

Thank you for your comment, Robert Bendick.

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Attachment: TNC CA Chapter Comments w Maps.pdf

Comment Submitted:

**Comments of the California Chapter of The Nature Conservancy
On Solar Energy Study Areas Located in California
Additional Public Scoping for the
Solar Energy Programmatic Environmental Impact Statement
September 14, 2009**

Iron Mountain

- The Iron Mountain study area is the most problematic of the solar energy study areas under consideration in California. The Nature Conservancy recommends that this solar energy study area be eliminated for the following reasons:
 - The Conservancy's Sonoran ecoregional plan, identified very good occurrences of desert sand-verbena interior dune habitat in this study area. These occurrences should be avoided because they are irreplaceable and necessary to sustain the viability and diversity of species in the ecoregion. The Iron Mountain solar energy study area almost entirely engulfs one of the four known occurrences of this habitat in the entire Sonoran Desert in California.
 - The Iron Mountain study area covers a significant portion of Danby Playa, which is the largest intermittently flooded playa lakebed within the Sonoran Desert in California. Playa surfaces are susceptible to wind erosion when disturbed, so any development on a Danby Playa could lead to air quality deterioration.
 - The Iron Mountain study area is surrounded by occupied bighorn sheep ranges. The Bureau's Northern and Eastern Mojave (NEMO) Management Plan identifies important bighorn sheep migration corridors between these ranges. The Iron Mountain solar energy study area overlaps a portion of these known wildlife corridors.
 - The Nature Conservancy's assessment of the Californian portion of the Sonoran Desert (completed in 2009), identified lands that have a high-level of landscape integrity, with low or no fragmentation, and that satisfy at least one of two conservation goals: irreplaceability or ecosystem representation. The Iron Mountain solar energy study area is the most problematic of the proposed study areas in the Californian Sonoran Desert based on an assessment of overlap of the solar energy study areas and these highly intact, high-quality conservation lands.

- The area is located far from any urbanized areas, which would greatly increase the adverse impacts of renewable energy development:
 - Energy development would significantly disturb a remote area, increasing secondary impacts such as the spread of invasive species, construction and use of additional roads, and inappropriate off-road vehicle use.
 - The workforce commute to the facilities would likely be significant, offsetting the greenhouse gas benefits associated with renewable energy facilities
- There are transmission problems (which will both raise costs, lower energy gains, and cause impacts to further areas).
 - The Renewable Energy Transmission Initiative (RETI) identified potential issues and complications with building transmission in this location that “would raise the cost of transmission access for generators seeking to connect in that area.”

Riverside East

- Areas within the Riverside East solar energy study area — especially areas adjoining Bythe and Desert Center — meet many of the criteria that The Nature Conservancy believes are important for siting solar energy facilities in the California Deserts. In particular, this area is close to transmission and is in close proximity to urbanized areas. A portion of the solar energy study area also meets another criterion that we suggested earlier: the study area includes public lands with relatively low conservation value that adjoin disturbed private lands with low conservation value.
- The size of the Riverside East solar energy study area, at 202,295 acres, dwarfs the size of any other solar energy study area and is significantly larger than the combined acreage of solar energy study areas being considered in any other state. The enormous size of this solar energy study area poses potential issues if a large percentage of the study area is developed.
 - The Riverside East solar energy study area lies within a transition zone at the border of two ecoregions: the Mojave Desert and the Sonoran Desert. The location of the transition zone between the ecoregions is likely to shift as the climate changes, and species may be forced to move in order to adapt to this change. Any barrier that prevents natural species movement may threaten the biological diversity of both ecoregions. In addition, populations of plants or animals living within the ecoregional transition zone may be genetically distinct from those found closer to the core of each ecoregion. Preserving this genetic diversity may be crucial to allowing species to adapt to climate change.
- A portion of the western part of the Riverside East solar energy study area surrounds Joshua Tree National Park on three sides. The Fish and Wildlife Service has identified

Joshua Tree National Park as a protected ecological reserve, which they included in the recovery plan for the threatened desert tortoise.

- A portion of the western part of the Riverside East solar energy study area surrounds the Bureau’s Desert Lily Sanctuary, created by The California Desert Protection Act (and an area given administrative protection by the Bureau since 1968). The California Desert Protection Act requires the Secretary of the Interior to “administer the area to provide *maximum protection* to the desert lily.” (emphasis added)
- The long-term viability of existing plants and animals within the Joshua Tree National Park ecological reserve and the long-term viability of the desert lily may be dependent upon habitat, populations or processes that exist outside of the boundaries of the preserves. The Nature Conservancy recommends modifying the boundaries of the Eastern Riverside solar energy study area to ensure the long-term viability of both the Joshua Tree National Park ecological preserve and the Desert Lily Sanctuary.
- The Nature Conservancy conducted an evaluation of the Californian portion of the Sonoran Desert within California in 2009. As mentioned above, this analysis identified lands that have a high-level of landscape integrity, with low or no fragmentation, and that satisfy at least one of two conservation goals: irreplaceability or ecosystem representation. Based on that analysis, significant portions of the Riverside East solar energy study area were identified as high-quality, intact habitat. Based on an assessment of overlap between these very important conservation lands and the solar energy study area, the following portions of the Riverside East solar energy study area are the most problematic:
 - In the western portion of the solar energy study area:
 - a portion of the area immediately west and south of Joshua Tree National Park,
 - the area to the east of Joshua Tree National Park and heading south towards Highway 10
 - In the central portion of the solar energy study area:
 - The northern-most portion of the solar energy study area.
 - In the eastern portion of the solar energy study area:
 - The western-most and northern-most portion of north-eastern section of solar energy study area.
 - The south-western portion of the south-eastern section of the solar energy study area.
 - The Nature Conservancy recommends modifying the Solar Energy Study Area to avoid this high-value and highly intact habitat.
- A portion of the Riverside East solar energy study area contains irreplaceable microphyll woodlands (including Ironwood, Paloverde and Honey Mesquite), a unique Sonoran Desert habitat that is important for bird species. In addition to the habitat value these woodlands provide, they are also important to sustaining the ecosystem function of the washes: the root systems stabilize the washes and banks during flash flooding, which

occurs during the monsoon season, and the trees help to slow the water. This habitat occurs in a portion of the western half of the solar energy study area. The Nature Conservancy recommends modifying the Riverside East solar energy study area to avoid impacts to this habitat and the ecosystem processes.

- As currently configured, the Riverside East solar energy study area severs the connectivity and linkage between the Northern Colorado and Eastern Colorado desert tortoise recovery units that was used in the Draft Revised Recovery Plan to justify combining these two units. This connectivity needs to be maintained.
- Summary of Recommendations for the Riverside East solar energy study area: The current solar energy study area should be modified, reduced, and potentially split into several solar energy study areas, based on an assessment of landscape-level linkages, including wildlife movement corridors, ecological processes, and climate change adaptation needs and to avoid irreplaceable and highly intact habitats.

Pisgah

- Areas within the Pisgah solar energy study area meet many of the criteria that The Nature Conservancy believes are important for siting solar energy facilities in the California deserts. Like the Riverside East area, this study area is close to transmission and also in close proximity to an urbanized area. A portion of the solar energy study area also meets another criterion that we suggested earlier: the study area includes public lands with relatively low conservation value that adjoin disturbed private lands with low conservation value.
- A recently released study [Hannah, L et. al. 2009. Cumulative Impacts of Large-scale Renewable Energy Development in the West Mojave. University of California, Santa Barbara, Donald Bren School of Environmental Science and Management] identified the development of the Pisgah Competitive Renewable Energy Zone (CREZ), as identified in the Renewable Energy Transmission Initiative, as potentially the most problematic area for solar energy development when it comes to the long-term survival of the bighorn metapopulation. The Pisgah solar energy study area corresponds with the Pisgah CREZ as defined in RETI. This solar energy study area should be evaluated and modified based on this new information to avoid bighorn sheep migration corridors.
- The eastern and southern portion of the Pisgah solar energy study area overlaps with and almost entirely engulfs some important conservation areas, including one of the few excellent occurrences of the White Margined Beardtongue in the Mojave Desert. The distribution of this imperiled plant is limited in the Western Mojave and this occurrence is on the western edge of its known range (CDFG, 1997b¹; Scogin, 1989²).

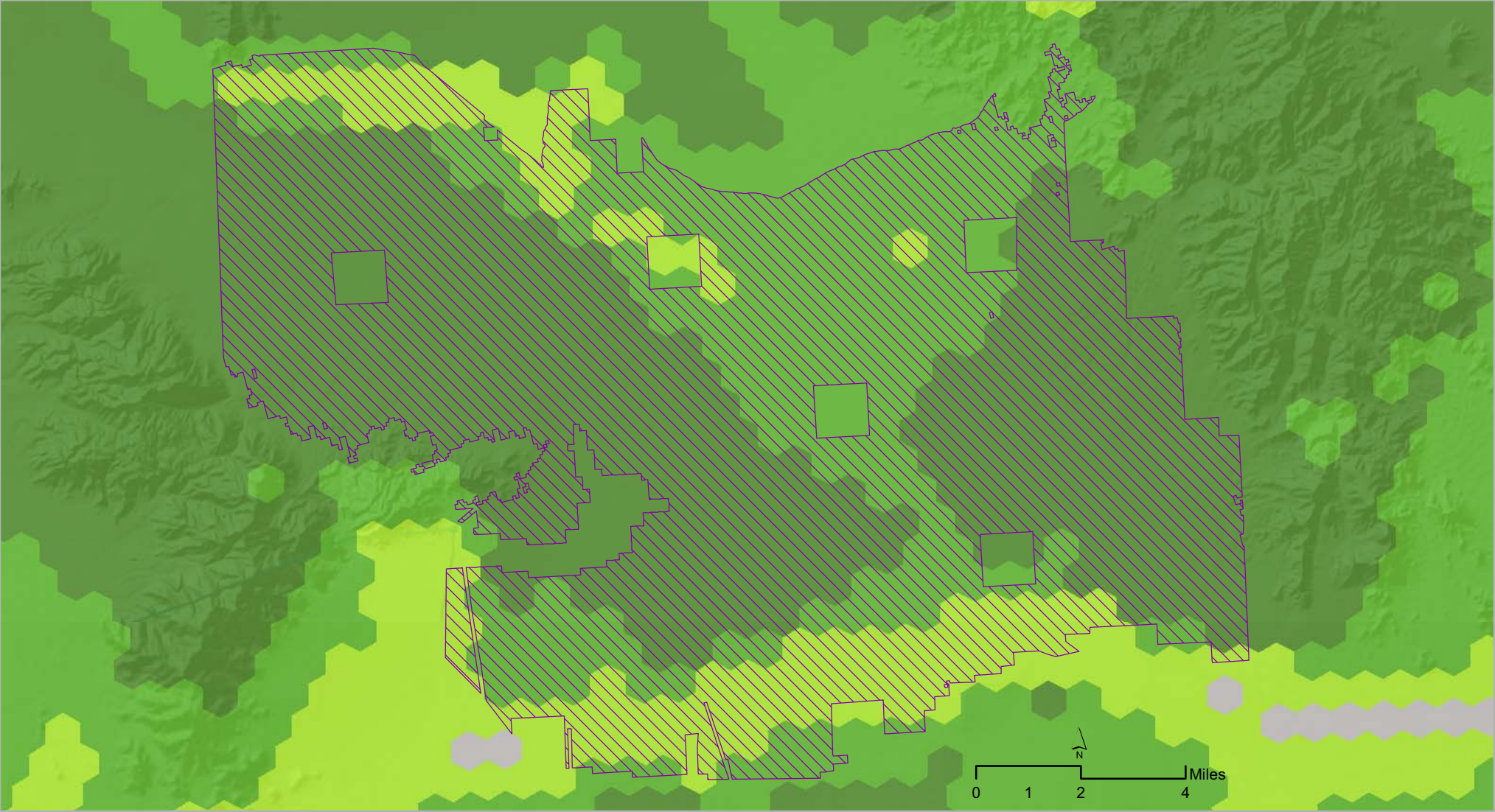
¹ California Department of Fish and Game. 1997b. Natural Diversity Data Base, RareFind Report.

- The drainages and crucifixion thorn woodland in the southern and eastern portion of the Pisgah solar energy study area create good habitat for several Sonoran bird species, allowing for the northernmost and westernmost extensions of these species. As climate changes, the extreme edges of the distribution of these species may be important for adaptation.
- The Pisgah solar energy study area, as currently configured, blocks an important desert tortoise movement corridor along the western edge of the Cady mountains. This wildlife corridor is important for providing connectivity between the Ord-Rodman Desert Wildlife Management Area (DWMA)/ACEC and the Superior-Cronese DWMA/ACEC.

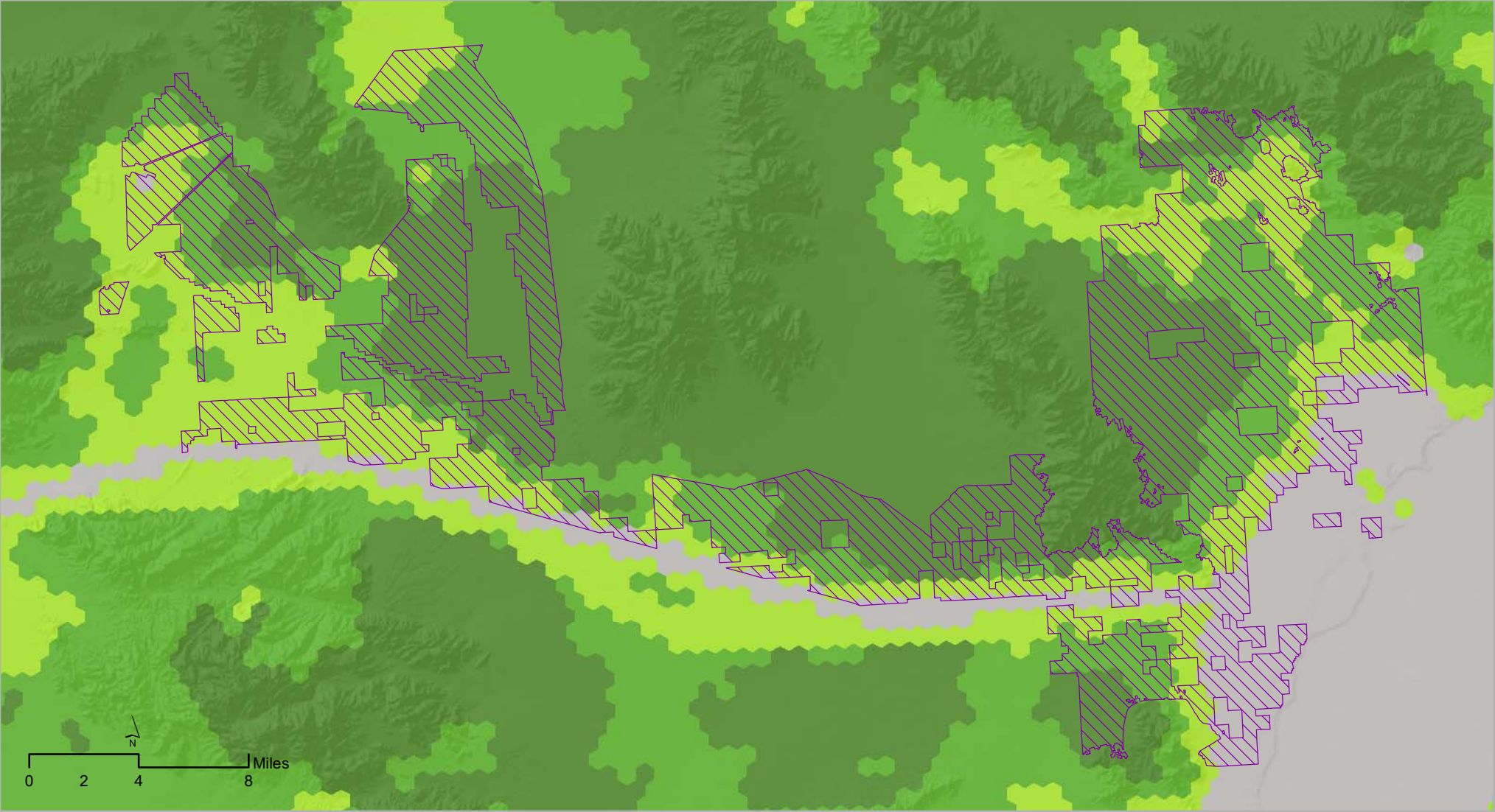
Attached maps:






Iron Mountain
Riverside East
Pisgah

² Scogin, R. 1989. Studies of *Penstemon albomarginatus* in California. Report for Rancho Santa Ana Botanic Garden, Claremont, California.



- Current SESA
- Category A: Lands that have a high level of landscape integrity (low or no fragmentation) and satisfy at least one of our two conservation goals of irreplaceability and ecosystem representation.
- Category B: Lands that have a high level of landscape integrity or satisfy at least one of our two conservation goals of irreplaceability or ecosystem representation. As such, lands in this category may have high target value but have compromised integrity,
- Category C: Natural areas or open space that are fragmented by roads, sparse rural residential communities, or other human uses, but which may nonetheless contain conservation targets, provide potential habitat linkages, or provide a buffer around Category A
- Category D: Lands that are dominated by urban communities and agriculture, but which may contain isolated conservation targets or provide habitat for some wildlife species.



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