

**MGS TAG Meeting Notes**  
**March 22, 2012**

Topic	Topic
1	Welcome and Introductions
2	Review Agenda
3	<p>Round-robin Presentation of new results from 2011 Field Season Results and Plans for 2012; Discussion</p> <p>Don Mitchell – 2 grids for Tehachapi Wind Project, 2 grids for volunteer effort</p> <p>Leo Simone – 2 grids volunteer</p> <p>Mary Kostwar – Pilot study on occupancy 48 in DTNA and 48 in eastern expansion area both camera and combination of point counts and walking transects.</p> <p>Sherri Heitkotter – DFG lands...</p> <p>Phil – Coso monitoring planned again. LSA and other sonculstants, LADWP providing some volunteers. Starting next week, trap in April. Expects lots of adults, no repro. PGE Hinkley compressor plant WQCB says they need..., EIR in prep, DT there, MGS? So will do Apr/May trapping. RTGS? Genetic samples.</p> <p>Kathy – May be doing some work, not confirmed yet. Volunteer effort limited by number of traps (currently doing three grids).</p>
4	<p>2012 Camera Study Plans, additional results from 2011(?)</p> <p>An update from the fall meeting. 60 sites in 2011. New set of 60 random sites this year. Trying to fill in some of the gaps from last year. 150 m centers, 10 cameras. Q: what is the detection radius? A: 100 feet, but MGS set-up points downward. Some cameras have been stolen. Q: Are data in NDDb? A: 2011 data are in BIOS. Q: How about maps? A: They could be. <b>** Add to MGS TAG Website</b></p>
5	<p>DMG MGS Working Group Update</p> <p>Very brief update: USGS Habitat Suitability model continues (funded by CEC and others). Goal is to publish ASAP, but it's not available yet. DRECP – MGS an important species. Q: Any generalizations from the model? A: Developed along the methods used by USGS for DT. 30 or so layers at start, use MaxEnt. Output is probability of occurrence. Patrick: Should the paper be peer-reviewed by the TAG? A: No, it will be peer-reviewed, but the contract wouldn't allow the TAG to have a role, per se. Q: Vegetation layers? A: New Todd-Keeler Wolf effort wasn't available at the time, the modelers found other variables did as much or more than the available veg layers.</p> <p>Speaker(?) - WEMO route designation revision in the works, would like TAG comments. Go to Barstow BLM website, find link to route designation process to submit until 4/15.</p>
<b>1200</b>	<b>LUNCH – on your own</b>
6	General discussion: Developing TAG recommendations for construction projects that may impact MGS (e.g. salvage/translocation, timing, artificial burrows, monitoring)

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	<p>Dave H: Take minimization measures – TAG should help with appropriate recommendations. DFG would like input from experienced field biologists/researchers. How can we minimize lethal take? Topics include those listed here. Doesn't necessarily need to cover DFG's mandates for take, but would prefer rational science</p> <p>Don Mitchell – Discussed this at last TAG meeting, have struggled with the DFG measures. We don't have the science to address the measures. Could be millions of dollars spent, that could be spent on conservation. Maybe some trapping during the June/July window (after breeding is done) to move them.</p> <p>Kathy Simon – Agrees. The measures are borrowed from BUOW, how justified are they? Similar situation as for DT: the minimization measures turn out to be research projects. Hard to monitor success.</p> <p>Don: What would a construction monitor do if a trencher turned up a squirrel?</p> <p>Leo: It makes more sense to take money that would be spent on minimization and do some research instead.</p> <p>Dave H: What should we do when 1500 acres is about to be blitzed to minimize lethal take? Stay away from obvious alternatives like acquire mitigation lands – that's a different topic.</p> <p>Leo: Translocation requires an adequate fence – difficult. MGS burrow under DT fence.</p> <p>Kathy: RTS translocation successful. MGS inactive period is so long. June-July is better than Sep Oct. Let the MGS move on their own rather than trapping and moving. Excavating burrows is difficult, but can be done (the return is not worth the effort). 90% are empty or AGS or CGS. Many thousands of burrows in every 10s or 100s of acres.</p> <p>Don: Dispersal-season trapping effort is probably the best, but not perfect.</p> <p>Leo: Need to grub during active season..</p> <p>Dave: These ideas are exactly what Dave wants from the TAG in its advisory capacity. If it's not ??:</p> <p>Russ: RE used standard measures for MGS in guidance. Should be updated.</p> <p>Dave: TAG could influence REAT. We'd also like to improve the DFG take minimization measures. Sounds like the group wants to work on this.</p> <p>??: Go through conditions and rework?</p> <p>Dave: Yes. The sample measures that were circulated were intended as a starting point.</p> <p>Kathy: We shouldn't recommend translocation as part of this until we know more about translocation in general. Distances, fencing, success rates, etc.</p> <p>Leo: Does know of one type of fencing that worked. Woven fence with recurved top. Very labor intensive.</p> <p>Don: Can't support a plan with artificial burrows.</p> <p>Martha: Genetic work in progress – why translocate animals long distance, which may muddy the situation?</p> <p>Don – There's a chance for more harm than good.</p> <p>?? – Could salvaged animals be housed somewhere, like zoos? And dig up the burrows to learn about MGS?</p> <p>Kathy: Or DTNA rather than zoos? They have a fence and good control over the land. Really the best minimization is avoidance, either seasonally or no project.</p> <p>?? - ...</p> <p>Kathy - ... [unclear discussion...]</p> <p>Leo: Need a well-prepared site to move the animals to.</p> <p>Becky: Need to monitor with radio transmitters.</p>

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	<p>Leo: SBD K-rats. Revegetated site with native plants, did monitoring. Neighbor dogs took trapped animals...</p> <p>Dave: Conclusions re translocation need to be developed. Are there other considerations? E.g., time of year.</p> <p>Leo: Timing affects other species.</p> <p>William Foster: Would it be possible to give money to propagate native plants at translocation sites?</p> <p>Shelley E.?? – There isn't the native plant nursery capacity to do this on a big scale.</p> <p>??: Isn't it the applicants' responsibility to collect and grow the seeds?</p> <p>Dave H: Reveg is a huge and important topic, but let's stay on MGS take minimization.</p> <p>Kathy: ...</p> <p>Eric Weiss: Are you suggesting modifying grids on the fly to create appropriate buffers?</p> <p>Kathy: Nesting avoidance is simply put buffers on bird nests, which could be in conflict with MGS measures. MGS should win.</p> <p>Erinn: Should grub in winter to avoid birds, the veg will be gone by the time squirrels come out.</p> <p>Leo: Mowers would crush MGS burrows.</p> <p>Erin: Light equipment/machetes would preclude bird nesting...</p> <p>??:... couldn't hear comment...</p> <p>Dave H: Need to memorialize these thoughts, identify data gaps, etc.</p> <p>??: Research is research, not take minimization measures.</p> <p>Dave: No, the monitoring is not the minimization measure, it's separate from the translocation (which is the minimization measure).</p> <p>Becky J??: Monitoring would go beyond the project construction phase. Maybe research needed to inform future iterations of such measures.</p> <p>Dave H: Dave will organize the topics for more input later.</p> <p>??: Are the dates in the sample typical, or were other dates put forth in other permits?</p> <p>Martha: Grubbing would be good in Sep- Feb, if only surface disturbance? But would the animals be able to dig themselves out?</p> <p>Leo: Wouldn't heavy equipment crush the burrows?</p> <p>Kathy: Can specify tire pressure of equipment, spread the load over a greater area.</p> <p>Dave H??: The size of the project may affect the recommendations.</p> <p>Three topics: Translocation, seasonality, monitoring (part of translocation).</p> <p>Erinn: How about use of designated biologists? How many, when, etc.</p> <p>Dave H: Devil's advocate: if not moving/salvaging animals, why even need a biologist?</p> <p>??: Should we develop separate guidance for large-scale versus small-scale projects, or for complete elimination of habitat versus partial removal? How about linear projects vs two-dimensional projects?</p> <p>??: Would hazing be an option?</p> <p>Don: Unknown.</p> <p>Phil: Still trying to figure out what the problem is. Is it that we need to get ready for a lot of projects coming up?</p> <p>Dave: Yes, for a variety of project sizes and types. Context is that DFG hears complaints about these measures, so we want to improve them. What would you do if you had the responsibility to minimize take?</p> <p>Leo: If it's species conservation, then acquire more habitat.</p> <p>Phil: Almost never know of MGS on project sites in the past. How about using the DT model – if</p>

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	<p>MGS found on the site, try translocating to find out if it's successful?</p> <p>??: Doesn't want more plastic in the desert (for the artificial burrows).</p> <p>??: Experience with GKR in Carrizo...</p> <p>Phil: Critical to monitor</p> <p>Dave: Monitoring can be incorporated into the permit.</p> <p>Kathy: Federal guidance on translocation is available.</p> <p>Phil: Seasonality. MGS are underground about half the year. Dormant squirrels leave no surface sign of their presence. Seems like no work should be done during the hibernation season.</p> <p>Don: Incorporate discussion today into interim measures now.</p> <p>??: Don't translocate except just before hibernation season.</p> <p>Dave H: Could also inform DRECP.</p> <p>??: Maybe differentiate between repro years and non-repro years.</p> <p>Dave: Maybe organize these by topics, then seek volunteers for each sub-topic. Will try to figure out schedule to accommodate the large-scale desert projects.</p>
<b>1430</b>	<b>Break</b>
7	<p>General discussion: What is known about substrate characteristics of MGS burrows?</p> <p>Can/should soil characteristics be incorporated into habitat models?</p> <p>Martha Heath – Monitoring on a solar farm, trenching showed cross-sections of burrows. 3-foot deep sand was typical. What is known about sand depths, volume?</p> <p>Dave H – Surface texture is the most commonly reported characteristic. Appears to be a data gap. Dave D – Seems important, has been collecting some limited soil information. Does USGS model incorporate it? Phil – Doesn't think anyone really knows much about the burrow characteristics (depth). Estivation burrow excavation results in large volumes of soil. Natal burrows might be shallower. 1932 J Mammal publication on MGS in Palmdale included some info on burrow depth. Phil has tried to retrieve slipped collar, with no luck (couldn't find collar in the burrow). Seem to take advantage of microscale variation in soil characteristics (desert pavement generally, but squirrels use sand accumulations around base of shrubs). Technology available for exploring burrows? Fiber optics not very practical.</p> <p>Martha – ITP "create an artificial burrow" on BLM land, sand only about 12 inches deep – didn't seem appropriate for MGS. What about variation? Phil – Yes, this is a missing bit of information. Assume that gently-sloping terrain is what they need, so we don't look for MGS on steeper, rockier areas. A few camera stations will be in such areas.</p> <p>Patrick – Use foam to investigate burrows where take is authorized.</p>
8	<p>General discussion: Is the use of rodenticides in agriculture a factor limiting MGS recovery?</p> <p>Martha: Background -- trapping around alfalfa field – lots of wildlife in and using it (jackrabbits, larks, squirrels, MGS). So now, Martha looks for MGS around ag fields (from public access points). Last year, working on LA county grids, looked around big farms near Lake LA, other big alfalfa fields east of Lancaster, south of EAFB. Big fields seem to have very little wildlife – "silent spring." But small fields (10 acres) seem to have plenty of wildlife. What's going on? Has anyone else made similar observations?</p> <p>Phil: Interesting observations, never paid much attention. Maybe talk to farm advisors to find out if rodenticides are in use.</p>

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	<p>Martha: Lack of birds suggests it may be something other than rodenticides.</p> <p>?: High desert corridor. Seems like lots of meso-carnivores, but not much bird life.</p> <p>?: Contact County Ag Commissioners office to find out more.</p>
9	<p>Support and Coordination for 2012 "Volunteer" Survey Effort</p> <p>Leo: 4 teams of trappers. Don's in Hinkley area RTGS, Kathy in Searles Valley, Martha in the June hiatus (if possible), LSA 2 grids in 395 corridor btw Ridgecrest and Red Mtn area (starting May 16). Would like to have more PIs helping. Agency folks include several from DFG, Erin Norton (USFWS), LADWP, Jeff Trow (SCE), bases, Mary DTNA joining others. Kathy would welcome help.</p> <p>Marjorie: Thanks to all volunteers. Anyone else need kit/supplies – let marjori know. Take tissue samples from any age/sex MGS. Most valuable if each individual is georeferenced to the trap location. RTGS, too.</p> <p>Phil: One-hand punch apparatus available?</p> <p>Marjorie: Use rubbing alcohol swabbed on apparatus to sterilize after each sample and before next sample taken.</p> <p>Phil: No problems with cross-contamination?</p> <p>Marjorie: Not yet.</p> <p>Leo: Will send out more information this weekend.</p> <p>Erin Martinelli: Please provide email address if didn't receive invitation email.</p>
10	<p>Other topics</p> <p>Leo: Is funding available for a trailer on the volunteer effort? Russell/Phil – BLM trailer last year. FEMA trailers, problem. Ended up getting apartments. Big trailer. Might be available.</p> <p>Bronwyn via email: DRECP alternatives available early or mid-April. Input requested.</p>
11	Set next meeting date mid-Sep, spring February.