

What are the remaining priorities / unanswered questions?

- (Phil) Main funding comes from BLM, money is going to run out in a year or two. No identified sources of funding for field work. What else do we need to know to conserve MGS? Related to conservation strategy, do we have all of our questions answered, important habitat areas that need protection
- (Don) Non-BLM funding, major government land owners (DOD) have in the past contributed money for data collection. Most of this has been centered around federal listing potential and their management practices on bases. Possibly additional DOD money in future
- (Scott) South China Lake Range stuff, being addressed this year.
- (Dan) Phil redrawing core areas, how would those be redrawn and why? What empty spots are there?
- (Scott) Conservation strategy, liberal approach to showing conservation areas, included the main four core areas and Phil's additional areas (e.g. DTRNA), linkage areas and buffers also included to show most important areas for MGS conservation.
- (Bruce) Definitely more than 4 core areas considered by members of TAG, China Lake areas haven't had a lot done that could be core areas. No project-related work, so no money
- (Ed) Funding, Ed's work primarily funded by solar, management plan required and there is long-term monitoring. Long-term solar will continue monitoring. Coordination needed for non-profits/land managers (e.g. Preserve Committee, Wildlands, and Desert Trust). Putting out cameras to ID squirrels, but maybe we can approach them to do more work on mitigation lands (get money from the non-profit folks? Someone else but on those lands?)
- (Kathy) Modeling done by USGS in last few years. Considerable areas outside known range (modeled areas have discovered tortoise that were outside known range but indicated in the models). Areas identified as habitat looked good and had squirrels, maybe we should go explore those for MGS. Possibly to the east?
- (Scott), good idea, north for refugia
- (Don) areas that he's curious about (Saddleback and Edwards for example) given what we know, should these areas of curiosity be a target even though there's not a conservation goal associated with it. Species showing movement to areas with higher rainfall maybe we prioritize.
- (Bruce) China Lake historically didn't have money and didn't care b/c of non-federal listing but now money yay! China Lake, federal listing would help. BLM usually goes along with state recommendations. Still be good to push listing to prevent some of the large scale development
- (Dan) Need to consider what argument we're going to make for federal listing. Not a tool for conservation dollars or project, established to prevent extinction so you need to demonstrate that case. If you present it for federal listing but doesn't support that argument of extinction will look like a weak attempt.
- (Scott) That's true. Despite two previous federal listing attempts, get the feeling that federal listing attempts are doomed, in last few years CA hasn't had any.
- (Dan) Candidate conservation agreements, get them onto a list. TAG come to agreement on conservation measures could get this type of agreement, they work now.

- (Bruce) Last federal listing attempt during Obama administration done by Defenders of Wildlife.
- (Kathy) fencing of good areas to reduce habitat stressors?
- (Phil) availability of round-tail ground squirrel genetic material. Marjorie's student about 10 years ago collected RTGS genetic material.
- (Scott) major aspects of ecology we need, e.g. physiological changes to rainfall in different parts of the range. Can we answer that now?
- (Bruce) Do we have a nice food habitat analysis for those in Poison Canyon?
- (Kathy) we took samples but they were hair, were they good?
- (Phil) yes they worked out but they aren't ideal
- (Phil) Erica wants to look at diet west of Hinkley since they can reproduce with lower amounts of rainfall. Trying to ID from fecal matter. All it takes is \$\$.
- (Kathy) we're generally trying to take scat samples when possible.
- (Bruce) If we can continue to trap later then we can get more scat
- (Scott) trying to get that added. Are there any special handling
- (Kathy) protocol with veg, make it more consistent. Ed does thing consistently in Bowling Alley.
- (Ed) really important for the department to come up with a tissue collection protocol for MGS, especially if in hand we can't tell what they are, may change where samples go etc.
- (Scott) collection protocol is straight-forward it's outlined in the MOUs
- (Ed) is a hybrid worthy of an ITP
- (Scott) department is working on that, this is a problem for a lot of taxonomic groups. Initial department interpretation, hybrid is treated as a hit in terms of CESA since the CESA species has been around recently. Veg sampling question, for those who fill out veg protocol, how much time does that take and for people who use that data how useful is that?
- (Kathy) lots of time between trap checks but we're not botanists. I know squirrel plants and tortoise plants. I bring a botanist if I need to do it because I don't have that breadth of knowledge. Can do it that way but not consistent. Scat collection consistency.
- (Scott) do you then generate a species list
- (Kathy) yes
- (Scott) not quantitative so may be difficult to use
- (Phil) incorporating in protocol trapping, 90-95% of the time when protocol trapping is done no MGS so what does that tell us?
- (Scott) is of interest and hopefully with more cameras that
- (Bruce) cameras are faster and cheaper. Camera trapping in a lot of species they're less invasive, less harassment of species, but you get more data from live trapping. Can we bait them using a maze of some sort to collect hair? Would be a mess but could do.
- (Kathy) can't get DNA or scat and you have iffy animals that you can't identify, limitation of camera trapping.
- (Scott) way to focus live trapping efforts
- (Bruce) most efficient way is camera trapping in regards to volunteer trapping. Can do cameras first, less babysitting needed.
- (Kathy) is it still the department's position that you don't need an MOU to camera trap?

- (Scott) yes that's true I think. Baiting methods where we don't subsidize ravens are good.
- (Ed) Trapping near Palisade Ranch (Mojave desert preserve)
- (Jacob) eDNA for terrestrial animals, Kramer Fisheries Science lab in W. Sac that does fish, they analyze this type of DNA, they're working on it but it could be a future possibility. Sampling to send them in was very affordable, and can train people to take samples correctly, generally affordable.
- (Scott) could potentially replace live trapping
- (Bruce) is this fecal?
- (Jacob/Scott) no, doesn't have to be
- (Jacob) there's a time element they could tell you when it was last there.

What about volunteer trapping?

- (Bruce) may get cameras out on over Birdspring Pass, it's private (for sale! Cheap!) on the edge of the described range, potential movement. Closest MGS record is ~10 miles east
- (Phil) one area Phil is interested in, 2011 Dave and I had area southeast of Kramer Junction where there were lots of cameras, just found MGS at 2 of those, the following year someone else did volunteer trapping and got quite a few MGS there, only place SE of Kramer and south of Kramer Hills where there was any record of MGS, would be nice to see if MGS are still there. No sign of burrows last few years but might be worth checking (E of 395 and S of 58, lots of habitat but maybe not a lot of MGS)
- (Erica) doing plant stuff with Barbara the first week of April if anyone wants to get more plant experience.

Important unexplored areas on public lands?

- (Scott) mystery squirrel of October on park lands.
- (Kathy) area Phil mentioned SE of Kramer is public, could be resampled.
- (Phil) Squirrel on west side of Panamints is bizarre, but is it a priority
- (Scott) could be nice to get more info in case
- (Kathy) ground checking MGS areas that were modeled by USGS, area not under a lot of pressure in San Bernardino. One area (county lands, may or may not be accessible), may be some in Lucerne Valley there is still some habitat, it's been written off but there is a possibility in the model and had good chunks of habitat. Further south than current range, SE there were good looking areas of habitat. Lots were in Searles which we're exploring.
- (Ed) Brisbane Valley, between 66 and 15, undeveloped but lots of sheep grazing, would be interesting.

What are priority areas for private land acquisition?

- (Kathy) map could guide
- (Jacob) use map, are there hotspots available