



## **DESERT TORTOISE COUNCIL**

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**Via email only**

27 July 2014

Roy C. Averill-Murray  
Desert Tortoise Recovery Coordinator  
U.S. Fish and Wildlife Service  
1340 Financial Blvd., #234  
Reno, NV 89502

RE: Proposed translocation of desert tortoises from the Desert Tortoise Conservation Center into Stump Springs Translocation Area in southern Nevada

Dear Mr. Averill-Murray,

The Desert Tortoise Council (Council) is a private, non-profit organization comprised of hundreds of professionals and laypersons who share a common concern for wild desert tortoises and a commitment to advancing the public's understanding of this species. Established in 1975 to promote conservation of tortoises in the deserts of the southwestern United States and Mexico, the Council regularly provides information to individuals, organizations and regulatory agencies on matters potentially affecting the desert tortoise within its historical range.

The Council was not given a direct opportunity to review and comment on this latest proposed translocation plan ("Plan") of tortoises from the Desert Tortoise Conservation Center (DTCC) into southern Nevada on lands managed by the Bureau of Land Management (BLM) (we received the plan from a third party). We now provide the following input. Most of our comments are prefaced by a quote from the Plan (see Literature Cited in Plan for references enclosed in quotes).

We are concerned that this release is planned due to failure of responsible parties to maintain captive and displaced wild tortoises within the DTCC, some of which were placed there as a result of USFWS-authorized development in the Las Vegas Valley. The Council does not believe that this proposed translocation is an adequate or responsible alternative to maintaining tortoises at the DTCC, which requires guaranteed funding and carries legal obligations in a number of Implementing Agreements associated with existing Habitat Conservation Plans, particularly since prior translocation efforts conducted during drought conditions were largely unsuccessful.

1). “The Stump Springs translocation site lies within an undesignated multiple-use area managed by the BLM in the western portion of Clark County.”

We appreciate that the Plan identifies many of the conflicting uses, both existing and proposed, for the site. Given the multiple use mandate of the BLM, how are tortoises in this particular augmentation effort protected from future uses of these public lands?

For example we are concerned that solar developments could happen on this site. Dr. Barry Sinervo described the local effects of solar plants on animal and plant populations in the vicinity—a heat sink effect. Why are these tortoise augmentations being planned in an area where three solar facilities are proposed? Should this solar development occur, how would the USFWS protect resident and translocated tortoises? Would translocated tortoises be translocated again?

What is the current status of the two utility corridors? Specifically, how developed are they currently, and will they see additional development in the future? If additional development is pursued, will USFWS and BLM ensure that measures are implemented to protect translocated tortoises? Can you show these on a map as was done for the solar projects?

How might the other current and/or future uses mentioned (e.g., grazing allotments, mining claims, mineral sites, and off-highway-vehicle events) affect translocated tortoises? For example, how often do race participants go off-road, legally or illegally? Please also show these various uses on a map.

2). Presumably USFWS still prohibits translocation of tortoises across state lines. However, the level of proposed monitoring (e.g., as per the mark-recapture proposal on page 10) is insufficient to detect animals dispersing into California. Thus, we recommend that no tortoises be translocated within 13 km of the California state line. Our reasoning is that translocated tortoises at the Fort Irwin project moved as much as 13 km after release.

3). “The area surrounding Stump Springs is currently classified as experiencing ‘severe drought’ conditions (Palmer Drought Severity Index = -3.0 – -3.9; Tinker 2014). Since the beginning of 2012, moderate to severe drought conditions have been present in the area during May-July 2012, May-July 2013, and February-April 2014 (National Climatic Data Center 2014). Precipitation outlooks for the area suggest that three-month rainfall totals may exceed the 1981-2010 average by up to 0.2 inches between August and November 2014 (NOAA/National Weather Service 2014).”

We understand that USFWS plans on releasing all tortoises even if drought conditions persist, and considers the expected elevated mortality to be acceptable, so long as translocated tortoises die at the same elevated rate as resident tortoises. We refer to your earlier conclusion in the 3 July 2013 Biological Opinion on Issuance of Recovery Permits under Section 10(a)(1)(A): “Therefore, long-term drought is likely to have even greater effects, particularly given that the current fragmented nature of desert tortoise habitat (e.g., urban and agricultural development, highways, freeways, military training areas, etc.) *will make recolonization of extirpated areas difficult, if not impossible*” (emphasis added). The Council believes that it is better to maintain tortoises at the DTCC until which time climate factors are favorable for a successful release.

4). “A group of up to 40 juvenile tortoises (carapace length <100 mm) may be released at a higher elevation within the translocation area, but outside the release area defined in Figure 4, as part of a related habitat-use experiment conducted by San Diego Zoo Global and the U.S. Geological Survey. These tortoises, which are not expected to disperse as far as translocated adults, will be compared to a cohort at a lower elevation in the Greater Trout Canyon translocation area.”

Esque et al. (2010) reported that the significant losses of tortoises associated with the Fort Irwin translocation study between 2005 and 2008 were due to drought-induced low population levels of coyote prey species, particularly rabbits and hares, so that coyotes likely preyed more heavily on both resident and translocated tortoises as a result. Esque et al. (2010) also noted that subadult tortoises (as well as female tortoises) were particularly susceptible to coyote predation. Has the USFWS conducted any studies at the Stump Springs translocation site to determine if current levels of rabbits and hares are abnormally low in response to three years of drought? Without data to prove otherwise, we must assume that coyote prey species are indeed abnormally low; in which case the USFWS Plan to release as many as 40 subadult tortoises is highly disconcerting.

Related, during the same time period considered by Esque et al. (2010), Berry et al. (2013) reported low mortalities of subadult and adult tortoises in a specific study area with coyote control. Will the USFWS perform coyote control measures to reduce mortality on translocated subadults, at least until the drought ends?

Finally, what is the “higher” elevation at which juvenile tortoises would be released? Is it below 4,100 feet, the elevation at which tortoises occur as stated on Page 7 of the Plan?

5). What are the results of recent tortoise translocations (i.e., Hidden Valley, Eldorado Valley, etc.) from the DTCC into southern Nevada? How has the design of the Stump Springs Plan benefitted from results at these other release sites? We think transparency is critical to the science of this and other USFWS projects and request results of the aforementioned translocation/augmentation reports and annual reports be provided to the Council as they become available.

6). “The nearest historic population study plot is a 1-mi<sup>2</sup> (2.6-km<sup>2</sup>) plot within the western end of the Greater Trout Canyon translocation area, approximately 7.5 km northwest of the nearest point of the Stump Springs translocation area (Figure 4). The plot was surveyed in 1987 and 1992 (Hardenbrook, undated; Holle et al. 1992) ... Surveyors found 28 adult shell remains (ratio of dead:live adults = 1.17), most of which were estimated to have died >2 years previous to the survey.”

Ratios of dead:live tortoises provide little if any information of value, since the remains of dead tortoises are not described by estimated times of death or sizes. Remains could be very old and of different sizes of tortoises. Although we suspect high mortality, we should not claim to know the level that has occurred without better studies and ongoing monitoring.

7). “More recent surveys were conducted southeast of Pahrump, Nevada, during the 2008 range-wide monitoring season between 19 and 29 May (USFWS 2012c) ... Within the entire Pahrump Valley (i.e., north and south of Pahrump), 28 of 58 tortoise detections were of shell remains; the ratio of dead:live tortoises (0.93) exceeded the average for all other monitoring strata in Nevada (range = 0.16-0.83; USFWS, unpubl. data). Twenty-nine full or partial transects were walked within the boundaries of the Stump Springs translocation site, and only 16 of 34 tortoise detections were of live animals.” We reiterate the previous statement here about this data set of the dead tortoises or shell-skeletal remains. The ratios of dead:live tortoises provide no useful information because remains of adults can persist for many years whereas remains for juveniles deteriorate rapidly.

The Council appreciates that historic data are referenced. On one hand, we understand that these data are presented to justify the release of captive tortoises into the translocation area. On the other, the data document that an above-average level of mortality has occurred in the area. What are the mortality factors that affected resident tortoises? How have these factors been addressed to avoid similar mortalities of translocated tortoises? We do not think sound science is in play here, because the USFWS has not demonstrated how or why this might be an appropriate site for a release or augmentation when the causes of death are not stated or potentially unknown.

8). “Population augmentation is an important tool for conservation of the Mojave desert tortoise (USFWS 2011). The primary goal for translocation to the Stump Springs area is to augment the population to increase density to a level comparable to that seen within the surrounding Eastern Mojave Recovery Unit. For a successful translocation, the number of tortoises in any area should not exceed the capacity of the surrounding desert. Little to no information on specific habitat characteristics or measures of habitat quality exist relative to carrying capacity for Mojave desert tortoises (USFWS 2011). Therefore, we will use densities recently observed elsewhere in the recovery unit to set a conservative population-density target.”

Again, we are concerned that this Plan is more of an emergency measure to translocate tortoises from the DTCC in anticipation of its closure than population augmentation. We continue to stress that USFWS should enforce obligatory measures identified in Implementing Agreements associated with placement of project-related, displaced tortoises at the DTCC.

Additionally, since this area appears to have experienced above normal mortality rates (USFWS has not established or stated what “normal” mortality rates means for this area or region), is it appropriate to compare densities elsewhere in the recovery unit that have not suffered as high mortality? In the absence of knowing the carrying capacity, or why tortoises at the proposed relocation site are dying at a faster rate than nearby areas, it is very risky to translocate tortoises to this area, particularly under the current prolonged drought conditions.

9) “Despite the area currently experiencing drought conditions, the proposed translocation targets an area that is considered to have high tortoise habitat potential (Nussear et al. 2009).”

Has the USFWS performed field surveys or finer-scale habitat modeling to determine that the proposed translocation area actually is high quality tortoise habitat? Without this field investigation or an understanding of why the tortoise density is lower within the proposed translocation area compared to nearby areas, all evidence would suggest that the 2009 habitat potential model, which was conducted at a very rough landscape level, does not accurately reflect current conditions at the proposed site.

10). “Furthermore, recent research has shown that survival of translocated tortoises is similar to non-translocated tortoises even under drought conditions (Esque et al. 2010; Nussear et al. 2012).”

Not all populations experienced the high mortality from coyote predation during drought reported by Esque et al. (2010). Berry et al. (2013) reported low mortalities of subadult and adult tortoises during the same time period in a specific study area with coyote control. Does USFWS intend to use coyote control or measure predator levels prior to release of the tortoises?

If the Stump Springs population is already stressed and exhibits higher than average mortality, is it really an adequate measure of success to say that elevated mortality in both the resident and translocated populations is acceptable? Instead of introducing unknown variables by translocating captive tortoises into the wild population, we recommend the resident population receive higher protection.

11). “Therefore, while overall survival may be lower than in wetter years, we expect augmentation to improve population status by providing a net increase in tortoise numbers. Delaying augmentation until a wetter year may increase individual survival, but inaction could extend indefinitely given the uncertainty of future drought. Proceeding in Fall 2014 increases the probability that additional tortoises will more immediately contribute to population recovery.”

We appreciate that in this particular Plan USFWS mentions drought as a factor predictably confounding the success of the translocation effort. However, USFWS then dismisses this known threat factor as acceptable by intentionally planning to introduce tortoises into a stressed landscape during the third consecutive drought year.

12). “One pathogen of long-standing concern is *Mycoplasma agassizii*, a bacterium known to cause upper respiratory tract disease. Seroprevalence of *M. agassizii* was recorded at levels up to 13% in the Stump Springs area (Sandmeier et al. 2013).”

First, Sandmeier et al. (2013) provided data over a large area and reported from 0 to 13% seroprevalence using only one strain of *M. agassizii* from Western blots and an ELISA test developed by Hunter et al. (2008) and not validated with typical necropsies or histology. What were the actual results for the Stump Springs area and how many animals were tested there? From the figure, the sample may have been 5 to 7 tortoises.

If we take the Plan’s proposal at face value, the USFWS proposes to place the translocated animals into an area where upper respiratory tract disease is a documented threat to those animals and may have been a factor in the past mortalities. We see no justification for releasing supposedly healthy tortoises into an area with up to 13% seroprevalence of disease, where tortoises were previously released (Trout Canyon) and results have not been made available.

13). “Current guidance developed for wild-to-wild translocation projects provides a structured approach for evaluating health status of individual desert tortoises prior to translocation (USFWS 2013; Figure 5). All tortoises to be translocated in this project will be selected from the collection residing at the Desert Tortoise Conservation Center (DTCC) in Las Vegas.”

We do not support the USFWS' approach for evaluating health status. Visual inspections alone are inadequate for determining whether a tortoise is subclinical for one or both known species of *Mycoplasma* in desert tortoises (see Jacobson et al. 1995, Schumacher et al. 1997, Jacobson and Berry 2012). The visual disease screening process is inadequate to identify pathogens and parasites in captive, pet tortoises that could be introduced into this wild population. The presence of a nasal discharge should be cause for additional screening (not just prolonged quarantine), using cytology to determine if inflammation exists and the type of cells present.

14). “The Stump Springs translocation area is located approximately 40 km west of the DTCC. Moving tortoises within 175 km of the DTCC ensures that the vast majority of released tortoises will remain in a genetic unit equivalent to that of their origin (actual locality of genetic origin, not that of the area immediately surrounding the DTCC) (USFWS 2012d).”

As we have commented in previous translocation efforts in southern Nevada, this statement seemingly presupposes that all the tortoises originated from the DTCC and Las Vegas area, when in fact the population of tortoises at the DTCC includes captive, pet animals of unknown origin and the statement admits the concept of "actual locality of genetic origin" vs. the locale of the DTCC itself. How can USFWS ensure that none of these animals were originally collected from the wild in states other than Nevada? This is particularly important considering that USFWS acknowledges the site “may be valuable for population connectivity... between the Ivanpah Critical Habitat Unit, Death Valley National Park, and areas to the north” (see Page 2 of the Plan).

15). “A specific monitoring approach and design will be developed depending on available funding. Tortoises found during the Fall 2014 pre-release surveys and all translocated tortoises will be given permanent marks to provide the option to comparatively monitor residents and translocatees through future mark-recapture surveys. For example, a potential approach would use survivorship and health of translocatees and of residents to describe the success of the translocation.”

We are deeply concerned that meaningful monitoring may not occur, especially when considering current budgetary constraints, potential lack of funding, that monitoring is contingent on that funding, and our belief that the proposed augmentation is actually an emergency measure to translocate tortoises from the DTCC in anticipation of its closure despite financial and legal guarantees to the contrary. Moreover, a private proponent conducting such a translocation effort under authority of Section 10a of the Federal Endangered Species Act would be obligated to guarantee funding for monitoring. The Council believes that if monitoring funding cannot be guaranteed, any “augmentation” value attributed to this latest proposed release is completely undermined. In the absence of legitimately guaranteed funding for monitoring, no tortoises should be released.

16). One very critical element is missing from this Plan: Data on the biomass and composition of available high vs. low quality forage plants. If this area has high biomass of exotic annual grasses especially, then it may not be able to support additional tortoises. Although the livestock allotments appear to have been closed, the area is part of a horse and burro herd and has the Barstow to Las Vegas motorcycle race. Thus it has both historic uses and current uses that contribute to proliferation of low quality forage species or foods that can cause tortoises to lose biomass (Hazard et al. 2009, 2010). Therefore, an evaluation of plant forage is essential prior to translocation, especially when the cause for the low tortoise density at the site is unknown.

It is understood that controlling exotic plants that are generally not favored as tortoise forage can help free up water and nutrients for native plants. This can be particularly important during persistent drought conditions like we are currently experiencing. If the translocation proceeds, what will USFWS do to control exotic plants in the translocation area?

17). “Negative population effects will be further reduced in the event any translocated individuals do happen to originate from a more distant population (which we expect to be a rare occurrence) if they are poorly adapted to conditions in the Stump Springs area and do not successfully integrate into the resident population (Edwards and Berry 2013).”

First, please provide justification for your expectation that translocated tortoises would rarely originate from a more distant population. Second, USFWS is implicitly depending upon any tortoises that happen to originate from a more distant population that are also poorly adapted to the area to not integrate into the resident population to prevent negative population effects. If these tortoises do integrate into the population, even if poorly, they could indeed negatively affect the population.

18). Please clearly explain the difference between the Stump Springs Release Zone, Stump Springs Priority Release Zone, Stump Springs Translocation Area, and Stump Springs Priority Translocation Area. Could tortoises be released or translocated to all of these areas, and is it just a matter of priority and available space?

19). How many additional tortoises, and how many additional tortoise translocation plans, are respectively expected to be translocated or developed at this time?

As in previous comment letters on translocation, we believe this latest proposal has resulted from the need to relocate soon-to-be displaced tortoises from the DTCC and that the proposed Plan is not a scientifically-defensible means of augmenting a depleted tortoise population. Furthermore, we believe that closure of the DTCC is a violation of public trust in a process that required the DTCC to provide suitable mitigation for projects. As such, the release of tortoises, including pets, from the DTCC is entirely inappropriate. We ask you to continue to seek more rational and realistic solutions to the budget problems facing the DTCC that support of the Desert Tortoise Recovery Plan, and to honor the DTCC’s legal and mitigation obligations that are already complete.

Please consider the Desert Tortoise Council as a member of the interested public and/or affected party and thereby notify us of any future proposed actions that might affect desert tortoises.

Regards,



Edward L., LaRue, Jr., M.S.  
Desert Tortoise Council, Ecosystems Advisory Committee, Chairperson

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