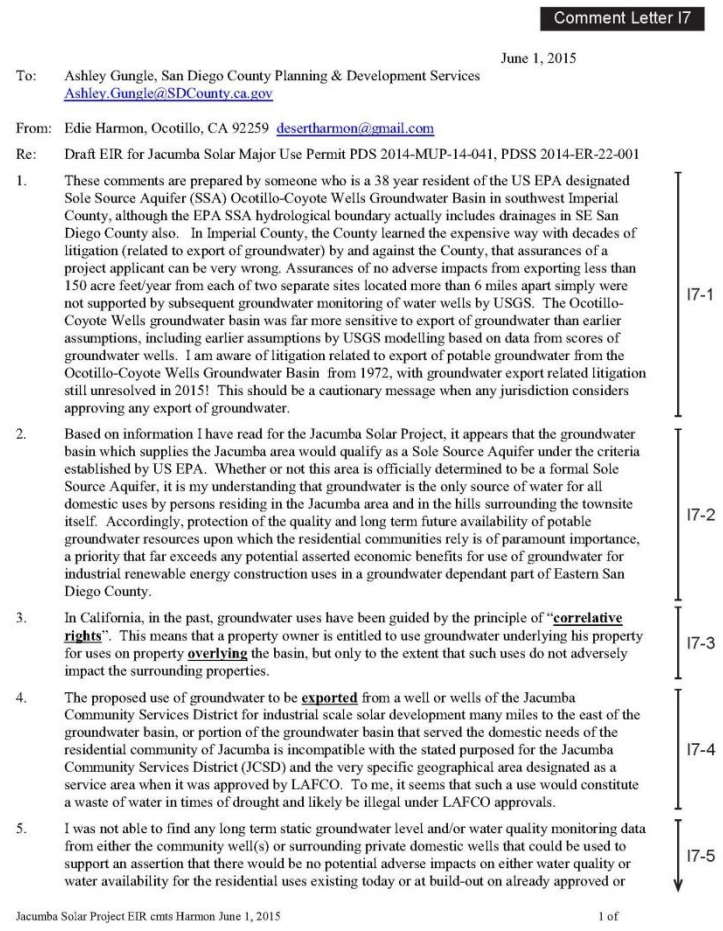

Comment Letter I7

June 1, 2015

To: Ashley Gungle, San Diego County Planning & Development Services
Ashley.Gungle@SDCounty.ca.gov

From: Edie Harmon, Ocotillo, CA 92259 desertharmon@gmail.com

Re: Draft EIR for Jacumba Solar Major Use Permit PDS 2014-MUP-14-041, PDSS 2014-ER-22-001

1. These comments are prepared by someone who is a 38 year resident of the US EPA designated Sole Source Aquifer (SSA) Ocotillo-Coyote Wells Groundwater Basin in southwest Imperial County, although the EPA SSA hydrological boundary actually includes drainages in SE San Diego County also. In Imperial County, the County learned the expensive way with decades of litigation (related to export of groundwater) by and against the County, that assurances of a project applicant can be very wrong. Assurances of no adverse impacts from exporting less than 150 acre feet/year from each of two separate sites located more than 6 miles apart simply were not supported by subsequent groundwater monitoring of water wells by USGS. The Ocotillo-Coyote Wells groundwater basin was far more sensitive to export of groundwater than earlier assumptions, including earlier assumptions by USGS modelling based on data from scores of groundwater wells. I am aware of litigation related to export of potable groundwater from the Ocotillo-Coyote Wells Groundwater Basin from 1972, with groundwater export related litigation still unresolved in 2015! This should be a cautionary message when any jurisdiction considers approving any export of groundwater. I7-1

2. Based on information I have read for the Jacumba Solar Project, it appears that the groundwater basin which supplies the Jacumba area would qualify as a Sole Source Aquifer under the criteria established by US EPA. Whether or not this area is officially determined to be a formal Sole Source Aquifer, it is my understanding that groundwater is the only source of water for all domestic uses by persons residing in the Jacumba area and in the hills surrounding the townsite itself. Accordingly, protection of the quality and long term future availability of potable groundwater resources upon which the residential communities rely is of paramount importance, a priority that far exceeds any potential asserted economic benefits for use of groundwater for industrial renewable energy construction uses in a groundwater dependant part of Eastern San Diego County. I7-2

3. In California, in the past, groundwater uses have been guided by the principle of "**correlative rights**". This means that a property owner is entitled to use groundwater underlying his property for uses on property **overlying** the basin, but only to the extent that such uses do not adversely impact the surrounding properties. I7-3

4. The proposed use of groundwater to be **exported** from a well or wells of the Jacumba Community Services District for industrial scale solar development many miles to the east of the groundwater basin, or portion of the groundwater basin that served the domestic needs of the residential community of Jacumba is incompatible with the stated purposed for the Jacumba Community Services District (JCSD) and the very specific geographical area designated as a service area when it was approved by LAFCO. To me, it seems that such a use would constitute a waste of water in times of drought and likely be illegal under LAFCO approvals. I7-4

5. I was not able to find any long term static groundwater level and/or water quality monitoring data from either the community well(s) or surrounding private domestic wells that could be used to support an assertion that there would be no potential adverse impacts on either water quality or water availability for the residential uses existing today or at build-out on already approved or I7-5

Jacumba Solar Project EIR cmts Harmon June 1, 2015 1 of

Response to Comment Letter I7

Edie Harmon
June 1, 2015

I7-1 The County acknowledges receipt of Edie Harmon's input and appreciates the comments regarding the potential impacts associated with implementation of the project. The County acknowledges this comment; however it does not address the adequacy of the DEIR, therefore no further response is required.

I7-2 The County acknowledges this comment; however it does not address the adequacy of the DEIR, therefore no further response is required. Groundwater impacts were analyzed in three locations in the DEIR, including Section 2.2.3 (Biological Resources), Section 3.1.4.3.4 (Groundwater Resources), and Section 3.1.8 (Utilities). Additionally, Appendix 3.1.4-3 and Appendix 3.1.4-4 to the DEIR are technical reports that further outline the potential impacts to groundwater resources. The import of groundwater as a source of water supply is disclosed on DEIR pg. 3.1.4-4. See also Response to Comments C1-2 through 6 for additional information on groundwater resources.

I7-3 The County acknowledges this comment; however it does not address the adequacy of the DEIR, therefore no further response is required.

sub-divided lots within the geographic confines of the JCSD or adjacent areas. Thus, **export of groundwater from a JCSD well or wells should be denied**, even if for no other reason than that there is no long term monitoring data upon which to make a finding of no significant adverse impact. If this groundwater dependent area is as sensitive as were/are portions of the Ocotillo-Coyote Wells Aquifer, then export from the proposed well site could result in significant unanticipated adverse impacts to the residential community, which could be unmitigable, especially if drought conditions persist long term as many scientists are predicting. I7-5 Cont.

6. I was unable to locate the Jacumba Solar Energy Project Water Supply Evaluation of Jan. 2015 which was incorporated by reference per EIR p. 3.1.4-1. I7-6

7. 70% of the 119 sq. mile watershed for the Jacumba Valley is located in Baja Mexico (EIR p. 3.1.4-2), and it would appear that rainfall and water usage in the Mexican portion of the groundwater basin should b e included in this document rather than assuming that the imaginary line called the international border is in any way a hydrological or geological boundary that confines the groundwater within the basin to the US side of the border. I7-7

8. EIR at 3.1.4-24 refers to the water from Well #6 as non-potable, yet when I reviewed the water quality data from 3.1.4-3 Groundwater Resources Tables 4-1, 4-2, 4-3, and 4-4 that the only reasons that the quality might be considered non-potable were that the pH was 9.48 and Fluoride was 2.72 when the MCL is 2.0. "Non-potable JCSD groundwater from Well No. 6 is slightly elevated above the drinking water MCL for fluoride, pH, and odor." (EIR 3.1.4-24) Because there is a restaurant and museum in Ocotillo that have high fluoride levels, I have long been aware that water for drinking water purposes can be defluorinated as is done at the restaurant. I had expected to see something like high VOCs as an explanation why water was called non-potable, but that does not appear to be the case for Well #6. Therefore, it would appear unwise to consider export of water from or near well 6 for export for industrial uses or dust suppression, especially during times of drought when long term availability of groundwater for domestic uses should be the highest priority. The Park well showed an elevated level of toluene, but failed to suggest the potential extent of the plume of contamination and what efforts have or should have been taken to remediate the toluene. (3.1.4-4 at 44 of 140.) Other than a mention of wellhead treatment, what efforts, if any, have been taken to define the extent of the plume of contaminationso that otherwise potable groundwater is not contaminated? I7-8

9. Contrary to an assertion that the Jacumba Valley Groundwater Basin has not been demonstrated to be in a condition of overdraft (EIR 3.1.4-26), there simply is not enough data from wells in different portions of the groundwater basin to draw any conclusions about changing water levels in different portions of the groundwater basin. Just because there may be no large decline of water level in one portion of the basin, there is no way of knowing what is happening in other portions of the basin for which long term monitoring data is not available. If such data is available, why was it not included in the EIR or technical studies? Indeed, for the Ocotillo-Coyote Wells Basin, what is of critical importance is what is happening to water levels and water quality where there is residential development not at distant locations under public lands where there is not and never will be groundwater extraction. So it is not basin-wide overdraft that counts, but local conditions of overdraft at parts of the groundwater basin from which residential use of groundwater is critical, or what happens where groundwater is available for springs, seeps or vegetation and habitat. I7-9

10. Supplemental Groundwater Resources Report 3.1.4-4 (p. 47 of 140) discusses overdraft and the potential for additional residential development, but fails to include such development in its I7-10

Jacumba Solar Project EIR cmts Harmon June 1, 2015 2 of

I7-4 See Response to Comment C1-4.

I7-5 Groundwater impacts were analyzed in three locations in the DEIR, including Section 2.2.3 (Biological Resources), Section 3.1.4.3.4 (Groundwater Resources), and Section 3.1.8 (Utilities). Additionally, Appendix 3.1.4-3 and Appendix 3.1.4-4 to the DEIR are technical reports that further outline the potential impacts to groundwater resources.

I7-6 The Water Supply Evaluation Memorandum is included within Appendix 3.1.4-1 of the DEIR.

I7-7 The DEIR does not assume the international border is a hydrological or geologic boundary. All technical appendices to DEIR Chapter 3.1.4 include the Mexican portion of the watersheds of interest. Please refer to Appendix 3.1.4-1 (e.g., Figure 5), Appendix 3.1.4-3 (e.g., Figures 7 and 10), and Appendix 3.1.4-4 (e.g., Figure 3, 4, 6, 7, and 8).

I7-8 As discussed in DEIR pgs. 3.1.4-24 and 3.1.4-25, as well as Appendices 3.1.4-3 and 3.1.4-4, water from JCSD Well 6 does not meet potable drinking water standards; in addition, if JCSD proceeds with activation of the Park Well, wellhead treatment may be required to remove toluene and/or any other VOCs prior to non-potable use of water produced from the Park Well and replacement well(s). Treatment of Well 6 to potable standards is not required nor requested to support the

		Proposed Project. JCSD would not purvey water for non-potable use from the Park Well if the water produced has elevated levels of toluene and/or any other VOCs . As discussed in DEIR Section 3.1.4.3.4, provision of water from the Park Well and replacement well(s) would only occur if the water produced were suitable. Otherwise, the Project would obtain its supply from Padre Dam Municipal Water District.
	I7-9	The DEIR indicates that the Jacumba Valley Groundwater Basin has not been demonstrated to be in an overdraft condition therefore, significance thresholds related to groundwater overdraft conditions are not applicable to the Proposed Project. The Appendices 3.1.4-3 and 3.1.4-4 provide the data identifying that groundwater in this basin is not in overdraft. This is in reference to the County Groundwater Ordinance that separates the County into three areas of regulation: overdrafted (i.e., Borrego Valley), Groundwater Impacted Basins and All Other Projects. The Proposed Project falls within the All Other Projects category.
	I7-10	Cumulative groundwater impacts are discussed in Section 3.1.4.4.2 of the DEIR, and analyzed in Appendix 3.1.4-3. The analysis of the water demands from Well 6 in Appendix 3.1.4-3 includes the water demands associated with full general plan build-out of the watershed (see Table 3-4). The analysis of the water

	demands from the Park Well and replacement well(s) in Appendix 3.1.4-4 did not include a full build-out analysis for the following reason: "If agricultural irrigation recommences at Jacumba Valley Ranch and/or other water uses commence on land within the alluvial basin, a detailed water balance analysis would need to be developed to determine the long-term sustainable yield of the basin. Additionally, future discretionary development at maximum density of the General Plan has not been considered in this analysis. The approximate 1,300-acre Ketchum Ranch is designated as a Specific Plan area with a potential density of 1.7 dwelling units per acre. If discretionary permits were obtained, this would potentially allow for over 2,000 residential units and commercial development. This type of development would require a detailed groundwater investigation far beyond the analysis provided in this study to determine the long-term sustainable yield of the basin." (Appendix 3.1.4-4 pg. 5-2) As the Park well and replacement well(s) are not constructed, the Proposed Project analysis evaluated the use of the 100,000 gpd a day from the existing JCSD

	non-potable well, and the remainder from PDMWD, or all water from PDMWD (for traffic and air quality for example). If the replacement well(s) are completed prior to Proposed Project construction then use of that water would be favorable from a reduction of traffic and air quality impacts perspective. JCSD's rehabilitation of the Park Well is not required to support the Proposed Project. If the Park Well and replacement well(s) are not activated, or if water of suitable quality cannot be produced, the Applicant would import water from Padre Dam Municipal Water District. Appendix 3.1.4-4 is provided merely for disclosure purposes, and analyzes the groundwater-related effects of the Park Well and replacement well(s) producing 100 acre-feet of water annually for JCSD to serve as a backup supply for the potable and non-potable demands of its customers generally. The Park Well and replacement well(s), if activated by JCSD, could be used briefly (i.e., the first 40 days of bulk grading) to supplement the production capacity of JCSD Well 6. For clarification, Department of Water Resources Bulletin 118 defines Jacumba Valley Groundwater Basin as basin number 7-47 with a very low California Statewide Groundwater Elevation Monitoring Program (CASGEM) groundwater basin prioritization result and is thus not mandated to be managed in accordance with the recently enacted Sustainable Groundwater Management Act.

assessment of cumulative impacts related to the proposed export of groundwater outside the boundaries of the JCSD. Why no serious consideration of cumulative impacts related to development as contemplated by already approved planning documents related to residential developments It seems imperative to complete a "study to determine the long-term sustainable yield of the basin" (3.1.4-4 at p 47 of 140) prior to any project approvals intending to use groundwater. This is especially true given the sustainability requirements for the new statewide groundwater legislation. I7-10 Cont.

11. Based on my 38 years of observations of groundwater export, I am extremely concerned about the prospects of exporting up to 100,000 gallons/day from one or two wells in the Park Well vicinity in such close proximity to the community water supply upon which my friends in Jacumba rely for domestic needs. Concerns are increased when one reads the Supplemental Groundwater Resources study to 288,000 gallons/day!(3.1.4-4 at p. 9 of 140 ES-1) With or without formal US EPA designation, it appears that the reality is that the community of Jacumba is located overlying a Sole Source Aquifer and that the underlying groundwater resource is the only physically feasible and only economically feasible source of water for all domestic needs of overlying residents. I7-11

12. The documents contain internally inconsistent numerical information or just plain sloppiness. For example: "Well-interference effects were limited to a pumping rate of 100,000 gallons per minute from JCSD Well 6 since the JCSD has indicated this would be the maximum rate allowed for these projects."(emphasis added EIR 3.1.4-28) Earlier the EIR asserts that:"JCSD would be able to provide up to 100,000 gallons per day for construction of the Proposed Project.(EIR 3.1.4-27) "According to the Groundwater Resource Investigation Report for the Jacumba Community Services District (Appendix 3.1.4-3), the JCSD would be able to provide up to 100,000 gallons per day during construction..." (Emphasis added EIR 3.1.4-27.) I7-12

13. The **April 2015 Supplemental Groundwater Resource Report** states that:"The water demand from the Park Well and replacement well(s) is expected to be up to 32.6 million gallons, or **100 acre-feet per year**. The peak water demand for the Park Well and replacement wells(s) is anticipated to be approximately 200 gallons per minute (**288,000 gallons per day**)." EIR 3.1.4-4 at p. 9 of 140.) This is almost three times as much as the EIR itself reports! I7-13

14. There is a serious concern about whether all the members of the JCSD board members and County staff have read and understood **all** of the groundwater studies related to the Jacumba Solar and other development proposals and understood the cumulative impacts of all potential projects that have sought to use groundwater for industrial purposes, construction and dust suppression. Do Board members understand that what is called "non-potable" really doesn't mean that the water could not be easily treated to make it potable? Has the JCSD sought the advice and analysis of a groundwater expert that is independent of the project applicant? I assume that Dudek's analysis is npaid for by the project applicant even if the money may have flowed from the County. Have board members studied the tables and graphs of data to be sure they understand them for themselves and/or requested updated or additional well monitoring for depths to groundwater and water quality analysis? If not why not? (See Figure 9 for Well locations at 3.1.4-3 p. 81 of 170, also Fig. 10 at 83 of 170 for portion of area wells near Well 6 to west.) For Fig 3, JCSD well #4, (p. 155 of 170 at 3.1.4-3) why is there no monitoring data from I7-14

Jacumba Solar Project EIR cmts Harmon June 1, 2015 3 of

I7-11 The County acknowledges this comment. Please see Groundwater DEIR, Section 2.2.3 (Biological Resources), Section 3.1.4.3.4 (Groundwater Resources), and Section 3.1.8 (Utilities), DEIR Appendix 3.1.4-3 and Appendix 3.1.4-4 and Response to Comment C1-2 through 6 for information substantiating that JCSD can provide groundwater to the Project without adverse environmental impacts. The Proposed Project analysis evaluated the use of the 100,000 gpd a day from the existing JCSD non-potable well, as capped by JCSD, and the remainder of water from PDMWD, or all water from PDMWD (for traffic and air quality for example). If JCSD completes the Park Well and replacement well(s) cumulative project completed prior to Proposed Project construction then use of that water to serve the balance (288,888 gpd) Proposed Project construction water demand would be favorable from a reduction of traffic and air quality impacts perspective. Also note that JCSD wells are monitored and the non-potable well proposed for construction use is demonstrably not connected to the potable well that JCSD uses for servicing the potable water needs within the JCSD.

I7-12 The County acknowledges there is an error in the unit on DEIR pg. 3.1.4-28. The last sentence of the first bullet point in the DEIR is therefore edited as follows:

> **"**Well-interference effects were limited to a pumping rate of 100,000 gallons per

	day from JCSD Well 6 since the JCSD has indicated this would be the maximum rate allowed for these projects."
	I7-13 As indicated in Appendix 3.1.4-4, pg. 1-2, "This groundwater resources investigation is being prepared to analyze the potential effects on groundwater and surrounding groundwater users from production of 100 acre-feet annually. In order to assess potential short-term effects for supplying non-potable use, water supply may be extracted at a rate up to 200 gallons per minute over a period of 90 days. Both the 90-day and 1-year water demands are analyzed in accordance with County Guidelines." Groundwater usage varies, and therefore, for the purpose of analyzing well interference effects, the anticipated capacity of the Park Well and replacement well(s) was used, whereas the long term water demand of 100 acre-feet per year was used to analyze groundwater in storage. See also response to comment I7-11.
	I7-14 The County acknowledges this comment; however it does not address the adequacy of the DEIR, therefore no further response is required. Figure 3 of Appendix C, Well 6 Pump Test Results contained within the Draft Groundwater Resources Investigation Report Jacumba Community Services District provides historical Well 4 water level data from May 1990 through May 2007. This graph was prepared by the

2008 to present? That is 7 years of missing monitoring data. The absence of monitoring data from drought years is presumed to mean that water levels declined more than the project applicant or JCSD wants to admit. I7-14 Cont.

15. The Supplemental Groundwater Resources Report "Exhibit 2-B[J1] Jacumba Valley Alluvial Aquifer Water Level Data July 1955 to December 2014" (3.1.4-4 p. 27 of 140) reveals that downgradient wells monitored have showed declining water levels including in the JCSD Park Well through 2013 as irrigation activities resumed in 2003. There was no discussion about what might be the impact if the Park well or a replacement well at that site were permitted to export up to 288,000 gallons/day. I7-15

16. Discussion of well interference in the Jacumba area is not convincing because there is no data for other wells, especially down-gradient or nearby private domestic wells. I recall when Imperial County predicted no adverse impacts from a well exporting 100-130 AF/Y from the Ocotillo-Coyote Wells Groundwater Basin, but the static water level in that well declined more than 70 ft. in 5 years as measured by USGS, and the water level in my domestic well declined 30 ft during the same time. Export ceased, in part because the export well began pumping saline water from depth. Why, because below the potable water is a deeper aquifer of saline water and the export well reached the bottom of the fresh water aquifer and pumping created an up-welling of saline water from depth. Water levels are still recovering some 33 years after the 5 years of export ceased! All predictions about aquifer conditions and transmissivity were proven incorrect by decades of USGS groundwater monitoring. Sadly, there were also decades of litigation that followed and were related to the rapidly declining water levels and public nuisance associated with exporting potable groundwater in old 5000 gallon former fuel tank trucks that had side labels that said "flammable". Exported groundwater went to Mexicali. A sad lesson and a warning that not all assumptions and predictions are actually correct in the long run. I7-16

17. Thank you for accepting these concerns about groundwater use for the Jacumba Solar Project. These comments are intended to supplement those submitted by others. I7-17

18. I strongly recommend denial of export of groundwater from the JCSD for industrial renewa ble energy projects whereever they may be. I7-18

Sincerely,

Edie Harmon
desertharmon@gmail.com
619-729-7178

County of San Diego and raw data was not available at the time of the preparation of the report to prepare updated graphs over the full monitored period. More recent water level data from January 2012 through December 2014 for Well 4 provided by the JCSD is presented in Exhibit 2-E of the same report. Thus a data gap from 2007 to 2012 for the Well 4 water level record is noted. There is no absence of water level data from the most recent drought period. As of June 18, 2015, the water level in Well 4 measured 10 minutes after pumping ceased was 10.0 feet below top of casing as compared to the historic all time recorded low water level of about 23 feet below ground surface.

I7-15 The commenter is referred to Chapter 3 of DEIR Appendix 3.1.4-4; specifically Sections 3.1.3 and 3.2.3. These sections discuss the effects of production of 100 acre-feet per year and 288,000 gallons per day (over 90 days) would affect groundwater in storage and well interference, respectively.

I7-16 The County acknowledges this comment; however it does not address the adequacy of the DEIR, therefore no further response is required. Well interference was calculated in the Groundwater Resources Investigation Reports as per the County requirements outlined in County of San Diego Guidelines for Deterring Significance and Report Format and Content Requirements. In addition water level thresholds have

	been established in the Groundwater Monitoring and Mitigation Plans prepared for the Proposed Project to protect users of groundwater resources. **I7-17** The County acknowledges this comment; however it does not address the adequacy of the DEIR, therefore no further response is required. **I7-18** The County acknowledges this comment; however it does not address the adequacy of the DEIR, therefore no further response is required.

INTENTIONALLY LEFT BLANK