAGCC (suggested at June meeting)

Meeting Summary

1. Welcome and Introductions: Mike Long, Region 8 Ecological Services Chief, U.S. Fish and Wildlife Service (FWS); Glen Knowles, Field Supervisor, Southern Nevada Fish and Wildlife Office; and Mary Orton, The Mary Orton Company, Facilitator
2. Purpose and Agenda Review: No changes to the agenda proposed.
3. Opening Comments from MOG Executives
 - a. The MOG-meeting venue is a great opportunity to re-engage with the various agencies, connect with desert tortoise management activities across the range, and discuss ways of moving forward.
 - b. Visitation to Joshua Tree National Park has tripled, leading to the highest rate of desert tortoise roadkill seen in the Park, so the Park is investigating creative education methods to deal with this issue. Kudos to Tara Callaway, FWS Palm Springs office, for her help with raven surveys.
 - c. Steve Spangle, FWS Arizona Ecological Services Office Supervisor, will be retiring in December 2018. Brenda Smith, Assistant Field Supervisor, will be retiring in June 2018. FWS AESO continues to work on a General Management Plan for desert tortoise in Mohave County.
 - d. BLM is getting the new administration up to speed during the transition period; is moving forward with the Desert Renewable Energy Conservation Plan, including looking at “downstream consequences” emerging from this complex plan; and continuing to contribute the best they can to range-wide monitoring.
 - e. While California Department of Fish and Wildlife’s primary function is permitting, they continue to have interest in working with other agencies on more proactive recovery efforts, such as working with FWS on the translocation guidance and applying mitigation banking programs to recovery needs.
 - f. Washington County continues work on a Habitat Conservation Plan renewal and is investigating how to mitigate new take, including looking at a potential new conservation area west of the current Red Cliffs Desert Reserve.
 - g. U.S. Geological Survey noted better communication with managers and a big push on cross-jurisdictional habitat restoration work. They continue to work on translocation, population connectivity, and disease epidemiology issues. They also are collaborating on two recently awarded Strategic Environmental Research and Development Program (Department of Defense) projects, one on the impacts of land use change and climate change on tortoise population connectivity and another on life history impacts from climate change.
4. Overview of Recovery Strategies in Desert Tortoise Recovery Plan (see presentation file on Desert Tortoise Recovery Office [DTRO] website)

Roy Averill-Murray (FWS-DTRO) summarized the six strategic elements of the desert tortoise recovery plan: 1) Develop partnerships, 2) Protect populations and habitat, 3) Augment depleted populations, 4) Monitor progress, 5) Applied research and modeling, and 6) Adaptive management. The MOG mostly has been focused on elements 1 and 2 in recent meetings, plus population monitoring aspects of #4. Under #3, FWS is working with partners

to revise its translocation guidance and develop a more strategic population augmentation plan. Under #4, work by the University of Arizona to use the range-wide monitoring data to develop a density surface is nearing completion and will help to monitor population distribution (in addition to trends in abundance/density). Monitoring components of the Desert Renewable Energy Conservation Plan may help in monitoring changes in the quantity of desert tortoise habitat and hopefully can be extended range-wide. Work progresses in all areas of research recommended in the 2011 plan (#5). An important update from #6 is that FWS received a scope of work to transfer the currently dormant spatial decision support system (SDSS) from the University of Redlands to a private contractor (who previously worked on the SDSS at Redlands) and get it back up and running. The scope of work would make the transfer and create the IT environment to host the system within 3 months of funding and provide a year of basic maintenance for a total cost of \$24,000.

5.a. Recovery Actions Implemented in FY 2017

Flo Gardipee (FWS-DTRO) highlighted a number of recovery projects implemented during the past year (see presentation file on DTRO website). Other MOG members also noted projects such as continued tortoise monitoring in the Upper Virgin River (UVR) by Utah Division of Wildlife Resources (UDWR) (in addition to monitoring efforts across the rest of the range coordinated by FWS), habitat restoration in the UVR and on the Beaver Dam Slope by Bureau of Land Management (BLM) and UDWR, and the use of an influx of fees from increased visitation by Joshua Tree National Park for habitat restoration in the Pinto Basin. The Nevada Department of Wildlife (NDOW) has assisted with captive tortoise issues, translocation efforts, a culvert study, and permitting over the last year, and is developing a citizen science project with BLM and FWS at Red Rock National Conservation Area. MCAGCC completed the initial round of tortoise translocations related to their base expansion; this project includes a 30-year monitoring component, including evaluation of different post-translocation densities. The Marine Corps Air Ground Combat Center (MCAGCC) is also evaluating the potential use of their head-starting research program for focused population augmentation.

BLM held an inter-state/office working group meeting on desert tortoise management and research which was valuable in establishing a community within and across BLM; they identified a need to compile tallies of habitat restored and lost (see also the note about strategic element #4, above), the need to synthesize lessons learned about restoration (see Clark County project that was just funded, below), and the need to evaluate how much to invest in range-wide monitoring relative to on-the-ground management actions.

Clark County has the following projects funded in their 2017-2019 biennium: Boulder City Conservation Easement (BCCE) management and law enforcement (ongoing), BCCE restoration (ongoing), desert tortoise translocation monitoring (ongoing), evaluating desert tortoise habitat restoration (upcoming), assessment of desert tortoise guard design (upcoming), "To the Max" education campaign (ongoing), OHV registration program marketing (ongoing), Tule Springs Fossil Beds National Monument boundary fencing (ongoing), pilot project for drone detection of desert tortoises (ongoing), and a desert tortoise sterilization clinic (completed).

b. Recovery Action Priorities for FY 2018

Flo also reported on Recovery Implementation Team (RIT) meetings that were held between 30 October and 14 November to discuss implementation needs for the coming year(s). Most of the RIT discussions were general in nature as previously proposed projects were re-evaluated and, in some cases, discarded. Few specific projects were identified to the MOG as funding needs (noted below), but the RITs continue to work on fleshing out new projects. The MOG directed the RITs to provide a list of specific projects in need of funding, including details of location, cost, and rationale, so they can be considered as budgets are resolved, as year-end funding becomes available, and as other sources of funding are identified (*Action Item #1*). Kim Tripp (BLM – Washington, DC) indicated that a June meeting is timely to think about potential use of end-of-year funds for recovery projects and suggested the MOG provide a venue for collaborative funding of high-priority projects.

The following specific projects were noted to be in need of funding (noted by RIT project number), in addition to the SDSS project noted above:

CA#26: Evaluation of raven food subsidy sites in and near the Mojave National Preserve (\$82,133)

CA#04: Desert tortoise barrier fencing: I-40, the northern boundary of the Ord-Rodman critical habitat unit (\$363,500)

More generally, cost estimates for barrier fencing were provided as ranging from \$2.70 to \$5.25 per linear foot (\$14,265–\$27,720/mile; based on previous NDOT/FHWA contracts), depending on the terrain and other site-specific factors.

The RITs also had a number of general recommendations or items of feedback for the MOG, but time ran out before these could be presented. The DTRO was directed to provide these items by sharing the PowerPoint presentation (*Action Item #3*).

6. Raven Management Framework

Glen Knowles (FWS Southern Nevada Field Supervisor) and Jen Newmark (NDOW) reported that work continues on a Nevada raven management plan modeled after a similar plan for sage grouse, in which actions are based on monitoring raven populations and implementing reduction activities when certain thresholds are met. This plan includes a three-tiered approach that links increasing management actions to raven densities relative to sage grouse demographics. Once this plan is completed, it can be reviewed for potential applicability and modification relative to desert tortoises.

7. Other action items from June 2017 meeting

a. Education and Outreach

Sarah Greeley (Tortoise Conservation Coordinator, The Living Desert) provided an overview of The Living Desert's recently funded education and outreach project, which is centered around raven-management issues (see presentation file on DTRO website). In response to questions about how to increase the reach of education efforts, it was suggested that Sarah contact the Ad Council for help with messaging (cf. U.S. Forest Service's Smokey the Bear campaign).

b. Range-wide Monitoring Implementing Subcommittee

Glen mentioned that funding vehicles for monitoring must be initiated by December 31 in order to be prepared for spring 2018 field work (*Action Item #4*). This includes sending cooperative agreements up through DOI for review before agreements with field workers can be finalized. Walter Christensen (MCAGCC) mentioned that MCAGCC has \$70,300 available for possible monitoring in the Ord-Rodman critical habitat unit.

c. Engaging Transportation Agencies

Glen welcomed those representatives of transportation agencies present at the meeting. Ken Corey (FWS – Assistant Field Supervisor, Palm Springs office) and others reported increased engagement with highway departments in California and Nevada. Ken also mentioned that work has been initiated to prioritize fencing needs in California using tortoise information from the range-wide monitoring program and other sources. Brian Wooldridge (FWS – Flagstaff) offered to help engage the Arizona DOT.

8. Update on Science Advisory Committee

Roy gave a brief overview of the SAC's recommendations for effectiveness monitoring, a response to a MOG request from its last meeting (see presentation file on DTRO website). Most importantly, clearly defined goals and measurable response parameters related to the particular management action need to be identified up front. Then, those parameters can be measured over time (with replicated projects) to see if the actual response meets the original goals. Over time, as different projects are implemented in the same area, it may be desirable to add range-wide monitoring transects to treatment areas to evaluate long-term effects on tortoises in those areas, but ultimately, landscape-level recovery will be assessed by the range-wide monitoring program. Specific metrics over a series of temporal stages also were outlined for translocation projects.

Roy also explained that SAC members were unable to attend the MOG meeting due to prior commitments, but that future scheduling of MOG meetings would include earlier notice to the SAC to encourage their attendance and interaction, beginning with the summer 2018 MOG meeting. In addition to a request to provide the MOG with a summary/list of research published each quarter (*Action Item #5*), the MOG requested that the SAC evaluate the current or ongoing research that is occurring relative to that recently published and provide recommendations for new (or reiterated) research priorities to continue making progress on recovery (*Action Item #6*). A particular research gap of note from the raven discussion included demographic effects of ravens on desert tortoise populations (e.g., relative to the management thresholds being used for sage grouse/raven management).

9. Review of Action Items (see above)

10. Public Comments

No public comments were offered.

11. Closing Comments/Future Agenda Items/Next Meeting Date

- a. Meeting evaluations were collected by Mary and will be used to improve future meetings. Raul Morales (BLM – NV) specifically suggested that a one-hour call be scheduled

between in-person meetings in order to keep progress moving between meetings and to prepare for the next meeting.

- b. Future agenda items (see above, first page)
- c. 2018 meetings and conference calls will be scheduled via an email poll.

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

Agency	Name	Title/Office
Clark County Nye County Washington County QuadState Local Governments Authority	Marci Henson Darrell Lacy Cameron Rognan Gerry Hillier	Desert Conservation Program Director, Community Development Red Cliffs Desert Reserve Manager Executive Director
California Department of Fish and Wildlife Nevada Department of Wildlife Utah Division of Wildlife Resources	Ali Aghili Jen Newmark Ann McLuckie	Senior Environmental Scientist, Supervisor Wildlife Diversity Bureau Chief Wildlife Biologist
BLM, Arizona BLM, California BLM, Nevada BLM, Utah	Karen McKinley Jerry Perez Raul Morales Abbie Jossie	Associate Deputy State Director State Director Deputy State Director Deputy State Director
Death Valley National Park Joshua Tree National Park	Josh Hoines Jane Rodgers	Resources Division Chief Chief, Natural & Cultural Resources
FWS, Region 8 FWS, Region 2	Mike Long Brian Wooldridge	Chief of Listing, Recovery, and Environmental Contaminants Fish and Wildlife Biologist, Arizona Ecological Services Office
USGS	Todd Esque	Research Ecologist
Edwards Air Force Base Naval Air Weapons Station, China Lake Marine Corps Air Ground Combat Center USMC Installations West	Larry Zimmerman James McDonald Walter Christensen Bill Berry	Natural Resource Manager Natural Resources Manager Natural Resource Officer Regional Conservation Program Manager