Letter 20

Date: 09 December 2011
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Subject: Comments in response to the "DRAFT ENVIRONMENTAL IMPACT REPORT WATER SUPPLY IMPROVEMENT PROJECT" (DEIR WSIP) OCTOBER 2011 as prepared for Indian Wells Valley Water District (IWVWD/WD)

File: IWVWD_2011WSIP_DraftEIR_DeMayComments.docx

Our Responses to the DEIR. Although our comments are 19 pages long, they cover many topics and they explain several issues inadequately presented in the DEIR. Therefore, we expect you to read them all and respond to what we pose as comments as well as what are posed as questions. The importance of the issues demands their serious and careful consideration.

Basic CEQA Requirements as Quoted in DEIR Section ES.1 Not Met.

None of the three requirements of the California Environmental Quality Act (CEQA) quoted in section ES.1 are adequately covered by this DEIR.

Re: "Each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect." The great significances of effects on other water users in the project area, as well as the greater Southwest Field of the aquifer, and eventually the entire valley are inadequately described so as to make them seem less problematic than they really are. This DEIR understates the current water situation and impact of operating the proposed well, possibly at full capacity and simultaneously with their other nearby production wells in the project area and Southwest Field (not disallowed). Better alternatives to the Proposed Project (IWVWD 2011 WSIP) are obscured in the DEIR by ignoring some facts and craftily describing conditions.

20-1

Re: "Areas of public controversy known to the lead agency, including issues raised by the agencies and the public" have not been adequately addressed in the DEIR, despite responses to the Initial Study and discussion at public information meetings.

The vocal public has made it clear that projected population growth and historical and current water use by IWVWD customers do not justify this project on the basis of need for additional 20% redundancy. The IWVWD itself has stated that it must consider historical as well as current data and that it must use projections but they leave out some facts and projections.

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20% REDUNDANY ALREADY EXISTS.

A combination of 3 things verify and predict as unnecessary the IWVWD's self-defined required redundancy, that would supposedly only be provided by the proposed WSIP.

(1) IWVWD's own water usage records—current, immediate, and past show that more redundancy than their existing wells is not needed. This should be LESS not more of an issue, considering they now have 2 arsenic treatment plants. There have been no high-demand-day failures over the past 4 years. This is despite Wells 13 and 18 having been out of service during parts of the high-demand season in 2011.

The recent peak production day was August 26, 2011 at about 12.9 Mgal (million gallons). This value differs significantly from much smaller values on the days before and after. The demand on the 25th was 9.9 Mgal and was 9.5 Mgal on the 27th. Since the IWVWD total reservoir capacity is about 17 Mgal, the actual day-by-day demand is hidden in the operation of the wells plus filling of reservoirs. The numbers suggest that filling reservoirs *may* have caused the peak day.

20-2 continued

WHAT TO DO INSTEAD. The IWVWD's reservoir is 17 Mgal, which is about 2 days storage capacity during most of the high-demand season. In view of this fact, it is more reasonable to base a need for redundancy on a two or three day running average of production. Also note that daily production does not equal daily demand. Using peak daily production numbers makes the alleged redundancy problem appear worse than it really is. The suggested averaging of production numbers gives a more realistic estimate of demand. This averaging appropriately reduces the peak demand number, revealing a larger existing redundancy.

The total WD well capacity by adding the measured outputs of the 10 existing functional wells is over 12 million gal/min. This is 16.35 Mgal/day. Considering recent peak demand, **the WD redundancy is currently 27% above their 2011 peak day,** and all of the new higher cost tiers that induce conservation have not yet been imposed. But looking back through IWVWD data to 2005 allows us to discover that the largest peak day demand since then was 13.6 Mgal. So even based on historical data, the WD currently has a demand redundancy slightly greater than 20% within its own system.

(2) The intertie agreement among IWVWD, Searles Valley Minerals, and the Naval Air Weapons Station (the base) provides potentially much more than 20% redundancy for IWVWD. According to its correct wording, the intertie is for more than emergencies. The following quote from the Decker Guest Editorial of 11/8/2011 makes it clear (single-quoted phrases are from the intertie agreement):
"The agreement that was made with North American Chemical (a predecessor to SVM) in 1991 states explicitly that the intertie is for the purpose of providing water for 'backup in the event of well failure or other emergency'. In addition, the WD is allowed to take water from the intertie for its 'summertime peak demands'."

20-3

(3) Monetary conservation efforts are already scheduled to increase and IWV population is expected to decrease due to reduction in force on the base over the next several years, so current redundancy (shown to be adequate) is predicted to continue to be adequate.

—Need for 20% More Redundancy Not Justified
(Re. 20% redundancy goal stated in Paragraph ES-2 and ES.4 and elsewhere)

In ES.4, the stated objective of the Proposed Project is to "Provide a cost–effective, safe and reliable source of domestic water supply for the IWVWD's customers;" This DEIR makes clear that IWVWD is willing to be poor water stewards for non-customers including current water users overlying the area that would be impacted by the 2011 WSIP project, in order to take the water that is cheapest in cost *to them*.

ES-3 says there is need for 20% redundancy because of mechanical failure or quality failure of 1 or more wells in order to continue serving current demand on peak days. But data analysis by others quantitatively refutes this. (See Don Decker's analysis.)

Regarding the last sentence in ES3.1.1, the IWVWD and others still don't have a comprehensive enough groundwater model for the 2011 WSIP proposed in the Southwest field.

20-4

—Population Considerations. Because the 1% population growth is based on a county governmental (KCOG) projection, it is also reasonable to incorporate Federal Government projections announced in Fall 2011 that government entities will be cut 10% across the board, while national security entities bear 50% of the total reduction to be made. The Pentagon projects a 10% reduction in force by 2015 (Ref NARFE). Since 1989 NAVAIR has been the first to meet required reduction numbers and time lines. Thus, it is reasonable to conclude that the China Lake Naval Base will reduce its population. The base is under management of NAVAIR and is embodied by the Naval Air Warfare Center (NAWC) and Naval Air Weapons Station (NAWS). The base is the overwhelmingly-principle employer in the Indian Wells Valley, either directly through government employees or indirectly through contracting companies. It is logical to conclude that the KCOG projection at the time of DEIR preparation and for overall Kern County—including the much larger western portion that includes Bakersfield—does not reflect current eastern Kern County expectation of a draw down in population. Over the past 20 years, the population of in the Indian Wells Valley has been fairly constant; the variations from time to time have either been insignificant in numbers or in duration. This is despite multiple Base Closure Realignment and Closure (BRAC) actions that have resulted in reductions in employee force or the recent rigorous but failed attempt to hire about a thousand new employees.

—Quantitative Use Considerations. Pocketbook conservation via the tier rate structure is already quantitatively effective and not yet fully implemented. Based

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on historical usage, quantitative data for more than the past 5 years and during the Fall 2011 failure of Well 18, show that adequate redundancy already exists.

WHAT TO DO ABOUT REDUNDANCY. Acknowledge that 20% redundancy already exists among IWVWD's existing wells and so is sufficient, based on IWVWD's own historical records of water use from the immediate and more distant past. Acknowledge be characterized as stable over the next 10 years rather than growing at the same that existing redundancy is sufficient based on an IWV population that would more reasonably pace as Kern County overall. Acknowledge that the intertie agreement eliminates any urgency of the Proposed Project to proceed based on its technically poor DEIR.

20-4 continued

Existing Overdraft in Proposed Project Area and Surrounding Area.

The DEIR/EIR must consider local overdraft, not just broader water conditions. The IWV's natural water system is separated from west Kern County by the Sierra Nevada Mountain Range but is not replenished from those mountains like the west side is. Groundwater under the Proposed Project and our basin is essentially our sole source of water, with extremely little and very slow recharge only near the mountains, as evidenced by most of the water having hydrogeology and chemistry that ages it back to the Pleistocene Era and water levels in monitoring wells. This is documented for the IWVWD's project area and its surrounding Southwest Field of our aquifer. The IWV aquifer has been in measured overdraft for at least 50 years (with few measurements even longer ago). In recent years, the water table in the Southwest Field overall has been lowering about 2 feet per year, with localized worse cases that may be anomalous but have been officially measured; a short-term 8-foot drop was measured by Kern County about ¼-mile from our well. This is more than the often-cited average decline across the whole basin of 1 foot per year. Even the Proposed Projects (biased by incomplete data and incorrect assumption about recharge) model for the area indicates at least 2 *additional* feet of annual drop due to the project.

20-5

WHAT DO DO INSTEAD. Based on the facts, the Southwest Field and project area would already be defined as in long-term critical overdraft, except for the lack of an agency with authority to declare it. So less, rather than more water should be pumped from the immediate and extended project impact areas.

Too Much Appropriation Already.

Kern County already declared the IWVWD to be an appropriator in 2007. Intent to further appropriate made clear in section ES-2's description of pipelines to carry water away from the overlying area.

The IWVWD already appropriates too much water from the project area and adjacent areas of the Southwest Field. The maps in the DEIR are either truncated so they don't show all of IWVWD's acknowledged area of greatest impact (within 2 miles) and

extended possible impact areas as far as 5 miles, or they cover so large an area (greater than the Southwest Field) as to imply less impact than should reasonably be expected. They also obscure combined effects that would be obvious to many readers if the 2- mile (and more really) impact radii around all of their production wells in the Southwest Field were shown overlapping. Using the scale shown on Appendix G maps, one can see that 6 IWVWD production wells would all be within 2 miles of Well 35 (labeled SWWF?) in the Proposed Project area, and 9 of their wells would be within 5 miles. Expectation of interference and cumulative effects is obvious to us based on these positions. Somewhere in the EIR, the drawdown cones of all 11 IWVWD wells shown on the Appendix G maps should be clearly delimited, as they would extend due to the proposed 2011 WSIP. The broad area of expected impact and well interferences would then be more readily apparent. All the non-IWVWD wells in this broad area should also be shown to further clarify what will be impacted. Our 40-year duration well system and neighboring wells are not shown in the DEIR, making it appear there are many fewer private wells close to the Proposed Project wells site than actually exist. (We give more details in a related discussion below.)

It's not enough to point out that the project would reduce the water table damage on some current overlying users by shifting some pumping a little further southwest via the Proposed Project. Existing and the proposed IWVWD wells in the areas of China Lake Acres and Inyokern would both still impact some overlying current users.

WHAT TO DO INSTEAD OF MORE APPROPRIATING.

Appropriating water from overlying users in the most-impacted and in the lesser-impacted project areas must be stopped. The IWVWD's proposal to further appropriate water from the project area is neither historically nor predictively justified by the facts, in terms of need for 20% more redundancy. And considering the overdraft conditions in the project area, appropriating more water from overlying users in the area to send it away to those not living in the overlying Southwest Field is not allowed by California law as cited by the Kern County response to the 2007 WSIP, the 2011 IS and DEIRs.

Water should be even more actively sought from recharged areas sufficiently away from Inyokern, China Lake Acres, and other non-WD users to avoid any additional impacts there, even if longer pipelines or higher costs ensue. More water should be pumped from under concentrations of IWVWD's overlying users, farther east than China Lake Acres, beyond even the lesser-impact radii of their and others' wells in the China Lake Acres area. That should be done even if it means much more filtering of TDS and treating of arsenic and new cleaning of brackish water and deeper wells with bigger pumps under the principle concentration of IWVWD water users. While this would cost the WD rate payers more than they now pay, such water cleaning is actual water improvement and is an eventuality that must be managed; the sooner it's done the less will be the negative geohydrology and social impacts and cost. As a counterpoint to that cost, doing that—instead of appropriating even more water from non-WD users according to the proposed WSIP plan—would save the high cost of the WSIP's mitigations and its shortsighted impacts as well.

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Planned Appropriation Must Stop. The IWVWD's 2011 WSIP is clearly a plan to increase their appropriation of water rights belonging to those who actually live above the Southwest Field and currently use its water. No customers of the IWVWD live on the land where Wells 18, 34, and proposed 35 are positioned but many non-customers with wells live within the high-impact area. Large water lines are proposed to carry the water away from the site to IWVWD customers, who mostly reside in the City of Ridgecrest that is located beyond the area of most immediate and significant impact. The location of the Proposed Project causes various interferences among IWVWD wells but also increases their collective impact on other private, group, and community wells in their spheres of impact.

20-5 continued

Correct the misstated Intertie Agreement and Subsequent Wrong Conclusions:
Section ES.3 contains incorrect information about the inter-tie agreement. The correct wording of the intertie agreement with the Naval Base and Searles Valley Minerals was not taken into account in the DEIR (discussed elsewhere in our responses).

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ES.5.1 says only 60 days are needed to install new equipment at each existing well. The intertie could be used for such a short time avoiding the need to nearly double pump size years in advance of possible demand for that much more water. But we don't want the increases to be made regardless of relatively little time that would be required to refit wells 18 and 34.

Water Access Challenges Over Time Even in SW Field

IWVWD acknowledges insufficient water in the Proposed Project area and surrounding Southwest Field, by virtue of its plans to import water starting in 2035. This importing for its customers does NOT justify "sucking the Southwest Field dry" in the mean time.

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It's inappropriate to use water levels averaged over areas much broader than the expected impact area to attempt to justify little impact in and above the Southwest Field and the immediate IWVWSIP area.

Potentially Significant Adverse Impacts on Hydrology and Water Quality Cannot All Be Written Off As Lightly As the DEIR Does.

(Ref ES.6.2 and elsewhere)
The DEIR generally lacks credibility because it provides such limited explanation and facts and references, while including some significant errors and having important omissions in its offerings about severity or lack of impacts and about mitigations.

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WHAT TO DO INSTEAD. Correct the errors in facts and assumptions and omissions before the DEIR and any final EIR. A few examples are as follows: include more recent data (for example results of AB303 studies, and water use data to the present), correcting assumptions known to be invalid (e.g. Proposed-Project-area hydrology assumptions about recharge shown by AB303 to be incorrect, correctly quantify water demand/usage

with respect to overall system capacity), redo the predictive model with corrected assumptions, include references to and conclusions based on recognized geohydrology water-quality science rather than making vague and insufficiently substantiated comments and drawing naïve conclusions from them.

Unavoidable Significant Effects on Water Quality Are Unacceptably Handled in the DEIR. (Ref ES.6.3 and elsewhere)
Because such a large body of established science and technology in this domain is ignored, the DEIR's and IWVWD and its expert consultants completely lack credibility due to these unprofessional omissions (in our opinion). Because of they do not adequately consider the science, their description of the conditions and their only offered cause makes it incorrectly seem to be a hopeless situation that cannot be mitigated and by the way isn't all their fault. They focus only on water migration due to depressions in the aquifer causing co-mingling of bad water with good. They entirely omit any discussion recognizing man-made causes of bad water through production-well pumping practices that have occurred in our valley and which the IWVWD evidently intends to continue. Considering more factors would obviate the conclusion about inability to manage water quality and obviate the conclusion that even if all pumping by IWVWD ceased, co-mingling would continue--at the same rate and over time. We discuss details elsewhere in our response. Their statement of pumping from proposed Well 35 as a nominal increase with significant but unavoidable cumulative impacts lacks sound basis. They do not specifically address combined and cumulative effects with their prior projects including 10 of their other wells within 2,000 ft through 2 miles and over to 5 miles. Such considerations are required by CEQA according to wording included in the DEIR.

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WHAT TO DO INSTEAD. Stop this Proposed Project and similar increased-pump-sized wells until the science and more facts and corrected modeling reveals a situation much closer to reality than what is offered in the current DEIR.

The DEIR's foundation for its water quality comments, based on the entire basin, is wrong and contrary to the IWVWD's own repeated public requests to keep comments and questions focused on the Proposed Project area. The reasoning and conclusions in section ES.6.3 and elsewhere seem silly and unprofessionally irresponsible and IWVWD-self-serving, given the seriousness of the risk to the water supply of the existing overlying users who actually live on the land in the Proposed Project area of the basin. The generalized premise and therefore wrong conclusions suggest either unconscionable water stewardship for the project's water neighbors and/or technical ignorance of water quality and/or a specious attempt to deflect from their desire to pump even more water—increased pumping in 2 wells and another new well—all from a part of the basin's aquifer that is known to hold very good quality water. Just because the new well will pump only a small amount of water compared to what is pumped from the entire basin, does NOT mean that damage to water quality in the project's immediate (2-mile radius) and greater 5-miles areas can be ignored as unavoidable. Contrary to what the DEIR incorrectly and self-servingly states in section ES.6.1,

- Decrease in groundwater quality (e.g. arsenic and TDS) in the project's immediate and extended area in the Southwest Field is likely to happen directly

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because of the increased quantity and nature of pumping proposed in the 2011 WSIP.

- The reduction in quality may not be miniscule to the pre-existing overlying water neighbors in the project's impact area around greater Inyokern and greater China Lake Acres.
- There are hundreds of non-IWVWD wells in the miles-wide impact area of the proposed project. There are very few IWVWD customers in the same area. Yet the IWVWD already has multiple production wells in the area, with drawdown cones that intersect each other and non-IWVWD wells. And this proposed project would increase their size and number. Wells 18, 33, 34, and 35 would be placed within approximately 2,000 to 3,000 feet of each other and would each be developed to pump 2,200 GPM. This is somewhat closer than they are to the other IWVWD wells in the area. The Appendix D maps labeled "Project Location 2010-132 Indian Wells Record Search" shows some of this closeness with 1-mile buffer lines. These delimiters are too small to represent the even the greatest-impact zones that the IWVWD knows will occur due to the Proposed 2011 WSIP. None of maps in Appendix D covers all the area with IWVWD wells that will most likely have combined or cumulative impacts with the currently Proposed Project IWVWD wells. The maps also lack markings of all other IWVWD wells in even in their shown areas. As a result of this missing information, reasonably expected magnitudes of impacts are obscured.

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Water issues cannot yet be adequately defined nor mitigated due to lack of facts.

Do not establish new or improved-to-be high-capacity production wells (e.g. 2,200 GPM) in the Southwest Field that surrounds the greater China Lake Acres and Inyokern areas, to include any wells that are already scheduled to be so "improved" and reduce the pumping rates of existing production wells in the area except in emergency, until the following is much more credibly resolved than in this DEIR.

Individual and interference effects on water levels must be based on more complete modeling (known errors and missing data in the models done for the IS and for the DEIR). Effects on water quality within and near their drawdown cones must be factually known by measured data in the impact areas or taken from solid science from very similar geohydrologic conditions (not different geohydrologic conditions just because they are in the same basin). That science must be supported by technically viable references. Better water-quality data and science than underlying this DEIR must be used before any realistic assessment of impacts can be made. Lacking such evidence, the current assumptions and default EIR conclusions must be that impacts would be significant and not enough is known to define the required mitigations to such ill-defined problems.

The IWVWD (1) characterizing water quality issues as not-mitigatable by virtue of stating that the amount of water to be pumped from the new proposed Well 35 is small compared to the amount of water pumped in the whole valley is specious. (2) The IWVWD claiming that water quality damage cannot be mitigated is self-servingly naïve at best.

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The DEIR's coverage of water quality measures such as arsenic and total dissolved solids (TDS) lacks factual basis that can be derived from the arsenic-and-geohydrology literature and relevant factual basis that is needed for the project area and its surrounding Southwest Field.

The proposed additional production-scale pumping of even more of the remaining known good quality water from our ancient aquifer, rather than treating brackish water and/or doing more arsenic treatment is the wrong choice.

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Pumping Interferences from Too Many Wells in Same Neighborhood Not Clear Enough.

For decades the practice approved by the Indian Wells Valley Cooperative Ground Management Group was that production wells should have pumps no larger than 1,200 GPM and placed at least 1/2-mile apart to ensure non-interference. Based on comments made by a Searles Valley Minerals member of the IWVCGWMG at their November 2011 meeting, the closeness of Wells 18, 33, 34, 35 and the other IWVWD wells in the Inyokern/China Lake Acres area was allowed based on a relatively new decision that any placement is okay if the well owner promises it would be non-interfering. The well placement of the proposed project goes against the science known for drawdown cones. The described intended use of Well 35 belies any promise of non-interfering use (see ES.5.3.5). In any case, verbal promises don't carry adequate legal weight so potential impacts must assume that maximum use may occur.

Maps in Appendix G do show there would be 6 IWVWD wells in the area to be most directly impacted within 2 miles of the Proposed Project. 3 more IWVWD wells are spread through and beyond China Lake Acres all within a 5-mile region that the Lahontan Regional Water District deems of interest. According to IWVWD hydrology contractor's admission (at the Inyokern public meeting in November 2011) and as indicated by Appendix G maps, these would all be impacted by the Proposed Project. There are also 2 other IWVWD production wells only a little further east. Proposed Well 35 is not clearly labeled on any of these maps, without any help from the text either one may conclude that SWWF means Well 35. While some positive impact on water level may occur if pumping is reduced from Wells 9A, 10, 11, and 13 that are farthest from the 2011 WSIP wells, overlying users between the two extremes of the area will still be impacted from multiple directions, exacerbated by the proposed 2011 WSIP. In Figure 7 of Appendix G, the red-to-pink zone marked with a 2 shows how much more water levels are expected to drop due to the Proposed Project. The pink zone is shown smaller than an actual 2-miles towards the north and northeast where greater numbers of existing overlying users live and are definitely expected to be impacted (according to 2 IWVWD experts at November public meetings). These model maps suggest a smaller negative impact area than the IWVWD itself admits. There are several maps but their coloring still does not represent the full impacts from the chosen 2011 WSIP wells 18, 34, and 35 that would involve combined effects from pumping wells 18/34/35 (SWSF?)/33/30/31/17. Many non-IWVWD wells are not shown and the pink zone doesn't even cover those on the map that would be endangered. We and our neighbors' wells are within 1-3/4 miles of the Proposed Project but that is not shown on this set of maps or other maps. There are at least 50 private wells within the rejected-Well-36 site

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within this area. A casual glance at the DEIR maps reveals that all wells to be impacted are not shown.

WHAT TO DO.

- Before their conclusions can be accepted as valid, the DEIR and any final EIR must clearly delimit the broad area that would really be most significantly impacted by proposed 2011 WSIP and its combined effects with its other projects in the area. This would cover the area through greater Inyokern and through greater China Lake Acres (even if not part of the originally so named subdivision).
- The impacts of the proposed 2011 WSIP wells must be considered in conjunction with each other and the other IWVWD area wells with which they accumulate effects. Separating information to the extent that is done in the DEIR is misleading and denies significant problems.
- The change in water quality in the collective diameters of the project's drawdown cones can be quantified, measured, and monitored. A baseline could be established from existing wells (IWVWD production, monitoring, private and community). Kern County records data from when wells were established. Some other measurements already exist. New measurements could begin immediately as part of the proposed project's mitigation expenses. Implementation of any additional pumping in the area could be delayed until sufficient monitoring methods and quantitative data exist to draw valid conclusions.
- According to Tom Haslebacher of the Kern County Water Agency, creating an arsenic problem by repeatedly wetting and drying the soil is known and carefully managed at the surface level in western Kern County. The company Tetra Tech—that is respected for work even in our own basin, has studied the geohydrology version of this problem in the southwest U.S.; several references can be found within seconds on the Internet. The problem and solutions for geohydrology and Pleistocene-lake-bed-sediment soils, such as underlie the Indian Wells Valley, have been known and managed in other parts of the world and reported in the open literature. Some can be found within seconds via Internet search. That literature makes clear how the wetting and drying cycles, such as would be created within the miles-wide drawdown cones of 2,200 GPM production wells, creates arsenic and TDS problems in the area. It also distinguishes levels of effect between local areas that are nearer geothermal activity (think of the north part of Indian Wells Valley) and those that are not (think of the south part of Indian Wells Valley). This may partially explain why the Southwest Field has better quality water than other groundwater fields under our valley. It also seems obvious to many that water quality in the southern part of the valley has become worse near where the IWVWD (and likely other big-quantity pumpers) have operated production wells for several years (think about the Intermediate area between Ridgecrest and China Lake Acres especially around Jacks Ranch Road).
- It's obvious from maps displayed at the IWVWD office that the depressions due to water pumping in our valley vary in depth. The depths of 2 depressions in the

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Proposed Project area are expected to change due to the project. This belies the credibility of DEIR's statements, if applied to the relevant project area rather than the whole basin, that "impact on the aquifer would occur whether or not the Proposed Project is implemented." Changes in water quality and level, before during and after IWVWD production well pumping near Jacks Ranch Road were reported in The Daily Independent on 07 November 2011 and have been anecdotally reported for years by those living in the areas of the Intermediate Field, part of China Lake Acres nearest IWVWD wells, and part of Inyokern.

20-10 continued

References:

1. 2007, Comments made by Tom Haslebacher (KCWA) at a meeting of the Indian Wells Valley Cooperative Groundwater Management Group.
2. Thomas E. Bridge, et. al, The Increased Draw Down And Recharge in Groundwater
3. Aquifers And Their Relationship to the Arsenic Problem in Bangladesh, http://phys4harvard.edu/~wilson/arsenic/refernces/. (Hydrogeologic conditions like our basin.)
4. Alan H. Welch, et. al, "Arsenic in Ground Water of the United States: Occurrence and Geochemistry"
5. Tetra Tech, Inc., Access work by putting "arsenic groundwater + Tetra Tech" in your internet browser's search box.

Seeming Attempts to Minimize Useful Controversy. (Ref ES.7)

Considering the years-long duration of comments about IWVWD damage to non-IWVWD wells and the statements at IWVWD meetings in conjunction with the 2007 WSIP, the EIR effort for this project should explicitly seek data that quantifies these experiences, not just by announcing a general topic meeting or hearing.

The Initial Study for the proposed 2011 WSIP was made in July with comment period running a few days into August. Loosely speaking, "everyone in the valley knows July is when everyone who is able goes on vacation." DEIR informational meetings and official response period were held during the Fall holiday season when many people are distracted.

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The continued re-proposal of IWVWD well "improvements," despite previous resounding condemnation by the public and Kern County, in combination with the timing disadvantages to the only-generally-knowledgeable public seems to be designed to minimize controversy. So the responses cited in section ES.7 should be taken as a small representation of a very large group of citizens.

Although groundwater modeling was redone, it was made clear at the Ridgecrest public informational meeting in November 2011 that it still was based on some of the same sometimes-inadequate and sometimes-incorrect data that continued to be used despite the problems and corrections having been made clear starting years ago.

Why Number of Letters Identifying Issues May Look Small

(Ref Table 1-3 in Introduction and elsewhere in DEIR)

Table 1-3 lists the number of Initial Study letters that mentioned each issue. The small numbers for many items is due to the great number of problems with the IS

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that people and agencies had to try to discuss in relatively limited time. It does not reflect concern by only a few people. Our responses to individual issues in the DEIR are again limited by the great number of problems we see with the issues as covered.

Who would be impacted?
(Ref SECTION 1.0 1.2 SUMMARY OF SCOPING/AREAS OF CONTROVERSY)

The affiliations given in the List of Scoping Letters in this section may falsely imply to some readers that most of the controversy associated with the proposed IWVWD 2011 WSIP is from a few private well owners, perhaps as opposed to what is typically and incorrectly assumed to be a greater water service to IWVWD customers. By its own often-stated correction, the IWVWD serves only 20% of the water in this valley (recently once said 30%). Nearly all of the existing overlying land occupiers in the area to be most impacted are private and small community well owners. Because they would be most seriously and immediately affected by the 2011 WSIP, they are most knowledgeable to respond. Depending on the definition of "project area" that varies under different considerations, it is reasonable to conclude there are very few to no IWVWD customers in the area to be impacted.

20-12 continued

Because the 2011 WSIP is intended to occur within the known remaining field of good-quality water in the IWV aquifer, and that aquifer is in recorded long-term overdraft, this short-sighted project would actually impact all users of water from the IWV aquifer over the long-term. That would include IWVWD customers for whom the WD is trying to grab the cheapest potable water even if their manner of operation would put that potable source at risk for all.

HYDROLOGY AND WATER QUALITY Modeling Inadequate for DEIR.
(Ref Table 1-3 in Introduction and elsewhere in DEIR)
The Layne Christensen modeling done for the DEIR was known to be based on incomplete data and incorrect assumptions used by the older Brown and Caldwell model prior, inadequacies known before undertaking the execution of the model for both the IS and DEIR of the proposed project. This is based on information in the 2008 the AB303 studies/report and corrections offered multiple times and places by Don Decker. The Brown and Caldwell model was revised only to reflect some newer understanding that impacts the Proposed Project. Its lack of data from AB303 clarifies that it does not validate the Proposed Project, just comparing poorly-based model results now with poorly-based results in the past does not viably validate.

20-13

Project Alternatives. (Ref ES.8)

REJECTED ALTERNATIVES. Information provided by IWVWD and their technical support at the November 2011 public informational meetings in Inyokern and Ridgecrest made clear that 4 alternatives were rejected because of supposed urgency to meet a 20% redundancy in capacity. But the facts stated at the meeting,

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and facts derived from IWVWD's own data, plus the truth of the Navy and Searles Valley Minerals Intertie Agreement, and better more recent projections than even the improved numbers in the DEIR all taken together show that at least 20% redundancy already exists and would like extend years into the future. We give quantitative details elsewhere in our response.

WHAT TO DO BECAUSE OF POPULATION DATA. Setting the proposed project in motion to production-pump even more of the known good-quality water from our ancient aquifer at users discretion is not an acceptable choice. Realistic consideration of slower-than-average population growth and additional conservation measures are a better choice, especially considering the effect on water conservation already realized by the recently imposed water-management tiered rate system.

WHAT TO DO INSTEAD ABOUT REJECTED ALTERNATIVES. Because the urgency argument actually now fails. It should be abandoned along with the chosen alternative. The rejected alternatives, which would have less impact on the proposed project area, now all seem better for the overlying water users in the proposed project area and for the basin water users in general.

20-14 continued

EVALUATED ALTERNATIVES. All the evaluated alternatives but the last (the No Project Alternative) are driven by a sole concern to meet the IWVWD's goal of providing the cheapest good water for their customers (only 20% of basin water use according to IWVWD statements), but seemingly without regard for the overlying and other non-customer users of the aquifer, and without regard for good stewardship of the over-drafted, ancient-water aquifer, especially including the good-quality water that remains only in the Southwest Field (according to IWVWD-representatives' statements at public meetings.

WHAT TO DO INSTEAD OF THE EVALUATED AND SELECTED ALTERNATIVES. The 2008 AB303 study of the water chemistry and geology of the Indian Wells basin makes clear that just having water available to a depth of thousands of feet does not guarantee finding good water just anywhere or at any depth. So the known fields of good water must be used more judiciously than the proposed 2011 WSIP allows or fails to support in its DEIR. Thus, the only reasonable alternative choice now is a combination of the alternatives "Additional water conservation" and "No Project Alternative" in terms of new pumping capacity. This should continue while much more distant well sites are sought near groundwater pockets that have recharge much more recent than the Pleistocene Era known for the 2011WSIP area, and while adding arsenic treatment plants and deepening their existing IWVWD-wells-that-are-nearest-their-greatest-concentration-of-customers, and while "Developing supplemental water supply" with greater effort than is already still in very initial stages.

Claimed Lack of Subsidence and Liquefaction.
(Ref Table 1-3 GEOLOGY AND SOILS, 3.7, Appendix A)

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The DEIR's statements about subsidence and liquefaction imply that lack of clayey soil alone is justification for claiming there would be little potential for subsidence More explanation and supporting references for the clayey-soil-alone basis needs to be given. Also, the meaning of "area" in this context is unclear and may be too constrained to justify the conclusions across a miles-wide diameter. Give specific references and definition of area.

20-15

Issues To Be Resolved by the Lead Agency (Ref ES.9)
Yes, all of these issues need to be resolved but details are dangerously lacking. And letting the IWVWD be its own judge of adequate resolution, based on their DEIR for the 2011 WSIP, would be as ridiculous as a fox guarding an unlocked hen house.

Deplete Groundwater Supplies or Interfere Substantially with Groundwater Recharge. (Ref pages ES-30 – 33. H-1)
The described mitigation program is dangerously lacking in details, has wording that would allow half the water-level impact to be ignored, and completely ignores effects on water quality (not justified by their technically invalid conclusions about water quality measuring, monitoring, and mitigation in section ES.6.3). A mitigation baseline and monitoring program must begin before increasing production capacities in Well 18 and Well 34. The program must include effects from changes to Wells 18 and 34 and others nearby. Decisions about drops in groundwater levels and effects on water quality cannot depend only on what occurs after that last project change, installation of Well 35. Comparing effects only after Well 35 is installed would subtract out about half the effects of the proposed project, those contributed by increasing pumping capacities of Wells 18 and 34 to equal that of Well 35.

20-16

Construction Diesel Fumes. (Ref ES.5.5.1) Prevailing winds, northeast and north from the Proposed 2011 WSIP construction site, head directly towards the nearby concentrations of existing land occupants including greater Inyokern and greater China Lake Acres. Considering approximately 3-4 months of well development blowing diesel fumes, damage to air quality for those living downwind from the project area is a significant health issue.
WHAT TO DO. If homeowners must keep their windows closed and run air conditioners during those months to protect their in-home air quality, then the significantly increased cost over open windows and/or evaporative cooling must be paid by the IWVWD.

20-17

Naïve Arsenic Comments in DEIR. (Ref ES.5.3.3 last sentence) It is naïve to simply claim, "Arsenic treatment is not anticipated to be required." Although current water quality in the general project area suggests that arsenic treatment would initially be unlikely, experience with wells 9 and 9A indicate even this is wishful thinking. Also, repeated wetting and drying of soil of the kind that exists in the area is known to create soluble-arsenic problems, and turning pumps on and off would create a wetting and drying cycle through the miles-wide drawdown cones associated with the Project wells.

20-18

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Discharge Pond. (Ref ES.5.3.4) Based on the amount of water we have seen running along Inyokern Road for days (perhaps weeks?) during IWVWD well work, it's reasonable to expect that large amounts of discharge water may not quickly disperse from the pond. This could create mosquito-breeding habitat and create a source of West Nile Virus. This should be addressed and mitigations proposed in the EIR.

20-19

Operation of Well 35. (Ref ES.5.3.5)
According to the DEIR, Well 35 "would be operated in accordance with system demands and maintenance schedules, approximately 70 to 90 percent of the time during high-demand summer months and 20 to 40 percent of the time during winter months." This sounds like regular use, not just in response to peak-demand or only when redundancy must be brought to bear. Also, operation of Well 35 would have combined and cumulative effects, especially the 3 other IWVWD production wells all within 2,000-3,000 feet of each other around Well 35.
WHAT TO DO. Make clearer statements in the EIR about both of these issues.

20-20

Need Not Justified. (Ref ES.5.4)
Water use has decreased from approximately 269 gallons per capita per day in 1998 to approximately 243 gallons per capita per day in 2009.
WHAT TO DO INSTEAD. The DEIR is dated Oct 2011 so it should also have included the decreased use from 2010 and at least half of 2011. This would better quantify the downward trend. Add this data before finalizing EIR.

20-21

Growth-Inducing Impacts. (Ref ES.6 and elsewhere)
As already will be made quantitatively as well as qualitatively clear through our response comments, the Proposed Project (IWVWD's 2011 WSIP) is not really necessary to provide 20% redundancy. Thus, it would more likely serve as a growth-inducing action than for its advertised purposes. It would allow for continued careless mining of the aquifer by growth-promoting developers who don't care about cost.

Grossly Inadequate Mitigations Offered.

Providing a hookup to IWVWD is an unacceptable mitigation because it would be trading the existing overlying users' good-quality water for the WD's poorer quality and chemically treated water. For those who are forced by conditions to hookup to IWVWD or another water system in the area, the IWVWD covering only the cost of hookup is insufficient; IWVWD must also cover the increased monthly costs that would ensue.

20-22

Just because the IWVWD could drill to a depth of 2,000 feet to reach water does nothing to guarantee that (a) existing overlying non-IWVWD water users could do the same, (b) nor does it guarantee anyone that all of that water is potable. In fact, an IWVWD employee has publicly stated many times that their may be plenty of water below our valley but [because of its quality and depth] it will be very expensive to make it usable. She stated this is supported by the 2008 AB303 (?)

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report that the aquifer consists of ancient water; and most areas of the aquifer received their significant recharge in the Pleistocene Era, though some areas very near the mountains were recharged only about 7,000 years ago.

Statements that significant, cumulative impact to water quality is unavoidable if the proposed 2011 WSIP moves forward and the specious claim that they need not be mitigated are reasons to ban this project and any others like it. (The ignored science is one justification for our use of the term specious.) Anticipating no arsenic treatment in project wells only and only at this time is an excuse for downplaying a problem and stating no mitigations to other affected parties is what I'd expect from an average middle-school student. More scientific and technical assessments must be documented.

20-22 continued

The fact that other water pumpers exist in the basin does not excuse the IWVWD 2011 WSIP from avoiding its contributions to problems.

Because many other DEIR statements indicating no problem readily appear to be specious, the statement that "The Proposed Project complies with the Plan" needs to be investigated beyond the time allowed in the comment period and needed by overlying non-IWVWD well users.

How exactly decisions will be made about who deserves distribution connections and the complete financial responsibility of the IWVWD unacceptably inadequately covered in the DEIR. Just shoving them off to the vague possible mitigations is too unprofessional to allow the Proposed Project.

Water Quality is a Serious Issue That Cannot Be Ignored
(Ref. PAGES ES-33 – 34. Water Quality)

Just because groundwater pumping in other parts of the basin has caused depressions and may have caused co-mingling of bad water with good is no justification for creating the same kind of problem in a new place. Furthermore, attributing all water quality degradation to comingling is naïve (see my discussion of how repeated wetting and drying in drawdown cones is known to cause quality degradation).

The collective groundwater under the Indian Wells Valley basin is not just one fully connected bowl, as the IWVWD likes to describe; it consists of many disconnected parts and some loosely disconnected parts. So effects in other parts of the basin do not necessarily affect the Proposed Project area. At the Ridgecrest public information meeting (Nov 2011) IWVWD's own hydrology expert admitted being ignorant of arsenic geohydrology science.

20-23

WHAT TO DO INSTEAD. Because the solid science that exists in the literature contradicts the limited justification and the conclusions in the Water Quality section of the DEIR, the project must not go forward until and unless new solid science is documented for the geohydrology in the proposed area and baseline water-quality

data is established for the area. The IWVWD should admit that its and its contractors' understanding of water-quality science is so inadequate at this time that it cannot justify the statements in the DEIR that the proposed project will not cause degradation. The IWVWD does know enough to claim "None required" about mitigation measures. The science reported by others makes clear that the increased localized pumping allowed by the proposed 2011 WSIP is highly likely to directly and significantly impact water quality throughout its miles-wide drawdown cones. These drawdown cones extend through the remaining good-water part of the Indian Wells Valley's aquifer.

Stop the 2011 WSIP due to multiple water quality issues being grossly inadequately covered in the Draft EIR:

1. Obvious lack of understanding of hydrogeology water-quality chemistry or ignoring it for some other reason(s).
2. If damage to water quality in the project area and the Southwest Field in which it is located cannot be mitigated (as claimed in the IS and now denied being needed in the DEIR), that alone must stop this IWVWSIP project.
3. Water quality problems can be mitigated. Others, including the IWVWD, have employed mitigations elsewhere: filtering of solids and filtering and/or chemical treatment of arsenic underground or in treatment plants. Water quality problems cannot be simply ignored as needing mitigation by using unprofessionally naive suppostions.
4. Offered mitigations to groundwater-level-only are ridiculous. Don't rush into the project without adequate baseline data. Establish baseline records of TDS and arsenic from other wells **in the Southwest Field**. Use measurements that were recorded with Kern County when wells were drilled and any more recent measurements that have been made. Also collect new measurements for at least 5 years before drilling any new or increasing the capacities of any existing production wells in the Southwest Field.
5. Stop the 2011 WSIP at least until technically respectable data and science are evaluated, to include discussion of such information that refutes the simplicity of current DEIR water-quality causes and conclusions.

20-23
continued

Section 5.1.1.7 is supposed to analyze cumulative impacts on hydrology and water quality. (a) The DEIR claims that high-quality groundwater exists down to at least 2,000 ft based on the 1993 U.S. Bureau of Reclamation Report and ignores the newer data and conclusions from the 2008 AB303 studies and report. Thus its conclusion that "This is a potentially significant cumulative impact that can be mitigated." Is not adequately founded. (b) Addressing cumulative water-quality effects in the Proposed Project area by characterizing the water to be pumped as only a small amount compared to that pumped over the entire basin then going on the discuss overall-basin effects, inappropriately deflects from the cumulative effects in the project area due to adding more IWVWD production capacity to an area that already contains 10 IWVWD production wells and many other wells. The DEIR's basin-wide comments and conclusions do not provided a sufficient basis for claiming that change in water quality in the Proposed Project area is "miniscule and cannot be quantified, measured, or monitored." (c) The fact that IWVWD pumps

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only a portion of the water pumped in the basin does not excuse pumping in the Proposed Project area to an extent that it damages water access and quality of the existing overlying water users. (d) Contrary to what the DEIR concludes in sections 3.8 and 5.1.1.7, potential impacts on water quality in the Propsed Project area are mitigable as we describe elsewhere in our response. Also, the water-quality problem would not necessarily persist especially to as great a degree without the Proposed Project because geohydrology-plus-water-quality science and evidence from other areas show that wetting and drying cycles in arsenic-locked Pleistocene sediments like ours in fact create soluble arsenic problems. The miles-wide drawdown cones created by 2,200 GPM pumps would create much larger volumes subject to dissolving arsenic in their water than are created by smaller pumps. An arsenic problem has been avoided about 40 years so far while pumping our well and its replacement well about 20 feet away from the original. The science suggests this is because our pump is small so it has a small drawdown cone and it must run frequently enough to avoid significant wetting and drying. One could reasonably apply our experience to other non-IWVWD overlying users' private and small-community wells within 5 miles and less of the Proposed Project well sites.

20-23 continued

Intended Use of Project Water Not Sufficiently Binding Against Maximum Use
(Ref Table 1-3)

The Proposed Project high-capacity production wells would have drawdown cones that intersect too many other IWVWD and non-IWVWD wells near each other. Even using full capacity of some of the wells at the same time draws damaging amounts of water from one area. Moving the pumping from one production well to another, even if not always at maximum capacity, introduces the wetting-and-drying cycle problem that is known to produce soluble arsenic in ancient sedimentary soils such as underlie our basin.

20-24

Using Insufficient Technical Resources Doesn't Justify Conclusions
(Ref Table 1-3 and elsewhere in DEIR)
Publishing most of the documents (that are still inadequate) and ignoring some significant documents and literature, e.g. the AB303 report and water-quality literature, is not good enough support for conclusions. Conclusions too often seem to be based on limited data or references to be self-serving rather than being as truthful as they could be regarding possible impacts. Other times, conclusions seem to be based on naïve assumptions. Instances of these two cases are mentioned elsewhere among our comments.

20-25

Failure to Address Certain Comments
(Ref Table 1-3 with no applicable sections cited in DEIR)
Failing to respond to any comments because they are submitted at the end of the official comment period is side-stepping the intent of comment periods. All concerns about the DEIR during the comment period, whether posed as written comments or questions must be addressed before the next CEQA step can proceed.

20-26

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Water Rights of Prior Overlying Users
(Ref Table 1-3)
Stating that "the priority and/or water rights of the various pumpers in the basin have not been established" is a self-serving point of view on behalf of the IWVWD; that statement is opposed to Kern County references to water law that designates the IWVWD as appropriators. Overlying land owners are entitled to water below them, and that water is within the groundwater pool/field/area of the proposed 2011 WSIP that will lower the water table out of reach for various of existing users at different times and (despite claims with misdirected basis by the DEIR) will likely damage water quality additionally making it unavailable to overlying users.

20-27

That's all for now. Length of the official comment period does not allow us to more fully address content of this DEIR. The DEIR's insufficiencies put an awesome burden on us non-expert public reviewers, despite our having scientific and technical expertise in other domains.

We do thank the IWVWD for other positive things it does on behalf of our aquifer, although we obviously feel the Proposed 2011 WSIP would cause unjustifiable damage.

Sincerely,
Annette deMay Thomas C. DeMay
Annette and Thomas DeMay

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Date: 09 December 2011
From: Annette and Thomas DeMay
222 Strecker St,
Ridgecrest, CA. 93555
(under 1-3/4 miles from 2011 WSIP wells site)

To: Tom Mulvihill, General Manager
Indian Wells Valley Water District
P.O. Box 1329
Ridgecrest, CA 93555
IWVWD@IWVWD.com

Subject: Mitigation costs – Response to the "DRAFT ENVIRONMENTAL IMPACT REPORT WATER SUPPLY IMPROVEMENT PROJECT" (DEIR WSIP) OCTOBER 2011 as prepared for Indian Wells Valley Water District (IWVWD/WD)

File: IWVWD_2011WSIP_DraftEIR_DeMayCommentsPart2.pdf

Responsibility for Costs of Mitigations.

Costs of mitigations are not adequately discussed in the DEIR. Increased costs to those who would be impacted by lower-water levels and/or reduced water quality in their wells due to the proposed WSIP are vaguely mentioned in a brief listing and are largely ignored.

(a) Even if the IWVWD bore the cost of drilling every impacted non-WD well deeper that doesn't cover known costs for electricity to run the deeper and bigger pumps that would be required.

(b) Nor does it recover costs for already-drilled wells that could no longer be adequately used for their lifetimes. Those lifetimes would be as projected before the 2011 WSIP and its combined-effects with other WD production pumping in the greater China Lake Acres and greater Inyokern areas.

(c) Nor does it cover costs of water-quality mitigations that are likely to be required. Just drilling a deeper well to existing water does not ensure adequate quality; the WD's own wells 9 and 9A provide evidence. Just hooking up impacted non-WD water users to chemically treated WD water would not restore us to our current quality. Restoration of users' water quality to its former healthier state would require better, mitigations than the WD currently employs for its customers.

20-28

Our Personal Mitigation Issues.

Impacts on our water would require more and more-expensive mitigations than we expect are typical to restore. To provide contextual understanding, we first describe our situation and conservation efforts, and then state what mitigations would be necessary to maintain its quality and availability. Some of these also apply to other non-WD well users in the immediate and broader impacted areas.

(a) We drilled a new and deeper well that went into production in 2005. This was done before any knowledge of the WD's 2007 supply improvement project. Its projected lifetime, based high-quality parts and installation that considered historical water-table data and trend through 2004, was at least 50 years. It's cost and depth would be likely be wasted

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prematurely due to lowering of the water table by the proposed 2011 WSIP project alone and surely by its combined effects, because we live in a place that's within the higher-impact radii of multiple WD production wells.

(b) We also made a considerable capital investment in a photovoltaic (non-water using) solar array that covers the cost of pumping water from our 2005 deeper well. Because a deeper well would likely be required before our 2005 well's predicted lifetime is over, our electricity costs to pump our same amounts of water would be hugely higher than the average non-IWVWD water pumper.

(c) Our water quality is definitely higher than what is being served by the IWVWD. All water quality measures from our system, including arsenic levels, have been acceptable since 1974, without any special treatment. Our other responses-to-the-DEIR memo discusses in detail the grossly incomplete presentation of water-quality issues in the DEIR and resulting naïve conclusions offered therein.

(d) Annette has a chemical-sensitivity problem of such severity that she cannot routinely drink the chemically treated water currently served by the WD.

(e) We continue our personal water-conservation program. We no longer have livestock on the property, so we have let die all 6 water-unwise poplar trees that were naively planted 40 years ago. We have stopped watering and are in the process of removing outlying pine trees that don't block wind or shade our house, 5 on this annual schedule. We will continue to let aging trees die off. Yes, we still have multiple trees naively planted 20-35 years ago. But they are fewer per unit area than would be occupied by 1 tree per city lot covering the same area as our property. Our trees are variously efficiently watered: underground drip, above ground drip only at tree lines, deep rather than shallow watering, absorbing some gray-water, not watering during winter. We have no grass, which uses more water per area than trees. We have and promote the use of non-water artificial grass and natural landscape. A water district employee told us that we surely use less water for our trees than a lawn of grass in town. We have low-water toilets.

20-28
continued

MITIGATIONS WE WOULD REQUIRE. If the 2011 WSIP were to go forward, the following would have to be legally guaranteed to ensure no unacceptable impacts to our water supply (accessible water level and quality) for the next 50 years.

1. At IWVWD cost, drill us a new and/or deeper well whenever we give evidence that water level has become unacceptably low or water quality becomes unacceptably low without filtering or other treatment.
2. If quality improvement cannot be achieved by a deeper well, it must be improved by filtering that does not introduce foreign chemicals.
3. All extra costs for operating our well with deeper pumping, as modified because of 2011-WSIP impacts, would be paid by the IWVWD. This would include electricity costs for above what could be covered by 60% of our current solar-generating capacity.

This is not intended to be an exhaustive list, rather it points out some kinds of details missing from the offered mitigations in the DEIR.

Respectfully submitted,

Thomas A. DeMay Annette DeMay

Thomas and Annette DeMay

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Response to Comment 20-1: This comment states that impacts to water resources are understated because the wells should be evaluated at running simultaneously at full capacity. District wells are currently not pumped at full capacity, but are operated in accordance with system demands and maintenance schedules approximately 70 to 90 percent of the time during high-demand summer months and 20 to 40 percent of the time during winter months. The District does not propose to change its operations with this Proposed Project. Additionally, the groundwater model evaluated the effects of both phases of the Proposed Project in addition to current conditions, including pumping from existing wells. Master Response 2 further addresses this issue.

Response to Comment 20-2: 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.

This comment also suggests that average daily production numbers be used to estimate demand, instead of using peak daily demand. The comment also suggests that the capacity of the existing reservoirs should be included when calculating the capacity needed to meet demand. The purpose of the Proposed Project is to meet maximum day demand, which represent the highest demand that occurs over a 24-hour period during the hottest part of the year. Unlike the peak daily demands satisfied by storage in the reservoirs, maximum day demand must be satisfied by water production wells. If high, hot-weather demands occur during a period of multiple days without increase production, then the water levels in the District's storage reservoirs will continue to decline over that multiple-day period. It is essential to prevent the water levels in the storage reservoirs from declining below the levels that are intended to provide for fire-flow storage. For planning purposes, it is important to base the maximum day demand on the average daily demand as projected in the 2010 Urban Water Management Plan. The maximum day demand is calculated by applying a peaking factor to the projected average day demand. A conservative estimate of the peaking factor means that the evaluation of impacts to water resources in the EIR also represents a conservative, or worst-case, estimate of the potential impacts from the Proposed Project. 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 demand be lower than the demand predicted in the EIR, because of cooler weather, lower population increases, or effective conservation, the new facilities will only be operated as needed to satisfy the actual demand. Master Response 7 further addresses this issue

Response to Comment 20-3: 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 IWVWD 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 IWVWD 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.

Response to Comment 20-4: 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, and future conservation will also reduce demand. Master Responses 7 and 8 further address this issue.

Response to Comment 20-5: This comment states that less, rather than more, water should be pumped from the southwest wellfield area. The comment further states that a brackish water treatment alternative should be implemented instead of the Proposed Project.

The comment also states that not all existing wells are shown on the maps in the EIR, particularly Appendix G. The wells shown on the maps in Appendix G are based on the best available data from Kern County Water Agency. However, the number of wells that would be affected by the Proposed Project does not increase or decrease the severity of the impacts as discussed in the EIR. If only one well would be affected, then the impact would still be potentially significant and would still require mitigation.

Response to Comment 20-6: This comment states that the intertie agreement could be activated in 60 days, and, therefore, the Proposed Project is not needed. 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. 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.

Response to Comment 20-7: This comment states that the use of water levels averaged over a broad area were used to show little impact in the southwest wellfield area. Water levels were not averaged over any areas in the evaluation presented in the DEIR. Figures 3.8-4 through 3.8-6 present the water levels at specific individual wells, as reported by KCWA. Figure

3.8-9 is a contour map of the groundwater surface elevation based on the most recent data in the KCWA database. The contours are based on water levels at specific individual wells, as shown on the map. The figures in Appendix G present contour maps that show the estimated additional drawdown from the Proposed Project throughout the basin at any given location. Figure 3.8-8 is a contour map of the average annual rate of decline in specific individual wells. The average rate of decline was determined from the data for individual wells from the KCWA database and then plotted for each location on the figure. The use of hydrographs was intended to illustrate the historic rate of water level declines in various locations in the basin. Localized impacts to groundwater declines were evaluated by Layne Hydro using the regional groundwater flow model (Appendix G). Master Response 2 provides additional information on this model.

Response to Comment 20-8: The comment states that the AB303 report was excluded from the hydrology analysis in the EIR. This report, *Installation and Implementation of a Comprehensive Groundwater Monitoring Program for the Indian Wells Valley, California* authored by M.D. Stoner and R.L. Bassett and prepared for the Indian Wells Valley Cooperative Groundwater Management Group under an AB 303 grant, was reviewed for the EIR along with many other data sources from the Kern County Water Agency, California Department of Water Resources, US Bureau of Reclamation, USGS, NAWS China Lake, Regional Water Quality Control Board, and others. The document was inadvertently omitted from the reference section in the EIR. This report confirms that the water pumped from the aquifer by all users exceeds the recharge. This information does not conflict with the information presented in the Draft EIR, and the analysis of impacts in the EIR is based on this condition. Master Response 3 further addresses this issue.

This comment also states that the assumptions used to estimate future water demand are incorrect. Master Responses 7 and 8 address this issue.

This comment also states that the Proposed Project should not be implemented because of the significant unavoidable impact to water quality. One of the issues that will be resolved by the IWVWD Board of Directors is which among the Proposed Project and its Alternatives should be selected for approval. The Board will use the information in the EIR regarding the potential for significant environmental impacts from the Proposed Project as part of the basis for this decision. Other factors, such as cost, reliability, and technical feasibility, will also be considered by the Board when making its decision. Master Response 9 addresses this issue.

The comment also states that the characterization of the reduction in water quality as miniscule is incorrect. The term “miniscule” was used to describe the incremental contribution of Phase 2 of the Proposed Project to the creation of groundwater depressions in the Indian Wells Valley basin that have caused the co-mingling of good quality and lesser quality water. This explanation is necessary, because it affects the feasibility of mitigation for cumulative impacts to water quality. The flow of low-quality water toward the groundwater depressions, and areas of higher-quality groundwater, is dependent on the hydraulic gradient, or slope of the groundwater surface. The groundwater flow model prepared by Layne Hydro in August 2011, and simple volumetric analysis, demonstrate that the incremental additional pumping from Phase 2 would not change the hydraulic gradient in or adjacent to the areas of low-quality water. Therefore, while the additional pumping would contribute to the groundwater depression locally (within two miles of the new well), it would not change the groundwater flow

rate in the areas of low-quality water. Thus, the Proposed Project's contribution to the cumulative impact to basin-wide water quality cannot be measured. Given this situation, it is also not technologically feasible to measure the timing or amount of the impact to individual wells in the basin. Therefore, feasible mitigation that provides performance standards and timing for this cumulative impact is not possible, and the cumulative impact to water quality in the basin remains significant, unmitigatable,, and unavoidable. Master Response 6 provides additional information on this issue.

The comment also states that not all existing wells are shown on the maps in the EIR, particularly Appendix G. The wells shown on the maps in Appendix G are based on the best available data from Kern County Water Agency. However, the number of wells that would be affected by the Proposed Project does not increase or decrease the severity of the impacts as discussed in the EIR. If only one well would be affected, then the impact would still be potentially significant and would still require mitigation.

Response to Comment 20-9: This comment asserts that the groundwater model used for the DEIR has known errors and missing data. The groundwater model was extensively reviewed by stakeholders in the basin, including the Indian Wells Valley Cooperative Groundwater Management Group. At present, the Brown and Caldwell model is the best available model of groundwater flow at the regional scale in the Indian Wells basin. Master Response 2 provides additional information on this issue.

This comment states that the literature used for characterization and evaluation of arsenic and total dissolved solids lacks factual basis. The Draft EIR used numerous technical references, including the Kern County Water Agency, California Department of Water Resources, U.S. Geological Survey, U.S. Bureau of Reclamation, and other publicly-available documents. Master Response 3 provides additional information on this issue. See also the Response to Comment 20-10 for a more comprehensive discussion of arsenic concerns.

The comment further states that use of treated groundwater should be the alternative selected. This alternative was considered for the Proposed Project, but was rejected because it was not cost-effective. The District conducted pilot testing for brackish water desalination from the Northwest Well Field from June 2008 to June 2009. The pilot test concluded that a brackish water treatment facility could provide approximately 3,000 acre-feet per year of high-quality groundwater. However, the cost of the disposal of the brine produced by the treatment process, a hazardous waste, would be excessive because of the District's inland location (ocean disposal of brine is not an option as with other communities). The cost of this alternative, at $2,350 per acre-foot would be more than 20 times the cost of the Proposed Project. The study concluded that the IWVWD benefits from this the additional drinking water recovered were not more than the cost of brine treatment. Master Response 10 further addresses this comment.

Response to Comment 20-10: This comment states that potential impacts to neighboring wells must be evaluated assuming maximum use of the wells. District wells are currently not pumped at full capacity, but are operated in accordance with system demands and maintenance schedules approximately 70 to 90 percent of the time during high-demand summer months and 20 to 40 percent of the time during winter months. The District does not propose to change its operations with this Proposed Project. Master Response 2 further addresses this issue.

This comment states that impacts to water levels are understated because the modeling results show impacts that are smaller than a 2-mile radius from Well 35. The modeling results show that measurable effects of the proposed increased pumping would occur at less than a two-mile radius from new Well 35. At the two-mile radius, the incremental increase in groundwater drawdown is too small to measure. A two-mile radius was selected for the mitigation program to ensure that all of the wells that could be affected by the Proposed Project are included in the program, and also to ensure that the control wells are located at a sufficient distance from Well 35 to be able to accurately evaluate background decreases in water levels. Master Responses 1 through 4 address this issue.

The comment also states that not all existing wells are shown on the maps in the EIR, particularly Appendix G. The wells shown on the maps in the Draft EIR are based on the best available data from Kern County Water Agency. However, the number of wells that would be affected by the Proposed Project does not increase or decrease the severity of the impacts as discussed in the EIR. If only one well would be affected, then the impact would still be potentially significant and would still require mitigation. This comment also states that wells near the Well 36 site would be affected. Well 36 is no longer part of the Proposed Project and would not affect existing wells.

This comment also states that the impacts of the Proposed Project must be considered in conjunction with each other and the other IWVWD area wells. The Layne Hydro model (Appendix G of the Draft EIR) included the effects of both phases of the Proposed Project in addition to existing groundwater pumping. The figures shown in the model identify the difference between the status quo and the Proposed Project. The Draft EIR identifies that more groundwater is currently being pumped from the basin than is being recharged. However, the purpose of the EIR is to identify impacts from the Proposed Project, including the Proposed Project's contribution to cumulative impacts, not to mitigate for existing conditions.

This comment also states that the affects of creating an arsenic problem by repeatedly wetting and drying the soils has not been accurately evaluated in the EIR. Arsenic is ubiquitous in the environment and may be present in soils, water, seafood, treated wood, and other industrial products. There are several well-known occurrences of elevated levels of arsenic in groundwater throughout the world. These include in Bangladesh and western India, south Florida, and Fallon, Nevada. In general, arsenic may be present in geologic formations or aquifer sediments in relatively immobile or insoluble mineral forms. Often, the arsenic is associated with clay deposits, marine sediments, or geothermal conditions. Mobilization of arsenic present within sediments generally requires strongly reducing conditions. The presence of organic material, reduced iron or manganese, or other substances that can remove oxygen from the groundwater is typically required to change the arsenic into a more mobile and soluble form.

On November 10, 2011, Tom Haslebacher of KCWA was contacted to discuss the statements he is alleged to have made by this commentor, and also to further define his experience and concerns with arsenic in groundwater within Kern County, and with the WSIP. Mr. Haslebacher stated that he was unfamiliar with the issues and concerns that commentors alluded to at the public meeting for the Draft EIR in Ridgecrest. He said that there are many groundwater extraction and recharge projects throughout Kern County and he was not aware of any situations where fluctuating groundwater elevations due to pumping and/or recharge are

alleged to have caused an increase in arsenic levels in groundwater. Thus, he has no concerns over this issue with respect to the WSIP.

Within the Indian Wells Valley, arsenic has been identified at several locations during field studies (e.g. 1993 US Bureau of Reclamation). As indicated in Table 3.8-1 of the Draft EIR for the WSIP, sample locations and depths at which arsenic was identified in groundwater are associated with the occurrence of thick lacustrine clay beds that also contain elevated levels of other metals, such as iron and manganese. These clay beds often contain organic material, sometimes in quantities sufficient to produce small amounts of methane gas. The organic material, soluble iron and manganese, and methane gas are all indicators of reducing conditions.

Water level fluctuations caused by pumping of the WSIP wells would only cause minor fluctuations of the water table for short periods of time. When pumping is occurring, a small interval (no more than a few feet) near the pumping well or wells would be partially dewatered and air would enter the pore space. The introduction of the air into the pore space would tend to add more oxygen to the exposed sediments, the opposite of what is required to create reducing conditions. Injection of air into aquifers is actually one of the methods used to lower arsenic concentrations in groundwater at many locations in Bangladesh, Southeast Asia, and the United States. Thus, if there is any measurable effect at all, the WSIP is likely to lower the potential for arsenic mobilization in the aquifer in the Southwest Well Field area.

Response to Comment 20-11: This comment states that insufficient notice was provided for the EIR scoping and Draft EIR comment period, so that controversy could be minimized. The public notification and meetings for the scoping period is summarized in Section 1.2 of the Draft EIR and the public notification and meetings for the Draft EIR is summarized in Section 1.2 of the Final EIR. The public notification and meetings held for the EIR met or exceeded the requirements of CEQA. There was sufficient interest in the project at the scoping meeting that two meetings for the Draft EIR were scheduled in larger meeting rooms.

Response to Comment 20-12: The comment states that insufficient time was given to provide scoping comments, resulting in a small number of comments. The scoping period was from July 6 to August 4, 2011, 30 calendar days, which meets the requirement of CEQA. It should be noted that comments were received through August 10, and that the District accepted and considered these late comments although not required to do so by CEQA.

This comment also states that all users in the valley, including IWVWD customers, would be affected by the Proposed Project, and that the list of scoping letters implies that only private well owners would be affected. The Draft EIR analyzed impacts to the environment based on environmental resource, not based on location within or outside of the IWVWD service boundary. The list of scoping letters provided in the EIR is merely for informational purposes.

Response to Comment 20-13: This comment states that the groundwater model used for the EIR is flawed. The modeling that was conducted for the EIR was based on a model that was developed by Brown and Caldwell for the Indian Wells Valley Cooperative Groundwater Management Group. At present, the Brown and Caldwell model is the best available model of groundwater flow at the regional scale in the Indian Wells basin. While no model offers a perfect representation of groundwater flow, the Brown and Caldwell model is suitable for

predicting the water-level changes that would result from the Proposed Project. Master Response 2 provides additional information on this issue.

Response to Comment 20-14: This comment states that rejected alternatives should be considered because IWVWD's data mis-represents the urgency of the capacity need. IWVWD's demand projections are based on population projections from Kern County COG and from a maximum day demand peaking factor based on eight years of historical data and recommendations in the California Waterworks Standards Master Responses 7 and 8 further address this issue. This comment states that the District should implement 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.

Response to Comment 20-15: This comment states that the potential of the Proposed Project to cause subsidence and liquefaction of soils needs additional substantiation. The potential of the Proposed Project to cause subsidence and liquefaction of soils was analyzed in the Initial Study prepared for the scoping process The Proposed Project sites are not located on unstable soils that would be subject to subsidence or liquefaction, as indicated on Figure 12 of Chapter 4 (Safety Element) of the Kern County General Plan. Therefore, the issue of subsidence or liquefaction was not further evaluated in the EIR, as allowed by CEQA Guidelines Section 15063.

Response to Comment 20-16: This comment states that mitigation for changes to water levels should be initiated with Phase 1, not Phase 2. Baseline monitoring will begin in 2012. However, the purpose of Phase 1 is to provide system redundancy in the event of equipment failure, maintenance, or emergency situations at other well locations. If Wells 18 and 34 are operated at increased pumping rates for a temporary period of time, the amount of drawdown would be greater than what currently occurs. However, after the maintenance, equipment failure, or other emergency situation is resolved, pumping would decrease and water levels would recover. Master Responses 2 and 4 provide additional information on this issue.

Response to Comment 20-17: This comment states that blowing diesel fumes would affect residents living northeast and north of the Well 35 site, and that mitigation is required. Construction emissions, including construction emissions from diesel equipment, were modeled and compared to the Eastern Kern County Air Pollution Control District thresholds. Emissions of toxic air contaminants, such as diesel particulate matter, would not exceed the health risk public notifications thresholds adopted by the KCAPCD Board. No mitigation is required.

Response to Comment 20-18: This comment states that the assumption that arsenic treatment would not be required for Well 35 is incorrect because the repeated wetting and drying of the soil would cause soluble arsenic problems. The repeated wetting and drying

cycles that may occur adjacent to any well in the basin, not just the Proposed Project wells, allows air to enter the dewatered part of the aquifer within the drawdown cone. This air includes oxygen, which tends to decrease the mobility of arsenic, not increase it. Thus, the comment mischaracterizes the geochemical behavior of arsenic. More detailed discussion of this issue is presented in the response to Comment 20-10.

Response to Comment 20-19: This comment states that standing water in the discharge ponds could cause mosquito breeding and contribute to West Nile virus. The discharge pond has been designed by a registered civil engineer to contain the well development and testing water. Based on the District's experience with other wells, the water in the pond would evaporate very quickly, within hours, and mosquito breeding would not be anticipated.

Response to Comment 20-20: This comment states that Well 35 would be operated similarly to the District's existing production wells, and that the project-level and cumulative impacts of the operation of Well 35 must be examined. The project-level and cumulative effects of both phases of the Proposed Project were examined. Master Responses 1 through 6 address this issue.

Response to Comment 20-21: This comment states that water demand in the District has been declining, and that including demand data from 2010 and 2011 would better quantify this downward trend. The comment further states that the Proposed Project is not needed because of the downward trend in water demand. The Proposed Project is based on population projections from Kern COG. Phase 2 would not be implemented until the demand for water exists. Should demand not occur, either from slower population growth, cooler weather, or effective conservation, Phase 2 would not be implemented. Master Responses 7 and 8 further address this issue.

This comment further states that the real purpose is to serve as a growth-inducing action. Water service is one factor affecting the growth potential of a community. As has been pointed out by many commentors, a variety of other factors outside of the influence of the IWVWD affect new development of population growth, including economic conditions of the region, land use planning requirements, and other factors, with economic factors generally the lead driver. The growth estimates used by the IWVWD were provided by Kern COG and, at 1 percent growth per year, are consistent the growth estimates in the General Plans prepared by Kern County (2% annual growth) and the City of Ridgecrest (1% to 3% annual growth). Therefore, the Proposed Project does not induce growth on its own.

Response to Comment 20-22: This comment states that Mitigation Measure H-1 is insufficient because the mitigation measure would only cover the cost of hookup to IWVWD, but not increased monthly costs of water. The cost of the mitigation actions listed in Mitigation Measure H-1 in the Draft EIR would be borne by the District. Such actions could include deepening an existing well, installing a different pump in an existing well, drilling a deeper well, or providing hookup to IWVWD or another cooperative water system in the area. This mitigation provides that land uses that exist at the time the EIR is prepared will continue to be supported. Economic impacts of a project, including changes to utility bills, are only subject to CEQA if those impacts cause physical impacts on the environment (CEQA Guidelines Section 15384).

This comment also states that Mitigation Measure H-1 does not guarantee that drilling a deeper will would find potable water. IWVWD recognizes that individual wells will require individual mitigation. Therefore, a range of mitigation options has been provided.

This comment also states that the IWVWD cannot avoid its contributions to the water problems in the basin because other water pumpers exist in the basin. The IWVWD has acknowledged the significant impacts from the Proposed Project. Many of these impacts can be mitigated; however, one impact would remain significant and unavoidable.

This comment also states that it is unclear who will make decisions regarding mitigation options is inadequately covered in the Draft EIR. The District is its own CEQA Lead Agency and, as such, is authorized to implement its own mitigation monitoring and reporting program under CEQA Guidelines Section 15097. The specific mitigation options for each well will be negotiated between the District and the well owner, as stated in Mitigation Measure H-1. Furthermore, it is specified in the Draft EIR that the mitigation monitoring program and evaluation of the semiannual monitoring data is to be conducted by a qualified, state-licensed professional, such that the District would receive independent analysis from a third-party licensed professional.

Response to Comment 20-23: This comment states that water quality degradation is not just caused by groundwater depressions, but is also caused by repeated wetting and drying in drawdown cones. The repeated wetting and drying cycles that may occur adjacent to any well in the basin, not just the Proposed Project wells, allows air to enter the dewatered part of the aquifer within the drawdown cone. This air includes oxygen, which tends to decrease the mobility of arsenic, not increase it. Thus, the comment mischaracterizes the geochemical behavior of arsenic. More detailed discussion of this issue is presented in the response to Comment 20-10.

This comment also states that impacts to water quality can be mitigated through several methods. While there are methods to improve water quality, as listed by the commentor, the changes to water quality related to the Proposed Project would be so small that it would be impossible to detect the Project changes from the background changes in individual wells. Therefore, it would not be technologically feasible to measure the timing or amount of the Proposed Project's impact to individual wells in the basin. Because of this, feasible mitigation that provides performance standards and timing for this cumulative impact is not possible. Master Response 6 provides additional information on this issue.

This comment states that the EIR ignores the 2008 AB 303 report, particularly regarding the occurrence of low-quality groundwater in the area of the Southwest Well Field. The data from the 2008 AB 303 report was considered as part of the evaluation presented in the Draft EIR, and these data are consistent with and support the findings of the Draft EIR. In particular, as part of the AB 303 studies, eight new wells were drilled in the Southwest Well Field area and farther to the southwest. These wells all encountered high-quality groundwater, with the exception of one well near the intersection of Highways 14 and 178, where the water quality was moderate. The AB 303 report also points out (on page 60), that zones of low quality groundwater encountered in some wells, such as U.S. Bureau of Reclamation well BR-3, are present within isolated sand lenses within clay layers, and do not imply degradation of either the upper or lower aquifer.

This comment states that the cumulative impacts to water quality are significant and mitigatable. The comment is partially correct. The EIR states that the cumulative impacts to water quality are significant. However, feasible mitigation to mitigate the Proposed Project's contribution to the impact is not feasible. Master Response 6 further addresses this issue.

Response to Comment 20-24: This comment states that the increased rate of drawdown from the Proposed Project would cause wetting and drying cycles that would produce soluble arsenic. The repeated wetting and drying cycles that may occur adjacent to any well in the basin, not just the Proposed Project wells, allows air to enter the dewatered part of the aquifer within the drawdown cone. This air includes oxygen, which tends to decrease the mobility of arsenic, not increase it. Thus, the comment mischaracterizes the geochemical behavior of arsenic. More detailed discussion of this issue is presented in the response to Comment 20-10.

Response to Comment 20-25: This comment states that documents and literature are ignored in the water resources analysis. Master Response 3 addresses this issue.

Response to Comment 20-26: This comment states that comments submitted after the public comment period ends must be considered. The public comment period follows the requirements of CEQA. Although the District is not required to consider and respond to late comments, the District has included responses to late comments in this Draft EIR to the extent possible, including comments received up to December 19, 2011.

Response to Comment 20-27: This comment states that overlying land owners have rights that supercede the District's. Master Response 12 addresses this issue.

Response to Comment 20-28: This comment states that the cost of the mitigation for local wells that are affected by water level declines from the Proposed Project are not adequately discussed in the EIR. The comment also requests mitigation for changes in water quality and increased costs in operating deeper wells, if they are required. The cost of the mitigation actions listed in Mitigation Measure H-1 in the Draft EIR would be borne by the District. Such actions could include deepening an existing well, installing a different pump in an existing well, drilling a deeper well, or providing hookup to IWVWD or another cooperative water system in the area. This mitigation provides that land uses that exist at the time the EIR is prepared will continue to be supported. It is possible that changes in utility costs may result from the new equipment. It is possible that utility use may increase; however it is also possible that the new well and/or new equipment that is installed would be more efficient than equipment installed in 2005. Additionally, the economic impacts of a project are only subject to CEQA if those impacts cause physical impacts on the environment (CEQA Guidelines Section 15384).

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