

## Letter 26

*Postmarked* **received**  
12/9/11

Dec. 8, 2011

Tom Mulvihill, General Manager  
Indian Wells Valley Water District  
PO Box 1329  
Ridgecrest, CA. 93555

Dear Mr. Mulvihill,

I have already written you regarding the IWWVD Water Supply Improvement Project Initial Study, but I would like to comment again about the IWWVD Draft Environmental Impact Report for the WSIP.

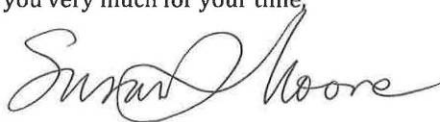
My husband and I are home and well owners on ten acres of property a few miles west of the town of Inyokern. Our address is 8626 Las Flores Ave., Inyokern. The records for our well were unfortunately lost in the Kirschenman's Well Drilling Company fire, but we can tell you that our water level has decreased approximately 30 feet in twenty years. Thus, we are very concerned about your proposed increase in well drilling and pumping in SW Inyokern. **Right now our pump is at the deepest depth possible, and we speak for our personal investment and interest when we ask that you not proceed with your current plan.**

26-1

We feel that the WSIP is too expensive and not needed. We understand that you are currently able to meet your peak day demands now, and more "redundancy" in the system is not necessary. We urge you to explore other ways to enhance the future water supply, including more conservation, other treatment of non-potable water and/or desalinization.

26-2

Thank you very much for your time



Susan D. Moore  
8626 Las Flores/PO Box 1210  
Inyokern, CA 93527  
760-377-3466

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**Response to Comment 26-1:** This comment states that the No Project Alternative should be selected due to potential impacts to water levels. Project impacts to water levels were analyzed using a groundwater flow model. Phase 1 of the Proposed Project (increasing the pumping capacity of Wells 18 and 35) would not affect the existing rate of water level decline. Phase 2 of the Proposed Project (installation of new Well 35) may increase the rate of water level decline in the vicinity of the new well. The groundwater flow model indicates that the average rate of water level decline within one-half mile of Well 35 is anticipated to increase by 0.5 foot per year, from a current baseline rate of approximately 1.6 feet per year to a projected rate of approximately 2.1 feet per year. The average rate of water level decline within 1.5 miles of Well 35 is anticipated to increase by 0.2 foot per year, from a current baseline rate of approximately 1.6 feet per year to a projected rate of approximately 1.8 feet per year. At about a 2-mile radius from Well 35, increases in the rate of water level decline caused by the Proposed Project would be too small to measure. This increase in the average rate of water level decline in the immediate vicinity of Well 35 was identified in the Draft EIR as a potentially-significant impact that can be mitigated. The mitigation measure for this impact is discussed in Master Response 4. Additional information on the analysis of water level impacts can be found in Master Responses 1 and 2. It should be noted that the No Project Alternative was evaluated in the EIR, and that the District's Board has the option to select this alternative.

**Response to Comment 26-2:** This comment states that the Proposed Project is not needed because peak demand was able to be met in 2011, even with certain wells out of service. Maximum Day Demand for the WSIP evaluated in the EIR was computed by applying a peaking factor to the Average Daily Demand as projected in the 2010 Urban Water Management Plan. This peaking factor was conservative, so that the worst-case scenario could be modeled and evaluated in the EIR. It should also be kept in mind that the District only produces groundwater in response to actual water demands from its customers. It does not have the ability to store large quantities of water for which there is no demand. Should the actual Maximum Day Demand values in the future be less than the estimate, similar to the demand in 2011, the new facilities would only be operated as needed to satisfy the actual demand. Master Response 7 provides more information on this issue.

This comment also states that another alternative should be approved, such as more conservation, treatment of non-potable water and/or desalination. Other alternatives, including aggressive conservation, blending, saline water recovery, water reclamation, and water importation considered for the Proposed Project, but were rejected because they could not be implemented in the time frame of the Proposed Project and/or because they would not be cost-effective. It should be emphasized that these alternatives were only rejected as alternatives to the Proposed Project. These alternatives could still be considered for future projects, although separate environmental analysis would need to be conducted. It should also be noted that one of the reasons Phase 3 (construction of new well 36 at Victor and Las Flores) was eliminated was that some of these alternatives may become feasible in the future and could be implemented. Master Response 10 further addresses this comment.

## Letter 27

Patrick & Stephanie Tillmanns  
4213 Drummond Ave.  
Ridgecrest, Calif.

marked 12/9/11  
**received**  
Dec. 8, 2011

We are very concerned residents in the area of the new proposed well, having seen our well water drop considerably in the last ten years.

Drilling a well here would endanger the quality of the water for all concerned.

The bottom line is after reading the project description and needs we are even more adamant in saying "NO" to this project.

Patrick & Stephanie Tillmanns

P.S. My printer's out so the "old fashion" hand written letter!

27-1

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**Response to Comment 27-1:** This comment states that the No Project Alternative should be selected due to potential impacts to water levels. Project impacts to water levels were analyzed using a groundwater flow model, which concluded that the average rate of water level decline within one-half mile of Well 35 is anticipated to increase by 0.5 foot per year, from a current baseline rate of approximately 1.6 feet per year to a projected rate of approximately 2.1 feet per year. The average rate of water level decline within 1.5 miles of Well 35 is anticipated to increase by 0.2 foot per year, from a current baseline rate of approximately 1.6 feet per year to a projected rate of approximately 1.8 feet per year. At about a 2-mile radius from Well 35, increases in the rate of water level decline caused by the Proposed Project would be too small to measure. This increase in the average rate of water level decline in the immediate vicinity of Well 35 was identified in the Draft EIR as a potentially-significant impact that can be mitigated. The mitigation measure for this impact is discussed in Master Response 4. Additional information on the analysis of water level impacts can be found in Master Responses 1 and 2. It should be noted that the No Project Alternative was evaluated in the EIR, and that the District's Board has the option to select this alternative.

# Letter 28

*Postmarked*



To: Tom Mulvihill, General Manager  
Indian Wells Valley Water District  
P.O. Box 1329  
Ridgecrest, CA 93555  
(760) 375-5086

From Paul and Julie von Schlemmer  
1424 N. Quasar St., Ridgecrest, CA 93555  
vonschlemmer@verizon.net

## **Environmental Impact Report for the Indian Wells Valley Water District Water Supply Improvement Project**

### **COMMENTS:**

In regards to the WSIP that is being proposed, we are concerned that it will affect the water table in our area. We are on the corner of N. Quasar and W. Reeves. We have our own well and cannot afford to dig a new one if the water table drops too low. Our relatives had to drill a new well on the corner of Bowman and Jacks Ranch when IWWVD put in a well on the corner of Jacks Ranch and R/C Blvd. The water table dropped too low for their existing well to operate.

Perhaps money could be put to better use by reclaiming water or desalination or other treatment of non-potable water.

Sincerely,

Paul and Julie von Schlemmer

A handwritten signature in cursive script that reads "Paul and Julie von Schlemmer".

28-1

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**Response to Comment 28-1:** This comment also states that another alternative should be approved, such as reclamation, desalination, or other treatment of non-potable water. Other alternatives, including aggressive conservation, blending, saline water recovery, water reclamation, and water importation considered for the Proposed Project, but were rejected because they could not be implemented in the time frame of the Proposed Project and/or because they would not be cost-effective. It should be emphasized that these alternatives were only rejected as alternatives to the Proposed Project. These alternatives could still be considered for future projects, although separate environmental analysis would need to be conducted. It should also be noted that one of the reasons Phase 3 (construction of new well 36 at Victor and Las Flores) was eliminated was that some of these alternatives may become feasible in the future and could be implemented. Master Response 10 further addresses this comment.

# Letter 29

**From:** [Julie Ann Pennix](#)  
**To:** [iwwwd@iwwwd.com](mailto:iwwwd@iwwwd.com)  
**Subject:** ATTN: Tom Mulvihill RE: Water Supply Improvement Project EIR  
**Date:** Friday, December 09, 2011 4:02:45 PM

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----- Forwarded Message -----

**From:** Julie Ann Pennix <desertmommie@yahoo.com>  
**To:** melissa <JMFinell@verizon.net>; mike <boilermiker@verizon.net>; Kathy laShure <desert\_encelia@verizon.net>  
**Sent:** Wednesday, December 7, 2011 6:31 PM  
**Subject:** Fw:

Friday is the deadline to send in our comments...if we are all in agreement I will submit this tomorrow...I have not heard any negative comments, therefore I feel confident on submission. Thank you.

----- Forwarded Message -----

**From:** Julie Ann <dezeez@verizon.net>  
**To:** 'Julie Ann Pennix' <desertmommie@yahoo.com>  
**Sent:** Monday, November 14, 2011 11:14 AM

- 
- The Donna Sue Water Company of Inyokern is very interested and concerned with the proposed EIR for the proposed Water Supply Improvement Project, Indian Wells Valley Water District, Kern County , CA .
  - While there are a number of comments being voiced by the professional groundwater community regarding assumptions and modeling, the Donna Sue Water Company remains primarily focused on ensuring the continuation of supplying our customers with our current high water quality standards, high water pressure, and continuous uninterrupted supply of water, and therefore will not be commenting on the technical aspects of the EIR groundwater modeling analysis.
  - Therefore, the Donna Sue Water Company is focused primarily on the mitigation outlined in the EIR as proposed by the IWWWD, and that such mitigation is adequate enough to ensure the water supply and water quality to our customers remain in-tact. Considering that significant technical and academic questions remain on the adequacy and accuracy of the water quality and the groundwater depletion modeling as done for the proposed project

29-1



in the EIR, and considering the Donna Sue Water Company is approximately 1.65 miles from the proposed actions, we are requesting the following mitigation be well defined and agreed upon before the EIR is completed:

1. What is the geographic boundary for the proposed monitoring wells that will assess any excessive water depletion in our area?
2. What is the assumption for the baseline levels for which loss of water level in this area is to be measured from?
3. What is the trigger rate-of-loss of groundwater for when mitigation will take place?
4. What is the specific well site mitigation that will occur for the wells in the mitigation area?
5. What is the time frame for which the IWWWD will abide by, or no longer honor, such mitigation?
6. Is there any intent to complete a Memorandum of Agreement that is legally binding and will be signed and approved by all stakeholder parties?

**29-1**  
continued

· Also, the Donna Sue Water Company is concerned that the CEQA process has not been adequately followed. Two of the proposed, but dismissed, alternatives for analysis were not adequately reviewed before dismissal occurred. They are as follows:

1. Navy to sell water to the IWWWD- This alternative was dismissed without appropriate documentation to show that the Navy actually did decline to sell water to the IWWWD. Neither a letter from the Navy, nor any correspondence of any kind, supports this assumption. Please provide such evidence that the Navy declined to sell IWWWD water.
2. Purchase of water from Agricultural landowners. As shown during the presentation, 40% of all water removed from IWWWD is for "Agriculture". Since IWWWD consumption for the rest of the 30,000 inhabitants of this valley is about the same level, and agricultural commodities in the valley remain insignificant from the standpoint of job creation and revenue acquired, this severe imbalance of water withdrawal rights remains ripe for analysis for another reasonable alternative of purchasing such rights. Nothing

**29-2**



was provided in the public meeting that was held, nor did the EIR analysis indicate reasonably that this alternative was adequately and reasonably pursued before being dismissed as an alternative, as required by CEQA.

· CEQA does not eliminate further analysis simply because a project proposal “cannot be completed within the project timeline”, or “fiscal costs to implement a proposed alternative are exceeded”. CEQA is bound only to REASONABLE ALTERNATIVES analysis separate from timelines and costs, and for both the Navy alternative, and the purchase of large water-producing wells from private agricultural landowners, the alternative selections were not provided enough evidence to warrant their elimination. So far the IWWWD has yet to complete this process. Either adequately address this concern, or pursue documented completion of the analysis that removes these alternatives from the reasonable list of alternatives analyzed. Therefore, we request you to pursue these 2 alternatives until they can be properly and analytically eliminated through supporting documentation, as required under CEQA regulation.

**29-2**  
continued

A written response to all above comments is requested.

Also, could you please provide us with a copy of the presentation provided to the public? Electronic or a hard copy mailed would be appreciated.

Sincerely,  
Julie Ann Pennix  
Donna Sue Water Co.  
PO Box XXXXXXXX

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Basically the intent is to require the IWWWD to provide us assurances that we will have water for many, many years to come. While we cannot necessarily control whether they proceed with the project or not, we can control the mitigation requirements to assure that the Donna Sue Water Co continues to provide water to the customers at a reasonable rate, and demand the quality that is comparable to what we

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have and pay currently.

The intent of this e-mail is to remove emotion and remained focused on issues pertinent to water availability,

Let me know what you think.

Comments/deletions/additions are appreciated.

I will need everyone to agree with this message before I send it in.

Comments are due Dec. 9 to the IWWWD, so I would appreciate comments from you all by no later than Dec 1.

Regardless of what Donna Sue Water Co sends, I urge you all to send whatever comments you have as individuals may have.

Thanks,  
Julie Ann

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**Response to Comment 29-1:** This comment asks several questions regarding Mitigation Measure H-1. This comment asks “what is the geographic boundary for the proposed monitoring wells that will assess any excessive water depletion in our area?” The technical assessments and modeling conducted for the Draft EIR established that a potentially-significant impact may occur to groundwater levels as a result of the proposed increased pumping for Phase 2. As described in Master Response 1, the measurable effects of the proposed increased pumping would occur at less than a two-mile radius from new Well 35. Existing baseline conditions will, over time, reduce the production rate of pre-existing wells such that these wells may not support existing land uses in the future. The additional pumping from Well 35 would result in an increased rate of drawdown locally. Based on the modeling conducted in August 2011 (see Appendix G of the Draft EIR) the average rate of water level decline within one-half mile of Well 35 is anticipated to increase by 0.5 foot per year, from a current baseline rate of approximately 1.6 feet per year to a projected rate of approximately 2.1 feet per year. The average rate of water level decline within 1.5 miles of Well 35 is anticipated to increase by 0.2 foot per year, from a current baseline rate of approximately 1.6 feet per year to a projected rate of approximately 1.8 feet per year. At about a two-mile radius from Well 35, increases in the rate of water level decline caused by the Proposed Project are too small to measure. Mitigation Measure H-1 includes water level monitoring on a semiannual basis for wells located within two miles of new Well 35 as well as a number of perimeter control wells, outside of the area of influence.

This comment further asks “what is the assumption for the baseline levels for which loss of water level in this area is to be measured from?” Baseline levels will be established for each well. As stated in Mitigation Measure H-1, to help establish pre-Project conditions, the monitoring program will begin in 2012. If available, historic water level data from the existing KCWA monitoring program will also be used.

This comment further asks “what is the trigger rate-of-loss of groundwater for when mitigation will take place?” The CEQA significance criterion specifies that a significant impact would occur when the production rate of pre-existing wells drops to a level that will no longer support existing land uses. Due to the timeframe required to implement any one of the actions identified in Mitigation Measure H-1, the “trigger” mechanism must provide sufficient lead time to prevent a decline in production below rates needed to support the land uses served by any given well. To accomplish this objective, detailed information about each well would be documented to evaluate the water level at which the impact would occur. This information would include, for example, total depth, screened interval, gravel-pack interval, well casing diameter, pump size, depth of pump intake, and head loss. This information would be used to evaluate the pumping rate at different groundwater levels to estimate the depth at which the impact would occur. This depth, along with the measured rate of water level decline, would then determine the time at which the mitigation process should begin so that the mitigation method selected (e.g. deepening the well, installing a different pump, drilling a deeper well, providing a connection to another water system) can be installed before the time at which the production rate in the existing well(s) would drop below rate that will support current uses.

This comment further asks “what is the time frame for which the IWWWD will abide by, or no longer honor, such mitigation?” Mitigation Measure H-1 would be in place for the lifetime of Well 35. Current depth to groundwater in the area of the Proposed Project is approximately 400 feet bgs. Drilling data from the 1993 U.S. Bureau of Reclamation study demonstrates that good

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quality groundwater is present to depths of at least 2,000 feet bgs in the Project vicinity. Even at a rate of decline of 2.1 feet per year, this mitigation approach will be effective for over 600 years, which is far longer than the lifetime of Well 35.

This comment further asks “is there any intent to complete a Memorandum of Agreement that is legally binding and will be signed and approved by all stakeholder parties?” A Memorandum of Agreement is not necessary to implement a CEQA mitigation measure. As a CEQA Lead Agency, the District is legally required to implement a mitigation monitoring and reporting program (see Section 5.0 of this Final EIR). To implement the mitigation, the District will be required to obtain permission from the well owners to monitor the wells; will collect, analyze, and report data semiannually under the direction of a third-party Certified Hydrogeologist or Registered Civil Engineer; and, if required, negotiate specific mitigation actions with the well owner. A written agreement will be implemented between the owner(s) of the specific well and the District at that time.

Master Responses 1 through 4 further address the analysis of impacts to groundwater levels and the proposed mitigation.

**Response to Comment 29-2:** This comment requests that documentation from the Navy be provided that shows that the Navy declined to sell water to the IWWWD, because this was the reason for dismissing alternatives. The commentor is incorrect. The EIR does not state that the Navy declined to sell water to the IWWWD. Alternative 3, which is the purchase of water from existing Navy wells was analyzed in the EIR. An alternative to construct new wells on NAWS China Lake was considered and rejected, not because the Navy declined to sell water to the IWWWD, but because the approval process for well construction would take many years with no guarantee of approval.

This comment also states that two alternatives to the Proposed Project were not adequately reviewed before dismissal, the purchase of water from the Navy and the purchase of water from agricultural landowners. The alternative of purchase of water from the Navy was analyzed in the Draft EIR, and could be adopted by the District’s Board. Alternative 3, which was analyzed in the Draft EIR, is the alternative of using the existing intertie between the District and NAWS China Lake to provide supplemental water that suggested by many commentors during the scoping and Draft EIR review period. With this alternative, supplemental water from existing wells on NAWS China Lake would be transferred to IWWWD in the summer months to provide additional nominal capacity during high demand days. The water would be pumped from the existing Navy wells to the existing IWWWD 30-inch pipeline located between the NAWS China Lake boundary and Highway 178. It has been suggested by several comment letters that this alternative could be implemented immediately at no or very little additional cost to the District. However, the District cannot simply begin pumping unlimited water at the daily capacity of the intertie at no cost from NAWS China Lake using existing infrastructure. In fact, this alternative would require the negotiation of the amount of water, the timing of delivery, and the price of water between the Navy and the District. Preparation of a National Environmental Policy Act document would be required. This alternative would also require the construction of a booster station located on NAWS China Lake property where the current intertie is located. Several commentors on this EIR have also stated or implied that this alternative would avoid the significant impacts to water resources that were identified with the Proposed Project. However, this alternative would result in the same amount of groundwater

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being pumped from the basin as the Proposed Project. The pumping location, however, would be changed from the southwest area to the intermediate well field and the area just to the northeast of Inyokern, where most of the Navy wells are located. Master Response 9 further addresses this issue.

The alternative of purchasing water from another entity within the Indian Wells Valley was evaluated in Alternative 3. The purchase of water from an agricultural user would be substantially similar to the purchase of water from the Navy, and, therefore, did not need to be analyzed separately in the EIR.

The alternative of purchasing water from public and private sources outside the Indian Wells Valley and the alternative of constructing new District wells on NAWS China Lake were examined but rejected as alternatives to the Proposed Project for reasons described in Section 4.6.3. It should be emphasized that the alternatives considered and rejected in the EIR were only rejected as alternatives to the Proposed Project. These alternatives could still be considered for future projects, although separate environmental analysis would need to be conducted. It should also be noted that one of the reasons Phase 3 (construction of new well 36 at Victor and Las Flores) was eliminated was that some of these alternatives may become feasible in the future and could be implemented. Master Response 10 further addresses this comment.

A copy of the presentation from the public meetings for the Draft EIR was mailed to the commentor on December 21, 2011.

# Letter 30

## Draft Environmental Impact Report for the Indian Wells Valley Water District Water Supply Improvement Project

received  
12/09/11

### Draft EIR COMMENTS

Public Meetings  
November 8, 2011, Inyokern Senior Center  
November 9, 2011, Ridgecrest City Hall Council Chambers

Please use this page to submit your comments on the Draft Environmental Impact Report (EIR) prepared for the District's Water Supply Improvement Project. Your comments are an important part of creating a comprehensive Final EIR. When making your comments, please be as specific as possible.

Name PATRICIA A. SORENSEN  
Address P.O. Box 1454  
E-mail RIDGECREST, CA 93556  
Street City Zip Code

**Comments can also be submitted to:**

Tom Mulvihill  
General Manager  
Indian Wells Valley Water District  
P.O. Box 1329/500 W. Ridgecrest Blvd.  
Ridgecrest, CA 93555  
(760) 375-5086

Email: [iwwwd@iwwwd.com](mailto:iwwwd@iwwwd.com)

All comments must be postmarked by December 9, 2011.

### Comments

Please provide your comments below. If you need additional space, please use the reverse side of this sheet. Thank you.

SEE ATTACHED

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**COMMENTS ON ENVIRONMENTAL IMPACT REPORT  
FOR THE INDIAN WELLS VALLEY WATER DISTRICT  
WATER IMPROVEMENT PROJECT**

Patricia A. Sorensen  
P.O. Box 1454, Ridgecrest, CA 93556  
[sorensenp@verizon.net](mailto:sorensenp@verizon.net)

COMMENTS:

1. Reference 4.2.1. "The increased pumping from the Proposed Project, however, is a very small fraction of the existing total pumping from the basin that has created the groundwater depressions. Thus, the contribution of the Proposed Project to the change in groundwater quality is very small and cannot be quantified, measured, or monitored.

Increased pumping of wells 18 and 34 that is currently going on has caused my well to drop 20' in the last 3 years and I live approximately 2 miles away from them. The readings on my well were made by the Kern County Water Management group and are a matter of record. To make a statement like the above is just ludicrous. IWVWD must be held accountable for not only the precipitous decrease to the water level in this area but for the changes to water quality also which would be exacerbated by perturbations to the water level caused by deep-cycle pumping. I have experienced a significant increase in salinity in my water these past 3 years and my neighbors have also. IWVWD CANNOT, JUST CANNOT increase pumping in this area more than they already have or they will run every well in this entire area dry or totally unpotable or both.

**30-1**

2. Reference 4.2.1. "Scenario 6 resulted in the fewest impacts to groundwater levels, and was selected as the Proposed Project."

I consider the results of Scenario 6 to be more than significant since the increased pumping from wells 34 and 18 has already cost me \$17,000 to get my well resleeved. Fitting these wells with a pump that will double their current capacity will have the effect of cutting the life of my well to less than a tenth of what it would normally be and will require further work and more money in the next 4-5 years. Who is going to pay for that?

**30-2**

3. Reference 4.2.2. (and several other places) Conservation measures:

There is no mention of the use of gray water in this paragraph. RWD is not being practical nor serious in their approach to water conservation without addressing the use of gray water, not just for Ridgecrest but a change in the building code that will allow all new, as well as existing construction to use gray water.

**30-3**

4. Reference 4.3.4.

Again, let me make this absolutely clear, INCREASED PUMPING OF WELLS 18 AND 34 WOULD DESTROY ALL OF THE PRIVATE WELLS WITHIN A 4-5 MILE RADIUS AND THERE ARE MANY.

**30-4**

5. Reference 4.6.3. Developing Supplemental Water Supply Alternatives;

In this section, much discussion is given to the cost per acre feet of water and time before implementation for several possible supplemental water sources with each of them being disregarded or 'thrown out' because they are either too expensive or time consuming to impact the supposed problem. At this point, I feel I must remind the reader of four points:



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1. Because of some creative accounting and the use of high water usage years which no longer exist, the 'crisis' of insufficient water production with a 20% redundancy is a fantasy. The IWWWD is easily meeting it's peak day demands now and actually has done so in the past when the demand was much higher.

**30-5**

2. The original document which we are now reviewing originally surfaced in 2007. It is now 2011, over five years later, and it is now in it's third draft. The original document was presented to satisfy a 'crisis state' that existed for the IWWWD that needed to be 'reconciled immediately'. The crisis has yet to materialize and it keeps changing with each draft of this document. A crisis didn't exist then and it doesn't exist now.

3. Copious amounts of money have been spent on this WSIP to date for analysis, for writing, rewriting, discussion, meetings, etc., in an effort to just kick the problem of a dwindling water supply down the road so that when it does reach crisis mode, and it will, someone else will have to deal with it. It's incredible the amount of money that has been spent by the IWWWD on this effort; to ECORP Consulting, to Layne Christensen, Inc., to Layne Hydro, to God-only-knows who else, and to buying parcels of land here and there in a speculative effort to determine where to drill next. Pursuing this effort has been expensive for the IWWWD and yet, not one drop of water has been produced to date. But more importantly, the IWWWD refuses to seriously address and plan for the real problem of long-term overdraft in the valley.

**30-6**

This head-in-the-sand approach has the potential for being enormously expensive in the long term. Tom Mulvihill made the statement at the last WSIP meeting that IWWWD would bear the cost of resleeving/reclaiming wells that went dry in the area of impact for the increased pumping of wells 18 and 34 and proposed well 35. But, we all knew that would happen ONLY IF we took the issue to court. This has a very probable potential for pulling together the well owners in this area for a class-action law suit with a cost to the IWWWD of millions of dollars. Culpability is easy to prove and we have nothing to loose.

4. If I were a customer of the IWWWD, I would be extremely upset to be footing the bill for all this effort to get this document through the CEQA process when IT'S NOT EVEN A SOLUTION, rather, it's a short term expediency, a BandAid. In a few years, when all the good quality water in the SW of the valley has been sucked out, IWWWD will be looking for another spot where they can put down new wells. Sound familiar? This has been going on for over 40 years at an incredible cost and with no long-term plan in sight. The reality is, there are no pockets of 'good quality' water left in the valley once the SW pocket is depleted. It's interesting it should be considered 'good quality' even as alkaline as it currently is.

Ten years from now, the cost of an acre-foot of water from a desalinization plant will look really cheap when compared to 'no water at all'.

In my opinion, the IWWWD staff should all be fired for gross incompetence and frivolous management of their customers money.

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**Response to Comment 30-1:** This comment states that impacts to water levels and water quality should be evaluated in the EIR. The EIR evaluates impacts from the Proposed Project to both water levels and water quality, and determined that these impacts would be significant. Master Responses 1 through 6 address these issues in more detail.

**Response to Comment 30-2:** This comment states that Phase 1 of the Proposed Project will reduce the life of the commentor's well. The EIR evaluates the impacts from the Proposed Project to water levels. Phase 1 of the Proposed Project would increase the nominal pumping capacity of Wells 18 and 34 to provide a 20 percent system redundancy. As such, Phase 1 does not result in an additional net volume of groundwater pumping but only provides redundant capacity. In the event of equipment failure, maintenance, or emergency situation on a maximum demand day, the amount of drawdown in the water table in the vicinity of Wells 18 and 34 during this temporary time period would be greater than currently occurs. After the equipment failure, maintenance, or emergency situation has been resolved, pumping would decrease and water levels would recover. Master Response 1 provides additional information on this issue.

**Response to Comment 30-3:** The use of reclaimed water was considered and rejected as an alternative in the Draft EIR. Recycled water is currently used by the City of Ridgecrest and the Navy. An agreement has been established between the City of Ridgecrest and the Navy for coordination of facilities in exchange for use of recycled water by the Navy. Recycled water is not currently available for use by the District due to inadequate quantities and lack of conveyance and treatment facilities. The City's agreement with the Navy provides for the Navy's allotment of 748 AF/yr of treated effluent, and the Navy typically uses its entire allotment. After disinfecting the effluent with chlorine, the Navy uses the water to irrigate a golf course on Navy property. In addition, approximately 224 AF/yr of secondary-treated effluent are used for irrigation on an alfalfa farm managed by the City of Ridgecrest. The remainder of treated effluent is evaporated or percolated in evaporation and facultative ponds. Adequate quantities of water must remain in the evaporation ponds at all times in order to provide enough percolation into the nearby Lark Seep, which serves as a refuge for the Mohave tui chub (*Gila bicolor mohavensis*), an endangered species of fish. At times, there is only enough effluent to supply the Navy and the endangered fish.

**Response to Comment 30-4:** This comment states that Phase 1 of the Proposed Project will destroy all the private wells within a 4 to 5 mile radius. Master Response 1 provides information on this issue.

**Response to Comment 30-5:** This comment states that the Proposed Project is not needed because peak demand was able to be met in the past. Maximum Day Demand for the WSIP evaluated in the EIR was computed by applying a peaking factor to the Average Daily Demand as projected in the 2010 Urban Water Management Plan. This peaking factor was conservative, so that the worst-case scenario could be modeled and evaluated in the EIR. It should also be kept in mind that the District only produces groundwater in response to actual water demands from its customers. It does not have the ability to store large quantities of water for which there is no demand. Should the actual Maximum Day Demand values in the future be less than the estimate, similar to the demand in 2011, the new facilities would only be operated as needed to satisfy the actual demand. Master Response 7 provides more information on this issue.

**WATER SUPPLY IMPROVEMENT PROJECT  
FINAL ENVIRONMENTAL IMPACT REPORT**

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**Response to Comment 30-6:** This comment states that the Proposed Project is too costly. Master Response 11 addresses this issue.

# Letter 31

RECEIVED  
12/12/11

Rec 12/12/11  
note: Drop of 30, but  
stated contact link  
on website not working

## Indian Wells Water District Supply Improvement Project 2011

### DRAFT EIR 45DAY COMMENT PERIOD FROM October 25<sup>th</sup> to December 9<sup>th</sup>.

The DEIR is supposed to contain new information from the information that was gathered last summer. There have been no significant changes in the document describing the growth or the supposed need for this document and my comments that I submitted last summer are still not being addressed.

31-1

The projected growth of the DEIR of 1% is questionable in this Valley. There has been no new population growth, but rather a substantial decline in our growth. Further implication of decline is the new cuts proposed in the Defense (Navy) budget, which will most certainly affect this area. This document also does not address the additional conservation savings that will come with higher water rates and improved public awareness that will result in an overall reduction in demand.

Your own records demonstrate there is really no need to drill a new well. The Base has reduced its water consumption by 30 plus percent, there has been a 17 percent reduction in water use and the District plans to continue its conservation focus. So there will be even more water conserved.

31-2

The IWVWD is easily meeting its peak day and season demands now and has done so in the past when the demand was higher. Therefore,  
a) past demands are comfortably met,  
b) less present day demands needed,  
and c) even less future demands to be made the, WD stated "redundancy" need is simply not there.

There is still no mention of water storage tanks or alternative water sources that could be considered that would benefit not only Ridgecrest, but also the entire area. In the October presentation it was said that storage tanks would produce unsafe drinking water, however, other desert communities have storage tanks one as close as Rosemond. A serious comprehensive study of this would be appropriate before the proposed project of additional well drilling, especially in an already unprotected water basin in the valley, which would lower the aquifer for the entire Valley. Two more valuable projects would be: First, how to enhance our water supply such as desalinization or treatment of non-potable water and Second, how to bring outside water into our Valley from the surrounding mountain areas and other sources.

31-3

There seems to be a lack of concern in this document for the private and mutual well owners. Unfortunately any additional deep well drilling will have a negative affect on EVERYONE in the Valley including the IWVWD in the long run.

31-4

Since IWVWD began drilling wells in the private well owner's area the water has decreased substantially. So much so that a good many private and mutual well owners have had to recently

**WATER SUPPLY IMPROVEMENT PROJECT  
FINAL ENVIRONMENTAL IMPACT REPORT**

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re-drill their wells to a deeper depth to maintain pumping their water and without negating the quality of their water.

Prior to IWVWD drilling these wells it was stated that they were drilling so deep that private and mutual well owners would not be affected. This has not been adequately proven. The private and mutual well owners have first water rights in the Valley, according to the Kern County Planning and Environmental Report letter to the IWVWD.

It is clear that the Water District has full intention to pump the Southwest Valley hard in order to establish new (prescriptive) water rights and to reduce water costs by reducing water pumped from wells in the Intermediate area that require arsenic treatment.

The project in the long haul will seriously impact all wells in the Southwest and West (including IWVWD wells) and does nothing to address our overdraft situation.

There is no justification for this project at this time and to pre-approve a project with a predetermined environmental document, which may be years old at the time of drilling lacks real concern for new issues, which may surface. It also lacks the scope of a CEQA and NEPA analysis on private, state and federal lands, which will be impacted if this project goes through.

So in conclusion, fix the well.



Sophia Anne Merk  
2062 S Mikes Trail Road  
Ridgecrest, California 93555

Supervisor McQuiston  
Kern County Planning Department  
Representative Kevin McCarthy  
Bureau of Land Management

**31-4  
Continued**

**31-5**

**31-6**

**WATER SUPPLY IMPROVEMENT PROJECT  
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**Response to Comment 31-1:** This comment states that the Proposed Project has not changed from the project that was initially circulated during the Scoping period in summer 2011. The Proposed Project was re-evaluated based on comments received during the Scoping period. Changes to the WSIP resulting from EIR scoping are listed in Section 2.2.4 of the Draft EIR and in Master Response 13. In summary, the following changes were made as a result of the scoping process:

- ◆ Production demand estimates were recalculated and lowered based on new information from the Navy and growth estimates from Kern COG (approximately 1 percent per year)
- ◆ Phase 3 was eliminated, because alternative water sources may become available after 2015. Well 36, which would have been located at the southeast corner of Las Flores Avenue and North Victor Street, is no longer proposed as part of this project.

**Response to Comment 31-2:** This comment states that the projected population growth of 1 percent, which was used in the EIR to project future demand, is not accurate and that a population decline will actually occur. Additionally, this comment states that a 20 percent redundancy is not needed because the District has met demand in the past. Population projections of 1 percent per year were provided by Kern COG, and are fall within the range of projections used by the City of Ridgecrest in its General Plan (1 to 3 percent) and Kern County in its General Plan (2 percent). It should be noted that the District only produces groundwater in response to actual water demands from its customers. It does not have the ability to store large quantities of water for which there is no demand. If population increases do not occur, or if demand is low because of conservation or cooler weather, then the new facilities would only be operated as needed to satisfy the actual demand. Master Responses 7 and 8 further address this issue.

**Response to Comment 31-3:** This comment states that the District should implement other alternatives, including water storage tanks, desalination, treatment of non-potable water, and importing water into the Indian Wells Valley. These alternatives were considered for the Proposed Project, but were rejected because they could not be implemented in the time frame of the Proposed Project and/or because they would not be cost-effective. It should be emphasized that these alternatives were only rejected as alternatives to the Proposed Project. These alternatives could still be considered for future projects, although separate environmental analysis would need to be conducted. It should also be noted that one of the reasons Phase 3 (construction of new well 36 at Victor and Las Flores) was eliminated was that some of these alternatives may become feasible in the future and could be implemented. Master Response 10 further addresses this comment.

**Response to Comment 31-4:** This comment states that private well owners and cooperative system well owners have water rights that supercede the IWWWD. Master Response 12 addresses this issue.

**Response to Comment 31-5:** This comment states that the purpose of the Proposed Project is to acquire prescriptive water rights. As stated in the Draft EIR, Section 2.3, the Proposed Project's purpose is to provide system redundancy to meet maximum day demand with a 20 percent safety factor in the case of a mechanical failure or water quality issue in one or more of their existing wells as required by the 1997 Water General Plan and the 2010 Urban Water

**WATER SUPPLY IMPROVEMENT PROJECT  
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Management Plan. Phase 2 of the project would also provide for a modest population increase of 1 percent per year. It should be kept in mind that the District only produces groundwater in response to actual water demands from its customers. It does not have the ability to store large quantities of water for which there is no demand. Should actual demand be lower than the demand predicted in the EIR, the new facilities would only be operated as needed to satisfy the actual demand. Master Response 7 provides additional information on this issue. Master Response 12 addresses water rights issues.

**Response to Comment 31-6:** This comment states that the EIR may be years old when Phase 2 is implemented. CEQA allows that the drafting of an EIR necessarily involves some degree of forecasting (CEQA Guidelines Section 15144). The EIR has estimated the timing of the implementation of Phase 2 based on population projections from Kern COG. The actual timing of implementation may differ based on actual demand, which is dependent on actual population changes, the effectiveness of conservation, and other factors. CEQA also requires the District to evaluate the environmental impacts of the entire Project, defined as the whole of an action. Evaluation of Phase 1 and Phase 2 in separate environmental documents would not be allowed under CEQA because the California Supreme Court has that determined that a project description must include all relevant parts of a project, including reasonably foreseeable future expansion or other activities that are part of the project [*Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal.* (1988) 47 Cal. 3d 376]. In this case, Phase 2 is reasonably foreseeable based on demand calculated from population projections provided by Kern COG. Future water supply projects that may be needed after the implementation of Phase 2 were not considered to be reasonably foreseeable because alternative water sources may become available in the future, and Phase 3 was dropped from the project during the scoping process. The commentor is correct when stating that any future water supply projects would require additional CEQA analysis.

This comment also states that a National Environmental Policy Act analysis should be conducted, because project impacts may affect federal lands. The Proposed Project is not subject to NEPA. NEPA is required when there is a Major Federal Action, which is defined as projects and programs entirely or partly financed, assisted, conducted, regulated, or approved by federal agencies; new or revised agency rules, regulations, plans, policies or procedures; and legislative proposals. This project is not obtaining financing from a federal agency and does not require approvals from a federal agency. It should be noted that Alternative 3, which would be purchase of water from the Navy using the existing intertie, would require a NEPA analysis if selected by the IWWWD Board.



WATER SUPPLY IMPROVEMENT PROJECT  
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# Letter 32

STATE OF CALIFORNIA

Governor's Office of Planning and Research  
State Clearinghouse and Planning Unit



Edmund G. Brown Jr.  
Governor



Ken Alex  
Director

December 9, 2011

Tom Mulvihill  
Indian Wells Valley Water District  
500 W. Ridgecrest Boulevard  
P.O. Box 1329  
Ridgecrest, CA 93555

Subject: Water Supply Improvement Project  
SCH#: 2011071010

Dear Tom Mulvihill:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on December 8, 2011, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

A handwritten signature in black ink that reads "Scott Morgan".

Scott Morgan  
Director, State Clearinghouse

Enclosures  
cc: Resources Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044  
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

# WATER SUPPLY IMPROVEMENT PROJECT FINAL ENVIRONMENTAL IMPACT REPORT

## Document Details Report State Clearinghouse Data Base

**SCH#** 2011071010  
**Project Title** Water Supply Improvement Project  
**Lead Agency** Indian Wells Valley Water District

**Type** EIR Draft EIR  
**Description** IWVWD currently does not have enough capacity to allow for a 20% redundancy for equipment failure during maximum demand days. Additional capacity is also required to accommodate a predicted future population growth. The Proposed Project would improve existing Wells 18 and 34 to provide up to 2,000 gpm of additional capacity (total) in 2012. If demand increases, a new well (Well 35) with a pumping capacity of 1,000 to 2,200 gpm would be constructed. For analysis purposes, it was assumed that Well 35 would be constructed in 2015, although actual implementation would be based on demand.

### Lead Agency Contact

**Name** Tom Mulvihill  
**Agency** Indian Wells Valley Water District  
**Phone** (760) 375-5086 **Fax**  
**email**  
**Address** 500 W. Ridgecrest Boulevard  
P.O. Box 1329  
**City** Ridgecrest **State** CA **Zip** 93555

### Project Location

**County** Kern  
**City**  
**Region**  
**Lat / Long** 35° 36' 22" N / 117° 47' 14" W  
**Cross Streets** Bowman Rd/Brown Rd and Bowman Rd/Star Pl  
**Parcel No.** 341-234-02, -03/341-082-18  
**Township** 27S **Range** 39E **Section** 8/9 **Base** SBB&M

### Proximity to:

**Highways** US 395  
**Airports** No  
**Railways** No  
**Waterways** Little Dixie Wash  
**Schools** No  
**Land Use** Vacant and Existing Water Wells/Estate 2.5 acres and Estate 20 acres/Low Density Residential

**Project Issues** Air Quality; Archaeologic-Historic; Biological Resources; Geologic/Seismic; Noise; Public Services; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Vegetation; Water Quality; Water Supply; Growth Inducing; Cumulative Effects

**Reviewing Agencies** Resources Agency; Department of Fish and Game, Region 4; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 6; CA Department of Public Health; State Water Resources Control Board, Division of Financial Assistance; Regional Water Quality Control Bd., Region 6 (Victorville); Department of Toxic Substances Control; Native American Heritage Commission

**Date Received** 10/25/2011 **Start of Review** 10/25/2011 **End of Review** 12/08/2011

Note: Blanks in data fields result from insufficient information provided by lead agency.

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STATE OF CALIFORNIA

Edmund G. Brown, Jr., Governor

**NATIVE AMERICAN HERITAGE COMMISSION**

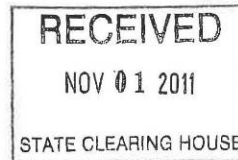
915 CAPITOL MALL, ROOM 364  
SACRAMENTO, CA 95814  
(916) 653-6251  
Fax (916) 657-5390  
Web Site [www.nahc.ca.gov](http://www.nahc.ca.gov)  
ds\_nahc@pacbell.net

clear  
12/8/2011  
e



October 28, 2011

Mr. Tom Mulvihill, General Manager  
**Indian Wells Valley Water District**  
P.O. Box 1329  
Ridgecrest, CA 93555



Re: SCH#2011071010 CEQA Notice of Completion; draft Environmental Impact Report (DEIR) for the "Water Supply Improvement Project;" located in the Ridgecrest Area; eastern Kern County, California

Dear Mr. Mulvihill:

The Native American Heritage Commission (NAHC), the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources pursuant to California Public Resources Code §21070 and affirmed by the Third Appellate Court in the case of EPIC v. Johnson (1985: 170 Cal App. 3<sup>rd</sup> 604). The court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources, impacted by proposed projects including archaeological, places of religious significance to Native Americans and burial sites. The NAHC wishes to comment on the proposed project. This project is subject to consultation pursuant to California Government Code §65352.3, *et seq.*

This letter includes state and federal statutes relating to Native American historic properties of religious and cultural significance to American Indian tribes and interested Native American individuals as 'consulting parties' under both state and federal law. State law also addresses the freedom of Native American Religious Expression in Public Resources Code §5097.9.

The California Environmental Quality Act (CEQA – CA Public Resources Code 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ... objects of historic or aesthetic significance.' In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. The NAHC Sacred Lands File (SLF) search resulted as follows: **Native American cultural resources were not identified** within the project area identified. However, the absence of archaeological resources does not preclude their existence. . California Public Resources Code §§5097.94 (a) and 5097.96 authorize the NAHC to establish a Sacred Land Inventory to record Native American sacred sites and burial sites. These records are exempt from the provisions of the California Public Records Act pursuant to California Government Code §6254 (r). The purpose of this code is to protect such sites from vandalism, theft and destruction.

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followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery'.

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. Regarding tribal consultation, a relationship built around regular meetings and informal involvement with local tribes will lead to more qualitative consultation tribal input on specific projects.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,



Dave Singleton  
Program Analyst

Cc: State Clearinghouse

Attachment: Native American Contact List

**WATER SUPPLY IMPROVEMENT PROJECT  
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**Response to Comment Letter 32:** This letter is an acknowledgement by the State Clearinghouse that the District has complied with the State Clearinghouse review requirements for draft environmental documents pursuant to CEQA. No response is required.

The attached comment letter from the Native American Heritage Commission is the same as Letter 1. Please refer to Letter 1 for the response to comments contained in this letter.

# Letter 33



9 December 2011

Dave Decker  
10260 Shenandoah Dr  
Reno NV 89508-8277

Tom Mulvihill, General Manager  
Indian Wells Valley Water District  
P.O. Box 1329  
Ridgecrest, CA 93555

SUBJECT: Draft Environmental Impact Report 'Water Supply Improvement Project' California State Clearinghouse No. 2011071010.

Mr. Mulvihill:

Thank you for the opportunity to comment on the draft EIR for the 'Water Supply Improvement Project' State Clearinghouse No. 2011071010. I've read the document and have a few comments from the perspective of someone with an engineering and hydrogeology background.

Section ES.3.1

It is a disservice to the IWVWD ratepayer for the IWVWD board to conclude that it needs a new well to provide a 20% standby capacity when there is an existing intertie agreement and hardware with the Navy and Searles Valley Minerals paid for by the rate payers. And the intertie works, per memorandum to the Navy dated 17 April 1991. If the intertie legal agreements don't permit use of the intertie except in emergencies, then one needs to modify the intertie agreement, not drill another well.

The last sentence in this section seems the most plausible reason why the IWVWD thinks a new well is needed. The assumption of a 1% population growth rate in the valley is optimistic at best given that the largest employer in the valley is likely to experience significant reductions in budget and possibly consequent staffing reductions. Furthermore the regional groundwater table clearly cannot support the present population given the continued groundwater mining that is occurring, as evidenced by the steady groundwater table decline. Therefore even thinking about trying to meet any increased demand with additional infrastructure installation and maintenance costs with a possible reduction in total number of rate payers is not financially sustainable. Meeting any increased demand by pumping additional water from a groundwater resource that is already in overdraft is not responsible and it certainly isn't sustainable.

Figure 3.8.2

Entire graduate thesis works could be written based on the analysis of data used to generate this figure. The largest water user in the valley is agriculture. Agriculture in the desert. This works in the Yuma and Salton Sea areas for one reason – proximity to a large river. Agriculture counts for a tiny fraction of the total jobs in the valley while the Navy accounts for most of the jobs. Yet the

33-1

33-2

**WATER SUPPLY IMPROVEMENT PROJECT  
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Navy uses but a small and declining fraction of the water agriculture uses. It is past time for the state of California to adjudicate water rights in a hydrographic basin that is in overdraft because the community is mining its groundwater. Agriculture is possible – but not with the crops and methods currently in use. If agriculture consumed water at the same rate the Navy did, the long-term economic future for everybody living in the valley would be very much brighter. Furthermore, the IWVWD wouldn't need to drill more wells to chase the water table to ever deeper depths.

**33-2  
continued**

*Last paragraph, page 3.8-31*

The conclusion that well owners may simply drill deeper to follow the water table without impact is false. Many factors affect water quality that have not been accounted for in this report, including geochemistry, mineralogy and regional groundwater intrusive flow from the shallow, high TDS groundwater underlying NAWs to equilibrate the man-made gradients induced by pumping. This paragraph should be stricken from the document.

**33-3**

*The Brown and Caldwell Numerical Groundwater Model*

Rather than comment in detail here on the use of the Brown and Caldwell model, I've included a letter that I wrote regarding the Solar Millennium (SM) project and its use of the Brown and Caldwell model. In that letter I develop a simple calculation that concludes that 8,000 afy increased pumping from the southwest well field would result in 29 feet of additional drawdown in the vicinity of the pumping well after 30 years. To those living near the proposed Well 35, they would most certainly think a 30 foot decline to be a significant and perhaps untenable impact. For the IWVWD to claim that the permanent decline in water table is mitigable is ridiculous. Mitigation occurs through corrective action. By what means does the IWVWD propose to replace the water it has pumped to supply its ratepayers? Drilling deeper isn't a sustainable mitigative action – therefore the proposed impact is not acceptable.

**33-4**

In conclusion I empathize with the IWVWD's position as a water supplier in a hydrographic basin that is in dramatic supply stress. The IWVWD's financial future is in serious jeopardy without long-term solutions to the water supply for all. Strategic planning for long term financial sustainability should be focused on, among other things:

- Developing collaborative methods to reduce agricultural water use by one or two orders of magnitude is essential. The state legislature must be engaged to adjudicate water rights in the valley to limit further groundwater decline. This will be painful for everybody, including the IWVWD. Agriculture in the valley is still possible, and may even thrive if modern large-scale hydroponic technology is adopted. Agriculture must 'earn its keep' such that it begins to compare with other valley water consumers on an economic basis (e.g. jobs/af, tax revenue/af, etc.). The water belongs to everybody, not just to those with the biggest/deepest well or pocketbook. Adjudication would provide a 'referee' where one is sorely needed.
- Developing joint contingency plans with the Navy and Searles Valley Minerals to supply water to each other that extend beyond simple disaster scenarios. This will enable the sharing of existing infrastructure as well as a collaborative understanding of the issues

**33-5**



**WATER SUPPLY IMPROVEMENT PROJECT  
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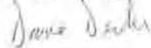
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facing everybody. The WSIP project premise is a symptom of severe stovepiping by the IWVWD, Navy, Agriculture, and Searles Valley Minerals. As the largest water users, these entities must work together – their long-term, decadal-scale, survival depends on it.

- The reduction in per meter water use from conservation measures reported in the WSIP EIS falls far short of what the IWVWD should expect. Reductions of 30-40% are possible without reduction in quality of life. The Navy has clearly figured out ways to save water as evidence by Figure 3.8.2 – the IWVWD and other major water users should all be matching that performance.
- Find real, meaningful water reuse targets for the municipal sewer. Using it to grow alfalfa and letting the rest go to evaporation is a gross waste of water given the unsustainable hydrologic context that the IWV faces. Modern wastewater treatment technology is available such that all wastewater can be reinjected for consumptive reuse. Federal financial assistance is available for such infrastructure improvements.

**33-5  
continued**

Respectfully,



Dave Decker.

encl.: Letter to E. Solario and J. Eubanks, 21 May 2010, 'Proposed Solar Millennium Ridgecrest Solar Power Project (SMRSPP), Docket Number 09-AFC-9'

# WATER SUPPLY IMPROVEMENT PROJECT FINAL ENVIRONMENTAL IMPACT REPORT

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21 May 2010

Dave Decker  
10260 Shenandoah Dr  
Reno NV 89508-8277

Eric Solorio  
Siting, Transmission, and EPD  
California Energy Commission  
1516 Ninth Street, MS-15  
Sacramento, CA 95814-5504  
esolorio@energy.state.ca.us

Janet Eubanks, Project Manager  
California Desert District  
Bureau of Land Management  
22835 Calle San Juan De Los Lagos  
Moreno Valley, CA 92553-9046  
jeubanks@ca.blm.gov

SUBJECT: Proposed Solar Millennium Ridgecrest Solar Power Project (SMRSPP), Docket Number 09-AFC-9

Mr. Solorio and Ms. Eubanks:

Thank you for providing the opportunity to comment on the Staff Assessment and Draft Environmental Impact Statement (SA/DEIS) prepared for the proposed Ridgecrest Solar Power Project (RSSP). I have a few comments regarding Section 5.17 of the SA/DEIS. These comments are specifically directed toward the numerical modeling, model interpretation and graphical presentation of the model results that are used in support of a 'no impact' finding to the Indian Wells Valley (IWV) groundwater resources resulting from the construction and subsequent operation of the SMRSPP.

I claim that the numerical model results presented by the applicant in defense of a 'no impact' finding are misleading and erroneous. I present below a simple calculation and a set of observations to support my claim. I am a research professor in the Nevada System of Higher Education (the Nevada University system) and my specialties are in civil engineering, flow and transport in variably saturated media, and geochemistry. I hold a Ph.D. in hydrogeology and an EIT certificate from California.

A complex numerical hydrogeologic groundwater model is not required to determine the project's impact to the local groundwater table. Following the logic progression presented in Section 5.17, we can simply compare the groundwater decline resulting from the difference in additional water withdrawn for construction and follow-on operation from that of the baseline annual water use present today. Details such as groundwater recharge, aquifer heterogeneity, boundary conditions, subsurface structure, etc. are all important to a numerical model, but are not needed for a simple difference calculation because these details are common to both baseline and project conditions – and as such they can be ignored in a simple calculation as given below.

There are two end-member types of alluvial aquifers – so called confined, and unconfined. The Brown and Caldwell report identifies the aquifers located within the IWV hydrographic basin as a mix of these two types. The two aquifers produce water by dramatically different mechanisms with the result that an unconfined aquifer can produce many orders of magnitude more water than a confined aquifer for a given aquifer volume. On the basis of the difference in magnitude of water produced, this analysis will assume that nearly all the water removed by pumping from the IWV groundwater resource is from unconfined aquifers.

A key descriptive parameter for an unconfined aquifer is the specific yield ( $S_y$ ) – a unitless parameter that describes the fraction of water that drains out of the saturated sand/rock by gravity following water removal by pumping. It is expressed as a ratio of lengths – for example feet of water drained per feet of sand/rock the water drains from. The Brown and Caldwell report found that the  $S_y$  for IWV was between

# WATER SUPPLY IMPROVEMENT PROJECT FINAL ENVIRONMENTAL IMPACT REPORT

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0.05 and 0.15. Using the average  $S_y$  of 0.1, this means that for a ten-foot thick section of aquifer, one-foot of water can be produced from it before this section of aquifer is dry and has no more water to remove by pumping. Now expand this calculation to an aquifer that underlies an area of 10,000 acres and if 10,000 acre-ft of water is pumped out (so visualize removing 1 foot of water from 10,000 acres of aquifer – it's the same thing as my first example) this will result in a groundwater table decline of 10-feet.

Expressed as a mathematical relationship, the volume of water drained from an aquifer,  $V_w$  can be calculated as:

$$V_w = S_y A \Delta h$$

where  $A$  is the horizontal area of the aquifer, and  $\Delta h$  is the decline in the groundwater table<sup>1</sup>. This equation simply expresses the relationship between volume of water removed and the decline in groundwater table – which is precisely what SM attempted to do in Section 5.17 of the SA/DEIS.

## 'WHAT IS THE IMPACT OF SM WATER WITHDRAWAL TO IWV GROUNDWATER RESOURCES?'

To answer this question does not require an invocation of the mathematics that describe subsurface flow (e.g. Darcy's Law) because we don't care about the rate of impact nearly as much as what the total impact may be from SM's water withdrawal for the RSPP. While the annual groundwater table decline may be 'small', because the IWV hydrographic basin is in overdraft per both the Brown and Caldwell report and the SM SA/DEIS, each annual decline in the groundwater table, no matter how larger or small, adds to the last and after 30 years may sum to a significant total impact.

Now let's use this equation to answer the question posed above for the SMRSPP. To do that, we need to know how much water is being pumped.

- a. Per conversation with the IWV Water District (IWVWD) on average each residential service connection consumes 0.64 acre feet<sup>2</sup> per year (afy).
- b. Construction water use for dust control and soil compaction:
  - o The CEC believes that at least 8,000 afy will be needed during construction for dust control, etc.<sup>3</sup> For a 28-month construction period, the total water withdrawal is 18,667 af.
  - o The SA/DEIS section 5.17 indicates that a total water use of 1500 af is required.
  - o The IWVWD operating agreement with SM indicates that a maximum of 1500 af will be supplied.
- c. SM's mailed brochure claims it will create 800 new jobs during construction and 85 permanent jobs in perpetuity.
  - o Assume the 85 permanent jobs is equivalent to 85 new families or residences to the IWV.
    - To operate the RSSP, staff that work at it (presumably new to the IWV) need an additional  $85 * 0.64 \text{ afy} = 54.4 \text{ afy}$ .
  - o Assume the 800 construction jobs are transient workers who travel to the IWV from elsewhere and reside in local hotels/motels. Assume that each worker uses 1/3 of the residential consumption, or 0.21 afy. This is a guess at how much water it takes to support a hotel guest with daily laundry, room cleaning, landscaping, etc.
    - To support construction personnel the RSSP needs  $800 * 0.64 \text{ afy} * 0.33 = 170 \text{ afy}$  for the first 28 months of the project.
- d. During construction, the construction workers alone will consume 170 afy. Once the plant becomes operational, 150 afy (RSSP plant operations) + 54.4 afy (RSSP operators) = 204.4 afy.

<sup>1</sup> C.W. Fetter, Applied Hydrogeology, 2<sup>nd</sup> Edition, ISBN 0675208874, page 107, equation 4-21.

<sup>2</sup> <http://en.wikipedia.org/wiki/Acre-foot>

<sup>3</sup> [http://www.energy.ca.gov/sitingcases/solar\\_millennium\\_ridgecrest/documents/2009-12-28\\_Issues\\_Identification\\_Report\\_1N-54597%20.pdf](http://www.energy.ca.gov/sitingcases/solar_millennium_ridgecrest/documents/2009-12-28_Issues_Identification_Report_1N-54597%20.pdf)

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### 'HOW MUCH WILL THIS CONTRIBUTE TO THE WATER DECLINE IN IWV?'

- e. Assume specific yield ( $S_y$ ) of 0.1 which is the average  $S_y$  from the Brown and Caldwell report.
- f. The SA/DEIS model used a baseline water consumption of 470 gpm or 1,768.93 afy, or 2,764 IWVWD water connections at 0.64 afy each. To be consistent with the SM modeling effort, I'll use this same baseline water consumption value.
- g. By examination of the Brown and Caldwell historic water level contour maps, Figures 16 and 17, the average annual baseline groundwater decline from 1985 to 2006 in the vicinity of Well 18 is approximately 2 ft per year.
  - o Well 18 was chosen as the modeled pumping well in SM's modeling of the SMRSPP impact to the IWV groundwater resources as documented in Section 5.17 of the SA/DEIS – so this location is chosen in this analysis to again be consistent with SM's approach.
  - o Well 18 is one of the IWVWD municipal water supply wells and as such it is used throughout the year to supply water to the IWVWD rate payers. Therefore, it is a reasonable, if simplistic, assumption that Well 18 supplies water to support all the water needs for the SMRSPP including construction (compaction, dust control), plant operations, and personnel – including both construction and permanent workers.
- h. Combining e, f and g, and using the equation above, we can now estimate the areal extent of the SW aquifer as:
  - o Aquifer Area = Baseline water volume pumped /  $S_y$  / baseline annual water table decline
  - o Aquifer Area = 1769 afy / 0.1 / 2 ft/yr = 8,845 acres.
- i. 8,845 acres \* 43,560 square feet / acre = 385.3 million (M) square feet (sf) or M sf.
- j. Now back to item d, how much water is used by SM personnel?
  - o 204.4 afy = 204.4 afy \* 43,560 sf / acre = 8,903,664 cubic feet (cf) water per year.
- k. How much water is that averaged over the size of the aquifer calculated from h?
  - o 8.903 M cfy by 385.3 M sf = 0.0231 fty.
- l. How much groundwater drawdown is that equivalent to?
  - o 0.0231 fty /  $S_y$  = 0.0231 fty / 0.1 = 2.77 inches per year.

This calculation process was ported into a spreadsheet that in turn was used to compute the cumulative impact of water withdrawal from construction and subsequent operation of the plant. The results of this spreadsheet calculation are shown in the following figures. Using SM's estimate of 1,500 af total construction water, 170 afy for construction workers for 28 months, and 204.4 afy for operations and plant workers, the total cumulative construction and operational water table decline is over 9-feet after 30-years, shown as the red line attached to the right axis in Figure 1.

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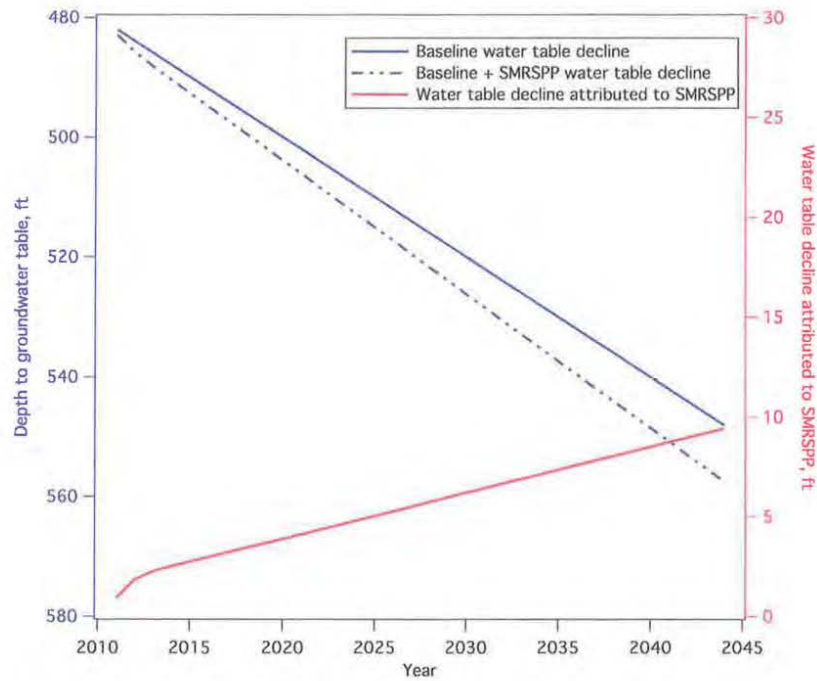


Figure 1: Projected groundwater table decline following a cumulative calculation of construction and operational water consumption. Construction water consumption 1,500 af total, 170 af for construction workers for 28 months, and 204.4 af for plant operations and plant workers per SM SA/DEIS. The right axis and the red line illustrates the estimated water loss resulting from the SMRSPP being constructed and operated for 30 years. There is clearly an impact, contrary to the claim made by SM in Section 5.17 of the SA/DEIS.

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Now at the other end of the construction water use estimate is the 8,000 afy estimated by CEC staff<sup>4</sup> that results in a very significant amount of water lost to the existing water users of the IWV with a total water table decline of almost 29-feet as shown in Figure 2.

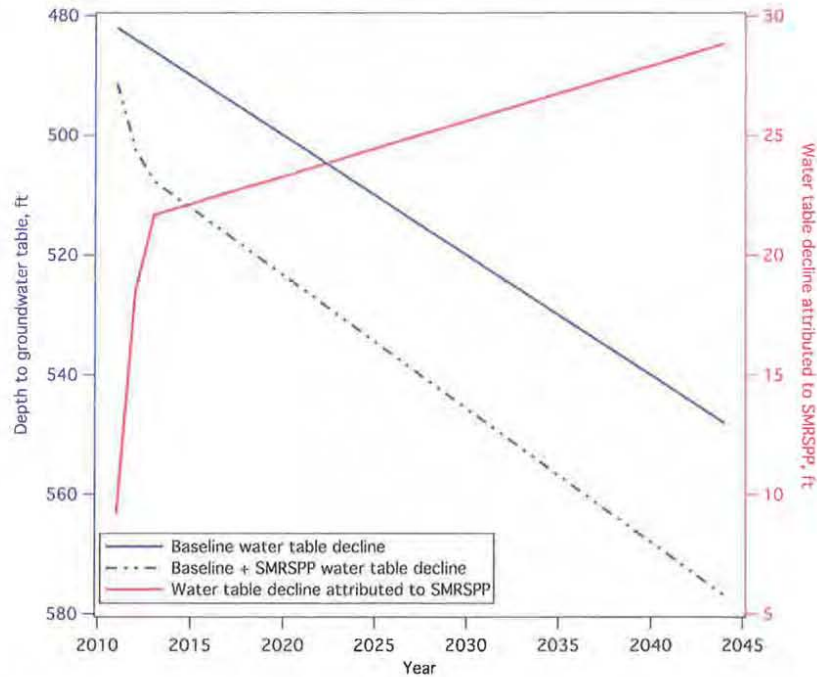


Figure 2: Projected groundwater table decline following a cumulative calculation of construction and operational water consumption. Construction water consumption 8,000 afy, 170 afy for construction workers for 28 months, and 204.4 afy for plant operations and plant workers per CEC.<sup>4</sup> The right axis and the red line illustrates the estimated water loss resulting from the SMRSPP being constructed and operated for 30 years. There is clearly an impact, contrary to the claim made by SM in Section 5.17 of the SA/DEIS.

The separation between the baseline water table drop and the SM project water table drop curves is a result of the large initial water extraction and consumption to support construction of the plant. The change in slope between the two projections is the additional water needed to support plant operations and the 85 plant workers. The two effects combined result in an obvious, quantifiable impact of many feet of permanent (and irreversible with the present lack of imported water to the IWV hydrographic basin) water table decline which is shown as the red line in both figures.

<sup>4</sup> [http://www.energy.ca.gov/sitingcases/solar\\_millennium\\_ridgecrest/documents/2009-12-28\\_Issues\\_Identification\\_Report\\_TN-54597%20.pdf](http://www.energy.ca.gov/sitingcases/solar_millennium_ridgecrest/documents/2009-12-28_Issues_Identification_Report_TN-54597%20.pdf)

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### 'BUT WHAT DOES THIS REALLY MEAN?'

Using this simple and straightforward first principles calculation method, the SM impact to IWV groundwater table decline will be between 9 and 30 feet after 30-years of plant operation depending on which construction water estimate one believes. As a civil engineer, I intuit that the construction water needs may well *exceed* 8,000 afy.

- The construction contractor must apply enough water to the cut/fill portions of the project to reach proctor density – the density of fill needed to prevent subsequent settling.
  - Any settling of the earthen fill will result in misalignment problems with the mirror frames – and if left unchecked could result in HTF leaks or worse.
- Enough water must be applied to prevent dust transport – a subject of concern addressed elsewhere in the SA/DEIS.
  - This produces a circular impact conundrum – don't apply enough water to minimize impacts to groundwater but then risk dust transport and subsequent construction shutdown – apply enough water to stop dust, and risk impacts to groundwater.

Yet SM claims 'no impact' in Section 5.17 of their SA/DEIS document using a sophisticated and non-layman accessible numerical groundwater model. How can this be? The first sentence of Chapter 1 of Wang and Anderson's book "Introduction to Groundwater Modeling" says 'A model is a tool designed to represent a simplified version of reality'.<sup>5</sup> Thus, both models attempt to articulate an estimate of what is actually happening – so is one model really better/worse than the other? Here are a few observations that may explain the differences.

- SM did not run their version of the Brown and Caldwell model to calculate the cumulative impacts of construction PLUS operations – they only looked at these individually. This is a significant error on SM's part – one that is to SM's advantage – and must be addressed in a revised analysis. What is the impact of making this correction? The very steep initial decline in Figure 1 and especially Figure 2 is a result of construction water withdrawal, followed then by a shallower slope resulting from operational water removal and use. The construction water withdrawal 'kicks' the groundwater table decline sharply, and is reflected in both figures to varying extent. But the operational water use follows at the same slope in both plots, but starts only after the conclusion of construction – so one adds to the other.
- The Brown and Caldwell model overall appears to be a professional quality product, although I did not conduct a thorough review of it. However, I note that the transient model calibration for the area around Well 18 falls far short of portraying the actual historical drawdown in this area – historical drawdown measured from 1985 – 2006 is about 40 feet, whereas the Brown and Caldwell transient model results show only 20 feet of drawdown during this time – thus the B&C model is off by a factor of 100% – a fact that SM choose to not address in their model, even though they invested the effort to conduct a grid refinement in the area of Well 18 and vicinity. Using a model that portrays a baseline groundwater table decline half of that actually measured certainly significantly contributes to the modeling results that seemingly support a 'no impact' finding provided by SM in 5.17 of the SA/DEIS – again a result to SM's advantage.
- The graphical presentation of SM's model results does not support a 'no impact' finding, Figures 5.17-14 and 5.17-16. Their claim of 'no impact' is made based on a visual examination of a course scale map with thick lines representing the 5' drawdown contours. To the casual lay observer the contours more/less plot on top of each other, and thus it looks like there is no difference – hence 'no impact'. However, I can see there is a difference because I'm a professional hydrogeologist. Furthermore, any engineer or scientist knows that to portray the difference between two large numbers, one must do the math, compute the difference, and plot that difference value. The SM figures are 'unclear' at best, and are certainly misleading to the advantage of SM.

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<sup>5</sup> H.F. Wang and M.P. Anderson, Introduction to Groundwater Modeling, 1982, ISBN 0716713039



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So it is quite possible that if SM ran their model after addressing the points raised above, their model may provide essentially the same estimates as what has been given to you here.

Why didn't SM do a better job with their modeling effort? Who knows, but surely they wouldn't try to fool the CEC staff and the lay public...

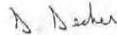
In conclusion, the SM computations of groundwater withdrawal impacts from their project significantly underestimate the impact to groundwater resources, and the graphical presentation and subsequent interpretation of their model results are both misleading. There is in fact a significant impact to the IWV groundwater resources as clearly shown by this analysis. A sophisticated numerical model is not necessary to compute this impact.

The SM SA/DEIS 'no impact' assessment of groundwater impact must be re-examined carefully by CEC staff, and if my analysis given here is confirmed by CEC staff, should be changed to 'significant negative impact'.

Finally, this week the National Academy of Sciences (NAS) announced the release of their latest series of reports regarding the impacts of Global Climate Change. The desert southwest is specifically mentioned with regard to an estimated 20% decline in precipitation and surface water runoff for California, Nevada and Utah in their entirety.<sup>6</sup> In a rare move, the NAS further underscores this conclusion by assigning a high degree of confidence to it. The meager power production and carbon savings from the SMRSPP will do nothing to offset any loss in recharge to the IWV groundwater aquifer resulting from global climate change as predicted by the National Academy of Sciences. The IWV baseline water condition is already in overdraft – meaning that the long-term prognosis for the IWV is grim without massive intervention. If this project is approved, a 20% decline in recharge on top of the significant water use by the SMRSPP simply dooms the IWV to ghost-town status even faster – and quite possibly within the 30-year lifetime of the project. As a matter of fact, if I was an SM investor, I'd be seriously considering whether or not the proposed plant could actually make it to its engineered life expectancy or not based on both decline in water table and subsequent decline in water quality - salt content increases with depth as discussed in the SA/DEIS.

Please conclude 'no project' based on a significant and sustained deleterious groundwater impact.

Sincerely,



Dave Decker

Cc: Hector\_Villalobos@ca.blm.gov, RFO

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<sup>6</sup> [http://www.nap.edu/openbook.php?record\\_id=12783&page=34](http://www.nap.edu/openbook.php?record_id=12783&page=34)

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**Response to Comment 33-1:** This comment states that the Proposed Project is not needed because of the existing intertie agreements in place with the Navy and Searles Valley Minerals. Alternative 3, which was analyzed in the Draft EIR, is the alternative of using the existing intertie between the District and NAWS China Lake to provide supplemental water that suggested by many commentors during the scoping and Draft EIR review period. With this alternative, supplemental water from existing wells on NAWS China Lake would be transferred to IWWWD in the summer months to provide additional nominal capacity during high demand days. The water would be pumped from the existing Navy wells to the existing IWWWD 30-inch pipeline located between the NAWS China Lake boundary and Highway 178. It has been suggested by several comment letters that this alternative could be implemented immediately at no or very little additional cost to the District. However, the District cannot simply begin pumping unlimited water at the daily capacity of the intertie at no cost from NAWS China Lake using existing infrastructure. In fact, this alternative would require the negotiation of the amount of water, the timing of delivery, and the price of water between the Navy and the District. Preparation of a National Environmental Policy Act document would be required. This alternative would also require the construction of a booster station located on NAWS China Lake property where the current intertie is located. Several commentors on this EIR have also stated or implied that this alternative would avoid the significant impacts to water resources that were identified with the Proposed Project. However, this alternative would result in the same amount of groundwater being pumped from the basin as the Proposed Project. The pumping location, however, would be changed from the southwest area to the intermediate well field and the area just to the northeast of Inyokern, where most of the Navy wells are located. Master Response 9 further addresses this issue.

This comment also states that the projected population growth of 1 percent, which was used in the EIR to project future demand, is not accurate and that a population decline will actually occur. Additionally, this comment states that a 20 percent redundancy is not needed because the District has met demand in the past. Population projections of 1 percent per year were provided by Kern COG, and are fall within the range of projections used by the City of Ridgecrest in its General Plan (1 to 3 percent) and Kern County in its General Plan (2 percent). It should be noted that the District only produces groundwater in response to actual water demands from its customers. It does not have the ability to store large quantities of water for which there is no demand. If population increases do not occur, or if demand is low because of conservation or cooler weather, then the new facilities would only be operated as needed to satisfy the actual demand. Master Responses 7 and 8 further address this issue.

This comment also states that meeting any increased demand by pumping additional water from a groundwater resource that is already in overdraft is not responsible or sustainable. The Draft EIR discusses this issue extensively. In particular, Section 3.8.1.5 summarizes the estimates of recharge and pumping from several studies. This section states, that, over the last 30 years, groundwater pumping from the valley has averaged about 26,000 acre-feet per year and the recharge in the valley is about 9,200 acre-feet per year. Master Response 1 further addresses this issue.

**Response to Comment 33-2:** This comment states that adjudication of the basin would reduce the water use from agricultural uses and that the Proposed Project would not be needed. Adjudication would affect every well owner and water user in the basin, including not only the IWWWD, but also the private and mutual well owners, the Navy, Searles Valley

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Minerals, and the agricultural users. The purpose and effect of adjudication are wide ranging and extend well beyond the scope and objectives of the Proposed Project. Adjudication addresses and affects, at least in part, water rights, whereas these rights are not environmental issues covered by CEQA, as discussed in Master Response 12. Therefore, adjudication is not addressed in the Draft EIR.

**Response to Comment 33-3:** This comment states that deeper wells would not mitigate project impacts. The last paragraph on page 3.8-31 of the Draft EIR evaluates the feasibility of Mitigation Measure H-1 to address the CEQA significance criterion related to maintaining the production rate of pre-existing wells near the Project site. Based on existing data, including the geochemical studies presented in the 1993 U.S. Bureau of Reclamation Report and the 2008 AB 303 report, the proposed Mitigation Measure H-1 is capable of maintaining adequate supply in nearby wells for the duration of the proposed Project. The impacts related to water quality are addressed in Sections 3.8.3.3, 3.8.5, and 5.1.1.7 and in Master Response 6.

**Response to Comment 33-4:** This comment provides an alternative calculation for water level declines for the Proposed Project. Specifically, the commentor states that his evaluation, using an alternative hydrologic calculation method as opposed to the existing groundwater flow model, indicates that pumping an additional 8,000 acre-feet per year from the Southwest Well Field would result in an additional 29 feet of drawdown near the pumping well after 30 years. Pumping an additional 8,000 acre-feet per year from the Southwest Well Field is equivalent to doubling the current production of the IWWVD. Phase 2 of the Proposed Project is intended to meet a projected increase in demand of approximately one percent per year, or about 80 acre-feet per year. The technical assessment and modeling results developed for the CEQA analysis indicate that the rate of water level decline within one-half mile of new well 35 will increase by approximately 0.5 feet per year above the baseline rate. Thus, over 30 years, the Proposed Project would result in an additional 15 feet or drawdown within one-half mile of the pumping well. This additional drawdown is about half of that estimated by the commentor for an annual extraction volume that is 100 times greater than that which would occur under the Project. Based on the information provided by the commentor, the groundwater model used for the EIR analysis would appear to over-estimate the drawdown that may result from Phase 2 of the Proposed Project.

This comment also states that Mitigation Measure H-1 is not acceptable mitigation because it does not replace the water pumped and that drilling deeper wells is not an appropriate mitigation. According to CEQA Guidelines Section 15370, mitigation includes one or more of the following: "(a) avoiding the impact altogether by not taking a certain action or parts of an action. (b) minimizing impacts by limiting the degree or magnitude of its action and its implementation (c) rectifying the impact by repairing, rehabilitating, or restoring the impacted environment (d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action (e) compensating for the impact by replacing or providing substitute resources or environments". The mitigation proposed in Mitigation Measure H-1 falls under category e and is an appropriate mitigation under CEQA.

The mitigation measure would be in place for the lifetime of the Proposed Project. Currently, in the southwest area, the depth to groundwater is approximately 400 feet bgs, and groundwater of good quality has been identified at depths of up to 2,000 feet bgs. At the projected rate of decline (with the Proposed Project) of 2.1 feet per year for wells within one-half mile of Well 35,

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the mitigation would be effective for over 500 years, well beyond the life of the Proposed Project. The mitigation provides for other remedies to ensure that the land use present at the time of the EIR preparation can be maintained, in the event that a deeper well is not an option.

**Response to Comment 33-5:** This comment recommends several methods for strategic planning for long-term water supply. The District evaluated other alternatives, including aggressive conservation, blending, saline water recovery, water reclamation, and water importation. These alternatives were considered for the Proposed Project, but were rejected because they could not be implemented in the time frame of the Proposed Project and/or because they would not be cost-effective. It should be emphasized that these alternatives were only rejected as alternatives to the Proposed Project. These alternatives could still be considered for future projects, although separate environmental analysis would need to be conducted. It should also be noted that one of the reasons Phase 3 (construction of new well 36 at Victor and Las Flores) was eliminated was that some of these alternatives may become feasible in the future and could be implemented. Master Response 10 further addresses this comment.

This comment also specifically recommends developing joint contingency plans with the Navy and Searles Valley Minerals to supply each other with water. Alternative 3, which was analyzed in the Draft EIR, is the alternative of using the existing intertie between the District and NAWS China Lake to provide supplemental water that was suggested by many commentors during the scoping and Draft EIR review period. With this alternative, supplemental water from existing wells on NAWS China Lake would be transferred to IWWWD in the summer months to provide additional nominal capacity during high demand days. The water would be pumped from the existing Navy wells to the existing IWWWD 30-inch pipeline located between the NAWS China Lake boundary and Highway 178. It has been suggested by several comment letters that this alternative could be implemented immediately at no or very little additional cost to the District. However, the District cannot simply begin pumping unlimited water at the daily capacity of the intertie at no cost from NAWS China Lake using existing infrastructure. In fact, this alternative would require the negotiation of the amount of water, the timing of delivery, and the price of water between the Navy and the District. Preparation of a National Environmental Policy Act document would be required. This alternative would also require the construction of a booster station located on NAWS China Lake property where the current intertie is located. Several commentors on this EIR have also stated or implied that this alternative would avoid the significant impacts to water resources that were identified with the Proposed Project. However, this alternative would result in the same amount of groundwater being pumped from the basin as the Proposed Project. The pumping location, however, would be changed from the southwest area to the intermediate well field and the area just to the northeast of Inyokern, where most of the Navy wells are located. Master Response 9 further addresses this issue.