

**Comment Set A1 – Bureau of Land Management****United States Department of the Interior****BUREAU OF LAND MANAGEMENT**

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February 3, 2015

*In Reply Refer to:*  
1610 (P)  
CAC090.38

Michael Krausie, Associate Planner  
c/o Aspen Environmental Group  
235 Montgomery Street, Suite 935  
San Francisco, CA 94104

The US Department of Interior considers it a priority to provide competent and timely review comments on environmental review documents prepared by other agencies. The BLM's review of the Draft Supplemental EIR for the Panoche Valley Solar Project (Dec. 2014) is predicated on the Hollister Field Office's jurisdiction and special expertise in the project area. We hope the attached comments will assist San Benito County in meeting their environmental responsibilities under the California Environmental Quality Act.

Sincerely,

Rick Cooper,  
Hollister Field Manager

Enclosure (1):

*BLM Hollister Field Office Annotated Comments on the Draft Supplemental EIR for Panoche Valley Solar Project (6 pp.)*

Comment Set A1 – Bureau of Land Management (cont.)

<b>BLM Hollister Field Office Annotated Comments on the Draft Supplemental EIR for Panoche Valley Solar Project</b>			
<b>Ref. EIR Section, (Page Number)</b>	<b>Comment</b>	<b>Recommendation</b>	
A.5.3 (A-5)	The Supplemental Draft EIR identifies PG&E upgrades on public lands, but the US BLM is not mentioned in the discussion of other agencies.	Identify BLM as a federal agency with permitting authority in section A.5.3 Include BLM in Table A-1 under Federal Agency. Jurisdiction is provided under the authority of the Federal Lands Management and Policy Act of 1976 (Title V). Permit or Regulatory Requirement = Right of Way (SF-299).	<b>A1-1</b>
A.5.3 (A-5)	“The Corps has assumed jurisdiction over the project for federal permitting under the National Environmental Policy Act (NEPA) of 1969 – 42 U.S.C. Section 4321 et seq. The Corps issued a Notice of Intent to prepare an Environmental Impact Statement (EIS) on July 19, 2012.”	Suggest adding the following statement after the last sentence of A.5.3:  “The environmental effects associated with the Revised Project, including the PG&E network upgrades, shall be analyzed in that NEPA document to facilitate subsequent approvals required by the US Army Corps. of Engineers and the Bureau of Land Management.”	<b>A1-2</b>
A.5.3 (A-5)	The EIR says “the NEPA process is taking place independent of the CEQA process.” Nonetheless, the proposals being analyzed in the EIS (NEPA) and the EIR (CEQA) are connected actions, so the public may benefit from a better explanation of the relationship between these two documents.  According the BLM’s NEPA Handbook (pg. 45), connected actions are those actions that are “closely related” and “should be discussed” in the same NEPA document (40 CFR 1508.25 (a)(1)). Actions are connected if they automatically trigger other actions that may require an EIS; cannot or will not proceed unless other actions are taken previously or simultaneously; or if the actions are interdependent parts of a larger action and depend upon the larger action for their justification (40 CFR 1508.25 (a)(i, ii, iii)).	Consider adding a paragraph in Section A.5.4 that is similar to the discussion of “Regulated Habitat” described on pg. C.6-20 of the 2010 Final EIR.  Also, consider adding a disclosure statement in section A.5.4 to explain:  “The NEPA document being prepared by the Army Corp. of Engineers will analyze the impacts of the revised project on the public lands and the jurisdictional waters of the U.S. because both actions are aspects of the broader Panoche Valley Solar Project.”	<b>A1-3</b>
B.11.3 (B-30 and B-31); C.6.5.3.2 (C.6-97)	Table B-12 is identical to Table C.6-5.  The document says Table B-12 presents AMMs to which PG&E has “committed” on page B-30. Later, on page C.6-97, the document characterizes the AMM’s in Table C.6-5 as “recommended” measures to be implemented by PG&E.  Also, there is a specific reference to PG&E’s SJVHCP: AMMs BIO-1, BIO-2, and BIO-3 on page B-31. However, these AMM’s do not appear in the 2010 FEIR or the 2014 Supplemental DEIR. Page C.6-97 also indicates that PG&E will not utilize the SJVHCP for incidental take of species for this work.  Last sentence on page C.6-97 suggests that USFWS Biological Opinion and CDFW 2081 permit will include species protection measures to avoid and minimize impacts to biological resources.	Consider replacing Table C.6-5 with reference to Table B-12.  Identify where AMM BIO-1, BIO-2, and BIO-3 are established.  Describe and the applicability of these measures (and the SJVHCP) to the proposed PG&E upgrades.  Please clarify which of the AMM’s for PG&E upgrades are “required” by USFWS, CDFW, or CPUC, versus those that are just recommendations.  Suggest the following edit to the last sentence on page C.6-97:  “These measures would be adopted and enforced by the CPUC <u>and the BLM as part of their review and oversight</u> of the PG&E Upgrades.”	<b>A1-4</b>

Comment Set A1 – Bureau of Land Management (cont.)

BLM Hollister Field Office Annotated Comments on the Draft Supplemental EIR for Panoche Valley Solar Project		
Ref. EIR Section, (Page Number)	Comment	Recommendation
B.11.3 (B-35 and B-36);	<p>AMM CR-1 thru MM CR-5 address: Federal and state laws that protect [cultural and paleo] resources and required procedures that must be followed.</p> <p>In the event that previously unidentified archaeological, cultural, or historical sites, artifacts, or features are uncovered during implementation of the project on the public lands, work must be suspended immediately and a BLM cultural resources specialist, or designated representative, must be contacted to examine the discovery and determine the appropriate course of action.</p>	<p>Suggest the following edits to select AMM's:</p> <p><u>AMM CR-1:</u></p> <p>A review of applicable federal, state, and local laws and ordinances governing cultural resources and historic preservation; <u>including notification of the appropriate public agencies.</u></p> <p>A discussion of site avoidance requirements and procedures to be followed in the event unanticipated cultural resources are discovered during construction; <u>including notification of the appropriate public agencies.</u></p> <p>A discussion of procedures to follow in the event human remains are discovered during construction; <u>including notification of the appropriate public agencies.</u></p>
		<p><u>AMM CR-2:</u></p> <p>Where avoidance is not feasible, potential impacts to significant cultural resources must be treated in a way that is acceptable to PG&amp;E, the State Historic Preservation Officer (SHPO), and if applicable, the local Native American community <u>and the BLM.</u></p>
		<p><u>AMM CR-4:</u></p> <p>PG&amp;E's cultural resources specialist or designated representative will be contacted immediately to examine the discovery and determine if additional work is needed. <u>If the unanticipated discovery is on the public lands, work must be suspended immediately and a BLM cultural resources specialist, or designated representative, must be contacted to examine the discovery and determine the appropriate course of action.</u></p>
		<p><u>AMM CR-5:</u></p> <p>If human remains or suspected human remains are discovered during construction, work within 100 feet of the find will stop immediately and the construction foreman shall contact the PG&amp;E cultural resources specialist, who will then call the San Benito or Fresno County Coroner, as appropriate.</p>

A1-5

A1-6

A1-7

A1-8

Comment Set A1 – Bureau of Land Management (cont.)

<b>BLM Hollister Field Office Annotated Comments on the Draft Supplemental EIR for Panoche Valley Solar Project</b>		
<b>Ref. EIR Section, (Page Number)</b>	<b>Comment</b>	<b>Recommendation</b>
		<u>If the unanticipated discovery is on the public lands, a BLM cultural resources specialist, or designated representative, must also be contacted to report the discovery and determine the appropriate course of action.</u>
Table B-12 (pg. B-36 and B-37)	AMM TR-1 and AMM WR-1 identify additional Plans to mitigate impacts of the PG&E upgrades on public lands.	BLM requests that the project proponents provide a copy of the Traffic Control Plan and the Storm Water Pollution Prevention Plan for the project to the Hollister Field Office.
C.2.2 (pg. C.2-2)	Approximately six (6) miles of the PG&E transmission line, and the proposed communication site on Panoche Mountain, are on BLM public lands. These facilities are adjacent to the Panoche Hills North WSA and the Panoche Hills South WSA.  In 1988, BLM recommended the Panoche Hills North WSA as “non-suitable” for wilderness designation. However, the Panoche Hills South WSA was recommended as “suitable” for wilderness designation.	Section C.2.1.2 should mention the environmental setting for the PG&E upgrades includes two (2) BLM Wilderness Study Areas: Panoche Hills North WSA and Panoche Hills South WSA.  Consider adding the following to Section C.2.2:  All WSA’s are managed under the BLM’s Interim Policy for Management of WSA’s until Congress determines if they are suitable for wilderness designation.  Visual resources on BLM land are regulated by the guidance provided in the BLM Handbook H-8410-1 (BLM 1986b).  All Wilderness Study Areas (WSAs) in the Planning Area have been assigned VRM Class I status until a determination is made by Congress for wilderness suitability.  Class I Objective: To preserve the existing character of the landscape. The level of change to the characteristic landscape should be very low and must not attract attention.
C.2.3.5 (C.2-6 & C.2-7)	Discussion of impacts from PG&E upgrade does not mention effects of temporary construction and/or a new communication tower on the two (2) Panoche Hills WSA’s (North & South).	Section C.2 (Aesthetics) of the 2010 FEIR provides a good model to analyze impacts to WSA’s from PG&E upgrades. At a minimum, Impacts AE-1 and AE-3 should identify potential temporary and/or permanent impacts on the two (2) Panoche Hills WSA’s (North & South) and determine significance.
C.6.1.2.2 (C.6-4)	The BLM’s Hollister Field Office may have additional biological resources data available associated with PG&E upgrades on the public lands.	Confirm whether the “literature search and review of existing data” included submission from BLM Hollister Field Office, or not. If not, then consider request for data associated with PG&E upgrades on the public lands

A1-8 cont.

A1-9

A1-10

A1-11

A1-12

Comment Set A1 – Bureau of Land Management (cont.)

BLM Hollister Field Office Annotated Comments on the Draft Supplemental EIR for Panoche Valley Solar Project		
Ref. EIR Section, (Page Number)	Comment	Recommendation
C.6.1.2.3 (C.6-5)	The reference to the species list for Clear Creek Management Area is not appropriate to characterize the environmental setting for the proposed PG&E upgrades.	Delete the reference to the species list for Clear Creek Management Area on page C.6-5.
C.6.1.2.3 (pp. C.6-6 to C.6-9)	<p>Table C.6-1 includes several other listed plant species identified as having “low, moderate, or high” potential to occur that conflict with BLM resource specialists knowledge of the area.</p> <p>For example, there is no potential for <i>Camissonia benetensis</i> to occur in the project area because it is restricted to serpentine soils, which are not present in the area.</p> <p>As noted on page C.6-6, “due to the timing of the surveys and the life history of the species, the three federally endangered, federally threatened, and/or California fully protected species and the majority of the other special status species would likely not have been detectable or identifiable to the species level.”</p>	<p>Delete the reference to San Benito evening primrose on page C.6-6 and page C.6-15.</p> <p>Consider the following edits to the potential presence of special-status plant species within the PG&amp;E upgrade route noted in Table C.6-1:</p> <p>Based on BLM resource specialist knowledge of the public lands, the following species in Table C.6-1 have “no” potential to occur:</p> <p><i>Antirrhinum ovatum</i>: Oval leaved snapdragon  <i>Astragalus rattanii</i> var. <i>jepsonianus</i>: Jepson’s milk vetch  <i>Atriplex subtilis</i>: Deltoid bract saltbush  <i>Camissonia benetensis</i>: San Benito evening primrose  <i>Campanula exigua</i>: Chaparral harebell  <i>Chorizanthe ventricosa</i>: Priest Valley spineflower  <i>Chloropyron molle</i> ssp. <i>Hispidum</i>: Hispid bird’s-beak  <i>Delphinium californicum</i> ssp. <i>interius</i>: California larkspur  <i>Fritillaria falcate</i>: Talus fritillary  <i>Fritillaria viridea</i>: San Benito fritillary  <i>Lagophylla diabolensis</i>: Diablo Range hare leaf  <i>Layia discoidea</i>: Rayless layia  <i>Leptosiphon ambiguous</i>: Serpentine leptosiphon  <i>Malacothamnus aboriginum</i>: Gray bushmallow  <i>Phacelia phacelioides</i>: Mt. Diablo phacelia  <i>Streptanthus insignis</i> ssp. <i>Lyonii</i>: Arburua Ranch jewel flower</p> <p>Whereas, <i>Caulanthus californicus</i> (California jewelflower) has “low” potential to occur; and the following three (3) species have “high” potential to occur:</p> <p><i>Deinandra halliana</i>: Hall’s tarplant  <i>Eriogonum nudum</i> var. <i>inductum</i>: Naked buckwheat  <i>Lepidium jaredii</i> ssp. <i>Album</i>: Panoche pepper grass</p>

A1-13

A1-14

**Comment Set A0001 – Bureau of Land Management (cont.)**

<b>BLM Hollister Field Office Annotated Comments on the Draft Supplemental EIR for Panoche Valley Solar Project</b>			
<b>Ref. EIR Section, (Page Number)</b>	<b>Comment</b>	<b>Recommendation</b>	
C.6.1.2.5 (pg. C.6-15)	It's not clear why the headline "Potential for occurrence is defined as follows:" and the associated terms (present, high, moderate, low, not likely) appear twice on the same page. The definition of these terms is identical in both places. Is this intentional, or is it a typo?	Review and confirm.	<b>A1-15</b>
C.6.2 (C.6-17)	The BLM public lands associated with the PG&E upgrades are managed in conformance with the Record of Decision and Approved Resource Management Plan for the Southern Diablo Mountain Range and Central Coast of California (2007).	Please include the Record of Decision and Approved Resource Management Plan for the Southern Diablo Mountain Range and Central Coast of California (2007) under the applicable regulations, plans, and standards.	<b>A1-16</b>
Table C.6-4 (C.6-59 and C.6-60)	APM BIO-16 was revised to say, "Off-site lands will be managed by a third party selected in consultation with CDFW and USFWS."	Suggest making the same revision to APM BIO-19.	<b>A1-17</b>
C.6.3.4 (pg. 6-66)	MM BR-G.2 says, "Herbicides used for noxious weed control would be applied in accordance with BLM-approved procedures and other federal and state regulations".	BLM requests that the project proponents provide a copy of the associated Noxious Weed and Invasive Plant Control Plan. Prior to herbicide application on the public lands, BLM would require operators to obtain a pesticide use permit. In years when herbicide treatments occur on public lands, BLM would require a copy of the annual written report identified under milestones.	<b>A1-18</b>
C.6.3.5.2 (pp. C.6-102 thru C.6-107)	There are several instances where the County recommends that PG&E implement and the CPUC should adopt the AMM's in Table(s) B-12 & C.6-5.  It's unclear if these measures would actually be adopted by PG&E and enforced by the CPUC?	Please clarify which of the AMM's for PG&E upgrades are "required" by USFWS, CDFW, or CPUC, versus those that are just recommendations.  Suggest the following edits to the statements on pages C.6-102 to C.6-107:  "The County would require that PG&E implement AMM BR-PGE-1 through BR-PGE-9 to reduce general environmental impacts. These measures would be enforced by the CPUC and/or the BLM."	<b>A1-19</b>
C.6.3.5.2 (pg. C.6-107)	Impact BR-16 includes a typo: 1 <sup>st</sup> paragraph, line 8: "BR-PG-11"  Impact BR-19 includes a typo: 1 <sup>st</sup> paragraph, line 6: "AMMBR-PGE-1"	Replace with "BR-PGE-11" and "AMM BR-PGE-1", respectively.	<b>A0001-20</b>
C.7.2 (pg. C.7-3)	The proposed PG&E upgrades on public lands are subject to the NHPA, FLPMA, and a myriad of other executive orders and BLM regulations.	Consider adding a statement in section C.7.2 to explain:  The proposed PG&E upgrades on public lands are subject to the NHPA, FLPMA, and a myriad of other executive orders and BLM regulations. The EIS being prepared by the Army Corp. of Engineers will analyze the impacts of the revised project on the public lands. The EIS will also address Section 106 consultation requirements, as applicable."	<b>A0001-21</b>

**Comment Set A1 – Bureau of Land Management (cont.)**

<b>BLM Hollister Field Office Annotated Comments on the Draft Supplemental EIR for Panoche Valley Solar Project</b>		
<b>Ref. EIR Section, (Page Number)</b>	<b>Comment</b>	<b>Recommendation</b>
C.7.3.5 (pg. C.7-6)	EIR says risks associated with Impact CR-2 and Impact PA-1 would be less than significant with implementation of AMM CR-1 thru AMM CR-5	<p>BLM requests a copy of the Archaeological Monitoring and Inadvertent Discovery Plan (described in AMM CR-3).</p> <p>Will this Plan also include the framework for evaluation and treatment of unanticipated discoveries of human remains described in AMM CR-5?</p>
C.15.1.2 (C.15-2)	There is a reference to the delineation of jurisdictional waters within the PG&E ROW described in the Natural Resource Assessment Report, dated October 20, 2014.	<p>May be useful to mention that the delineation of jurisdictional waters is also described in Section C.6.1.2.6 (pg. C.6-17).</p> <p>Also, consider adding a statement in sections C.6.2 and C.15.2 to explain:</p> <p>Jurisdictional waters are subject to the provisions of the Clean Water Act (1972) and the Rivers and Harbors Act (1899). The EIS being prepared by the Army Corp. of Engineers will analyze the impacts of the revised project on the jurisdictional waters of the U.S.”</p>

**A1-22**

**A1-23**

## Comment Set A2 – California Department of Fish and Wildlife



State of California – Natural Resources Agency  
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*EDMUND G. BROWN, Jr., Governor*  
*CHARLTON H. BONHAM, Director*



February 2, 2015

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c/o Aspen Environmental Group  
235 Montgomery Street, Suite 935  
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Subject: **Panoche Valley Solar Project Draft Supplemental Environmental Impact Report (SCH#2010031008)**

Dear Mr. Krausie:

The Department of Fish and Wildlife (Department) has reviewed the Draft Supplement Environmental Impact Report (DSEIR) for the Panoche Valley Solar Project (Project), which discloses changes to the Project since the approval of the Project's 2010 EIR. The Department is a Trustee and Responsible Agency for the Project and has received from Panoche Valley Solar, LLC (Applicant) Notifications for streambed alterations pursuant to Fish and Game Code §§1600 *et seq.* and applications for an Incidental Take Permit (ITP) pursuant to Fish and Game Code §2081(b), since the Project would impact species listed under the California Endangered Species Act (CESA).

As the Department has noted in prior letters to the County of San Benito (County) regarding the Project, the Project site is considered to be of high conservation value for many special-status species endemic to California, and is considered essential for the recovery of many species listed as threatened or endangered under the CESA and Federal Endangered Species Act<sup>1</sup>.

Following is a summary of the Department's recommendations in response to the changes presented in the DSEIR. Further discussion on why the Department makes these recommendations follows this list:

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<sup>1</sup> US Fish and Wildlife Service. 1998. Recovery plan for upland species of the San Joaquin Valley, California. Region 1, Portland, Oregon, USA.

A2-1

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1. Display all proposed construction ponds on Project maps; require enclosed water tanks instead of ponds to minimize wildlife fatality risks.
2. Apply lessons learned from similar photovoltaic (PV) projects that have gone before this Project about minimizing disturbance: require siting the staging areas to be within the solar panel array boundaries; pull the perimeter fence in to conform to array boundaries; eliminate permanent laydown yards; eliminate grading that is proposed beyond the permanent infrastructure footprint and perimeter fence; and eliminate much of the proposed temporary impact in the 740-acre “work area.”
3. Include the 2013 FLO-2D floodplain modeling in the public record and evaluate the implications of citing mitigation for upland species in areas predicted to be inundated.
4. Identify the specific mitigation lands, instead of ratios, required in mitigation measure BR-G.6.
5. Identify a feasible solution for resolving the federal mineral rights and other potential encumbrance issues on Silver Creek and other proposed mitigation lands.
6. Update the estimates of upland habitat value for the state and federal threatened California tiger salamander (*Ambystoma californiense*, CTS) to reflect literature published after the 2010 EIR. Require greater avoidance and a new mitigation strategy in response to the understanding of increased upland habitat values and increased disturbance from the revised Project in core upland habitat.
7. More clearly describe that the increase to 7.86 acres of stream impacts is a result of the revised Project design which would intercept all stream drainage on the eastern Project boundary, divert flow from streams, and grade the streambeds to level the site for PV array installation. Require a reduction in stream impacts to only those necessary for road crossings, as similar PV projects have done in similar hydrologic settings.
8. Require that any bridge at Panoche or Las Aguilas Creek be designed to avoid permanent impacts to the streams by setting the abutments farther back from the banks.
9. Prescribe success criteria for all mitigation measures even if the specific methods of meeting those criteria would be detailed in a later plan and/or the actions may require permits from other agencies at later dates.

A2-1 cont.

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- 10. Require stream setbacks for upland Project features that would not be subject to conditions of a Lake or Streambed Alteration Agreement (LSAA).
- 11. Update the BNLL discussion to reflect new information on the importance of the Panoche Valley as a climate refuge for this species.
- 12. Require a 395-acre buffer from all locations of the state and federal endangered, state fully-protected species blunt-nosed leopard lizard (*Gambelia sila*, BNLL).
- 13. Require that pre-construction BNLL surveys be performed during the season during which the species is active above ground and immediately prior to disturbing ground in a given area, followed up with full-time biological monitoring.

A2-1 cont.

**Construction Ponds**

The DSEIR discusses three ponds for holding water during construction but maps only two. Please map all proposed ponds.

Construction ponds invariably cause wildlife fatalities in this habitat type even with exclusion fencing in place. The Department recommends using enclosed tanks instead.

A2-2

**Extent of Disturbance, Laydown Areas**

The DSEIR states that the extent of disturbance has been reduced from that evaluated in the 2010 DEIR. The Department has not found this to be the case, but there does appear to be opportunity to reduce Project related impacts beyond what is described in the SEIR. The 2010 EIR disclosed 2,203 acres of permanent disturbance and no area of temporary disturbance (Tables B-2 and B-3 in the DSEIR). For the revised Project, the DSEIR discloses 1,888 acres of permanent disturbance and 844 acres (857 less 31 acres of overlap) of temporary disturbance, for a total of 2,714 acres of disturbance. The redesigned project would disturb 511 more acres than the Project approved in 2010.

A2-3

The Department encourages the County to require reducing the extent of the proposed temporary disturbance areas (“work areas”) and permanent laydown areas. It is unclear why the temporary disturbance area increased by 607 acres since 2010, while the permanent footprint decreased, as is the necessity to temporarily disturb substantially more habitat than what has occurred with similar, recently constructed PV projects. Also unclear is the need for extending permanent

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laydown yards, grading, and work areas outside of the PV arrays and/or the perimeter fence (Figure B-4 in the DSEIR).

A2-3 cont.

The work areas (740 acres) are described as being used for staging equipment and materials during construction. The laydown areas (104 acres) are proposed to be permanent and have stair-step boundaries characteristic of the PV arrays. The Department has previously requested of the Applicant to restore all laydown and work areas after their use during construction; the Applicant (Mr. Eric Cherniss) stated that they will not restore these areas because they would like to have the option to potentially develop those for additional “overflow” energy production. We recommend designing and conditioning the Project to preclude potential future expansion and avoidable construction-related impacts. The “work areas” and “laydown areas” comprise the large spaces between the perimeter fence and PV arrays, and are comprised of California tiger salamander and other listed species habitat. At least three of the permanent laydown areas and much of the proposed grading are within the core upland areas around the known tiger salamander breeding ponds.

By contrast, a similar yet larger project in the Carrizo Plains required four, 10-acre laydown areas that were almost entirely within PV array footprints; another project of comparable size to the proposed Project required only 4.4 acres of temporary laydown area outside of the permanent PV array footprint. All temporary impact areas for the larger project were limited to linear features (roads and electrical lines) and for the other project were limited to less than 80 acres (Table 1). Both projects use their permanent O&M facilities for laydown purposes during O&M.

**Table 1. Comparison of Impacts among Similar PV Projects**

	Topaz Solar Farm	California Valley Solar Ranch	Panoche Valley Solar Project
Permanent Impacts (acres)	3510	1782	1888
Temporary Laydown Areas (acres)	40	4	740
Permanent Laydown Area other than O&M facility (acres)	0	0	104
Total Temporary Impact Area (acres)	Unspecified; limited to mapped linear features only	80	844

The Department therefore recommends that the County require the Applicant to reduce impacts by eliminating the proposed 844 acres of temporary impacts by pulling in the fence to conform to the array boundaries, siting the temporary laydown

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areas predominantly within the PV array or other permanent structure boundaries, avoiding grading beyond the permanent footprint areas, siting all laydown areas outside of a 1.3 mile buffer from California tiger salamander ponds, and using the permanent O&M facility location as the permanent laydown area.

A2-3 cont.

**Floodplain and Mitigation Land Functions**

A2-4

The Department recommends that the County includes in the DSEIR the new floodplain modeling developed by the Applicant’s consultants (“100-Year FLO-2D Analysis Panoche Valley Solar Project” prepared by Energy Renewal Partners, LLC, August 19, 2013). The model predicts that a 100-year flow would inundate most of the proposed Valley Floor Conservation Lands (VFCL). With most of the uplands proposed to be developed around the VFCL, the prospects for GKR and BNLL to recolonize the VFCL after flooding would be reduced compared to existing conditions. A similar situation at the Department’s Alkali Sink Ecological Reserve is believed to have led to the extirpation of a kangaroo rat species at that site. The Project may end up diminishing the habitat functions of much of the VFCL compared to existing conditions, which calls into question the proposal to count those areas toward the habitat compensation requirements for the Project. Those areas should be conserved, however after Project implementation they may no longer be of equal or greater value for all species compared to the Project site.

**Mitigation Measure BR G-5**

A2-5

This measure requires that the mitigation lands be conserved with a conservation easement. While the Department has not yet determined whether these lands are acceptable for Incidental Take habitat compensation purposes, or whether we would accept fee title on those lands, we note that the measure includes no option to transfer the lands in fee to the Department or another Department-approved entity to satisfy the County’s mitigation requirements. If the County wishes to allow fee title transfer to the Department as an option, please be aware that any existing easement may preclude our or another entity’s acceptance of fee title, depending on the terms of the easement.

**Specify Mitigation Lands**

A2-6

The DSEIR implies that all of the Silver Creek, Valadaeo, and Valley Floor areas would be conserved, although mitigation measure BR-G5, which is the measure requiring habitat compensation, specifies mitigation ratios that amount to lesser acreage and does not specify any location. The Department recommends identifying the specific mitigation lands required in mitigation measure BR-G5.

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### Federal Mineral Rights

The DSEIR's conclusions on mitigated biological impacts are premised on the preservation of specific lands where the severed mineral rights are held by the federal government. If those lands (or a conservation easement thereon) were held by the Department or any other entity, that entity would have no authority to dictate how the federal mineral rights would be exercised. Those rights could be exercised in ways that compromise the habitat values of the mitigation lands. For this reason, the Department typically does not accept lands that have the type of federal mineral rights that exist on Silver Creek. To date the applicant has not provided title reports or other information that may reveal additional encumbrances on the mitigation lands. The Department recommends identifying a feasible path to resolving the mineral rights issues and other encumbrances that may exist on the mitigation lands before premising findings on the assumption that those lands will be conserved to offset the Project's impacts.

A2-7

### CTS Impacts

The Department recommends that the County assess the Project's potential impacts to CTS and corresponding avoidance and mitigation measures in light of the literature on upland habitat use that has been published since the release of the 2010 EIR. The DSEIR, including the "California Tiger Salamander Pre-construction Avoidance and Minimization Plan" does not consider that the estimates of upland use relative to breeding pools have been refined and increased since the 2010 EIR. Instead, the DSEIR and minimization plan rely on lesser estimates of upland habitat use that are now considered outdated. In 2011, Searcy and Shaffer<sup>2</sup> estimated that 95% of a CTS population's reproductive value is within 1,867 m of the breeding pool, 90% is within 1,501 m, and 50% is within 562 m. Those are now considered to be the best available estimates and should be the basis for assessing impacts and developing mitigation measures.

A2-8

In addition, the Project's upland impacts around the pools have increased. For example, the 2010 EIR did not discuss grading, while the revised project includes up to 392 acres of grading, much of which is near CTS breeding pools. Much of the 104 acres of permanent laydown yard 740 acres of work areas are also within core upland CTS habitat around pools. The Department recommends revising the impact analysis to quantify the impacts within the distances described by Searcy and Shaffer and require the reduction or elimination of grading, laydown, and work areas

A2-9

<sup>2</sup> Searcy, C. A. and H. B. Shaffer. 2011. Determining the migration distance of a vagile vernal pool specialist: How much land is required for conservation of California tiger salamanders? Pages 73-87 in D. G. Alexander and R. A. Schlising (Editors), Research and recovery in vernal pool landscapes. Studies from the Herbarium, Number 16. California State University, Chico. CA.

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within the uplands occupied by CTS. Providing a map with the updated upland distances based on Searcy and Shaffer, overlaid on the Project layout, will help in describing and avoiding CTS impacts.

A2-9 cont.

While the impacts to CTS have increased since the 2010 EIR, based on both the increases in disturbed area and improved information on CTS ecology, the mitigation proposed for CTS has not increased accordingly. The Department recommends that the County require the applicant to construct three breeding pools on mitigation lands to offset the net loss of upland habitat and loss of individuals during Project construction of the revised Project design.

A2-10

Lastly, the DSEIR describes two of the known CTS breeding pools on the Project site as “historic,” which implies that their conservation value is somehow different than the other known breeding sites in the area. Please note that the applicant has not performed surveys to support this characterization. Breeding was documented at these two pools in 1992. No conclusive surveys have been completed there since then and the land uses in the area have not changed. The pools remain intact, and the Applicant did find CTS breeding in other nearby pools. Therefore, there is no reason to consider these breeding sites as “historic.”

A2-11

**Analysis of Streambed Impacts**

A2-12

The DSEIR states that the impact to streams would remain unchanged with the revised Project compared to that in 2010 EIR; this characterization is inaccurate. The revised Project is proposed to impact 7.86 acres of streams, while the 2010 EIR quantified no impacts to streams and included mitigation measures requiring that streams would be avoided altogether except for necessary road crossings. Similarly, the Applicant’s Streambed Alteration Notifications (Notifications) to the Department increased from 0.3 acre of stream impacts in May 2014 to 7.61 acres in December 2014. Most of the impacts would result from filling streambeds and diverting the flows to make all water sheet through the solar project site. This is a departure from the prior 2014 Notifications in which the impacts were to be only from road crossings, and from the 2010 EIR, which did not quantify stream impacts. Filling and grading streams to level them for solar panel installation was neither analyzed in the 2010 EIR nor understood by the Department to be part of the solar project development plan until having received the most recent Notification from the Applicant.

The Department requests that the County clarify the description of proposed stream alterations in the DSEIR if the Department will be asked to rely on the final DSEIR for issuing a LSAA.

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Specifically, the Department requests that the DSEIR

- clearly quantifies the extent of impacts from stream grading and leveling for PV array installation as opposed to road crossings;
- clearly describes that the proposal is to intercept all streams and overland flow along the eastern perimeter road, direct it to new road crossings, and then divert flows out of the streams which will be graded to allow solar panel array installation;
- describes and maps the proposed detention basins and how they would redirect flows; and
- describes specifically where flow would exit the solar site at the downstream end, including where the diversions and redirections would reduce or increase flows downstream of the grading in the tributary channels of Las Aguilas and Panoche Creeks, and how that would affect the habitat functions of the area immediately downstream which is proposed to be mitigation land.

A2-12 cont.

### Avoiding and Minimizing Streambed Impacts

By contrast, both solar project sites in the Carrizo Plains have streams that are similar to those at the Project site. Both of those projects re-designed their PV array layouts to avoid filling the streams. As a result, their impacts within streams were only from road and electrical crossings and installing PV panel support post on existing grade. The Department recommends that the County require the Panoche Valley Solar Project to take the same approach and avoid filling or grading streams.

A2-13

### Bridge Design

The Department still questions the justification for the proposed bridges at Panoche Creek and Las Aguilas Creek, given the many points of access from Little Panoche Road that would not require any stream crossings, and which would also meet the fire code requirements (see attached letter). The fire code requires providing full access to a site via a minimum 20-foot wide road with pullouts for passing. The proposed bridges are not required for the Project to satisfy the fire code (personal communication, Chief Michael O'Connor, Hollister Fire Department).

A2-14

The Department requests that if the Applicant continues to propose the bridges at Panoche and Las Aguilas Creeks, that the County requires the Applicant to design the bridges to avoid impacting streams as the 2010 EIR intended. The bridge engineers' report considered two bridge designs and determined they were both feasible: bridges with abutments set back 100 feet from the banks and bridges with abutments at the top of bank. The latter design, which is proposed by the Applicant, requires placing rock slope protection in the stream to protect the abutments because they are at the top of the bank. As noted in page 18 of the most recent Notification's addendum "...the abutments and footings may affect channel flow

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dynamics during high flow events due to potentially reduced flow velocity and flow restriction.”

A2-14 cont.

These direct impacts, and the potentially destabilizing effects on channel morphology and wildlife habitat within the stream, can be avoided by setting the abutments farther back from the banks such that rock slope protection would not be required to protect them from scour. The Department finds that Panoche Valley Solar, LLC has room to explore setbacks between the two distances that were assessed—top of bank and 100 feet—and that would avoid directly impacting Panoche Creek and Las Aguilas Creek, both of which support BNLL. Setting the abutments farther back from the stream banks may also obviate the need to obtain an Agreement or 404 and 401 permits to construct the bridges, as the Department stated in its comments on the draft EIR in 2010.

Also not discussed is how the impacts would be offset. The DSEIR states that the impacts will be mitigated to less-than-significant levels because a habitat restoration and management plan will be prepared. The DSEIR provides no criteria regarding extent, quality, or functions and value of stream impact mitigation that would have to be met in order for the impacts to be mitigated.

A2-15

Further, in the discussion regarding deleting a measure to avoid washes and streams (APM BIO-8), the DSEIR concludes that the deletion of that measure would not create a new biological impact because the impact would be permitted by other agencies. The discussion also states that the US Army Corps of Engineers and Department will review grading plans and prescribe protective buffers in the 404 permit and Streambed Alteration Agreements (SAAs). This argument not only defers the formulation of mitigation to further approvals by other agencies, but it assumes that the other agencies will approve the crossings and will prescribe protective buffers across the entire Project site. Because only the Project components directly affecting streams (and as a result presumably in the Notification to the Department) would be subject to SAA conditions, an SAA would not prescribe stream buffers to the remainder of the Project that is in uplands. Therefore, the Department does not concur with the justification for removing APM-BIO-8. However, it should be noted that if the Applicant were to place soil or other materials where they would wash into a stream, without Notification to the Department, this could result in a violation of Fish and Game Code §1602 and/or §5650.) Therefore, we encourage the County as CEQA Lead Agency to develop its own enforceable criteria for streambed buffers and other quantifiable mitigation measures to substantiate the DSEIR’s finding that stream impacts would be minimized and mitigated to less-than-significant levels.

A2-16

A similar complication arises with the proposed changes to measure BR-G.2, which states that no ground disturbance shall occur within 100 feet of washes or streams except as allowed by a 404 permit and LSAA. Since Project components not

A2-17

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associated with a stream crossing (e.g. solar panel installation in uplands) would not be subject to LSAA conditions, the measure would prohibit activities within 100 feet except as needed to cross the stream. Much of the project footprint would not be subject to an LSAA, yet is within 100 feet of streams, and would therefore not be allowed per the new language in BR-G.2.

A2-17 cont.

### BNLL and Climate Change

New information has become available since the 2010 EIR regarding BNLL that is not reflected in the DSEIR. The Panoche Valley is predicted to be a climate refuge for BNLL in the foreseeable future. At the same time, the San Joaquin Valley extent of BNLL range is projected to become unsuitable due to climate change (personal communication, Joseph Lawrence and Dr. Barry Sinervo, University of California Santa Cruz). This places added emphasis on maintaining intact and variable habitat in the Panoche Valley of sufficient size to support a robust population that will sustain climate change. Expanding the population here is the general goal of the recovery plan for this species and that aligns well with the projected climate change issues.

A2-18

### BNLL Avoidance

The DSEIR's 52-acre BNLL avoidance buffer is not sufficient to ensure that take will be avoided. As discussed in the attached letter to the Applicant dated July 8, 2010, three of 24 females in the best available dataset had home ranges exceeding 98.8 acres. In addition, Tollestrup<sup>3</sup> documented movements up to 1,509 feet (0.28 mile), and range shifts, in only a one-month study. The DSEIR underestimates this specie's ability to move long distances and occupy relatively large home ranges for a lizard of its size. Buffers of anything less than the maximum home range sizes and movement distances have the potential to result in take.

A2-19

Tollestrup's finding of movements up to 1,509 feet between detections, within a one-month study period, illustrates the hazard in assuming that a lizard will remain within a 52-acre buffer of where it is detected. A 1,509-foot movement would equate to a 164-acre buffer if used as the radius, and a 657-acre buffer if doubled to account for the fact that a BNLL may be at the edge of its home range when detected. Considering that movement up to 1,509 feet was found in one of only 17 lizards in a short study period, the Department considers that to be an underestimation of movements that BNLL may often make. The Department maintains its recommendation of a 395-acre buffer for this project based on the home range data that are currently available.

<sup>3</sup> Tollestrup, K. 1983. The social behavior of two species of closely related leopard lizards, *Gambelia silus* and *Gambelia wislizenii*. *Z. Tierpsychol.* 62:307-320

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Considering their ability to shift their core areas within seasons and between years<sup>4</sup>, it is important to complete surveys immediately prior to working in an area when BNLL have already been found in contiguous habitat. For this reason, the Department recommends instead of completing surveys within 30 days of working (construction) in an area, that work begin immediately after the last survey (provided no BNLL are found) followed by full-time monitoring.

A2-19 cont.

MM-BR -10.1 also does not specify a seasonal requirement for the BNLL pre-construction surveys. It is imperative the surveys are performed when BNLL are active on the ground surface. We recommend that the County require that the BNLL pre-construction surveys be completed during the adult BNLL survey period prescribed in the current Department survey protocol.

Additionally, the Department accepts BNLL survey results only if they are less than one year old. The reasons for this include the seasonal and between-year shifts in range and abundance. If another adult BNLL active season begins, surveys will have to be performed again.

A2-20

Lastly, the Department recommends that the County require a fixed buffer for all BNLL observed, whether they are prior to or during construction. The change in the Applicant-proposed measure BIO-13 from buffering all BNLL locations to buffering only “historic” BNLL locations, and the change in mitigation measure BR-10.1 to allow monitoring biologists to apply buffers “that will be determined at their discretion” around live lizards during construction makes the buffer requirements ambiguous and therefore ineffective at avoiding and minimizing impacts to BNLL. Please be advised that the Department has not deemed this flexible buffer strategy as appropriate for ensuring take avoidance.

A2-21

If you have any questions regarding this letter or need additional information, please contact Dave Hacker, Senior Environmental Scientist, at (805) 594-6152 or david.hacker@wildlife.ca.gov.

Sincerely,



Jeffrey R. Single, PhD  
 Regional Manager, Central Region

Attachments: Letter to Chief Michael O’Conner, letter to Mr. Eric Cherniss.

<sup>4</sup> Warrick, G., T.T Kato, and B.R. Rose. 1998. Microhabitat use and home range characteristics of blunt-nosed leopard lizards. J. of Herpetology 32:183-191.

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cc: State Clearinghouse  
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Sacramento, California 95812-3044

ec: CDFW (Dave Hacker)  
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Katerina Galacatos, US Army Corps of Engineers  
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## Comment Set A2 – California Department of Fish and Wildlife



State of California – Natural Resources Agency  
 DEPARTMENT OF FISH AND WILDLIFE  
 Central Region  
 1234 East Shaw Avenue  
 Fresno, California 93710  
 (559) 243-4005  
[www.wildlife.ca.gov](http://www.wildlife.ca.gov)

*EDMUND G. BROWN JR., Governor*  
*CHARLTON H. BONHAM, Director*



September 22, 2014

Mike O'Connor  
 Chief  
 Hollister Fire Department  
 110 Fifth Street  
 Hollister, California 95023-3926

**Subject: Fire Code Requirements and Access to the Proposed Panoche Valley Solar Farm**

Dear Chief O'Connor:

California Department of Fish and Wildlife (Department) staff received your letter (enclosed) dated July 14, 2014, regarding the Panoche Valley Solar Farm (Project). The Department very much appreciates you having taken the time to meet with staff at the proposed Project site earlier in July to discuss the fire code requirements and proposed emergency access routes. The Department understands that while many access road configurations could satisfy fire code requirements, safety is paramount in operating the proposed Project.

After the meeting, staff reviewed the existing roads leading to the proposed emergency access bridge location on Panoche Creek and observed conditions that the Department would like to bring to your attention. These conditions were not entirely apparent during the field meeting and are pertinent to the decision to permit the bridges and roads that are proposed to be constructed within active floodplains and proposed biological mitigation lands. Due to the seasonal constraints and conditions discussed below, the Department requests your input on the alternative access road plan attached to this letter. This alternative plan would not include bridges at Panoche and Las Aguilas Creeks, and would provide increased access to the entire perimeter of the northwestern solar panel array. The Department is not suggesting placing any considerations ahead of human safety; we submit this plan for your consideration with the belief that it provides comparable or better emergency vehicle access based on the observations discussed below, and request your input on anything we may have overlooked in this alternative plan compared to the applicant-proposed plan, which is also attached.

The Department's field observations suggest that the proposed Project site would be equally accessible with or without a new bridge over Panoche Creek. This is in part due to the fact that when the roads are wet (which would be outside of the fire season), the bridge would not be accessible, and the fact that the stream channel is crossable at most locations west of Little Panoche Road during the dry season without any bridges or culverts. During all seasons, with or without the proposed bridge, the Project would be directly accessible along the 2.5 miles of frontage on Little Panoche Road, which is an existing, paved road with a bridge over Panoche Creek.

Yturiarte Road, which would provide the only access to the proposed new bridge over Panoche Creek, is accessible only from Little Panoche Road 0.75 miles east of the proposed bridge and Panoche Road, 2.75 miles west. It is important to note that the dirt roads between Panoche Road and Yturiarte Road are private and mostly not maintained. Further, multiple locked gates, cross fences, and abandoned vehicles block access. Additionally,

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Yturiarte Road on its west end is not signed and has the appearance of a private driveway, with gates on either side of the first creek crossing. Yturiarte Road crosses Panoche Creek twice with no bridges, culverts, or other improvements between there and the proposed bridge location. If Panoche Creek were flowing, thus necessitating a bridge, the proposed bridge could not be accessed by approaching from the west because of these two existing, unimproved crossings. If these crossings were flooded or wet, then the only access to the proposed bridge would be from the east side, where vehicles could access the Project site directly from the 2.5 miles of frontage along Little Panoche Road without the proposed bridge. In addition, Yturiarte Road approaching from either direction does not have an all-weather surface and appears to be impassable when wet.

The proposed bridge is also proposed for fire access, outside of the wet season. During the fire season, the creek is dry and crossable at most locations west of Little Panoche Road, between the Project site and north of Yturiarte Road, as discussed during the July field meeting. Also as discussed with staff, the barbed-wire fences are typically not an impediment for wildland engine access, and gates could further improve access across the ranch fences. A gate would have to be built across the proposed bridge access road regardless. Approximately 0.25 miles west of the proposed bridge site, vehicles could also approach the Project area across rangelands directly from Yturiarte Road without crossing Panoche Creek or any other major drainage.

Thank you for reviewing and considering this alternative plan. The Department looks forward to hearing your thoughts on our proposal. Please feel free to contact me or Dave Hacker, Senior Environmental Scientist (Specialist), at (805) 594-6152 or [david.hacker@wildlife.ca.gov](mailto:david.hacker@wildlife.ca.gov) with any questions regarding this letter or if you would like to meet to discuss it further.

Sincerely,



Jeffrey R. Single, Ph.D.  
Regional Manager

**Attachments**

ec: David Hacker  
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## Comment Set A2 – California Department of Fish and Wildlife (cont.)



### HOLLISTER FIRE DEPARTMENT



Firehouse 1  
Head Quarters

110 Fifth Street • Hollister, CA 95023-3926  
(831) 636-4325 • Fax (831) 636-4329

July 14, 2014

David Hacker  
California Department of Fish and Game  
Central Region 4 Fresno  
3196 S. Higuera St., Suite A  
San Luis Obispo, CA 93401

Mr. Hacker,

Thank you for meeting me in the field this past Wednesday to discuss fire access to the proposed Panoche Valley Solar Project. As we discussed, the Hollister/San Benito County Fire Department has jurisdiction over the site and with limited resources available in the area, response times and accessibility are key to successful response to fire and/or medical emergencies.

After additional consideration of alternative routes, including various gates along the perimeter fence and driving through various areas of the future Valley Floor Conservation Lands and associated wash area, my team and I have determined that adequate, all-weather access will require a bridge that is of sufficient size to support the weight and size of our fire trucks be installed across the wash area from Yturiarte Road north into the Project area (as detailed in our letter dated October 17, 2013 to Eric Cherniss at PV2 Energy, LLC). We are concerned that during times of the year, driving through the wash will not be feasible as a means of response to the corners of the facility. In addition, a means of access/egress for my crews to escape a fire either coming onto or from the site, is critical to the safety of our personnel.

Thank you for working with the Hollister/San Benito County Fire Department to ensure the safety of those in the Panoche Valley. If you have additional questions, please let me know.

Thank you,

Chief O'Connor

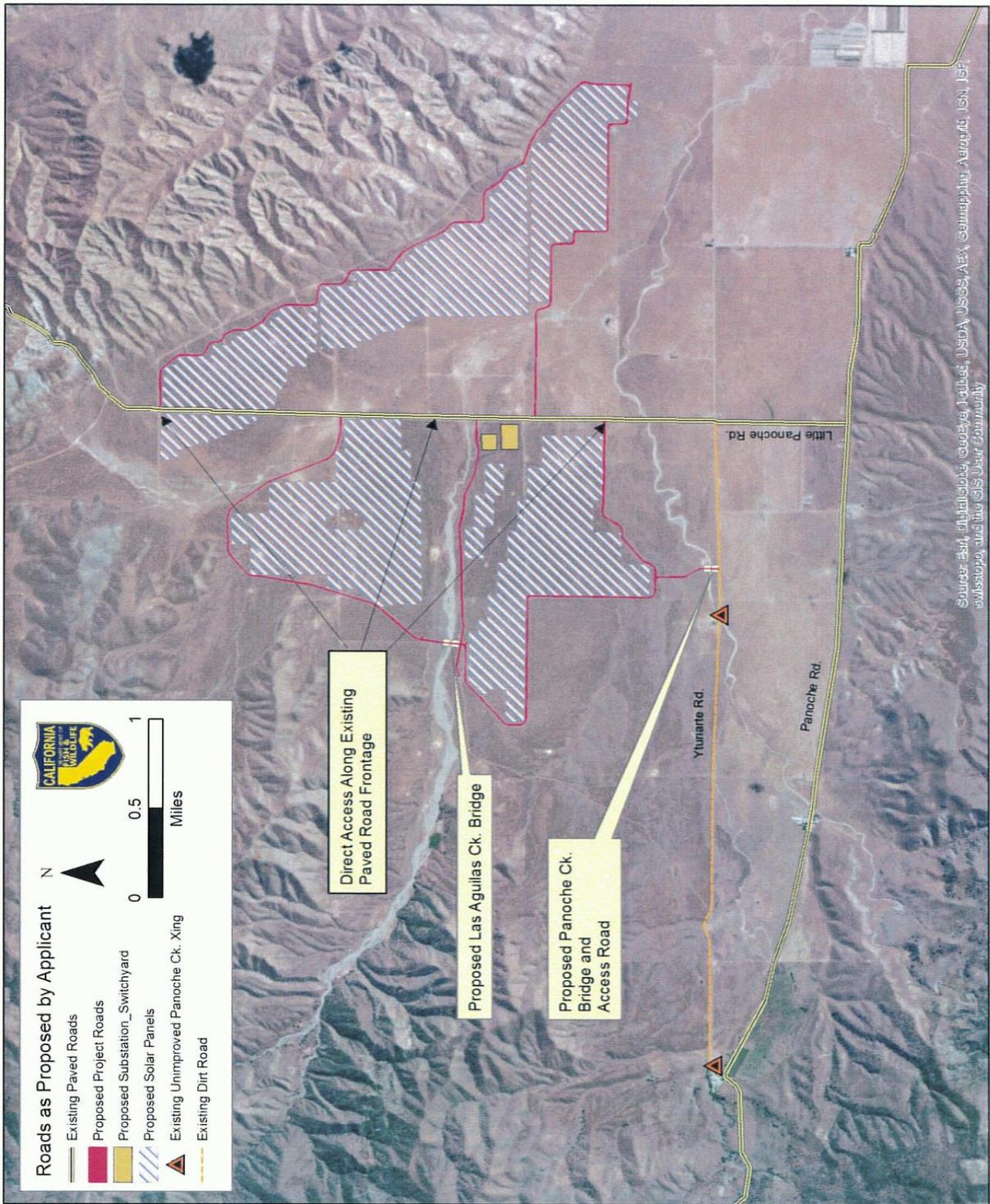
Firehouse 2 1000 Union Road  
Hollister, CA 95023  
(831) 636-4141

Fire house3 30 Airport Dr.  
Hollister, CA 95023  
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Firehouse 4 24 Polk Street  
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### Comment Set A2 – California Department of Fish and Wildlife (cont.)



## Comment Set A2 – California Department of Fish and Wildlife (cont.)



State of California – The Natural Resources Agency

DEPARTMENT OF FISH AND GAME

Central Region

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ARNOLD SCHWARZENEGGER, Governor

JOHN McCAMMAN, Director



July 8, 2010

Eric Cherniss

Solargen Energy, Inc.

20400 Stevens Creek Boulevard, Suite 740

Cupertino, California 95014

Subject: Recommendations on Surveying for and Avoiding Blunt-Nosed Leopard Lizards (*Gambelia sila*) at the Proposed Panoche Valley Solar Farm in San Benito County, California

Dear Mr. Cherniss:

On several occasions you have requested written recommendations from the Department of Fish and Game (Department) on surveying for and avoiding “take” of the State and Federally endangered, State fully protected species blunt-nosed leopard lizard (BNLL) at the proposed Panoche Valley Solar Farm (“Project”) site. The recommendations provided below elaborate on and describe the reasoning behind the verbal recommendations for BNLL avoidance that the Department has made to you in several meetings to date. These recommendations are based on the current, limited knowledge of the distribution of BNLL in the Panoche Valley and these may change as more information becomes available. This letter addresses the pre-Project survey methods and avoidance through Project design. Additional temporary construction and permanent operations and maintenance measures will be addressed when there is sufficient information to allow the status of the species on-site and the final Project design to be understood by the Department.

The Department reviewed Live Oak Associates’ May 24, 2010, document titled “Solargen Energy’s Panoche Valley Solar Farm: Summary of Three-Step Avoidance Measures to Prevent Take of Blunt-Nosed Leopard Lizards During Construction and Operation of the Project.” The Department also reviewed the best available scientific information on BNLL spatial ecology and has determined that the proposed avoidance measures (5-acre buffers from documented BNLL occurrences in grasslands, 50-foot buffers from documented BNLL occurrences in washes, and 100-foot buffers from wash features [except for new road crossings]) would neither avoid direct “take” of BNLL during construction nor provide for the persistence of individual lizards and recovery of the population after construction.

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Previously, the use of impermeable fencing to surrounding locations of BNLL observations was discussed as an impact minimization measure. The proposed avoidance plan did not discuss the use of this measure, however, the Department continues to recommend this measure not be used--as to surround BNLLs with impermeable fencing would constitute "take" in the form of capture. It may also lead to increased mortality as a result of predation (escape routes would be blocked) and a generally reduced availability of resources for the individual BNLL. As you are aware, §5050 of the Fish and Game Code designates BNLL as a "fully protected species" and precludes the Department from permitting "take" of BNLL. The presence of a fully protected species on the Project site warrants more detailed impact analysis and cautious avoidance recommendations than for a project that would not have the potential to affect fully protected species. The Department recommends completing full protocol BNLL surveys prior to completing the California Environmental Quality Act (CEQA) review and the California Endangered Species Act (CESA) take permit applications, avoiding all wash features, and incorporating a minimum 395-acre buffer around locations where BNLL are detected. The recommendations above are formulated with these three goals in mind:

1. Ensuring that Project-related activities avoid "take" of the species as required by §5050 of the Fish and Game Code during construction, operations, and maintenance for the entire life of the Project, including direct mortality and mortality resulting from habitat modification;
2. Ensuring that the Project provides for persistence and recovery of the existing, geographically isolated, genetically distinct population that occurs on the Project site; and
3. Contributing to, and not precluding the implementation of the "Recovery Plan for Upland Species of the San Joaquin Valley, California" which recommends protecting at least 6,000 acres of occupied, contiguous habitat in the Project vicinity supporting at least one BNLL per acre through one precipitation cycle and ensuring that traditional rangeland uses continue in that area (USFWS 1998).

Following is the analysis to support our recommendations.

### Pre-Project Surveys

As stated since the Project was first proposed, the Department recommends completing protocol surveys for BNLL across the entire Project site prior to CEQA analysis and any CESA Incidental Take Permit applications for the other State-listed species which are

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known to occur on the Project site. Protocol BNLL surveys for each Project phase should be completed in the survey season immediately prior to that construction phase. “Protocol survey” refers to the 12-day adult survey and 5-day juvenile survey outlined in the May 2004 survey protocol ([http://www.dfg.ca.gov/wildlife/nongame/survey\\_monitor.html](http://www.dfg.ca.gov/wildlife/nongame/survey_monitor.html)). The Department recognizes that surveying the large Project site, which is comprised entirely of suitable habitat for BNLL, is a significant undertaking. On a March 10, 2010, phone call with you, prior to the beginning of the survey season, we agreed that the second-best (although not the preferred) approach is to complete BNLL protocol surveys only once for each Project phase, in the survey season immediately prior to construction of each phase. Phased surveys should include surveying buffers around construction activities. The survey buffers should be based on half a home range for BNLL, a subject discussed below. The initial BNLL survey results disclosed to date for the Project exemplify why both the adult and juvenile BNLL surveys should be completed. It is notable that, in the fall juvenile survey, BNLL hatchlings were found approximately one-quarter mile away from where any adult BNLL were observed. This reinforces other information which indicates that observations of adult BNLL do not reliably predict juvenile distribution.

### **Avoidance through Project Design**

The Department’s recommendation for avoiding “take,” providing for individual and population persistence, and conforming to the applicable recovery goals is to design the Project to avoid all occupied BNLL habitat, and base that avoidance on known spatial ecology of BNLL. The design should reflect known home range estimates and movement distances, with the intent to avoid fragmenting occupied habitat and habitat necessary to support and recover the species. The Department recommends using maximum observed home range areas and movement distances instead of average home range areas, which underestimate the area that many BNLL individuals are known to use. This is particularly significant in areas that may be subject to high ecological or climatological variability, such as the Project site.

**Buffer Areas:** To determine a buffer that has a reasonable chance of preventing take, the Department reviewed the best available scientific information on the area which individual BNLL use (home range) and the distances that individuals are known to move between points. Below is a summary of relevant findings from the available published literature and unpublished data on BNLL spatial ecology.

*Tollestrup (1983):* Seventeen BNLL were marked, recaptured, and observed visually (no telemetry). Home ranges were derived from a one-month study period and considered to be underestimated. Seasonal shifts in activity areas were detected, specifically between the breeding and non-breeding season. One individual moved 1,509 feet between successive capture points.

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*Warrick et al (1998)*: Five females and 11 males were tracked with radio telemetry for 17 to 71 days. One lizard's home range steadily increased even after 40 days. The authors conclude that ten of the lizards' home ranges, which were based on less than 30 locations, should be considered minimum values. One lizard exhibited a dramatic home range shift which was not included in its home range estimate. Female home range estimates (convex polygon) were 1.2 to 11.0 acres. Male home range estimates were 3.9 to 21.7 acres. Where upland habitat had relatively dense vegetation, washes were used significantly more than the upland areas. Where vegetation was sparse in grasslands, grassland habitat was used more than other habitats, including washes.

*Unpublished Data*: Dr. David Germano of California State University, Bakersfield, provided some summary statistics of unpublished telemetry data from 2002 to 2004. Thirty-three males and 24 females were tracked in three different years. It is unknown as of yet how many individuals were tracked in multiple years and how many were tracked for single years. Female home range estimates (95 percent minimum convex polygon) were 1.1 to 16.5 acres. Male home range estimates were 1.8 to 52.4 acres. These estimates excluded three females which used home ranges greater than 98.8 acres (unknown how much greater).

Table 1 summarizes the maximum home range and movement distances detected.

**Table 1. Maximum Known Home Range Estimates and Movement Distances**

Source	Maximum Movement Distance Detected (ft)	Maximum Home Range Estimate (acres)
Tollestrup (1983)	1,509	4.4
Warrick et al. (1998)	NA	21.7
Germano 2002-2004 data (unpublished)	NA	98.8

Live Oak Associates document proposed a five-acre avoidance buffer from the points where BNLLs are detected during the construction year for each Project phase, no more than thirty days prior to construction. The five-acre buffer was based on the average female home range estimate from Warrick et al. (1998). However, males are more likely to occur in a given location. Multiple studies have found that males outnumbered females by ratios of 2:1 to 3:1 (USFWS 1998). The five-acre proposal is less than half the average male home range estimate from Warrick et al. (1998), and does not recognize the known long-distance movements and substantially larger home ranges of many individuals in the limited studies to date. Finally, it became clear that in the two published studies, the home range estimates were derived from data collected within a single activity season and often for a very short period within the season (e.g., 17 days).

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Data from entire seasons and across multiple years would likely yield much greater home range estimates. Given these findings and the available spatial use data summarized above, the Department does not concur that a buffer based on an average female home range estimate would neither avoid “take” of BNLL nor would it provide for continued occupation of the buffered habitat once it becomes surrounded by construction activity, maintenance activity, and permanent Project features.

Several factors make predicting the locations of BNLL when construction commences highly uncertain. These uncertainties make the proposal unlikely to avoid direct mortality of individual BNLL during Project construction. For example, the lizards would be detected when on the surface; between the detection date and the start of construction, they will move and occupy unknown locations underground, possibly long distances from the point of detection. The lizard’s location underground when construction commences is not predictable and unlikely to be encompassed by a five-acre buffer of any shape. Also, when a lizard is detected, it is unlikely to be at the center of its home range. It may be on the margin or elsewhere within an irregularly shaped home range area. (Figures 1 and 2, enclosed). Predicting the size and shape of the home range is not feasible unless there are completely unsuitable habitat types which would limit spatial use. The Live Oak Associates document proposes prescribing a five-acre buffer in a way that captures high burrow density. However, this provides no assurance that the lizard would be in the area selected by the biologist, and neglects the documented longer distance movements of BNLL outside such a limited area. The entire Project site consists of potential habitat for BNLL. They may be in any burrow during the inactive season, including undetectable burrows that lizards construct themselves and small mammal burrows that are backfilled.

Predicting home range locations based on habitat type is also highly uncertain. One of the two study sites in Warrick et al (1998) was 80 percent grassland, and lizards used that area in proportion to its availability, even with open wash habitats available. The authors surmised that fire and drought increased suitability of the grasslands by reducing herbaceous cover, suggesting that grazing could be used as a tool to replicate similar conditions in favor of BNLL. The current grazing regime on the Project site keeps the grassland vegetation height and cover relatively low, providing suitable habitat for BNLL. In addition, the limited non-protocol survey results disclosed to date for the Project show BNLL occurring far from wash habitats, in grasslands.

If the maximum known distance moved (1,509 feet) were used as a radius for prescribing buffer areas, the buffer area would need to be 164 acres. This approach would be based on only one study (Tollestrup 1983) and is probably an underestimation of spatial use. The two studies which used more reliable, radio telemetry methods did not present any movement distances.

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The maximum home range estimate of 98.8 acres was observed with three female lizards. Females typically exhibit smaller home ranges than males. Of the BNLL studied in the two available telemetry studies, approximately one in 25 had home ranges that exceeded 98.8 acres (Warrick et al. 1998, Dr. David Germano, California State University, Bakersfield, unpublished data). That rate would increase to one in 20 lizards if considering only the study where those observations were made.

If one in 20 to 25 lizards has a home range greater than 98.8 acres, then the Department expects some lizards on the Project site to use areas of similar size. The Department recommends using 98.8 acres as a minimum starting point for BNLL “take” avoidance buffers. Prescribing a 98.8-acre buffer around a detected lizard may encompass a wide range of expected home ranges. However, placing an avoidance buffer around the lizard observation assumes that we know where the lizard’s home range is relative to the location of the observation. Since we have no way of predicting the size or shape of the home range based on a single observation of a lizard, a reasonable plan for avoidance is to assume that the lizard might utilize up to 98.8 acres in any direction from where it was observed. A circular home range could be assumed due to the uncertainty of home range shape. The diameter of a 98.8-acre circle is 2,340.8 feet. Using that distance as a buffer from the point where the lizard is detected yields an approximately 395-acre circle which could be prescribed as a buffer area. Figure 3 (enclosed) illustrates this concept.

**Avoiding Washes:** Much emphasis has been placed on the importance of washes as BNLL habitat in the proposed avoidance measures. Washes do offer consistent *foraging opportunity* due to the consistently open substrate, while upland habitat suitability might vary over time with climate and/or management activities such as grazing. BNLL often occur in higher densities near washes when surrounding uplands have dense vegetation. In addition, washes provide loose substrates where BNLL have been observed to excavate their own burrows. This type of burrow is unlikely to be found by surveyors prior to construction, increasing the chance of “take” while constructing road crossings. The potentially higher density of lizards near washes may increase the chance of vehicle strikes for the life of the Project on roads constructed in and near washes.

We must conclude that the proposed 50-foot construction buffer from lizard observations in washes is likely to result in “take” of BNLL for the same reasons that the proposed five-acre buffer in grasslands is likely to result in “take.” For these reasons, all washes should be avoided to prevent “take” and to minimize habitat impacts. Nearly all upland areas on the Project site can be accessed directly from existing roads, without crossing washes.

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This matter is complicated by the fact that the survey results disclosed to date show approximately 18 BNLL observations outside of washes, many of which were approximately 1,320 and 1,760 feet from any wash feature. More were observed outside of washes than in washes according to the 2009 partial survey results presented by Live Oak Associates in their February 2, 2010, document titled “Proposed Quantitative Sampling Program for Blunt-Nosed Leopard Lizards and other Sensitive Biotic Resources for the Panoche Valley Solar Farm.” The surveys presented in that report covered only a small portion of the Project site and were completed on only five or eight days depending on location, instead of the 17 days that are considered sufficient to adequately detect presence, as explained in survey protocol. The proposed 100-foot buffer from washes for all Project features (except bridges and roads), does not reflect this fact. Instead of prescribing a different buffer for washes, the Department recommends providing buffers from observed lizard locations as described earlier. Washes should be avoided altogether due to the potential for undetectable burrows and for the beneficial habitat variability that they provide in an area overwhelmingly dominated by grasslands. Maintaining and enhancing this habitat type in an intact arid grassland/shrubland context would aid in the long-term conservation and recovery of the BNLL population in the Project area.

**Recovery Goals and Habitat Fragmentation:** The proposed Project avoidance buffers would also isolate habitat patches and likely render them unsuitable. The Project facilities, including the solar panels, transformers, and other structures, are likely to dissuade use by BNLL. As described in our response to the Notice of Preparation for the Project, it is already known that solar panels will significantly alter surface temperatures, air temperatures, soil moisture, plant community composition, and wind attenuation under and between solar panels (Smith 1981, 1984, Smith et al. 1987). The Department expects these effects to substantially modify and highly fragment habitat, leading to population declines and localized extirpation.

Even slight temperature changes have been shown to alter surface activity patterns of other lizard species enough to interfere with reproduction, leading to local population losses (Sinervo et al. 2010). Temperature strongly influences BNLL surface activity. They may be naturally disposed to local extirpation from slight temperature changes similar to the species discussed in Sinervo et al. They are active on the surface for only a few weeks or months when temperatures are suitable, in which time they must mate and build up enough fat reserves to survive the rest of the year. Successive drought years have been correlated with substantially reduced BNLL surface activity and a lack of reproduction (Germano et al. 1994). Modifying habitat by attenuating wind and adding shade may similarly affect the ability of lizards to use areas, much less reproduce, within the Project site. The Department expects the Project to render unsuitable the areas within solar arrays and potentially some habitat fragments between arrays.

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The expected habitat degradation and fragmentation would be contrary to the recovery goals for BNLL, which include protecting at least 6,000 acres of occupied, contiguous habitat in the Project vicinity supporting at least one BNLL per acre through one precipitation cycle and ensuring that traditional rangeland uses continue in that area (USFWS 1998). The Department is unaware of other areas in the Project vicinity, or in the entire northern portion of the species range, where this goal could be achieved without conserving the suitable habitat on the Project site; thus, the Project as proposed could conceivably make recovery and delisting impossible. The significance of this is heightened by the fact that the Panoche BNLL population is genetically distinct from other populations. Finally, the Panoche population may have enhanced importance in the context of climate change adaptation, as it is the major population center in the northern portion of the BNLL range.

Reducing available habitat to only the areas that appear to be currently occupied by a population that has suffered substantial reductions is also contrary to basic conservation biology principles and sound stewardship of dwindling ecological resources. To provide for long-term population persistence and recovery, occupied habitat should be connected with additional unoccupied, suitable habitat to allow for population fluctuations and changes in distribution in response to changing habitat conditions.

A final cautionary note regarding predictions of abundance and distribution of BNLL based on the survey results provided to date, which are from a selected portion of the Project site surveyed in 2009. These results provide a limited understanding of the species' status on the Project site due to the limited survey area and duration. Survey results in 2009 and 2010 may also be confounded by three consecutive drought years (2007 to 2009), which are likely to have suppressed the population levels and reduced distribution. Survey results in 2009 and 2010 may under-represent the area that the population actually occupies over time and likewise the area needed to support the population.

### Conclusions

- The proposed adult-season-only, phased survey method is not recommended by the Department and could lead to construction activities that result in “take” of BNLL.
- BNLL frequently use areas much greater than 5 acres. In the limited studies available, one lizard moved 1,509 feet between consecutive detection points in less than one month and one in 20 to 25 individuals had home ranges greater than 98.8 acres.

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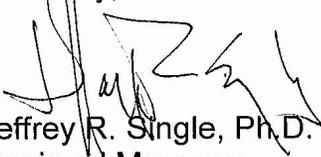
- Predicting the extent and location of a home range within extensive, suitable habitat, based on a single detection point, is not feasible. Construction buffers that fail to recognize this uncertainty are likely to result in “take” of BNLL.
- BNLL survey results available to date on the Project site do not indicate a preference for use of washes over grasslands, although the limited wash habitats are undoubtedly an important habitat component to maintain.
- The proposed avoidance buffers are likely to lead to construction and Project operational activities that result in “take,” and degrade and fragment habitat to an extent that precludes achieving the recovery goals for BNLL.

### Recommendations

- The Department recommends surveying the entire Project site for BNLL, according to the Department’s BNLL survey protocol, prior to completing CEQA review and submitting CESA permit applications.
- The Department recommends a minimum 395-acre avoidance buffer for all Project-related activities, centered on the location where each BNLL is observed.
- All washes should be avoided.

Thank you for the opportunity to comment on the Panoche Valley Solar Farm. We look forward to working with you to find solutions for this challenging energy Project. If you have any questions regarding these comments, please contact Dave Hacker, Staff Environmental Scientist, at 3196 Higuera Street, Suite A, San Luis Obispo, California 93401, by telephone at (805) 594-6152, or by email at dhacker@dfg.ca.gov.

Sincerely,



Jeffrey R. Single, Ph.D.  
Regional Manager

Enclosures: Figures 1, 2, and 3

cc: See Page Ten

## Comment Set A2 – California Department of Fish and Wildlife (cont.)

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Tina Bartlett, Habitat Conservation Branch Chief  
Scott Flint, Habitat Conservation Branch  
Annee Ferranti, Central Region  
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## Comment Set A2 – California Department of Fish and Wildlife (cont.)

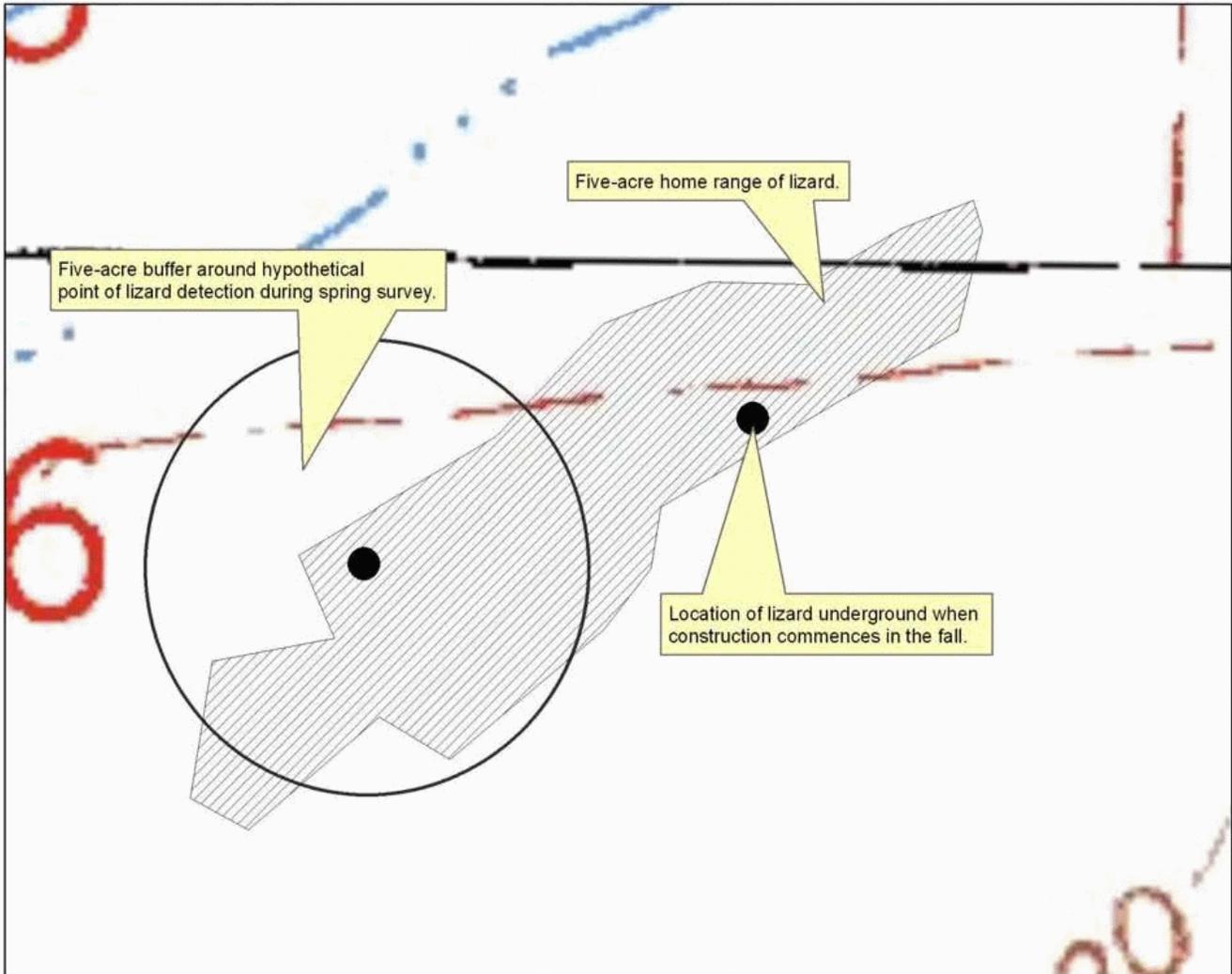
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**Comment Set A2 – California Department of Fish and Wildlife (cont.)**

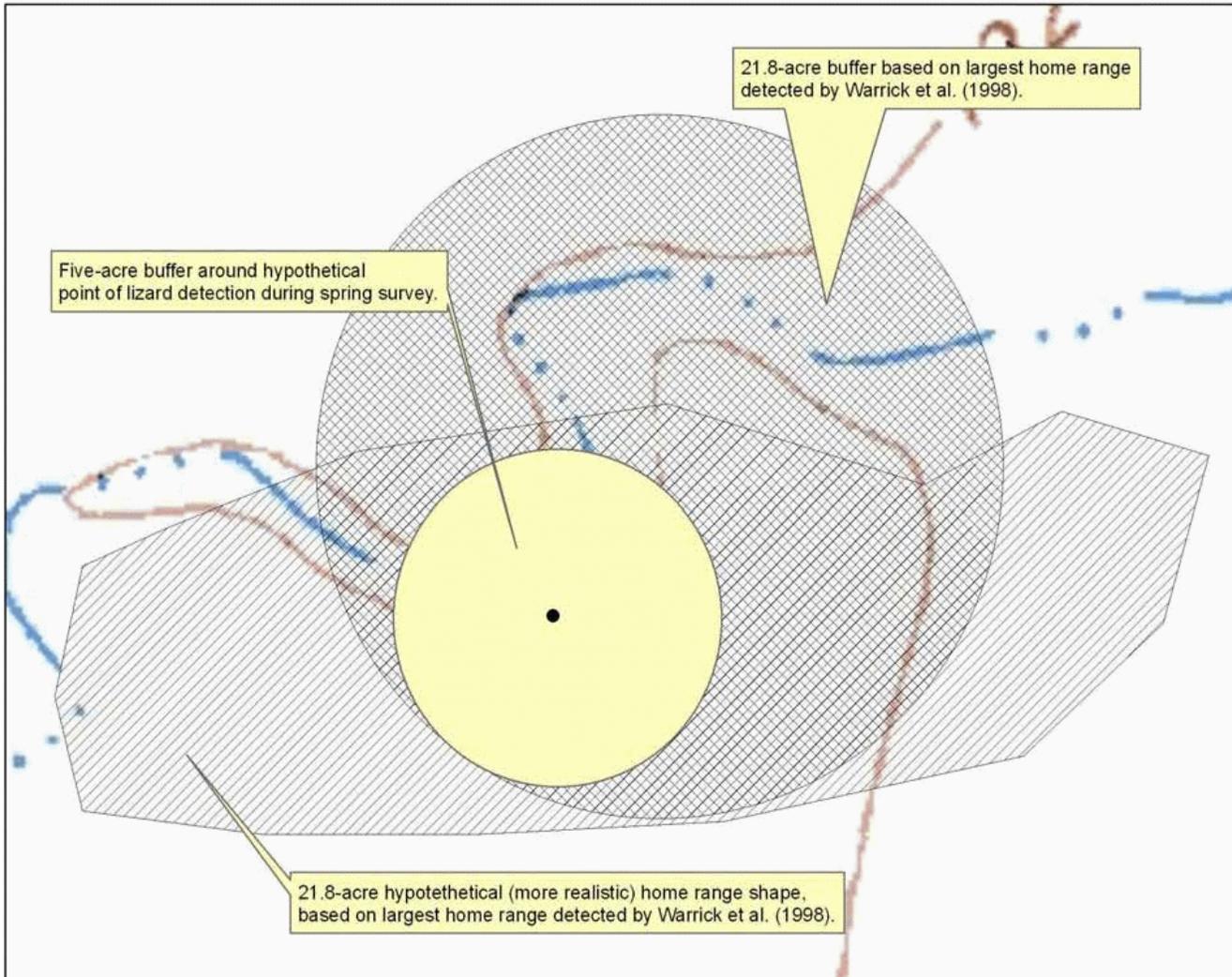
Figure 1. Hypothetical Blunt-Nosed Leopard lizard Detection, Five-Acre Avoidance Buffer, Home Range, and Location of Lizard when Construction Commences



In this case, the five-acre avoidance buffer would not encompass most of the home range, and could result in “take” during construction. Predicting the actual shape of a home range where all surrounding habitat is suitable is not possible.

## Comment Set A2 – California Department of Fish and Wildlife (cont.)

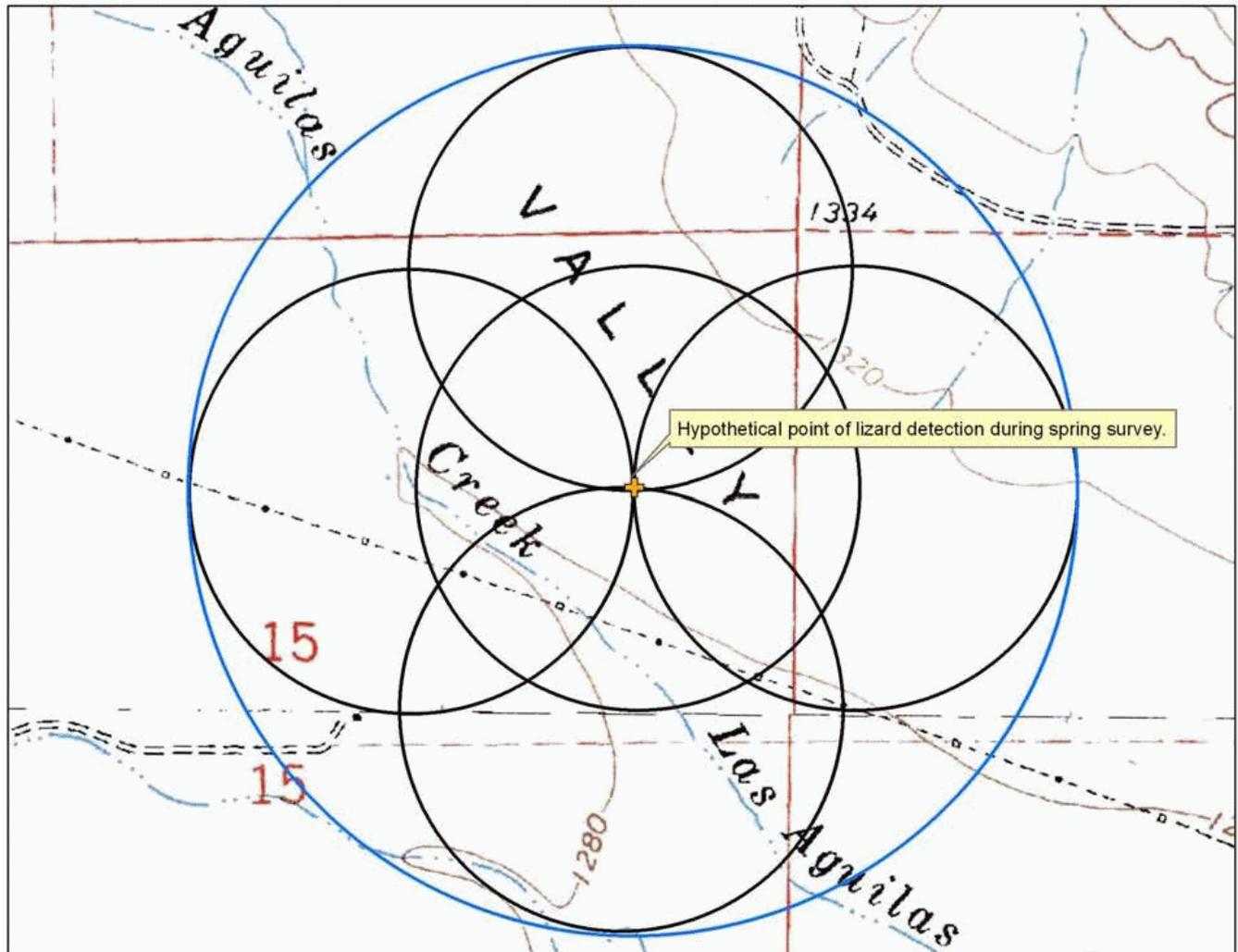
Figure 2. Five-acre Avoidance Buffer Relative to a 21.8-acre Buffer and Hypothetical Home Range.



A five-acre avoidance buffer would encompass a small part of the full range of home ranges sizes described by Warrick et al (1998), which were as large as 21.8 acres. When construction ensues, the lizard is likely to be outside of the five-acre buffer area.

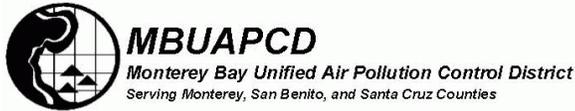
## Comment Set A2 – California Department of Fish and Wildlife (cont.)

Figure 3. Area Required to Encompass the Range of Potential Home Ranges around a Single Lizard Observation



The center circle represents a uniform buffer applied around the location of a lizard observation. The other four inner circles represent four potential home ranges of equal size, assuming that the lizard was detected on the margins of its home range. The outer circle encompasses all possible home ranges in any direction from where the lizard was found. This illustrates why applying a buffer defined by an estimated home range radius (center circle) would not include most of the potential home ranges (e.g., the four other circles intersecting at the lizard detection point). Only the outermost circle encompasses the extent of possible home ranges.

## Comment Set A3 – Monterey Bay Unified Air Pollution Control District



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February 10, 2015

San Benito County Planning Department  
2301 Technology Parkway  
Hollister, CA 95023  
Attention: Michael Krausie

Email: panochesolar@aspeneg.com

Re: Panoche Solar Project Supplemental Environmental Impact Report (SEIR)

Dear Mr. Krausie:

Thank you for providing the Monterey Bay Unified Air Pollution Control District (Air District) with the opportunity to comment on the above-referenced document. The Air District has reviewed the document and has the following comments:

- Increasing watering to three times per day should reduce fugitive dust emissions from the expanded construction area of 50 acres per day. However, every effort should be made to apply additional water or surface treatment, as necessary based on site conditions, before fugitive dust becomes visible in order to reduce overall PM10 emissions and potential non-compliance with Air District Rule 400, Visible Emissions. A3-1
- The PG&E improvement portion of the project may be subject to the San Joaquin Valley Air Pollution Control District's (SJVAPCD) Indirect Source Review, Rule 9510. Please contact SJVAPCD prior to starting construction to confirm applicability of Rule 9510. A3-2
- If any part of the area to be disturbed is located in a Geographic Ultramafic Rock Unit as identified by the California Department of Conservation or if the area to be disturbed has, or is later discovered to have, naturally-occurring asbestos, serpentine, or ultramafic rock, the requirements of the State Asbestos Air Toxic Control Measure (ATCM) must be followed. Please see Section 93105 of the California Code of Regulations for more information on the ATCM (<http://www.arb.ca.gov/toxics/atcm/asb2atcm.htm>). A3-3
- Although construction related emissions are included in the Air District's emissions inventory, the NOx daily emission rate as calculated in the CalEEMod output is more than three times the Air District's NOx threshold for operational emissions. The project is also located within 18 miles of the air monitoring station at Pinnacles National Monument which is where the highest concentrations of ozone are recorded in the North Central Coast Air Basin. Therefore, the Air District is concerned the more intense construction project schedule may contribute to increases in regional ozone concentrations due to the high amount of NOx precursor emissions. In addition to the mitigation identified in the SEIR, the following measures are recommended in order to reduce the effects of construction emissions on regional air quality: A3-4

*Richard A. Stedman, Air Pollution Control Officer*

## Comment Set A3 – Monterey Bay Unified Air Pollution Control District (cont.)

- During the ozone season (May to October), expand the use of Tier 3 and Tier 4 rated off-road equipment and on-road engines meeting the 2010 standards;
- During the ozone season (May to October), use portable equipment with engines rated at least Tier 3 or higher;
- Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, biodiesel, or electric.

A3-4 cont.

Please let me know if you have any questions. I can be reached at (831) 647-9418 ext. 227.

Best Regards,



Amy Clymo  
Supervising Air Quality Planner

cc: David Frisbey/MBUAPCD

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*Richard A. Stedman, Air Pollution Control Officer*