Explanation of Map of FWS-Identified Priority Desert Tortoise Connectivity Areas

The U.S. Fish and Wildlife Service's (USFWS) Desert Tortoise Recovery Office performed a landscape-scale modeling exercise to identify priority habitat linkages between and among desert tortoise conservation areas (as defined in USFWS 2011) and define other large blocks of habitat with important value to recovery of the desert tortoise. Based on USFWS current understanding, the combination of linkages and existing desert tortoise conservation areas represents the basis for a conservation network for the Mojave desert tortoise. The map illustrates the intersection of these lands and variance areas identified in the preferred alternative of the Final Solar PEIS. The value of these lands with respect to recovery and persistence of the desert tortoise elevates the review and evaluation needed for solar energy projects proposed on these lands to assist in reducing impacts to desert tortoise.

*"Priority 1"*
Least-cost corridor modeling identified potential habitat linkages between existing conservation areas that have the best chance of sustaining connectivity for desert tortoise populations. To identify these linkages, USFWS began with U.S. Geological Survey's (USGS) Mojave desert tortoise habitat potential model (Nussear *et al.* 2009), and developed a cost surface where higher habitat potential equaled a lower cost to the desert tortoise. The linkages of least-cost to the desert tortoise between pairs of conservation areas (Beier *et al.* 2008) represent priority areas for conservation of desert tortoise population connectivity and are characterized as "Priority 1" lands within the context of the SPEIS.

*"Priority 2"*
Other blocks of habitat with the greatest potential to support populations of desert tortoises, outside least cost corridors, may also have important value to recovery. Based on the USGS model, USFWS identified areas of contiguous, high-value desert tortoise habitat as "Priority 2" lands for conservation of desert tortoise within the context of the Final Solar PEIS. These lands were identified by beginning with the highest habitat potential, and including all habitat down to 0.6 that could be reached from the highest potential starting habitat (i.e., 0.6-1.0), excluding small, unconnected "islands."

For additional information on the model and the importance of connectivity for desert tortoise populations please visit the http://www.fws.gov/cno/energy.html

Beier, P., D.R. Majka, and W.D. Spencer. 2008. Forks in the road: choices in procedures for designing wildland linkages. Conservation Biology 22:836-851.

Nussear, K.E., T.C. Esque, R.D. Inman, L. Gass, K.A. Thomas, C.S.A. Wallace, J.B. Blainey, D.M. Miller, and R.H. Webb. 2009. Modeling habitat of the desert tortoise (*Gopherus agassizii*) in the Mojave and parts of the Sonoran deserts of California, Nevada, Utah, and Arizona. U.S. Geological Survey Open-file Report 2009-1102. 18 pp.

US Fish and Wildlife Service. 2011. Revised recovery plan for the Mojave population of the Desert Tortoise (*Gopherus agassizii*). U.S. Fish and Wildlife Service, California and Nevada Region, Sacramento, California.