DOCKET 08-AFC-13	
DATE RECD	Jul 07 2009



Michael J. Connor, Ph.D. California Director P.O. Box 2364, Reseda, CA 91337-2364 Tel: (818) 345-0425 Email: mjconnor@westernwatersheds.org Web site: www.westernwatersheds.org

Working to protect and restore Western Watersheds

Mr. Christopher Meyer Project Manager California Energy Commission 1516 Ninth Street, MS-15 Sacramento, CA 95814 <cmeyer@energy.state.ca.us>

Mr. Jim Stobaugh Bureau of Land Management P.O. Box 12000 Reno, NV 89520 < Jim_Stobaugh@blm.gov>

> Re: NEPA/CEQA Scoping Comments for Staff Assessment/Environmental Impact Statement (SA/EIS) and CDCA plan amendment for the Stirling Energy Systems Solar One Project, San Bernardino County, California.

Dear Mr. Meyer and Mr. Stobaugh:

On behalf of Western Watersheds Project and myself, please accept the following scoping comments as you embark on the preparation of a Staff Assessment/Environmental Impact Statement (SA/EIS) and CDCA plan amendment for the Stirling Energy Systems Solar One Project, San Bernardino County.

Western Watersheds Project works to protect and conserve the public lands, wildlife and natural resources of the American West through education, scientific study, public policy initiatives, and litigation. Western Watersheds Project and its staff and members use and enjoy the public lands, including the lands at issue here, and its wildlife, cultural and natural resources for health, recreational, scientific, spiritual, educational, aesthetic, and other purposes.

The scoping notice for the proposed translocation was posted on the June 9, 2009. According to the scoping notice, the Bureau of Land Management (BLM) and the California Energy Commission (CEC) are developing CEQA and NEPA documents and a CDCA plan amendment for a project that would designate 8,230 acres of BLM-managed public lands as suitable for development and operation of a solar energy generation facility in the vicinity of I-40 just west of Ludlow and 37 miles east of Barstow in rural San Bernardino County, California. The Project will include a main access road from the south off Hector Road, secondary access off Pisgah Crater Road, internal access roads, approximately 34,000 Stirling SunCatcher solar concentrating dishes, perimeter fencing, and ancillary facilities. Each 25 kW SunCatcher has a diameter of 38 feet and a maximum height of 45 feet. The proposed facility would generate a total of 850 megawatt of electricity, to be phased on-line as each 60 units are completed. Ancillary facilities include underground communication and electrical collection systems, a new electrical substation, 2 miles of 230kV overhead transmission line connecting to an upgraded SCE-Pisgah substation, upgrade of the Pisgah Lugo #2 line between the site and the Victorville area substation, services complex, administration and maintenance buildings, temporary staging area and access routes.

This is a massive project that will have direct, indirect and cumulative impacts on some of the desert's most sensitive resources. Western Watersheds Project and its members have a particular interest in the desert tortoise and the desert bighorn sheep, both of which species would be heavily impacted by the proposed energy project.

Specific issues of concern that should be addressed in the NEPA documents to ensure compliance with NEPA and to ensure that NEPA's requisite "hard look" at the environmental impacts include:

(1) Range of Alternatives.

The NEPA implementing regulations specify that NEPA documents must analyze a full range of alternatives. Based on the information and analysis presented in the sections on the Affected Environment (40 C.F.R. § 1502.15) and the Environmental Consequences (40 C.F.R. § 1502.16), the NEPA document should present the environmental impacts of the proposed action and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public

All alternatives should comply with, NEPA, FLPMA, and the ESA. Based on prior experience, we suggest that the agencies consider the following reasonable alternatives in addition to any proposed action:

(a) "No Action Alternative" as is required by NEPA.

(b) "Alternative Site" Alternative i.e. consideration of other sites for the project with fewer resource conflicts, and that would not require amending the CDCA Plan.

Full analysis of the "No Action" and "Alternative Sites" alternatives will help clarify the need for the proposed project, provide a baseline for identifying and fully minimizing resource conflicts, facilitate compliance with the BLM's FLPMA requirement to prevent the unnecessary and undue degradation of public lands and its resources, and will help provide a clear basis for making an informed decision.

(2) Desert Tortoise.

The NEPA/CEQA documents must describe, clearly characterize and identify the desert tortoise populations that will be impacted by each alternative. We note that the project proponent's "Application for Certification" is peppered with factual errors with respect to the desert tortoise that downplay the significance of the project site to the desert tortoise. For example, the Environmental Information section states:

"Desert tortoise mostly occur in four subpopulations in the California Mojave Desert (Ord-Rodman, Superior-Cronese, Fremont-Kramer, and Joshua Tree DWMAs) and outside of these areas tortoise tend to occur in at much lower densities." [at 5.6-9]

The applicants have confused the BLM's ACEC/DWMA land use designations for the West Mojave Desert Tortoise Recovery Unit with desert tortoise populations and distributions throughout the California Desert. Desert Tortoise Recovery Units were identified in the 1994 Desert Tortoise (Mojave Population) Recovery Plan based morphological, genetic, behavioral, and ecological differences. Five of the six Recovery Units identified in 1994 occur in or partly in California. The 1994 plan also proposed that the agencies establish Desert wildlife Management Areas ("DWMA") to implement recovery actions within each of the six Recovery Units. Desert tortoises have a patchy distribution throughout the Recovery Units and many localized, high density desert tortoise concentrations occur outside of designated DWMA.

The proposed project site is within the West Mojave Desert Tortoise Recovery Unit. The West Mojave Recovery Unit spans a very heterogeneous area of the southwestern Mojave Desert. In a landmark genetic study published after the West Mojave DWMA were designated in 2006, Murphy et al. (2007) identified at least three genetically distinct desert tortoise populations (or Recovery Units) within the West Mojave Recovery Unit. They termed these the Western Mojave, Central Mojave, and Southern Mojave recovery units. The project site is on the north side of Murphy et al.'s Southern Mojave Recovery Unit. Tortoises in this area occupy a strategic band of habitat along the south and west sides of the Cady Mountains. This occupied habitat provides the only viable connectivity between the Ord-Rodman and Superior-Cronese DWMAs, and between Murphy et al.'s Southern and Central Mojave Recovery Units. The proposed site location would require that a large number of tortoises be relocated and poses a severe threat to the extent connectivity.

<u>The WMP ROD signed March 2006 includes "Goal 3: ensures genetic connectivity</u> among tortoise populations, both within the West Mojave Recovery Unit, and between this and other recovery units. All alternatives considered in this NEPA/CEQA process should be compatible with this goal.

<u>The NEPA/CEQA documents should fully document the genetic background of these</u> <u>desert tortoises and should provide a firm estimate of the population size</u>. The presence/absence survey data provided in the project proponent's Application for Certification indicates that large numbers of desert tortoises occupy the site. However, this data is an inadequate basis for determining the number of tortoises that will be impacted. Obtaining this basic information on the desert tortoise population is essential if the agencies are to take NEPA's requisite "hard look" at the environmental impacts of each alternative.

<u>The NEPA/CEQA documents should also provide frank estimates of the expected losses</u> of desert tortoises that may occur for all alternatives considered.

If any tortoise relocation or off-site translocations are anticipated, a threat assessment should be conducted for all potential relocation/translocation sites. Threats that should be assessed include vehicle routes, off-road vehicle activity, livestock grazing and residual impacts

from livestock use, invasive species and fire risk, predator levels (including ravens and coyotes) and proximity to human developments including housing, energy transmission corridors, and roads. Translocation sites should be located in areas with defensible boundaries and that can be conserved. This should include the feasibility of closing the area around translocation sites should be comparable to the habitat from which the tortoises have been removed. This should be based on site-specific surveys of soils, hydrology, vegetation, invasive species, and anthropogenic threats. The current desert tortoise carrying capacity should be determined for any translocation site. Translocation sites should be designated for conservation use only. Where possible, desert tortoises should be relocated to immediately adjacent protected sites. We have attached a copy of our February 18, 2009 scoping comments to the BLM in response to its request for public comments on the Fort Irwin desert tortoise translocation which covers many issues related to relocation/translocation that may be relevant to this project. We hereby incorporate our February 18, 2009 comments and list of references cited by this reference.

The NEPA/CEQA documents should provide a review of the direct, indirect and cumulative impacts of the proposed project on the West Mojave Recovery Unit, and all associated infrastructure including the roads and transmission lines.

(3) Desert bighorn sheep.

The Cady Mountains WSA has a native population of bighorn sheep. This population may have benefitted from the recent buyout of the Cady Allotment that was part of the Fort Irwin expansion mitigation package. Bighorn sheep may use the site on a seasonal basis for foraging, drinking, or migration. The West Mojave Plan's conservation strategy calls for protecting springs used by bighorn sheep and calls for providing methods for crossing freeways and other barriers to dispersal. The NEPA/CEQA documents should review all direct, indirect and cumulative impacts to this species including impacts to linkage habitat and connectivity issues.

(4) Other Sensitive Animals and Plants.

The proposed project site provides important habitat for Mojave fringe-toed lizard (*Uma scoparia*), the white-margined beardtongue (*Penstemon albomarginatus*), and other sensitive and at risk species. The NEPA/CEQA documents should fully analyze impacts to these sensitive species and ensure compliance with the West Mojave Plan's conservation strategy and other applicable governing plans. This must include full consideration of blowsand habitat, sand movement in the area, and the impacts of project structures that are required to protect the Pisgah Mojave fringe-toed lizard populations (West Mojave Plan at 2-186).

The NEPA/CEQA documents must also consider any potential impacts that off-site roads and transmission lines required by the proposed project may have on the Mohave ground squirrel particularly the upgrade of the Pisgah Lugo #2 line to Victorville.

(5) Wilderness Values

The NEPA/CEQA documents should provide a review of the direct, indirect and cumulative impacts of the proposed project on the Cady Mountains Wilderness Study Area ("WSA") including impacts to natural resources and scenic values.

(6) Global Climate Change

Department of the Interior Order No. 3226 mandates that the BLM must consider the impacts of each proposed alternative with respect to global climate change in its NEPA reviews. The agencies should use the recently released USGS desert tortoise habitat model to determine likely changes in desert tortoise habitat quality in the area and the importance of the desert tortoise habitat south and west of the Cady Mountains in connectivity between desert tortoise populations, DWMA, and recovery units.

(7) Monitoring Programs.

The NEPA/CEQA documents must explain the monitoring programs that will be in place to monitor the short and long term impacts of the project. This should include the timelines, and estimated costs and sources of funding for the monitoring programs.

We thank you again for the opportunity to submit scoping comments on the proposed solar plant project. Please keep Western Watersheds Project on the list of interested public for this project. If we can be of any assistance or provide more information please feel free to contact me by telephone at (818) 345-0425 or by e-mail at <mjconnor@westernwatersheds.org>.

Yours sincerely,

hichur, Come

Michael J. Connor, Ph.D. California Director Western Watersheds Project P.O. Box 2364 Reseda, CA 91337 (818) 345-0425 <mjconnor@westernwatersheds.org>

Attachments: February 18, 2009 letter from Western Watersheds Project providing scoping comments Re: BLM Seeks Public Comments on Desert Tortoise Translocation near Fort Irwin.



Michael J. Connor, Ph.D. California Director P.O. Box 2364, Reseda, CA 91337-2364 Tel: (818) 345-0425 Email: mjconnor@westernwatersheds.org Web site: www.westernwatersheds.org

Working to protect and restore Western Watersheds

By E-mail

February 18, 2009

Dr. W. Mickey Quillman BLM Barstow Field Office 2601 Barstow Road Barstow, CA 92311 <William_Quillman@ca.blm.gov> <wquillma@ca.blm.gov> <Roxie_Trost@ca.blm.gov>

Re: BLM Seeks Public Comments on Desert Tortoise Translocation near Fort Irwin

Dear Dr. Quillman:

On behalf of Western Watersheds Project and myself, please accept the following scoping comments as you embark on the NEPA analysis for the translocation of desert tortoises from the Fort Irwin expansion areas to nearby public and private lands.

Western Watersheds Project works to protect and conserve the public lands, wildlife and natural resources of the American West through education, scientific study, public policy initiatives, and litigation. Western Watersheds Project and its staff and members use and enjoy the public lands, including the lands at issue here, and its wildlife, cultural and natural resources for health, recreational, scientific, spiritual, educational, aesthetic, and other purposes. Western Watersheds Project has a particular interest in the desert tortoise and recently petitioned the Department of Interior to list the Sonoran desert tortoise population under the Endangered Species Act.

The scoping notice for the proposed translocation was posted as a press release on the BLM website on February 4, 2009. It provided for a 15-day period for submission of scoping comments, with an ending date of February 18, 2009. We understand the urgency in undertaking the analysis since desert tortoise translocation is most likely to be successful in the spring months, but this is an unreasonably short comment period for such an important and controversial project. We are not aware of any Federal Register notice, so our comments are based on the sparse information provided in the press release.

Specific issues of concern that should be addressed in the NEPA documents to ensure compliance with NEPA and to ensure that NEPA's requisite "hard look" at the environmental impacts include:

(1) Range of Alternatives.

The NEPA implementing regulations specify that NEPA documents must analyze a full range of alternatives. Based on the information and analysis presented in the sections on the Affected Environment (40 C.F.R. § 1502.15) and the Environmental Consequences (40 C.F.R. § 1502.16), the NEPA document should present the environmental impacts of the proposed action and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public. The regulations specify that agencies shall:

(a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.

(b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.

(c) Include reasonable alternatives not within the jurisdiction of the lead agency.

(d) Include the alternative of no action.

(e) Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference.

(f) Include appropriate mitigation measures not already included in the proposed action or alternatives.

Based on prior experience, the agencies should consider the following reasonable alternatives in addition to any proposed action. Comparison of these alternatives will help define the issues and provide a clear basis for making an informed decision.

(a) No Action Alternative. This alternative is required. Full analysis of "no action" will help clarify the need for the translocation by identifying both the tortoise population that will be impacted by the Army's training program and by identifying and characterizing the resident tortoise populations in any proposed translocation sites.

(b) Desert Tortoise Recovery Plan Alternative. This alternative would fully implement the recommendations of the 1994 Desert Tortoise Mojave Population Recovery Plan Appendix B. This alternative would identify translocation sites outside the DWMA.

(c) Fort Irwin Translocation Plan Alternative. This alternative would consider implementation of the July 29, 2005 USGS Plan (Esque et al., 2005). Review of this alternative will provide a frank assessment of the successes and failures of the 2008 translocation effort and inform both the public and the decisionmakers as to appropriate mediation measures.

(2) Purpose of an Environmental Assessment

The scoping announcement indicates that the BLM is preparing an Environmental Assessment (EA) for this project. The purpose of an EA is to provide sufficient evidence and analysis to determine whether a project requires preparation of an environmental impact statement (EIS) or whether issuance of a finding of no significant impact is merited. [CEQ NEPA Implementing Regulations, 40 C.F.R. §1508.9]. Given the significance of the proposed translocation to desert tortoise survival and recovery, the considerable scientific controversy, and

the intense public interest the 2008 translocation generated we expect that the EA will result in a determination that an EIS is required. The BLM should seriously consider initiating the EIS process immediately.

(3) Population Assessments.

The NEPA documents must clearly identify the number of tortoises that will be translocated and their demographics. The desert tortoise populations currently resident at any proposed translocation sites should be similarly characterized.

The NEPA documents should provide frank estimates of the expected losses of both translocated and resident desert tortoises that may occur for all alternatives considered.

(4) Selection of Translocation Sites.

Translocation site should be selected based on sound, science-based criteria and manageability to maximize likely success.

There is no consideration in the current West Mojave Plan EIR/EIS for using designated DWMAs for large-scale desert tortoise translocations. This should be addressed in the NEPA documents if use of habitat within the DWMAs as translocation sites is considered. All translocations should fully comply with relevant BLM policies.

A threat assessment should be conducted for all potential translocation sites. Threats that should be assessed include vehicle routes, off-road vehicle activity, livestock grazing and residual impacts from livestock use, invasive species and fire risk, predator levels (including ravens and coyotes) and proximity to human developments including housing, energy transmission corridors, and roads. Translocation sites should be located in areas with defensible boundaries and that can be conserved. This should include the feasibility of closing the area around translocation sites should disease containment be required.

Habitat quality of translocation sites should be comparable to the habitat from which the tortoises have been removed. This should be based on site-specific surveys of soils, hydrology, vegetation, invasive species, and anthropogenic threats. The current desert tortoise carrying capacity should be determined for each translocation site. Translocation sites should be designated for conservation use only.

Where possible, desert tortoises should be relocated to immediately adjacent protected sites. This would include tortoises located on the base close to the training area boundaries and those tortoises located close to conservation areas on the base itself including the Lane Mountain Milkvetch refuges.

Translocation sites should be selected in areas where resident desert tortoises share similar genetic backgrounds. Murphy et al (2007) have identified at least three measurably distinct populations within the West Mojave recovery unit. The translocation must not compromise the genetic integrity of these populations.

It is well established in the literature that desert tortoises may make long-distance movements following translocation. Translocation sites should be selected such that the tortoises can be safely confined to minimize risks posed by this behavior, but any enclosed sites must be of sufficient size for the tortoises to establish new home ranges.

The NEPA analysis should address the threats that have contributed to localized population declines for any potential translocation sites where resident tortoise populations have declined or have been extirpated, and explain how these threats will be ameliorated. Where disease and predation issues are of concern, appropriate mitigations should be specified.

Translocation sites for diseased tortoises should be double fenced to minimize potential risks to healthy tortoises. These confined animals could theoretically continue to contribute to the gene pool through future headstarting projects and the like. However, fencing off areas within the DWMA boundaries amounts to a direct loss of habitat to the free ranging population. Accordingly, translocation sites for diseased tortoises should be located outside the DWMA in accordance with the 1994 Desert Tortoise Recovery Plan. Alternatively, measures need to be taken to mitigate for the loss of habitat. The proposed mitigation ratio for the Superior-Cronese DWMA is 5:1 under the West Mojave Plan.

(5) Predation Issues.

Desert tortoise depredation by coyotes has been documented at least as far back as Woodbury and Hardy (1948) who found tortoise remains in coyote scat. Boarman (2002) reviewed more recent literature related to coyote predation on desert tortoise. Based on their observations of tortoise fatalities, Woodbury and Hardy concluded that coyote predation on desert tortoise increased when rabbit populations were low. In his review, Boarman (2002) also explores the coyote-desert tortoise relationship, and the hypothesis that coyotes switch to predating desert tortoises following drought-induced reduction in the coyotes' normal prey. Field et al, 2007 also includes an extensive review of the topic in the discussion section.

The 2004 Biological Opinion for the Fort Irwin expansion briefly reviewed aspects of the proposed desert tortoise translocation (USFWS 2004). The Biological Opinion discusses the Bird Springs Valley, Nevada desert tortoise translocation study conducted by Dr. Nussear (USFWS 2004, pages 40-41). It notes that predation by canids was the cause of death for all but one of the resident and translocated desert tortoises that died in the first year (USFWS 2004, page 40). The Biological Opinion concludes: "In summary, predation comprised the most dramatic source of mortality for both translocated and resident desert tortoises over the 3 years of the study." (USFWS 2004, page 41).

In his subsequent thesis, Dr. Nussear reports that at Bird Spring Valley, 7 of 53 (13%) resident and 7 of 48 (15%) translocated tortoises were lost to predation by large canids in the first year (Nussear, 2004). He concluded that predation was the leading cause of mortality.

Given the background literature, the USFWS Biological Opinion, and recent experience, canid depredation of desert tortoises following translocation is clearly likely to occur. We do not advocate lethal control of local coyotes, since this is at best a stopgap measure and it is unclear

as to how effective coyote removal would be at reducing depredation. Rather, predator distribution and presence should be criteria used in selecting translocation sites. Appropriate predator mitigation measures (such as temporary protective fencing) should be incorporated into the translocation plan. Any proposals for lethal control of coyotes and other predators need to be fully analyzed in the NEPA documents. Coyote removal could result in new packs moving in from adjacent areas and occupying the now vacant territory, potentially compounding the problem. Lethal coyote control could have potential long-term consequences for the local desert ecosystem. Coyote removal could trigger an increase in the local rabbit and black-tailed hare population and change the availability of tortoise food plants in subsequent years. Coyote eradication could lead to increased kit fox numbers and increased predation on desert tortoise nests.

Berry et al (2009) report that more females were predated than males in the 2008 translocation. The translocation plan must include mitigation measures to address this imbalance. The plan should include specific guidelines related to the translocation of gravid females to minimize risks to this crucial demographic group.

The translocation sites should also consider risks of raven predation at each site on the offspring of translocated tortoises since this may limit the ability of the translocated animals to continue to contribute to the recovery of the species.

(6) Health and Disease Issues.

The plan should evaluate the health status of all translocated and resident desert tortoises and analyze how the translocation may be expected to change this.

The denser a given population is, the more likely it is that individuals in that population will encounter other individuals and present opportunities for disease transmission. This factor is of particular concern with species like the desert tortoise that have complex social behavior. Translocation can lead to disrupted social behavior (Berry, 1986) and may result in other stresses such as weight loss (Gowan et al., 2009) that could contribute to the outbreak of clinical signs. Relocated tortoises are at risk of both contracting and spreading infectious disease.

Wildlife disease epidemiologists should be consulted with respect to known infectious disease issues, and the direct, indirect and cumulative risks for disease spread fully assessed.

(7) Monitoring Programs.

The NEPA documents must explain the monitoring programs that will be in place to judge the short and long term effectiveness of the translocation. This should include the timelines, and estimated costs and sources of funding for the monitoring programs.

(8) Contingency Planning.

The translocation plan and NEPA analysis must include contingency plans, including specific triggers, for potential future impacts including quarantine measures that could be

implemented should disease outbreaks be triggered. Spread of *Mycoplasma* has been shown to be host density-dependent in other species such as house finches and domestic chickens (Hochachka and Dhondt, 2000) and this seems likely true for the desert tortoise too as evidenced by the rapid collapse of the high-density tortoise population at the Desert Tortoise Natural Area in the late 1980s. Given the presence of *Mycoplasma agassizii* and *M. testudineum* in tortoises in the area and the well-known propensity of translocated desert tortoises to move long distances following translocation, the risk of triggering a URTD epidemic remains a serious concern.

(9) Public Involvement.

The translocation plan should incorporate specific measures aimed at keeping the public informed on the progress of translocations. This should include providing daily or weekly updates of translocation numbers, demographics, and any losses on the CDD website. Given the high level of interest in the desert tortoise, providing meaningful and timely data should be an essential component of management if the agencies are to engender public support.

If I can be of any assistance or provide more information please feel free to contact me by telephone at (818) 345-0425 or by e-mail at <mjconnor@westernwatersheds.org>.

Yours sincerely,

i due), Como

Michael J. Connor, Ph.D. California Director Western Watersheds Project P.O. Box 2364 Reseda, CA 91337 (818) 345-0425 <mjconnor@westernwatersheds.org>

References

Berry, K. H. 1986. Desert tortoise (*Gopherus agassizii*) relocation: implications of social behavior and movements. Herpetologica 42: 113-125.

Berry, K. H., Mack, J., Brown, M., Anderson, K., Roberts, J. and Jacobson, E. 2008. Decision Time for Desert Tortoises in the Fort Irwin Translocation Project: Health and Disease Issues. Abstracts of the 2008 Desert Tortoise Council Annual Symposium. Page 4.

Berry, K. H. Gowan, T. and Mack, J. S. 2009. Health and Survival of 158 Tortoises Translocated from Ft. Irwin: Year 1 of the Health Research Program. Abstracts of the 2009 Desert Tortoise Council Annual Symposium. Page 4.

Boarman, W. I. 2002. Threats to desert tortoise populations: a critical review of the literature. Unpubl. Report, prepared for the West Mojave Planning Team and the Bureau of Land Management. 86 pp.

Esque, T. C., Nussear, K. E. and Medica, P. A. 2005. Desert Tortoise Translocation Plan for Fort Irwin's Land Expansion Program at the U. S. Army National Training Center (NTC) & Fort Irwin Prepared for U.S. Army National Training Center, Directorate of Public Works. 129 pp.

Field, K. J., Tracy, C. R., Medica, P. A., Marlow, R. W. and Corn, P. S. 2007. Return to the wild: translocation as a tool in conservation of the desert tortoise (*Gopherus agassizii*). Biological Conservation 136: 232-245.

Gowan, T., Berry, K. H. and Mack, J. S. 2009. The Ft. Irwin Translocation Project in 2008: Health, Behavior, and Movements of 158 Translocated Desert Tortoises in the Nine Months after Translocation. Abstracts of the 2009 Desert Tortoise Council Annual Symposium. Page 15.

Hochachka, W. M. and Dhondt, A. A. 2000. Density-dependent decline of host abundance resulting from a new infectious disease. PNAS. 97(10): 5303-5306.

Morafka, D. J., Berry, K. H. and Spangenberg, E. K. 1997. Predator-proof field enclosures for enhancing hatching success and survivorship of juvenile tortoises: a critical evaluation. In: Proceedings: Conservation, Restoration, and Management of Tortoises and Turtles - An International Conference. pp. 147-165. State University of New York, Purchase.

Murphy, R. W., Berry, K. H., Edwards, T. and Mcluckie, A. M. 2007. A Genetic Assessment of the Recovery Units for the Mojave Population of the Desert Tortoise, *Gopherus agassizii*. Chelonian Conservation and Biology 6(2): 229–251.

Nussear, K. E. 2004. Mechanistic investigation of the distributional limits of the desert tortoise *Gopherus agassizii*. Dissertation. University of Nevada, Reno.

USFWS. 1994. Desert tortoise (Mojave Population) Recovery Plan. U.S. Fish and Wildlife Service, Portland, OR.

USFWS. 2004. Biological Opinion for the Proposed Addition of Maneuver Training Lands at Fort Irwin, California (1-8-03-F-48)

Woodbury, A. M. and Hardy, R. 1948. Studies of the desert tortoise, *Gopherus agassizii*. Ecological Monographs 81: 146–200.