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Via E-Mail to ca690@ca.blm.gov

Mr. George Meckfessel
Planning and Environmental Coordinator
Bureau of Land Management, Needles Field Office
1303 South U.S. Highway 95
Needles, CA 92363

DOCKET

07-AFC-5

DATE 02/11/10

RECD. 07/20/10

Re: Comments on the Ivanpah Solar Energy Generating System FSA/DEIS, 74 Fed. Reg. 58043 (Nov. 10, 2009).

Dear Mr. Meckfessel:

Thank you for the opportunity to comment on the Final Staff Assessment/Draft Environmental Impact Statement ("FSA/DEIS") for Bright Source Energy, Inc.'s Ivanpah Solar Energy Generating System ("SEGS") project. These comments are submitted on behalf of Defenders of Wildlife ("Defenders") and our more than 1 million members and supporters in the U.S., 200,000 of whom are in California.

Defenders is dedicated to protecting all wild animals and plants in their natural communities. To this end, Defenders employs science, public education and participation, media, legislative advocacy, litigation, and proactive on-the-ground solutions in order to prevent the extinction of species, associated loss of biological diversity, and habitat alteration and destruction.

Defenders strongly supports the emission reduction goals found in the Global Warming Solutions Act of 2006, AB 32, including the development of renewable energy in California. However, we urge that in seeking to meet our renewable energy portfolio standard in California, project proponents design their projects in the most sustainable manner possible. This is essential to ensure that project approval moves forward expeditiously and in a manner that does not sacrifice our fragile desert landscape and wildlife in the rush to meet our renewable energy goals.

The Ivanpah SEGS is a massive project located in the Northern Ivanpah Valley which has increased from a 3,400-acre footprint to a 4,065 acre footprint that includes three solar concentrating thermal power plants, associated buildings, roads, a gas and water pipeline, new groundwater pumping, and a reconducted transmission line. It could entail loss of habitat and displacement for many wildlife species, including the state and federally threatened desert tortoise, special-status mammals and birds, and numerous rare plant species. The FSA/DEIS fails to analyze a reasonable range of alternatives, narrowly defining the project's objectives in such a way as to preclude assessment of many viable alternatives on private and degraded land. In addition, the FSA/DEIS does not adequately address the significant loss of habitat and cumulatively significant impacts associated with a project that spans more than 4,000 acres of high quality, relatively

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undisturbed desert land. Additionally, the FSA/DEIS fails to analyze a reasonable range of alternatives, narrowly defining the project's objectives in such a way as to preclude assessment of many viable alternatives on private and degraded land. Defenders would ultimately like to see this project's impacts avoided if possible or mitigated to the greatest extent practicable. To that end, we offer the following comments.

I. The Alternatives Analysis is Insufficient Under the National Environmental Policy Act

The FSA/DEIS's analysis of proposed project alternatives is insufficient and violates the National Environmental Policy Act ("NEPA"). Because the alternatives analysis is the "heart" of any environmental review, the failure to provide meaningful alternatives is fatal to this FSA/DEIS. Indeed, even the California Department of Fish and Game ("CDFG") noted that a "full analysis" of alternate sites was still lacking in the FSA/DEIS (CDFG comments on the Preliminary Staff Assessment, October 27, 2009, page 4). Unfortunately, rather than looking for meaningful alternatives that avoid significant impacts to the desert tortoise and other biological resources, the Bureau of Land Management ("BLM") appears to have simply accepted the proponent's proposal and choice to build the proposed Project in "excellent tortoise habitat," with a low level of mitigation, a 3:1 ratio for impacts to 4,073 acres of high quality desert tortoise habitat, even where "lower quality habitat is clearly within range to potentially reduce the overall project impact to endangered and sensitive species." *Id*

A. BLM's Purpose and Needs Statement is Unlawfully Narrow, Preventing a Reasonable Range of Alternatives From Being Considered

In specifying their EIS obligations under NEPA, federal agencies must "specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." 40 C.F.R. § 1502.13. Agencies may not "contrive a purpose so slender as to define competing 'reasonable alternatives' out of consideration (and even out of existence)." *Simmons v. U.S. Army Corps of Eng'rs*, 120 F.3d 664, 665 (7th Cir. 1997). Nor may agencies "define the objectives of its action in terms so unreasonably narrow that only one alternative . . . would accomplish the goals of the agency's action, and the EIS would become a foreordained formality." *Citizens Against Burlington v. Busey*, 938 F.2d 190, 196 (D.C. Cir. 1991) cert. denied 503 U.S. 994 (1991).

Rather than presenting a purpose and need statement that reflects the larger goal of providing for the development of solar energy, and then evaluating different means to achieve that goal, BLM has instead defined the Ivanpah SEGS project and other infrastructure construction itself as the goal. *See* FSA/DEIS at 4.5 ("to . . . construct and operate a nominal 400-MW, renewable power generating facility in California . . . in areas of high solar intensity with ground slope of less than 5 percent . . . [and] to complete the impact analysis of the project by the first quarter of 2010"). By so radically narrowing the scope of the project's purpose, BLM has impermissibly constricted the range of alternatives considered. *See Carmel by the Sea v. U.S. DOT*, 123 F.3d 1142, 1155 (9th Cir. 1995)

Indeed, the FSA/DEIS considers only two "alternatives" – the proposed action and the no action alternative. Other viable methods to effectively develop solar projects while minimizing impacts to sensitive wildlife populations and habitat, including development on private lands with lower quality wildlife habitat, development on degraded land, reductions in the size, or changes in

the configuration of the Project, were not considered as alternatives in the FSA/DEIS. Because the purpose has been defined as requiring the project to be of a certain size, configuration, slope, and location, the BLM has ensured that no alternative courses of action would be considered, regardless of whether such alternatives would also meet renewable energy goals without significant environmental impacts.

B. Analysis of Only the Proposed and No Action Alternative Fails To Meet Minimum Requirements Under NEPA

In addition to properly defining the purpose and need of an agency action, agencies must consider a range of reasonable alternatives to the agency action in the EIS. Agencies must “[s]tudy, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.” 42 U.S.C. § 4332(2)(E). NEPA requires that an EIS must discuss alternatives to the proposed action, “to provide a clear basis for choice among options by the decision-maker and the public.” 40 C.F.R. § 1502.14; *see also* 42 U.S.C. § 4332(E); C.F.R. §§ 1507.2(d), 1508.9(b). The purpose of this requirement is “to insist that no major federal project should be undertaken without intense consideration of other more ecologically sound courses of action, including shelving the entire project, or of accomplishing the same result by entirely different means.” *Environmental Defense Fund v. Cops of Engineers*, 492 F.2d 1123, 1135 (5th Cir. 1974); *Methow Valley Citizens Council v. Regional Forester*, 833 F.2d 810 (9th Cir. 1987), *rev’d on other grounds*, 490 U.S. 332 (1989) (agency must consider alternative sites for a project). NEPA documents considering a no-action alternative along with “two virtually identical alternatives,” have been faulted for “fail[ing] to consider an adequate range of alternatives.” *Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 813 (9th Cir. 1999).

As a result of arbitrarily limiting the purpose and need, the BLM only analyzed two alternatives: the proposed action and the no action alternative. Such a truncated alternatives analysis violates the agency’s duty under NEPA to fully review “all reasonable alternatives.” The EIS must analyze project alternatives including (1) project modification; (2) private land development on disturbed lands; and (3) alternatives outside the jurisdiction of the BLM.

1. Project Modification

The BLM rejected a proposed project reconfiguration submitted by the Sierra Club as an alternative, stating very generally that impacts would not be reduced. BLM failed to provide any meaningful analysis and simply glossed over what were some significant differences in impacts to biological resources between the I-15 alternative and the proposed project site. Surveys conducted by the project proponent in 2007 identified less desert tortoise within the I-15 reconfiguration area than on the proposed project site. However, protocol desert tortoise surveys were not conducted for the I-15 alternative site (FSA/DEIS, page 4-44).

2. Private Lands Alternative

BLM dismissed the alternative of locating the project on private land because it would have required the project proponent to complete “option-to-purchase agreements with multiple private owners (FSA/DEIS, page 4-19).” In the case of the Harpers Lake private land option, which “had sufficient land for a 400 MW facility with the configuration of the proposed project,” it was rejected by the proponent because “one of the major land owners at the site requested too much money

(FSA/DEIS, page 4-20).” This dismissal is unacceptable. The California Energy Commission (“CEC”) and BLM should have at least independently analyzed the project proponent’s statements concerning cost. Considering the overriding policy impetus toward siting renewable facilities on private degraded land, the agencies have a mandated to fully consider a reasonable range of private land alternatives. The Renewable Energy Transmission Initiative (“RETI”) recently issued the following statement:

RETI stakeholders agree that utilizing disturbed private lands close to existing infrastructure for renewable energy development should be a priority for the state. County governments and state agencies are in the best position to develop mechanisms to consolidate the ownership of extensively-parcelized lands that have excellent renewable resource potential. For this reason, the RETI Phase 2A Final Report includes a formal recommendation that the California Energy Commission, in conjunction with other state and federal agencies, counties and the renewable energy industry, develop and implement a strategy for consolidating ownership of disturbed or degraded private lands for renewable energy development on an expedited basis (RETI Phase 2A Final Report, page 2-33).

RETI’s prioritization of private lands for renewables siting creates a mandate for CEC and BLM to analyze a reasonable number of private lands alternatives. BLM should not preclude a private land alternative or any other alternative from analysis because it is not within the agency’s jurisdiction. In fact, NEPA regulations require inclusion of reasonable alternatives not within the jurisdiction of the lead agency. 40 C.F.R. § 1502.14(c).

3. Existing Application Alternative Locations

Many of the potential alternative locations were eliminated from consideration due to other applicants, or in some cases, the same applicant having filed an application with BLM to develop the property. While BLM has yet to review or act on these applications, BLM has inexplicably determined that such applications confer a property right in federal lands, stating that “existing applications for renewable projects give applicants prior rights to BLM-administered lands (FSA/DEIS, page 4-11).” This also appears to be without any regard to the ultimate viability of any such projects. Beyond the panoply of legal issues that this raises, the policy it promotes – encouraging a race to file applications in an effort to claim territory is antithetical to efforts to responsibly develop solar energy projects while minimizing impacts to wildlife and other resources.

4. Siberia East Alternative

Even more inexplicable is BLM’s elimination of the Siberia East Alternative site based on the existence of two prior applications having been filed – both by Brightsource – the same applicant as for this ISEGS project. BLM’s stated reason for eliminating that alternative from analysis was that “Brightsource maintains active applications with BLM and desires to develop both sites. As such, it has been eliminated from potential selection (FSA/DEIS, page 4-13).” This reasoning by BLM fails to meet basic standards of logic, let alone the detailed requirements of NEPA. See *Simmons v. United States Army Corps of Eng’rs*, 120 F.3d 664, 666-7 (7th Cir. 1997) (“One obvious way for an agency to slip past the strictures of [NEPA] is to contrive a purpose so slender as to define competing ‘reasonable alternatives’ out of consideration (and even out of existence). The Federal Courts cannot condone an agency’s frustration of Congressional will. If the agency

constricts the definition of the project's purpose and thereby excludes what truly are reasonable alternatives, the [environmental impact statement] cannot fulfill its role.”).

II. The EIS Must Adequately Analyze and Address Impacts to Species and Habitats

A. Desert Tortoise

The U.S. Fish and Wildlife Service (“USFWS”) listed the Mojave population of desert tortoise, including those in the Ivanpah Valley, as threatened in 1990, providing the tortoises protection under the Endangered Species Act (“ESA”), 16 U.S.C. § 1531, *et seq.* ESA § 7 requires federal agencies, such as BLM to ensure that their actions are “not likely to jeopardize” listed species. This obligation includes ensuring that actions such as issuance of permits or rights of way will not jeopardize the continued existence of any endangered or threatened species or result in adverse modification or destruction of critical habitat of such species. 16 U.S.C. § 1536(a)(2). To determine whether its actions are likely to jeopardize listed species, BLM must consult with USFWS pursuant to Section 7(a)(2). BLM’s substantive obligation under the ESA to conserve listed species is in addition to its duty to adequately analyze and address impacts to species and habitats under NEPA.

As a result of cumulative impacts, desert tortoise populations have been extirpated or almost extirpated from large portions of the western and northern parts of their geographic range in California (e.g., Antelope, Indian Wells and Searles Valleys). Population declines or extirpations attributable to cumulative impacts have occurred in and near the California communities of Mojave, Boron, Kramer Junction, Barstow, Victorville, Apple Valley, Lucerne Valley, and Twentynine Palms. Similar patterns are evident near Las Vegas, Laughlin, and Mesquite, Nevada; and St George, Utah. Future extirpations can be expected in the vicinity of all cities, towns, and settlements (Fish and Wildlife Service. 1994. Desert tortoise (Mojave population) Recovery Plan. U.S. Fish and Wildlife Service, Portland, Oregon. Page 3).

The proposed project site is classified by BLM as Category III desert tortoise habitat, which is the least protective category. The 1994 Desert Tortoise Recovery Plan included the North Ivanpah Valley in the proposed Ivanpah Desert Wildlife Management Area (“DWMA”), recognizing the ecological value of the area and its importance to desert tortoise recovery. Unfortunately, BLM chose to exclude the North Ivanpah Valley from the DWMA in the Northern and Eastern Mojave (“NEMO”) Planning Area amendments to the California Desert Conservation Area (“CDCA”) Plan. The importance of this area is evidenced by the number of tortoises that continue to occupy this site. Surveys completed by the project proponent’s consultants found at least 26 desert tortoises on this site. BLM should expect to find approximately double that number - 52 tortoises - currently occupying the site. The estimated population of desert tortoises occupying the project area is approximately twice the observed number due to variable factors of detectability and above-ground activity. This Northern Ivanpah Valley tortoise population is very significant, particularly because the population there has crashed from a one-time maximum density of 50 tortoises per square mile (Desert Tortoise Recovery Plan, page F13). As discussed above, the proponent’s survey results show that approximately 52 tortoises likely occupy the 6-7 square-mile site (7-8 tortoises per square-mile). This is significantly less than the one-time maximum density referenced above.

The proponent has characterized the site as disturbed land with little to no value for wildlife. Defenders recognizes that this project site has been in the Clark Mountain grazing allotment (CA-690-EA06 26). However, the grazing activity on the site has been nominal. Defenders staff has

visited the site and we concur with the assessment in the FSA/DEIS (p. 6.2-29) that “the ISEGS project area provides high quality habitat for this species, with low levels of disturbance and high plant species diversity.” The desert tortoise population in the Northern Ivanpah Valley is also unique because it is the highest elevation at which this species is known to reside in the State (FSA, page 6.2-29). Therefore, the area could be very important for desert tortoise survival if the species is forced to seek out higher elevation habitat as a result of climate change and aridification of the Mojave Desert.

NEPA requires agencies to include a discussion of the means to mitigate adverse environmental impacts of projects. 40 C.F.R. § 1502.16(h). Given the importance of this habitat, the high number of tortoise on the site, and the sheer loss of over 4,000 acres of habitat, we strongly recommend that the project proponent attempt to avoid impacts to tortoises first, then minimize those impacts that cannot be avoided, and finally, if all else fails, adequately mitigate for those impacts. To that end, we strongly urge that the project follow the recommendations found in the current USFWS Desert Tortoise Recovery Plan for avoidance and minimization measures. Additionally, BLM has initiated consultation with USFWS and the forthcoming biological opinion will contain avoidance and mitigation measures.

The FSA/DEIS (page 6.2-120) proposes an overall 3:1 mitigation ratio to compensate for loss of desert tortoise habitat. The CEC and BLM propose to “nest” the BLM’s 1:1 mitigation ratio within the CEC’s 3:1 mitigation ratio to fulfill both agencies’ requirements. According to CEC Condition of Certification BIO-17, the proponent would satisfy the nested mitigation requirement through an “in-lieu fee” mitigation program – e.g. payment into a fund to support habitat acquisition or enhancement. BLM’s compensatory mitigation plan, serving as one-third of the 3:1 mitigation ratio required to satisfy the California Endangered Species Act (“CESA”), would include acquisition of up to 4,073 acres of land within the Eastern Mojave Recovery Unit, or desert tortoise habitat enhancement or rehabilitation activities that meet BLM, CDFG, USFWS and CEC approval, or some combination of the two. BLM should also consider habitat enhancement measures as part of its one-third contribution to the mitigation requirement. Erecting fencing on Nipton Road and the adjacent portion of I-15 could help mitigate road mortality for desert tortoise populations, which has taken a significant toll in the past.

This “in-lieu fee” mitigation plan raises many questions. Because it is a joint or “nested” mitigation structure, and therefore must satisfy both State and Federal mitigation requirements, BLM should be aware of legal requirements at both the State and Federal level. In California, the payment of fees must be tied to a functioning mitigation program to be adequate. *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359. In order to serve as an adequate substitute for traditional mitigation measures, an in-lieu fee program must be evaluated under the California Environmental Quality Act (“CEQA”), including the requirements to circulate the plan for public comment. *California Native Plant Society v. County of El Dorado* (2009), 170 Cal. App. 4th 1026. It is in BLM’s interest to ensure that the in-lieu fees manifest into actual on-the-ground improvement to desert tortoise habitat. The FSA/DEIS does not currently contain adequate information to satisfy the public’s interest in ensuring that the required fees translate into benefits to the desert tortoise. Additionally, according to BLM Instruction Memorandum No. 2008-204, “in-kind” mitigation is generally preferred to “out-of-kind” and BLM offsite mitigation may be performed on Federal lands. BLM should strongly consider using its one-third mitigation requirement to acquire suitable desert tortoise habitat within the Recovery Unit. As mentioned above, this population of desert

tortoises faces multiple threats, including habitat destruction, predation and disease. Targeted habitat acquisition could help the species to recover.

The Biological Assessment for this project lists the Site Rehabilitation Plan as a mitigation measure (Biological Assessment, page 1-21). The proponent has developed a plan for restoring the site after the 50-year lifetime of the facility. As stated in the Application for Certification (page 5.2-29), “desert systems are ecologically fragile and it will not be practicable to recreate the lost habitat elements exactly after 50 years of site disturbance...the long-term lapse, more than 50 years, is equivalent to a total loss of this habitat.” The identification of site rehabilitation as a mitigation measure is improper. The proponent concedes in its own Application for Certification that the site cannot be rehabilitated to its original state. The site will represent a total loss in terms of its habitat value. The severity of the impacts to the species merits acquisition of habitat as the most feasible mitigation measure. The desert tortoise is known to be present on the site, the habitat is of high quality, and the habitat would be significantly disturbed by the project due to grading and ground disturbance. Additionally, the project affects habitat connectivity because it bifurcates an area located at the juncture of the Mojave Preserve, the Tortoise DWMA and Federal wilderness areas.

The BLM must also consider the substantial risks posed by the Ivanpah SEGS translocation program. The U.S. Army suspended its Desert Tortoise translocation program at Fort Irwin when at least 15% of the translocated tortoises died, mostly due to predation¹. Some unofficial estimates have now placed the Fort Irwin desert tortoise mortality rate at nearly 30%. Other impacts to tortoises must be fully analyzed and addressed, such as new water sources that attract predators, impacts to tortoise water sources from proposed groundwater pumping, impacts from roads, and impacts from vegetation management. For example, if additional water sources will be placed on site, it could increase raven populations within the surrounding area. A raven monitoring plan would need to be included, as ravens can have a very detrimental impact on tortoises. In addition, while the project will obviously involve roads and a great deal of traffic (particularly during construction), the project application fails to consider the use of fencing to avoid impacts to the tortoise. Roads lead to direct and indirect impacts on desert tortoise including roadkill mortality, destruction of burrows, dispersion of invasive plants, predators, development, recreation, and possibly disease (Boarman 2002). Roads and highways tend to fragment wildlife habitat and reduce the movement of animals through the landscape (Tsunokawa and Hoban 1997, Evink 2002). Road kill is the greatest human-caused source of direct mortality to vertebrate wildlife in the United States with an estimated one million vertebrates killed per day on roads in America (Forman and Alexander 1998, Kline and Swan 1998). The cumulative impact of habitat fragmentation on desert tortoise is exacerbated by roads and the amount of habitat that they degrade (Boarman 2002).

The Biological Assessment identifies translocation as a mitigation measure. It is important to note that translocation is not mitigation. Translocation is a minimization measure for the take of desert tortoises on the site. However, the project will result in take of all desert tortoises on the site and cannot be mitigated by translocating individual tortoises. Additionally, the proponent's consultants observed at least 25 desert tortoises on the site during surveys. Based on those surveys, at least 50 desert tortoises are likely to be found on the site. Therefore, the proponent's statement that “the proposed action would likely result in the translocation of 25 tortoises” is incorrect

¹ Army suspends Fort Irwin tortoise relocation plans after deaths of 90 animals, *available at* http://www.pe.com/localnews/inland/stories/PE_News_Local_S_tortoises10.450e731.html (last visited Feb. 10, 2010)

(Biological Assessment, page 5-1). At least 50 tortoises will likely need to be translocated. Finally, surveys of the translocation area were completed in July and August of 2009 outside of the protocol survey season (Biological Assessment, page 4-6). Therefore, the proponent does not currently possess adequate knowledge of the desert tortoise population in the translocation area to develop a sufficient translocation plan.

The BLM is constrained by specific policy guidance in implementing translocation programs. According to BLM Manual 1745, a site-specific activity plan is required prior to the introduction, transplant, and reestablishment of plants or animals on public lands. Additionally, decisions for making introductions, transplants, or reestablishments should be made as part of the land use planning process, and include a land use plan amendment (BLM Manual 1745). BLM has not included an activity plan or land use plan amendment in the FSA/DEIS or the Biological Assessment. This documentation will be required before a decision is made on the translocation. Additionally, BLM must ensure that the translocation lands are preserved in perpetuity. BLM must not allow right-of-way applications on areas that effectively become surrogate desert tortoise habitat due to a translocation program.

As stated above, Defenders does not believe that translocation, in and of itself, provides mitigation for desert tortoises. Instead, any translocation must be in conjunction with the preservation of habitat. Further, the Translocation Plan should follow the recommendations of the USFWS Desert Tortoise Recovery Plan, including:

- a) No experimental translocations into DWMA's.
- b) Translocations should be made to appropriate habitat. The EIS should justify its selected translocation site. BLM should also explain the adequacy of the non-protocol surveys that were completed.
- c) Areas into which desert tortoises are to be relocated should be surrounded by a desert tortoise-proof fence or similar barrier. The fence will contain the desert tortoises while they are establishing home ranges and a social structure.
- d) The best translocations into empty habitat involve desert tortoises in all age classes, in the proportions in which they occur in a stable population. The EIS should discuss the population structure in the proposed translocation area.
- e) The number of desert tortoises introduced should not exceed the pre-decline density.
- f) All tortoises identified for potential translocation should be medically evaluated in terms of general health and indications of disease, using the latest available technology, before they are moved.
- g) If desert tortoises are to be moved into an area that already supports a population - even one that is well below carrying capacity - the recipient population should be monitored for at least 2 years prior to the introduction. Necessary data includes the density and age structure of the recipient population, home ranges of resident desert tortoises, and general ecological conditions of the habitat. Any translocation sites should be isolated by a desert tortoise barrier fence or similar barrier next to the highway or road. The purpose of fencing the highway is obvious - to keep translocated

animals from being crushed by vehicles on the road. The FSA/DEIS is unclear about the level and extent of fencing.

B. Banded Gila Monster

Defenders strongly urges BLM to include the Banded Gila Monster, listed under CESA as a species of special concern by CDFG, on the list of species to be analyzed and addressed. Recent scientific research has found that Gila monsters appear to use rocky hills and surrounding bajadas as overwintering sites (D.F. DeNardo, et al., 2007 Desert Tortoise Council Symposium Abstract). Thus, the project area could be important habitat for the Gila monster. The project should provide adequate mitigation for impacts to Banded Gila Monster habitat. The FSA/DEIS states that compensatory mitigation for desert tortoise may also offset impacts to Gila monsters. This mitigation measure may not have a tangible benefit for the species on the ground and is therefore inadequate. As CDFG stated in its comments, there must be a plan in place to address impacts to Gila monster should desert tortoise mitigation be insufficient to reduce Gila monster impacts to less than significant levels (CDFG comments on the Preliminary Staff Assessment, October 27, 2009, page 4).

C. Nelson's Bighorn Sheep

Defenders also urges BLM to assess impacts to Nelson's bighorn sheep, a BLM sensitive species, in the EIS. While the California Natural Diversity Database ("CNDDDB") reports the last occurrence of bighorn sheep in this area to be in 1986, there is some evidence showing that bighorn sheep use the project area either as foraging habitat or for wildlife corridors. Therefore, we strongly urge that this project analyze and address impacts to bighorn sheep and their ability to move across the Ivanpah Valley. Construction and operation of the Ivanpah SEGS project could reduce foraging opportunities for bighorn on the bajada and narrow the width of movement corridors between Clark Mountain and the Stateline Hills for this species (FSA/DEIS, page 6.2-47). Furthermore, given the proposed use of groundwater, we strongly recommend that the impacts of this pumping be analyzed and addressed with respect to potential impacts on the desert seeps and springs used by bighorn sheep. Studies have not been completed to determine whether seeps used by bighorn in the Clark Mountains will be affected by groundwater pumping in Ivanpah Valley through hydrological connections. Lastly, the mitigation proposed in the FSA/DEIS is limited to construction of an artificial water source (page 6.2-47). This measure will not mitigate impacts to bighorn sheep foraging habitat and wildlife corridors and may have the negative effect of attracting ravens. Acceptable mitigation requirements are those that avoid, minimize, rectify, reduce or compensate for an impact. 40 C.F.R. § 1508.20. The artificial water source accomplishes none of these benefits in connection with the potential habitat loss. The EIS should clarify the manner in which water sources will effectively mitigate for habitat loss and justify the absence of habitat acquisition requirements for bighorn sheep.

D. Burrowing Owl

The project fails to address impacts to the burrowing owl. In addition to its status as a State Species of Special Concern, the burrowing owl is also protected under Fish and Game Code Section 3503.5 and the Migratory Bird Treaty Act. 16 U.S.C. § 703. Impacts to burrowing owls must be addressed in the EIS. The species was detected on the ISEGS site during the 2008 surveys and suitable habitat was identified (FSA/DEIS, page 6.2-22). However, the FSA/DEIS did not identify

compensatory mitigation measures for the burrowing owl. Off-site habitat acquisition and enhancement pursuant to BIO-17 is identified as a mitigation measure for the owl in Biological Resources Table 7 of the FSA/EIS. However, that habitat acquisition measure is not explained. BLM must adhere to the following measures in the EIS, as found in CDFG's Burrowing Owl Survey Protocol and Mitigation Guidelines:

- a) Occupied burrows should not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by the Department of Fish and Game determines that the adult birds have not begun egg-laying and the juveniles from the occupied burrows are foraging independently and capable of independent survival.
- b) As compensation for the direct loss of burrowing owl nesting and foraging habitat, the project proponent should mitigate by permanently protecting known burrowing owl nesting and foraging habitat.
- c) A Burrowing Owl Mitigation and Monitoring Plan should be submitted to the Department of Fish and Game for review and approval prior to relocation of owls describing the proposed relocation and monitoring plans. The plan shall include the number and location of occupied burrow sites and details on adjacent or nearby suitable habitat available to owls for relocation. If no suitable habitat is available nearby for relocation, details regarding the creation of artificial burrows (numbers, location, and type of burrows) will also need to be included in the plan.

E. Native Desert Vegetation and Special Status Plant Species

The FSA/DEIS details impacts to some plant species, particularly the barrel cactus, Mojave yucca, desert pincushion, nine-awned pappus grass, Parish's club-cholla, Rusby's desert mallow and Mojave milkweed. However, the original plant surveys were admittedly conducted during a dry year. Surveys, no matter how thorough, when performed during seasons and in years in which specific growth conditions are absent, may fail to record the presence and/or full range extent of rare plants in desert habitats. Indeed, given the diversity of native plants found on the project site during a dry year survey, we believe that this site contains a large number and extent of rare plants.

Impacts to rare plants on the project site would be extensive. To manage for viable rare plant populations on the project site, BLM must identify project-related threats to those populations. Threats include, but are not limited to, altered light regimes due to shading by heliostats, altered hydrological conditions due to intercepted and redirected rainfall patterns and mirror washing, soil compaction during construction and operational phases of the project, altered soil nutrient conditions due to modified nutrient uptake by regularly mowed vegetation, and the introduction and spread of invasive weeds.

The sheer number and extent of the threats make them difficult to mitigate. However, the rare plant mitigation measure proposed in the FSA/DEIS – BIO-18 – is woefully inadequate. Although the proposed avoidance and minimization measures included in BIO-18 may reduce impacts to three impacted species (desert pincushion, nine-awned pappus grass, and Parish's club-cholla) to less-than-significant levels, impacts to Mojave milkweed and Rusby's desert-mallow would remain significant (FSA/DEIS, page 1-18). Impacts to these species therefore cannot be fully mitigated. In what appears to be a last ditch effort to mitigate for these species, BIO-18 requires the

project owner to conduct floristic surveys for Rusby's desert-mallow and Mojave milkweed on all lands that will be acquired as part of the desert tortoise compensatory mitigation requirements. (FSA/DEIS, page 6.2-128). However, compensatory mitigation for these species is not ultimately required, either on lands acquired for desert tortoise or elsewhere. As such, this survey requirement appears to be toothless. Adequate mitigation that addresses the impacts to rare plant populations would require, at a minimum, that the applicant conduct offsite surveys in multiple areas to identify lands with additional occurrences of the affected special status plants and protect those lands through acquisition or conservation easement.

Finally, we are very concerned about the extent of the impact of the proposed project on the Creosote Bush-White Bursage Barrel Cactus Community Type. With 10,000 acres of this plant community existing in 20 to 30 locations, the project appears to impact more than 1/3 of the community type (Application for Certification, page 5.2-46). Such an impact appears to be very significant and must be fully analyzed and addressed in the EIS.

F. Other Species

The proposed project will reroute and fill in a number of existing ephemeral washes that flow into the Ivanpah Dry Lake. The EIS must analyze and address impacts to the Dry Lake and fairy shrimp. Additionally, the EIS must analyze and address impacts to migratory birds from this project. Loss of nesting and foraging habitat for special-status bird species (golden eagle, burrowing owl, loggerhead shrike, Crissal thrasher and Brewer's sparrow) would adversely affect populations of these species within the Ivanpah Valley. According to the FSA/DEIS proposed Condition of Certification BIO-17, the compensatory mitigation plan could offset the loss of habitat for these species and reduce the impact to less-than-significant levels. CDFG noted that this section should be updated to either show that the compensatory mitigation does offset the loss, or other measures may need to be developed that will reduce impacts to less-than-significant levels. Defenders agrees with CDFG's recommendation.

III. The EIS/FSA Must Adequately Analyze Cumulative Impacts

The need to prepare a comprehensive EIS based on cumulative and regional effects on wildlife has been specifically embraced by the D.C. Circuit. For example, in *Natural Resources Defense Council v. Hodel*, 865 F.2d 288 (D.C. Cir. 1988), conservation organizations alleged that the Department of the Interior failed to adequately consider the cumulative effects of simultaneous offshore oil and gas leasing and development in the Pacific and Atlantic Oceans on migratory species including endangered cetaceans, marine mammals, salmon, and marine and coastal birds. The D.C. Circuit agreed with plaintiffs, finding that the EIS "for the most part considers only the impact within each area" of leasing. *Id.* at 298 (emphasis in original). The Court thus held that the analysis did "not address the issue ... which NEPA requires the Secretary to consider...the cumulative impacts of [oil and gas leasing] development in different areas," and that "allowing the Secretary's 'analysis' to pass muster here would eviscerate NEPA." *Id.* at 298-99 (quotations in original). The FSA/DEIS does not contain a comprehensive list of projects in the area that may have cumulative impacts.

Further, NEPA requires analysis of significant cumulative impacts of the proposed project when combined with other past, present and reasonably foreseeable future projects. 40 C.F.R. § 1508.27 requires that the significance of actions be analyzed in several contexts such as society as a

whole, the affected region, the affected interest, and the locality. This section also requires that the severity of impact be considered and evaluated in determining significance using 10 stated criteria. 40 C.F.R. § 1508.27. The seventh criterion addresses “[w]hether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.” Therefore, the EIS must analyze the other proposed renewable energy projects in this region, any foreseeable growth in this area, including in Primm, the foreseeable impacts of climate change, and any other reasonably foreseeable future projects. The EIS should include a discussion of the foreseeable growth from the workers associated with this project in terms of increased housing and traffic.

Finally, the cumulatively significant impacts of the project, or its contribution to cumulative impacts, must be mitigated. The FSA/DEIS concedes that without mitigation the Ivanpah SEGS project would be a substantial contributor to the cumulatively significant loss of Ivanpah Valley’s biological resources, including the threatened desert tortoise and other special-status species (FSA/DEIS, page 6.2-95). However, the FSA/DEIS does not address *which* existing measures would address the cumulatively significant impacts of the project, or whether additional measures are necessary to deal with the project’s contributions to cumulative impacts.

IV. Conclusion

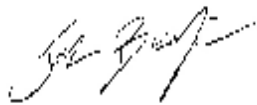
Defenders appreciates this opportunity to submit comments on the FSA/DEIS for the Ivanpah SEGS. California’s 33% Renewable Portfolio Standard is an important policy mandate and one that Defenders strongly supports. This is a major step in weaning our State off fossil fuels. However, the permitting agencies must be vigilant in assessing the environmental impacts of renewable energy facilities and not cut corners. To the contrary, because the Ivanpah SEGS project will impact thousands of acres of federal land and set the tone for future projects, BLM must be particularly thorough in its environmental analysis.

The Ivanpah SEGS project will impact over 4,000 acres of desert tortoise habitat and likely displace over 50 individual tortoises. The project will destroy several rare plant communities, a number of which have a significant portion of their range in the Northern Ivanpah Valley. Finally, many other species may be impacted, including migratory birds and reptiles. Defenders urges BLM to seek avoidance measures, adequate mitigation measures if necessary, and a robust alternatives analysis. A strong EIR will only help this project going forward, as well as the many projects that will follow.

Sincerely,



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California Program Director



Joshua Basofin
California Representative

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