SECTION 3.0

COMMENT LETTERS AND RESPONSES TO COMMENTS

This section includes the letters received during the public and agency review period on the Draft EIR, followed by responses to the comments in the letters that were received. Revisions to the Draft EIR are included in Section 4.0 of this Final EIR.

3.1 MASTER RESPONSES TO COMMON COMMENTS

A number of the comments received on the Draft EIR discussed the same issues or environmental concerns. Rather than repeat responses, master responses to common issues were prepared. These master responses are provided below.

3.1.1 Master Response 1: Analysis of Potential Changes in Groundwater Levels from the Proposed Project

Summary of Issues Raised. Several comment letters stated that the potential for changes to groundwater levels in local private well systems should be addressed or was not adequately addressed in the Draft EIR.

Response. The discussion of the Proposed Project's impacts to water quantity, including changes in water levels in local private well systems, is found in the Draft EIR, Section 3.8. To examine trends for groundwater levels in the Indian Wells Valley, long-term data from the US Geological Survey, California Department of Water Resources, and Kern County Water Agency (KCWA) were reviewed. To support the analysis conducted in the Draft EIR, data were requested and received from KCWA for wells within the northeast corner of Kern County in the 324-square-mile area encompassed by Townships 25 South through 27 South and Ranges 38 East through 40 East (see Figure 3.8-3 in the Draft EIR). KCWA provided 5,042 individual water records from approximately 200 wells, which are provided in Appendix F of the Draft EIR. A detailed analysis of the approximately 135 wells with a 10-year record or longer was conducted as part of the evaluation of existing, or baseline, conditions for the Draft EIR. This analysis indicates that groundwater levels have been declining in the Indian Wells Valley for many decades. Prior to approximately 1950, groundwater levels were stable. Between approximately 1950 and 1980, groundwater levels were decreasing at a rate of approximately one-half foot per year or less throughout the basin. In the 1980s, the rate of decline in the groundwater levels accelerated. For the past three to seven years, water levels have been stable or even slightly increasing in wells throughout the basin.

Impacts to groundwater supplies were evaluated against the following threshold of significance, from the CEQA Guidelines Appendix G:

- Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

As part of Phase 1 of the Proposed Project, the nominal pumping capacity of Wells 18 and 34 would be increased from 1,200 gpm to 2,200 gpm to provide a 20 percent system redundancy. As such, Phase 1 does not result in an additional net volume of groundwater pumping but only provides redundant capacity in the event of equipment failure, maintenance, or emergency situation. Phase 1 would not result in an increase in annual pumping by the District. It may, however, result in some variations in the amount of water pumped from different wells and different areas of the valley. For example, if equipment failure, maintenance or emergency situations at other well locations required increased pumping rates at Wells 18 and 34, more groundwater would be pumped from the southwest well field area of the valley for a temporary time period than can be currently pumped from the same wells. Thus, the amount of drawdown in the water table in the vicinity of Wells 18 and 34 during this temporary time period would be greater than currently occurs. At the same time, pumping from other IWVWD wells in the intermediate well field or in the City of Ridgecrest would decrease, resulting in less drawdown in these areas of the valley. These variations, however, are short term in nature and would only occur if the additional nominal capacity of Wells 18 and 34 is being used, after which pumping would decrease and water levels would recover. Therefore, Phase 1 would not alter the long-term trends in groundwater levels.

Phase 2 includes the installation of new Well 35 in the southwest well field area, but only if customer demand increases as projected in the Draft EIR. The additional pumping from Well 35 would result in an increased rate of drawdown locally. Based on modeling conducted in August 2011 by Layne Hydro (see Appendix G of the Draft EIR), the average rate of water level decline within one-half mile of Well 35 is anticipated to increase by 0.5 foot per year, from a current baseline rate of approximately 1.6 feet per year to a projected rate of approximately 2.1 feet per year. The average rate of water level decline within 1.5 miles of Well 35 is anticipated to increase by 0.2 foot per year, from a current baseline rate of approximately 1.6 feet per year to a projected rate of approximately 1.8 feet per year. At about a 2-mile radius from Well 35, increases in the rate of water level decline caused by the Proposed Project are too small to be measured.

It should be noted that the model results represent a worst-case scenario when measuring local groundwater drawdowns. The model assumes that Wells 18, 34, and 35 are pumped at their full capacity, rather than the actual well rotation used by IWVWD where individual wells are operated approximately 70 to 90 percent of the time during high-demand summer months and 20 to 40 percent of the time during cooler months. This increase in the average rate of water level decline in the immediate vicinity of Well 35 was identified in the Draft EIR as a potentially-significant impact that can be mitigated. The mitigation measure for this impact is discussed in Master Response 4, below, and in Section 3.8.4 of the Draft EIR.

3.1.2 Master Response 2: The Groundwater Model is Inadequate

Summary of Issues Raised: Some comment letters stated that the groundwater model used to assess impacts to water levels (Appendix G of the Draft EIR) does not accurately reflect the potential effects of the Proposed Project.

Response. The modeling that was conducted for the development of the EIR was based upon the model that was developed by Brown and Caldwell for the U.S. Navy, Searles Valley

Minerals, and the IWVWD in close cooperation with the Indian Wells Valley Cooperative Groundwater Management Group. At the time of its creation, the model was extensively reviewed by stakeholders in the Indian Wells basin, and calibrated to the water-level data that were available at that time. At present, the Brown and Caldwell model is the best available model of groundwater flow at the regional scale in the Indian Wells basin. Owing to the inherent difficulty of predicting the water levels in the basin, Layne Hydro configured the modeling analysis for the EIR based on the differences between scenarios, and the difference over time within each scenario. 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.

The groundwater flow model was based on the data available at the time it was prepared. The model was calibrated and validated using a combination of qualitative and quantitative methods for both steady state and transient modeling periods, as described in detail in Chapter 5 of the Brown and Caldwell modeling report (Final Report, Indian Wells Valley Basin Groundwater Flow Model and Hydrogeologic Study 2009). The model received technical peer review from Brown and Caldwell senior staff and outside consultants, and was reviewed by staff from Indian Wells Valley Water District, the U.S. Navy, Searles Valley Minerals, and the Indian Wells Valley Cooperative Groundwater Management Group Technical Advisory Committee, as the representative for the other stakeholders in the basin. The 2009 Brown and Caldwell model is the most recent model prepared for the basin and, thus, is based on the most recent data and interpretations for the groundwater system. The District has appropriately selected the groundwater flow model as one of several methods used for evaluation of the Proposed Project based on what is reasonably feasible, in accordance with Section 15151 of the CEQA Guidelines

For the EIR, changes to the hydrologic system were developed as differences from a "status quo" modeling scenario. The status quo scenario assumed no change in the arrangement of IWVWD wells. In each year of the predictive simulation, withdrawals that satisfy the projected water demand were allocated among the various IWVWD wells according to each well's proportion of the total withdrawals in 2009. For the simulations that include the modified arrangement of wells (Proposed Project and Alternatives 1 and 2), it was necessary to develop a scheme based on the *a priori* unknown production schedule for the modified system. In the absence of historical records, it was determined that in predictive simulations, the annual projected withdrawals should be allocated among the modified arrangement of IWVWD wells according to the capacity of each well. While it has been suggested by one commenter that the new wells should be assumed to pump at their full capacity in the predictive simulations, this would be an unrealistic representation of the spatial distribution of the withdrawals, and would also produce more water than needed in the winter months. This is confirmed by the fact that the current wells in the southwest have not operated continuously in the past.

In groundwater models of desert basins, simulated water levels will be controlled by the initial water levels in the model, the distribution of aquifer recharge, the distribution of aquifer transmissivity, and the distribution of water withdrawals in the aquifer. In any model, it is likely that simulated heads will differ from observations during model calibration. This is particularly true in the absence of significant head-specified or head-dependent-flux-specified internal boundary conditions (e.g. at the playa lake). While water levels in the basin have declined with time, the amount of historical decline is less than one-quarter of the pre-development saturated thickness in the basin. As a result, simulated changes in heads during a particular model

scenario, and the head differences between two scenarios, will be controlled by the distribution of water withdrawals in the models and the distribution of aquifer transmissivity. Because all scenarios made use of the same transmissivity distribution, and because the transmissivity distribution in the model is considered the best available, the predicted Project-specific water-level changes in the predictive scenarios are realistic for the purpose of the EIR.

It should be noted that analysis in a CEQA document is not required to be perfect, and that disagreement among experts does not make an EIR inadequate. Section 15151 of the CEQA Guidelines states that "an EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure." Although some commentors have stated that the model has flaws, the model is the best available model of groundwater flow at the regional scale in the Indian Wells basin. Only one comment letter, Comment Letter 33, proposed an alternative hydrologic calculation method. This alternative calculation method was developed for a different, non-IWVWD project that would have pumped 8,170 acre-feet per year for 28 months during construction and then slightly over 200 acre-feet per year for on-going operations from the Southwest Well Field. The alternative calculation method is based on volumetric analysis and approximated aquifer properties and is consistent with standard hydrogeologic principles. The alternative calculation method presented in Comment Letter 33 indicates that pumping an additional 8,170 acre feet per year for 28 months followed by pumping 200 acre-feet per year from the Southwest Well Field would result in an additional 29 feet of drawdown near the pumping well after 30 years. Pumping an additional 8,170 acre-feet per year from the Southwest Well Field is equivalent to more than doubling the current production of the IWVWD. The alternative calculation presented in Comment Letter 33 also estimated that the drawdown from pumping 200 acre-feet per year would be approximately seven feet over 30 years.

Phase 2 of the Proposed Project is intended to meet a projected increase in demand of approximately one percent per year, or about 80 acre-feet per year. The technical assessment and modeling results developed for the CEQA analysis indicate that the rate of water level decline within one-half mile of new well 35 would increase by approximately 0.5 feet per year above the baseline rate. Thus, the Brown and Caldwell model estimates that over 30 years the Proposed Project would result in an additional 15 feet of drawdown within one-half mile of the pumping well. The additional drawdown estimated for the Proposed Project is about twice that estimated by the alternative calculation method presented in Comment Letter 33 for an annual extraction volume that is 2.5 times greater than that which would occur under the Project. Because the alternative calculation method is linear, it yields an estimated drawdown over 30 years from pumping of 80 additional acre-feet per year of about 2.75 feet, which is much less than that estimated by the Brown and Caldwell model. Therefore, the groundwater model used for the EIR analysis would appear to over-estimate the drawdown that may result from Phase 2 of the Proposed Project. Based on this information, the District has concluded that the groundwater model prepared for the EIR represents a worst-case scenario in evaluating impacts to groundwater supply. As a result, the District has determined that the model used in the EIR

is sufficient to provide the decision makers (the IWVWD Board of Directors) with information that enables them to make a decision that takes into account environmental consequences.

3.1.3 Master Response 3: The Evaluation of Impacts to Groundwater Did Not Use Specific References

Summary of Issues Raised. Several comment letters stated that the analysis of impacts to groundwater resources was incomplete because specific reference material was not incorporated into the analysis.

Response. The agencies consulted in preparation of the EIR, and the technical references used, are provided in Sections 6.0 and 7.0, respectively, of the Draft EIR. The specific reference material used in the groundwater resources evaluation is discussed throughout Section 3.8 of the Draft EIR. Appendices F and G include specific technical studies and data used in the Draft EIR. Other studies and reference material used in the analysis are incorporated by reference, in accordance with Section 15150 of CEQA.

It should be noted that one reference used in the technical analysis, "Installation and Implementation of a Comprehensive Groundwater Monitoring Program for the Indian Wells Valley, California", prepared by the Indian Wells Valley Cooperative Groundwater Technical Advisory Committee (M. D. Stoner) and Geochemical Technologies Corporation (R.L. Bassett), March 3, 2008, was inadvertently left off of the reference list in Section 7.0 of the Draft EIR. This report was prepared as part of the AB303 Local Groundwater Assistance Program. This report is available to the public at www.iwvgroundwater.org and is cited by many commenters. An inadvertent typographical error does not diminish the sufficiency of the technical analysis of groundwater resources in the CEQA document.

The 2008 AB303 Report prepared by Stoner and Bassett (Section 5.2.2) includes an extensive discussion of the geochemistry, flow paths, recharge, and age-dating of the groundwater. This discussion in the AB303 report provides what is described as a "proof-of-concept" that recharge from the Sierra mountain front canyons is migrating through the basin following general pathways that are defined geochemically. These pathways, and the recharge volumes shown on Figure 5.1 of the 2008 AB303 report, are consistent with and support the groundwater flow model and analysis in the Draft EIR. Specifically, the age-dating for the post-Pleistocene water does not infer that the water was emplaced at that time in the past (*e.g.* 6,000 or 7,000 years ago) and has been static since that time, as has been asserted by several commentors. Instead, the model developed and supported in the 2008 AB303 report states that the groundwater has been consistently recharged from the Sierra mountain front and that the age dating and geochemistry indicate the migration time for the water to reach those locations. Prior to the early part of the 20th century, there was no pumping in the basin and the only water loss was evaporation from the China Lake playa. The lack of pumping and significant loss of water from the aquifer would have resulted in very flat hydraulic gradients and very slow flow velocities, which are consistent with the age dating in the 2008 AB303 report and the flat gradients observed to the southwest of the southwest well field, where very little development of groundwater has occurred. Thus, the age-dating and geochemical modeling presented in the 2008 AB303 report have been recognized and considered in the analysis presented in the Draft EIR, and they are consistent with and support the findings of the EIR.

CEQA Section 15151 defines the standards of adequacy for analysis in an EIR. Specifically:

> "An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure."

The EIR fully discloses the issues related to declining water levels in the basin, areas of lower water quality, and the potential for the Proposed Project to affect these conditions.

3.1.4 Master Response 4: Mitigation for Changes in Groundwater Levels from the Proposed Project

Summary of Issues Raised. Several comment letters requested clarification regarding mitigation for water level changes, including where the mitigation program would occur and who would pay the costs incurred for the mitigation program.

Response. The technical assessments and modeling conducted for the Draft EIR established that a potentially-significant impact may occur to groundwater levels as a result of the proposed increased pumping for Phase 2. As described in Master Response 1, above, the 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.

Existing baseline conditions will, over time, reduce the production rate of pre-existing wells such that these wells may not support existing land uses in the future. Under the requirements of CEQA, Mitigation Measure H-1 addresses the incremental increase in the rate of drawdown and potentially shorter timeframe before an impact to an individual well may occur as a result of the Proposed Project. Mitigation Measure H-1 includes a mitigation monitoring program to determine if water levels are declining at a faster rate than ambient conditions as a result of the Proposed Project. This difference in the water level decline will be determined by comparing the rate of decline within the 2-mile radius with control wells located outside of the area of influence. The program provides mitigation options that will be negotiated between the IWVWD and the well owner, which will be implemented prior to loss of use of the well. The monitoring program and any mitigation options will be implemented at the expense of the IWVWD. With Mitigation Measure H-1, impacts to groundwater levels would be reduced to a less-than-significant level.

For convenience, Mitigation Measure H-1 is repeated below.

H-1: To evaluate whether the Proposed Project will have an incremental impact on individual wells, a mitigation monitoring program will be established. This mitigation monitoring program shall be in place for the life of Well 35. The mitigation monitoring program must be prepared by a California-licensed Certified Hydrogeologist or California-licensed

Professional Engineer experienced with groundwater monitoring programs and procedures. A detailed monitoring plan will be prepared that specifies field measurement procedures, the well locations to be included in the program, data collection and documentation procedures, and data analysis methods. The monitoring program will include a number of perimeter control wells, outside the area of influence of the Proposed Project, to document the baseline rate of water level decline over time. The monitoring program will also include any wells within two miles of new Well 35 for which the owners agree to participate in the program. It should be noted that non-participation in the monitoring program would make it extremely difficult if not impossible to evaluate whether or not the Proposed Project will have an effect on a specific individual well.

Water levels will be measured semiannually in each well that is part of the program. The monitoring frequency and timing may be coordinated with monitoring that is currently conducted by KCWA to enhance the overall public knowledge of groundwater conditions in the valley. The monitoring data will also be provided to KCWA for inclusion in its public database of water levels in Indian Wells Valley. To help establish pre-Project conditions, the monitoring program should begin in 2012.

Water level data from individual wells will be analyzed semiannually and compared with the data from the perimeter control wells. The data will be evaluated to determine whether the rate of water level decline in a well within two miles of new Well 35 starts to increase after Phase 2 of the Proposed Project is implemented relative to the baseline rate in the perimeter control wells. If a rate of decline greater than the baseline rate develops in any well in the monitoring program as a result of District activities, then a mitigation program will be developed for that well by IWVWD in cooperation with the well owner. The rate of decline must also be clearly correlated with activity related to the Proposed Project. For example, if increased drawdown is occurring but new Well 35 has not been installed yet, or it is not pumped at a rate, in combination with other southwest well field wells (i.e. Wells 18, 33, and 34), that exceeds current pumping from those areas, then the increased drawdown cannot be attributed to the Proposed Project.

The mitigation program will include an assessment of the time at which the water level decline may reduce the production rate of the well, such that the wells will not support land uses that existed at the time this EIR was certified. The mitigation must then be implemented prior to this determined water level decline, so that the well owner does not experience a loss of pre-Project land use. Potential mitigation options that may be considered include:

- Deepening an existing well;
- Installing a different pump in an existing well;
- Drilling a deeper well; or
- Providing a hookup to IWVWD or another cooperative water system in the area.

The monitoring will be conducted by IWVWD. The mitigation options, if needed, may be installed by IWVWD or they may be funded by IWVWD and installed by the owner.

Current depth to groundwater in the area of the Proposed Project is approximately 400 ft bgs. Drilling data from the 1993 U.S. Bureau of Reclamation study demonstrates that

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

3.1.5 Master Response 5: Cumulative Impacts to Groundwater Quantity are Significant

Summary of Issues Raised. Several comment letters stated that any withdrawal from the groundwater basin is a significant impact, and that, therefore, the Proposed Project would have a significant cumulative impact to groundwater quantity in the basin.

Response. Impacts to groundwater supplies were evaluated against the following threshold of significance, from the CEQA Guidelines Appendix G:

- Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

As discussed in the Draft EIR, Phase 1 of the Proposed Project would not increase the total volume of pumping in the basin. Phase 2 of the Proposed Project would increase pumping by about one percent of the current production. The measurable effects of this pumping would only occur within the two-mile radius directly affected by the Proposed Project. Outside of this area, the effect of the increased pumping will be too small to be measured and, therefore, would not contribute to a reduction in the production rate of pre-existing wells outside of the two-mile radius. Because there would be no measurable effects outside of two-mile radius, and the impacts within the affected area would be mitigated to less than significant, the impact to groundwater quantity would not be cumulatively considerable. Impacts would be less than significant with Mitigation Measure H-1.

3.1.6 Master Response 6: Analysis of Potential Changes in Groundwater Quality from the Proposed Project

Summary of Issues Raised. Several comment letters stated that the potential for changes to groundwater quality should be addressed or was not adequately addressed in the Draft EIR.

Response. Water quality data reviewed in the Draft EIR were from the USGS, IWVWD, US Bureau of Reclamation, and reports prepared under funding from the AB303 Local Groundwater Assistance Program. Water quality varies appreciably across the basin. Water quality data from the northwest area of the basin indicate elevated levels of total dissolved solids (TDS), in the range of 500 milligrams per liter (mg/L) to 1,000 mg/L along with elevated levels of specific constituents such as arsenic, chloride, and nitrate in shallow and deeper aquifer intervals. A TDS of less than 500 mg/L is generally targeted for potable water use. The elevated TDS and the occurrence of arsenic and other constituents in the northwest area appears to be associated

with the thick organic clay layer that is present at various depths in the aquifer. In the northeastern and eastern part of the basin, TDS levels can be up to several thousand mg/L due to evaporation and concentration of salts in the area of China Lake. The central, western, and southern portions of the basin generally contain the best quality groundwater, with the best quality groundwater occurring in the intermediate and southwest areas of the basin. The testing program conducted by the US Bureau of Reclamation in 1993 indicated that high-quality groundwater exists to depths of at least 2,000 feet bgs in the southwest area, where Well 35 is proposed.

Impacts to groundwater quality are evaluated based on the following threshold of significance, from the CEQA Guidelines Appendix G:

- Would the project otherwise substantially degrade water quality.

The U.S. Bureau of Reclamation (1993) and the Layne Christensen Company (2010) studies evaluated water quality variations within the groundwater basin. One of the major findings of the U.S. Bureau of Reclamation (1993) is that a greater quantity of high-quality groundwater is in storage at depth in both the intermediate and southwest areas of the valley than previously known. This same study (U.S. Bureau of Reclamation 1993) concludes that one of the main approaches for extending the time period over which high-quality groundwater can be extracted from the Indian Wells Valley is to expand pumping in the southwest part of the basin. The Layne Christensen Company (2010) expanded on the prior findings and recommendations and based selection of appropriate pumping locations for the Proposed Project on areas with lower chloride and TDS concentrations, and areas with higher transmissivity (i.e., higher capability of the aquifer to transmit water to a well). The locations of existing Wells 18 and 34, and new Well 35, are in the southwest part of the basin in areas with lower chloride and TDS concentrations. Therefore, these wells are expected to produce high-quality groundwater for the foreseeable future in accordance with the findings and recommendations of the U.S. Bureau of Reclamation (1993) study.

Existing groundwater pumping in the intermediate and southwest areas, unrelated to the Proposed Project, has created groundwater depressions, such that groundwater elevations in these areas are lower than those in surrounding areas. It is assumed, therefore, that water levels dropping throughout the basin have caused the co-mingling of higher quality and lower quality water. The Proposed Project would contribute to the pumping that has created the groundwater depression and thus would contribute to the migration of groundwater with elevated levels of TDS and/or other constituents toward the pumping well locations. 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 (Appendix G of the Draft EIR), 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. 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, and the cumulative impact to water quality in the basin remains significant, unmitigatable, and unavoidable.

3.1.7 Master Response 7: The Proposed Project is Not Needed (Phase 1)

Summary of Issues Raised. Several comment letters stated that the Project is not needed because a 20 percent safety factor is not required. Other comment letters stated that the maximum day demand was improperly calculated, and is actually much lower than the estimate used in the Draft EIR. Several comment letters stated that recent increases in conservation have reduced the demand so that existing capacity can accommodate demand with a 20 percent safety factor.

Response.

Rationale for a 20 Percent Redundancy Safety Factor. The California Waterworks Standards (Title 22 Chapter 16), Section 64554(c), states that, "Community water systems using only groundwater shall have a minimum of two approved sources before being granted an initial permit. The system shall be capable of meeting Maximum Day Demand (MDD) with the highest-capacity source off line."

In compliance with said requirements of the California Waterworks Standards, the District's 1997 Domestic Water System Water General Plan (p. V-2) included the following in its list of system design criteria: "Well pumping plants should have sufficient combined capacity to meet maximum day demands with the largest well pumping plant out of service." In 1997, the largest water source would have been either Well 30 or Well 31, each with a nominal capacity of 1,400 gpm at that time. In 1997, 1,400 gpm would have represented approximately 12 percent of the total production capacity.

The above-noted requirement of the California Waterworks Standards represents a minimum standard, and varying local circumstances may dictate a more conservative approach. An engineering reference manual, *Water Distribution Systems Handbook* (Mays, Larry W., McGraw-Hill, 2000, p. 3.7), states that "...a community that relies primarily on groundwater for its supply should, at a minimum, be able to meet its maximum day demand with ***at least*** one of its largest wells out of service." (Emphasis added.) Note: The District's interconnections with NAWS and Searles Valley Minerals are intended only for use during catastrophic interruptions of water supply, and cannot be relied upon to satisfy the District's demands in the event of an equipment failure or maintenance (scheduled or unscheduled).

As a result of periodic but unpredictable water quality issues (particularly in Wells 17 and 18), and the installation of groundwater disinfection facilities after 1997, (complex treatment and control equipment are especially vulnerable to outages), the District modified its redundancy criterion to require a 20 percent redundancy in system-wide production capacity to ensure that the MDD would be met in the case of loss of production of one or more of its individual sources.

Maintaining a 20 percent redundant safety factor is especially important now that the arsenic treatment facilities have been installed. Each arsenic treatment plant constitutes a single water source, treating water from two District wells. The loss of either facility, through either

equipment failure or maintenance activity, would result in the loss of production from both of those two wells. As shown in Table ES-1 of the DEIR, each of the arsenic treatment plants (Wells 9A/10 and Wells 11/13) individually have a nominal production capacity of 2,100 gpm, representing over 18 percent of the current total production capacity of 11,600 gpm.

Therefore, given the ongoing water quality issues faced by the District, and its use of complex treatment and control equipment at its well pumping plants, particularly with respect to arsenic treatment, the District has determined that a 20 percent redundancy in system production capacity is a reasonable design criterion that is fully in accord with applicable regulations and the District's mission to provide a safe and reliable water supply to its customers.

Calculation of Estimated Maximum Day Demand. MDD represents the highest demand that occurs over a 24-hour period, usually during the hottest part of the year. Unlike the peak daily demands satisfied by storage in the reservoirs, MDD must be satisfied by water production wells. If high demands occur over a period of multiple days without increased 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 emergency and fire-flow storage.

The MDD is related to the Average Daily Demand (ADD) by a "peaking factor." For the WSIP, projected MDD values were computed by applying a peaking factor of 2.0 to projected ADD values estimated in the 2010 Urban Water Management Plan based on population projections from Kern COG. MDD peaking factors can vary widely from time to time and from community to community, and are highly dependent on weather conditions. A peaking factor of 2.0 is commonly used as a conservative estimate that would accommodate most adverse conditions. Section 64554 of the California Waterworks Standards (CCR Title 22, Division 4, Chapter 16) recommends using a default peaking factor of 2.25 when only annual water usage data are available; however, the District has eight years of daily water usage data available for analysis. According to District records, the actual MDD peaking factor has varied over the last eight years from a low of 1.47 (in 2007) to a high of 1.92 in 2004. Therefore, because the peaking factor has not exceeded 2.0 in the past eight years, the District selected a peaking factor of 2.0 rather than the default peaking factor of 2.25 recommended in the California Waterworks Standards.

It should be noted that the variability of the peaking factor during that eight-year period does not exhibit a decreasing trend (the peaking factor in 2010 was 1.74); rather it represents a complex mix of factors affecting seasonal water usage including weather conditions and construction activity. Because such conditions cannot be accurately predicted for the future, but must nevertheless be accommodated, a peaking factor of 2.0 represents a reasonable, conservative estimate to apply to future conditions within IWVWD. Using 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 is not particularly likely that a 2.0 peaking factor would be realized within the next ten years, but it is within the realm of possibility, and if it does occur, the District must be prepared to accommodate the resulting demands and must disclose the potential environmental impacts.

It should be kept in mind that the increases proposed in Phase 1 of the Proposed Project are for production *capacity*, *i.e.* the *ability* to produce groundwater, not necessarily for actual

production of groundwater. 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 MDD values be lower than the MDD values predicted in the EIR, the new facilities will only be operated as needed to satisfy the actual MDD values.

Several comment letters used the example of August 26, 2011 as a recent peak production day, when Well 13 (capacity 1,100 gpm) was not pumped at all and Well 18 (capacity 1,200 gpm) failed. Several comment letters stated that the project is not needed because demand was able to be met on that day, and some commentors posed that the District currently has an excess in capacity of 29.8 percent. Table 3.1-1, below, shows the water production from District wells on August 26, 2011. On August 26th, Well 18 only pumped 2.7 hours due to concerns with pumping more gravel. With Well 18 out of service, for most of the day, the District's excess capacity was 16 percent. If, on that day, one arsenic facility was out of service (it does not matter which one), two additional wells would have been out of service (either Wells 11 and 13 or Wells 9A and 10). If this had occurred, excess capacity would have been 6 percent. If one arsenic plant and Well 18 had been out of service, the District's demand would have been 12.865 MGD and its capacity would have been 11.952 MGD and it would not have been able to meet demand on that day.

Table 3-1
Well Production and Capacity
August 26, 2011

Well Number	Production (gallons)
9A*	1,618,000
10*	1,768,000
11*	1,555,000
13*	0
17	1,003,000
18	194,000
30	998,000
31	2,039,000
33	1,617,000
34	2,067,000
Total Production	**12,865,000**
Total Capacity	16,700,000
Capacity w/o Wells 11 & 13 or 9A & 10	13,680,000
Capacity w/o Wells 11 & 13 or 9A & 10 and Well 18	11,952,000

Notes: *=arsenic facility well

3.1.8 Master Response 8: The Proposed Project is Not Needed (Phase 2)

Summary of Issues Raised. Several comment letters stated that the project is not needed because the projected demand will not occur due to increased conservation, smaller increases in jobs at NAWS China Lake, and the general poor economy. Several comment letters stated

that the projected 1 percent annual increase in the population of the service area is too high, and that population increases would be less than 1 percent annually or would decline.

Response. The Proposed Project would support the approximately 1 percent annual growth in population that is expected to occur in the service area as estimated by the Kern Council of Governments (COG). This estimate is consistent with the planning documents adopted not only by Kern COG, but also by the City of Ridgecrest and Kern County. None of these agencies indicate that population would grow by less than 1 percent annually or would decline. The City of Ridgecrest adopted its current General Plan in December 2009. The City's General Plan states that the City's population growth rates through 2030 could range from 1 percent to 3 percent annually. The EIR for the General Plan analyzes impacts to the environment using the 3 percent growth rate.

The Kern County portions of the IWVWD service area are within the South Inyokern Specific Plan. This Specific Plan was adopted by Kern County in 1973. There are no population estimates in this Specific Plan. The Kern County General Plan Land Use element, dated 2009, assumes that overall population growth in Kern County will be approximately 2 percent or less per year.

It should also be noted that the timing of the Proposed Project Phase 2 implementation in the Draft EIR was estimated using population projections. However, the actual implementation of Phase 2 would be triggered based on actual demand. Water production figures are currently, and would continue to be, recorded daily in the IWVWD's computerized database. Tank levels and pumping plants are monitored on a continuous basis by telemetry at the IWVWD's headquarters. If there is a period, likely during the summer season, where maximum day demand cannot be reliably met, then Phase 2 of the WSIP would be triggered.

3.1.9 Master Response 9: An Alternative Other Than The Proposed Project Should Be Selected

Summary of Issues Raised. Several comment letters stated that an alternative other than the Proposed Project should be selected. Many of these comment letters recommended the selection of Alternative 3: Additional Water Production from Existing NAWS China Lake Wells or Alternative 5: No Project Alternative.

Response. 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 environmental effects of the Proposed Project and the Alternatives 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.

If significant impacts are identified in an EIR, then CEQA requires that alternatives be considered that would avoid the impact and also achieve most of the project objectives. The requirements for evaluation of alternatives are provided in CEQA Guidelines Sec. 15126.6 and CEQA Statute Sec. 21061.1, and are summarized below.

First, the alternatives selected for evaluation must avoid or substantially lessen the significant impacts that have been identified for the project and must also achieve most of the project

objectives. For this project, only one significant impact was identified, a cumulative impact to water quality. Second, the alternatives must achieve most of the project objectives. The project objectives are:

- Provide a cost-effective, safe, and reliable source of domestic water supply for the IWVWD's customers;
- Provide a 20 percent system redundancy to ensure water supply to IWVWD's customers during maximum pumping days; and
- Meet the IWVWD's current and future water production requirements, including increases in domestic water demand resulting from projected population increases of approximately 1 percent per year in Kern County and no additional connections in San Bernardino County.

Not every conceivable alternative that meets these criteria must be included in the EIR, only a reasonable range of feasible alternatives need to be evaluated. CEQA defines feasible as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors".

The District considered about a dozen alternatives to the Project, including many that were suggested in scoping comments. Five of them were brought forward for analysis. These include two alternative scenarios for the Phase 1 well improvements, one alternative that includes purchase of water from China Lake, and one alternative that would include Phase 1 only. Additionally the No Project or Status Quo alternative was evaluated, which is required by CEQA. These alternatives are described in detail in Section 4.3 of the Draft EIR and summarized below.

Alternative 1 – Improve Wells 30 and 34/Construct Well 35. Alternative 1 is one of the scenarios evaluated in the groundwater models conducted in 2010 and 2011. The other scenarios brought forward for analysis in the Draft EIR include Alternative 2 and the Proposed Project. With this alternative, new Well 35 would be constructed, and the nominal capacity of existing wells 30 and 34 would be increased. Alternative 1 would be constructed in two phases:

- Phase 1 – Improve Well 34 and construct Well 35 in 2012, providing 2,000 to 3,2000 gallons per minute (gpm) of additional capacity;
- Phase 2 – Improve Well 30 in 2015, providing 900 gpm in additional capacity, for a total of 2,900 to 4,100 gpm in additional capacity.

Alternative 2 – Improve Wells 30 and 31/Construct Well 35. Alternative 2 is one of the scenarios evaluated in the groundwater models conducted in 2010 and 2011. The other scenarios brought forward for analysis in the Draft EIR include Alternative 1 and the Proposed Project. With this alternative, new Well 35 would be constructed, and the nominal capacity of existing Wells 30 and 31 would be increased. Alternative 2 would be constructed in two phases:

- Phase 1 – Construct Well 35 in 2012, providing 1,000 to 2,200 gpm of additional capacity;
- Phase 2 – Improve Wells 30 and 31 in 2015, providing 2,000 gpm of additional capacity, for a total of 3,000 to 4,200 gpm of additional capacity.

Alternative 3 – Additional Water Production from Existing NAWS China Lake Wells. This alternative is the alternative of using the existing intertie between the District and NAWS China Lake to provide supplemental water that was suggested by many commentors during the scoping and Draft EIR review period. With this alternative, supplemental water from existing wells on NAWS China Lake would be transferred to 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 full 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. The booster station would be constructed in the existing disturbed area for the NAWS China Lake reservoirs, located north of Highway 178 approximately 0.5 mile east of Jack Ranch Road. With this alternative, the District would request the transfer of water in two phases:

- Phase 1 – an additional 1,800 gpm of additional capacity would be available to the IWVWD starting in 2012
- Phase 2 – an additional 750 gpm of additional capacity would be available to the IWVWD starting in 2015, for a total of 2,550 gpm of additional capacity

Several commentors also stated that this alternative would avoid the significant impacts to water resources that were identified with the Proposed Project. However, this alternative would result in the same amount of groundwater being pumped from the basin as the Proposed Project. The pumping location, however, would be changed from the southwest area to the intermediate well field and the area just to the northeast of Inyokern, where most of the Navy wells are located.

Alternative 4 – Phase 1 Only. With this alternative, only Phase 1 (improvements to existing wells 18 and 34) would be constructed, allowing an additional nominal pumping capacity of 2,000 gpm, which would be available during maximum demand days. If the maximum daily demand with a 20 percent safety factor could not be reliably met, which is anticipated to occur by 2015, then the existing Water Shortage Contingency Plan and other measures described in the 2010 Urban Water Management Plan would be enacted. These measures are detailed in Section 4.2.2 of the Draft EIR, and include a four-stage rationing plan that provides for voluntary and mandatory rationing depending on the causes, severity, and anticipated duration of the water supply shortage.

CEQA requires that the alternatives be evaluated on a comparative basis with the proposed project. For convenience, the summary table comparing the impacts from the alternatives to the impacts from the Proposed Project is repeated on the following page (Table 3-2).

Table 3-2
Comparison of Alternatives with Proposed Project

Category	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5 (No Project)
Air Quality	O	O	O	-	-
Biological Resources	O	O	O	-	-
Cultural and Paleontological Resources	O	O	O	-	-
Geology and Soils	O	O	O	-	-
Greenhouse Gas Emissions	O	O	O	-	-
Hazards and Hazardous Materials	O	O	O	-	-
Hydrology and Water Quality	+	+	O	-	-
Noise	O	O	O	-	-

Notes: + = Impacts would be greater than the Proposed Project
O = Impacts would be the same as the Proposed Project
- = Impacts would be less than the Proposed Project

Alternatives 1 and 2 are the alternate pumping alternatives. When compared to the Proposed Project, these alternatives would have greater impacts to hydrology, according to the 2011 model, which is why the Proposed Project was selected. Alternative 3 is the alternative of purchasing water from China Lake. This alternative would require improvements to the existing intertie, so there would be construction impacts similar to the proposed project. Many commentors stated that Alternative 3 should be selected because it would avoid the impacts from the Proposed Project. In fact, the impacts to water supply and water quality would be similar to the Proposed Project because a similar amount of pumping would be required, but they would occur in and area slightly more northeast in the valley. None of the first three alternatives would avoid the significant impact to water quality. Additionally, it is likely that the necessary approvals from the Navy (the amount of water, timing of the water transfer, the cost of the water, and the NEPA document required for the project) could take several years with no guarantee of approval.

The fourth alternative would only implement Phase 1. This would eliminate the project's contribution to basin-wide water quality impacts. However, the impact would not be completely avoided because the continued pumping from all users in the valley would continue. Additionally, this alternative does not meet the project objectives to plan for future growth. The No Project Alternative would also eliminate the Project's contribution to basin-wide water quality impacts but the overall impact would again not be avoided. The District would not be able to provide for a 20 percent safety factor in case of equipment failure and would not be able to plan for future growth.

3.1.10 Master Response 10: An Alternative Considered and Rejected Should Be Considered/Selected

Summary of Issues Raised. Several comment letters stated that an alternative that was considered and rejected should be considered and selected. Many comment letters stated that, in particular, additional water conservation and brackish water treatment should be selected.

Response. As described above in Master Response 6, not every conceivable alternative must be included in the EIR, only a reasonable range of feasible alternatives need to be evaluated. CEQA defines feasible as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors". The five alternatives that were evaluated, described in Section 4.3 of the Draft EIR, included two alternative scenarios for improvements to existing wells, one alternative to obtain water from another source within Indian Wells Valley (purchase of water from NAWS China Lake's existing wells, i.e. using the intertie), and one alternative for a smaller project (Phase 1 only). Additionally, the No Project Alternative was evaluated. These represent a reasonable range of feasible alternatives to the Proposed Project.

In addition to the five alternatives that were analyzed, several alternatives to the Proposed Project were considered and rejected. Many alternatives were rejected because they were determined not to be feasible due to the amount of time for implementation – they would not be able to be implemented in the project time frame. Cost and reliability were also factors in the rejection of alternatives. 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 of the project (the construction of new Well 36 at Victor and Las Flores) was eliminated after the scoping period was that some of these alternatives may become feasible in the future and could be considered.

The alternatives that were rejected included the construction of new wells on NAWS China Lake, Additional Water Conservation; and Developing Supplemental Water Supply. For the last category, the IWVWD examined three sub-alternatives for development of supplemental water supply within the Indian Wells Valley, including construction of additional storage tanks, groundwater treatment and blending, and the use of reclaimed or recycled water. Four sub-alternatives for additional water supply outside of the Indian Wells Valley were examined, including import of water from existing and potential future District-owned properties, purchase of supplemental water from other public or private entities, purchase of State Water Project water, and the purchase of water from the City of Los Angeles.

Many comment letters stated that, in particular, additional water conservation and/or brackish water treatment alternatives should be selected. This Master Response provides additional discussion regarding the reasons for rejection of these alternatives. Section 4.6 of the Draft EIR contains description, analysis and discussion of all of the alternatives considered and rejected.

Additional Water Conservation Alternative. Several comment letters stated that additional water conservation should be employed to avoid the need to provide additional water

supply for future IWVWD customers. Several comment letters suggested specific water conservation strategies.

The current water conservation methods employed by IWVWD are listed in Section 4.2.2 of the Draft EIR, and would continue with all alternatives including the No Project Alternative. These methods include a conservation-based rate structure, conservation education, conservation measures, and conservation regulations. According to the Indian Wells Valley Cooperative Groundwater Management Working Group, the District has the lowest consumptive use per hookup, on average 0.7 acre-feet per year. The District's baseline water use was recently calculated for the 2010 Urban Water Management Plan using the methodologies developed by the California Department of Water Resources pursuant to California Water Code Section 10608.20(h)(1), in the document *Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use*, dated October 1,2010. Using this methodology, the baseline water use is approximately 264 gallons per capita per day (GPCD). The California Water Code (Section 10608.20) requires further reduction to 239 GPCD by 2015 and 214 GPCD by 2020.

The Additional Water Conservation Alternative would reduce water use through conservation by an additional amount above the 20 percent reduction required by the California Water Code. Because the 20 percent safety factor is currently not being met, Phase 1 would be implemented. However, this alternative would meet future water demand plus a 20 percent safety factor solely with existing water supply capacity by using more aggressive conservation measures. IWVWD would implement new restrictions on water use, such as limitations on residential landscape irrigations, washing vehicles, etc., and have appropriate penalties for failure to comply with restrictions.

This alternative would avoid the District's contribution to the significant cumulative impact to water quality associated with Phase 2 of the Proposed Project. However, it would not eliminate the overall cumulative impact to water quality in the basin, which would occur even if all of the District's pumping were eliminated. Additionally, it would not meet most of the Project objectives. The Additional Water Conservation Alternative would not provide a reliable source of domestic water supply for the IWVWD's customers or meet the IWVWVD's current and future water production requirements. Conservation programs defer or limit the rate of demand for water. However, these programs cannot reliably supply water in the long term.

Finally, similar alternatives that are within the reasonable range of alternatives have already been evaluated in the EIR. These alternatives include Alternative 4, which examines the implementation of Phase 1 only. After Phase 1 is constructed, if the maximum daily demand with a 20 percent safety factor could not be reliably met, which is anticipated to occur by 2015, then the existing Water Shortage Contingency Plan and other conservation and rationing measures described in the 2010 Urban Water Management Plan would be enacted (see Section 4.2.2. of the Draft EIR). Because the District has evaluated this alternative in the EIR, it is not required to evaluate every alternative for water conservation.

Groundwater Treatment and Blending. Several comment letters suggested brackish water desalination to extend the useful life of the groundwater aquifer. Solar methods of desalination were sometimes suggested. The IWVWD considered the treatment and blending of poorer quality groundwater with good quality groundwater to extend the useful life of the groundwater aquifer and avoid or minimize treatment costs. While this blending process would not increase

the total quantity of groundwater available, it could extend the useful life of the groundwater presently available in the valley.

The District conducted pilot testing for brackish water desalination from the Northwest Well Field (NWWF) from June 2008 to June 2009. The groundwater from the NWWF was originally used for irrigation and cannot be used for drinking water without treatment. The treatment of brackish groundwater could allow the IWVWD to increase capacity while using the existing resources in the Indian Wells Valley.

The pilot test used a reverse osmosis and electodialysis reversal process to treat the water. The pilot test also evaluated the potential to use solar facilities to power the treatment process. The study determined that a 1 megaWatt (MW) solar facility would produce power to supply approximately 20 percent of the energy demand and would cost approximately $5 million in additional capital cost. Ultimately, the study concluded that brackish water treatment, including the use of a solar facility to power the treatment process, is feasible. However, because of the District's inland location, the cost of brine disposal is extremely expensive. Water produced using this alternative would cost more than 20 times the cost of the Proposed Project, and the study concluded that the IWVWD benefits from the extra drinking water recovered were not more than the cost of the brine treatment. Additional detail on the pilot project and its conclusions are provided below and in Section 4.6.3.1 of the Draft EIR.

A pilot facility was housed in a temporary building constructed adjacent to Well 1 in the NWWF. The pilot facility was operated for a seven-month period. The process produced a high-quality product, removing 90 percent of the total dissolved solids. All treated water goals were met, with the exception of boron. Boron is not regulated, and there is no maximum contaminant limit. However, the California Department of Public Health has set a notification level of 1 mg/L for boron. The boron concentration after treatment was 1.4 mg/L; thus, the IWVWD would either need to provide notification that this limit has been exceeded, provide additional treatment to further remove boron, or blend the water with water from the District's potable wells to reduce the boron concentration. The pilot study estimated that a brackish groundwater treatment facility could produce approximately 3,000 acre-feet per year (AFY) and cost $46.0 million. Operations and maintenance costs would be approximately $3 million per year. This cost did not include the cost of distribution piping or additional boron treatment. The cost of this alternative, approximately $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 the extra drinking water recovered were not more than the cost of the brine treatment. This is because of the IWVWDs inland location. If ocean disposal of brine were an option, the costs of brine disposal would be approximately half of the cost of a treatment system using a brine concentrator and evaporation ponds. Additionally, if the District were to rely on this method of treatment, approximately 30 percent of the District's capacity in 2015 would be lost if there were a failure in the plant. Therefore, this alternative does not meet the Project objective of a cost-effective, safe, and reliable source of domestic water supply for the IWVWD's customers.

3.1.11 Master Response 11: The Proposed Project is Too Costly

Summary of Issues Raised. Several comment letters stated that the Proposed Project is too costly and implementation of the Proposed Project would cause water rates to increase. Some of the comment letters stated that other alternatives analyzed in the EIR be implemented because they may be less costly.

Response. Providing a cost-effective, safe, and reliable source of water supply for the IWVWD's customers is a Project objective. The Proposed Project and alternatives were selected for evaluation in the EIR based on their ability to meet this objective. Several other alternatives, such as the development of supplemental water supplies both inside and outside of the Indian Wells Valley, were not analyzed as alternatives to this Proposed Project, in part because of their cost. This does not mean, however, that technological or other factors may not make these alternatives more cost-effective in the future and they may be considered for future water supply projects. If this were to happen, additional environmental analysis would be required for that project.

The purpose of the EIR is to evaluate the potential environmental impacts of the Proposed Project, not to provide a cost-benefit analysis of various water supply alternatives and their potential effects on water rates in the IWVWD. However, environmental impacts are just one factor that the IWVWD Board of Directors will use to make its decision whether or not to approve the Proposed Project. Other factors, such as cost, reliability, and technical feasibility, will also be considered by the Board when making its decision.

3.1.12 Master Response 12: Water Rights

Summary of Issues Raised. Several comment letters stated that private well owners and cooperative system well owners have water rights that supercede the IWVWD.

Response. The comments regarding water rights are not environmental issues covered by CEQA and therefore no response is required. Notwithstanding this, the priority and/or water rights of the various pumpers in the basin have not been established/adjudicated.

3.1.13 Master Response 13: Project Changes Since EIR Scoping

Summary of Issues Raised. Several comment letters stated that the IWVWD is proposing the same project as the 2007 WSIP and/or the project that was initially considered during the scoping period for this EIR.

Response. The IWVWD has continued to revise the parameters of the WSIP in response to changes in future demand as estimated by Kern COG and in response to public and agency comments. Background on the changes to the WSIP are provided below and discussed in more detail in Section 2.2 of the Draft EIR.

In 2007, IWVWD proposed a WSIP to meet the maximum day demand with a 20 percent redundancy in capacity, as well as additional domestic water service demand from a potential increase in population associated with the transfer of new employees to NAWS China Lake and

a moderate growth in the community. This project included the construction of two new wells at the corner of Victor and Las Flores and the refitting of five existing wells, for an additional nominal capacity of between 8,500 to 11,500 gallons per minute in one phase. The project was not approved, and the Board of Directors directed staff to re-evaluate the project and to prepare a comprehensive groundwater model that would evaluate the impacts of increasing the IWVWD's pumping capacity.

The project was revised based on groundwater modeling conducted by Layne Christensen in 2010. Scenario 6 from the model was selected for analysis in the EIR, which included upgrades to two existing wells (wells 18 and 34) to provide system redundancy (Phase 1), and the installation of two new wells (proposed well 35 [Phase 2] and proposed well 36 [Phase 3]) to provide additional capacity to accommodate future projected demand and to continue the system redundancy. This project proposed an increase in nominal capacity of 2,000 gpm in Phase 1, 1,000 to 2,500 gpm in Phase 2, and 1,000 to 2,500 gpm in Phase 3. The total increase in nominal pumping capacity after Phase 3 was proposed to be 4,000 to 7,000 gpm.

A Notice of Preparation was distributed to agencies and the public for the purposes of soliciting comments on the scope of the EIR from July 6 to August 4, 2011. Comments were received from stakeholders concerning the production demand estimates used in the WSIP. Increases in workforce originally estimated by the Navy as a result of new missions at NAWS China Lake have since been determined by the Navy not likely to occur. Additionally, because alternative water sources may become available after 2015, the water source to provide for additional demand after 2015 could not be determined. Phase 3 was therefore eliminated from the WSIP, and the construction and operation of new Well 36 is no longer proposed. Well 17 is also no longer scheduled for abandonment because better technology available to sequester calcium has decreased the frequency for needed equipment replacement and acid treatment of the well. To summarize, the following changes were made to the WSIP as a result of scoping comments:

- Production demand estimates have been recalculated and lowered based on new information from the Navy and growth estimates from Kern COG as projected in the 2010 Urban Water Management Plan;
- Phase 3 has been eliminated, because alternative water sources may become available after 2015. Well 36, which would have been located on the southeast corner of Las Flores Avenue and N. Victor Street, is no longer proposed as part of this project. Future water supply projects would require separate evaluation under CEQA;
- Well 17 would not be removed from service during the planning period (prior to 2015).

After the scoping period, the WSIP was revised as described above, resulting in the Proposed Project analyzed in this EIR. New groundwater modeling was conducted by Layne Hydro (successor firm to Layne Christensen) in August 2011 to reflect the new Proposed Project (Layne Hydro 2011, Appendix G of the Draft EIR).

The Proposed Project analyzed in the EIR includes an increase in nominal pumping capacity of 2,000 gpm in Phase 1 and an increase of 1,000 to 2,200 gpm in Phase 2, for a total increase in nominal pumping capacity of 3,000 to 4,200 gpm after Phase 2 implementation.

To summarize:

- 2007 WSIP: an increase in nominal pumping capacity of 4,000 to 7,000 gpm in one phase in the intermediate well field;
- WSIP evaluated in EIR scoping period: an increase in nominal pumping capacity of 4,000 to 7,000 gpm over three phases in the southwest well field and intermediate well field;
- Current Proposed Project: an increase in nominal pumping capacity of 3,000 to 4,200 gpm over two phases in the southwest well field.

3.2 RESPONSES TO INDIVIDUAL LETTERS

Responses have been provided to individual letters in the order that they were numbered in Table 2-1 in Section 2.0. Responses to individual letters follow this page.

Letter 1

STATE OF CALIFORNIA — Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

October 28, 2011

received
11/04/11

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

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

Dear Mr. Mulvhill:

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

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

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

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The NAHC "Sacred Sites,' as defined by the Native American Heritage Commission and the California Legislature in California Public Resources Code §§5097.94(a) and 5097.96. Items in the NAHC Sacred Lands Inventory are confidential and exempt from the Public Records Act pursuant to California Government Code §6254 (r).

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries of cultural resources or burial sites once a project is underway. Culturally affiliated tribes and individuals may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We strongly urge that you make contact with the list of Native American Contacts on the attached list of Native American contacts, to see if your proposed project might impact Native American cultural resources and to obtain their recommendations concerning the proposed project. Special reference is made to the *Tribal Consultation* requirements of the California 2006 Senate Bill 1059: enabling legislation to the federal Energy Policy Act of 2005 (P.L. 109-58), mandates consultation with Native American tribes (both federally recognized and non federally recognized) where electrically transmission lines are proposed. This is codified in the California Public Resources Code, Chapter 4.3 and §25330 to Division 15.

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Furthermore, pursuant to CA Public Resources Code § 5097.95, the NAHC requests that the Native American consulting parties be provided pertinent project information. Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). Pursuant to CA Public Resources Code §5097.95, the NAHC requests that pertinent project information be provided consulting tribal parties. The NAHC recommends *avoidance* as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and Section 2183.2 that requires documentation, data recovery of cultural resources.

Consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 *et seq*), 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

Confidentiality of "historic properties of religious and cultural significance" should also be considered as protected by California Government Code §6254(r) and may also be protected under Section 304 of he NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APEs and possibility threatened by proposed project activity.

Furthermore, Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be

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

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

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

Sincerely,

Dave Singleton
Program Analyst

Cc: State Clearinghouse

Attachment: Native American Contact List

3

California Native American Contacts
Kern County
October 28, 2011

Tule River Indian Tribe
Ryan Garfield, Chairperson
P.O. Box 589
Porterville , CA 93258
chairman@tulerivertribe-nsn.
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(559) 781-4610 FAX
Yokuts

Tejon Indian Tribe
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2234 4th Street
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Yowlumne
Kitanemuk
Kawaiisu

Ron Wermuth
P.O. Box 168
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warmoose@earthlink.net
(760) 376-4240 - Home
(916) 717-1176 - Cell
Tubatulabal
Kawaiisu
Koso
Yokuts

Kawaiisu Tribe of Tejon Reservation
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Kawaiisu

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Kern Valley Indian Council
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Southern Paiute
Kawaiisu
Tubatulabal
Koso
Yokuts

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Kawaiisu
Koso
Yokuts

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2011071010; CEQA Notice of Completion; draft Environmental Impact Report (DEIR) for the Water Supply Improvement Project of the Indian Wells Valley Water District; located in the Ridgecrest area; eastern Kern County, California.

California Native American Contacts
Kern County
October 28, 2011

Tubatulabals of Kern Valley
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drbegay@aol.com
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Santa Rosa Tachi Rancheria
Lalo Franco, Cultural Coordinator
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This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2011071010; CEQA Notice of Completion; draft Environmental Impact Report (DEIR) for the Water Supply Improvement Project of the Indian Wells Valley Water District; located in the Ridgecrest area; eastern Kern County, California.

Response to Comment 1-1: This letter states that a search of the Native American Heritage Commission's (NAHC's) Sacred Lands file did not identify Native American sacred sites that would be affected by the Proposed Project. The NAHC recommends that further consultation with Native American groups be conducted for the project. During the Draft EIR process, consultation letters were sent to the Native American groups identified by the NAHC. These letters are provided in Appendix D of the Draft EIR. No resources or concerns were identified, and the Draft EIR concluded that no impacts to Native American resources would occur from the Proposed Project.

Letter 2

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

received 11/28/11

Draft EIR COMMENTS

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

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

Name DAVID A. FREEMAN

Address 135 N. BROWN ROAD INYOKERN CA. 93527
Street City Zip Code

E-mail

Comments can also be submitted to:

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

Email: iwvwd@iwvwd.com

All comments must be postmarked by December 9, 2011.

Comments

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

EVERYONE NEEDS TO ADDRESS THE AFFECT THAT THESE NEW OR EXPANDED PRODUCTION WELLS WILL HAVE ON THE PRIVATE WELL SYSTEMS IN THE AREA. WHO IS GOING TO BE RESPONSIBLE FOR THE COSTS THAT WILL BE INCURRED BY THE WATER LEVELS IN THE AREA DROPPING AND HAVING WELLS GO DRY BECAUSE OF THE INCREASED DEMAND YOU WANT TO PUT ON THE TABLE IN THIS AREA. I THINK COURT ACTION WILL BE ONLY WAY TO SOLVE THIS! IF YOU CAN'T COME UP WITH A PLAN TO PROTECT THE LOCAL WELL OWNERS, FROM HAVING TO LOSE THEIR WATER RIGHTS IN THIS VALLEY!

2-1

Response to Comment 2-1: This comment requests that the impacts to private well systems in the area from water level changes as a result of the Proposed Project be addressed, including who will be responsible for the costs that will be incurred to mitigate potential decreases in water levels. Master Responses 1 and 4 provide responses to these comments.

The portion of the comment addressing water rights is addressed in Master Response 12.

Letter 3

Tom Mulvihill, General Manager
Indian Wells Valley Water District
P.O. Box 1329
Ridgecrest, CA 93556

25 November 2011

Dear Mr. Mulvihill:

The following are my comments on the draft Environmental Impact Report for the proposed Water Supply Improvement Project.

1) The proposed plan develops/adds wells in a region of maximum water table depression and the maximum rate of water table lowering. This seems like the worst possible choice for where to pump more water. This in turn demands a closer examination of all the alternatives. As an Inyokern resident with a well not far from Well 34, I am concerned that this project could run my well dry.

2) Alternative 3, getting additional water from NAWS, was not adequately covered.
It is my understanding that there is an intertie between the NAWS system and the IWVWD system that is capable of transferring in excess of 3,000 gpm in either direction, and that it has been used in the past. This capacity is half again the increase in volume for the phase 1 of the project. Note that the previous use was without the addition of a pumping station. Considering the precedent already exists for its use, it makes a lot more sense to not spend the money on the proposed solution and instead pursue a formal agreement with the Navy. The precedent for use lowers the impact of the long time expected to get an agreement. It can be used, if necessary, like it was before, while working out formal terms.

3-1

3) The conservation alternative missed a huge potential for water conservation. Swamp coolers consume an extraordinary amount of water. I measured mine in May (hardly the peak month) and it evaporated over 9 gpm. I extrapolate this to 13 gpm in the peak of summer heat. This results in roughly 50-200 gallons per day. A very rough estimate of 10,000 households, virtually all of whom have swamp coolers, results in something like 90,000 gpm consumed during the day just from swamp cooler use, with a daily swamp cooler consumption on the order of a million gallons. An alternative cooling method has the potential to save a huge amount of water.

One alternative could be for users to install refrigeration, combined with rooftop solar power to offset the power cost of the refrigeration. There have been solar panel offerings recently advertised on the radio that involve no cash outlay on the part of the owners. If the IWVWD could team up with Southern California Edison and such a solar panel provider to provide an incentive plan for swamp cooler replacement with a minimal cash outlay, it would be beneficial for all stakeholders:
- Reduce total water demand
- Reduce peak water volume
- Not increase or even reduce power demand
- Provide power cogeneration
- Provide better quality cooling (no humidity)
- Reduce power bills
- Reduce water bills
- Reduce carbon footprint

3-2

If the refrigeration unit was a heat pump, you might get the gas company join the team, as that could be used to replace gas heating in winter, conserving gas also.
Such a program could be a model for other desert communities.

Thank you for consideration of my comments.

Eric Bosley
P.O. Box 1353
Ridgecrest, CA 93556

Response to Comment 3-1: Comment 3-1 requests a closer examination of all alternatives, particularly Alternative 3 – Additional Water Production from Existing NAWS China Lake Wells. Master Response 9 addresses this comment.

Response to Comment 3-2: This comment requests that the Additional Water Conservation Alternative, which was considered and rejected in the Draft EIR, be considered. A specific suggestion for water conservation is provided. Master Response 10 addresses this comment.

Letter 4

From:	Lucinda Crosby
To:	iwvwd@iwvwd.com
Subject:	Response to IWVWD Draft EIR for Water Suply Improvement Project
Date:	Thursday, December 01, 2011 12:05:41 PM

Indian Wells Valley Water District Water Supply Improvement Project Draft EIR Response: 12-1-2011

Lucinda Sue Crosby 1539 N. China Lake Bl #241, Ridgecrest, CA 93555

When addressing stressed or possibly "inadequate" water production, ascertaining the true amount of present and future needs is job one.

According to pumping numbers posted in August of 2011, peak day requirements of the IWVWD were easily handled with plenty of redundancy even though one well was not in use.

Neither the most recent BRAC relocations nor area population increases for other reasons have lived up to previous estimates. Indeed, California gross population numbers show an exit out of and not a relocation into, the state, a stat that may prove more and more relevant here.

Additionally, average per capita water usage has plummeted throughout this basin to a level unanticipated by the IWVWD due to unexpected conservation and efficiency measures by Water District customers and others.

Therefore, current pumping capacities are and will continue to be more than adequate for IWVWD customer needs for at least a decade. Why then incur the millions-of-dollars investment debt required to re-equip old wells or build new wells?

4-1

For thousands of years, the go-to responses to a perceived need for more water have been engineering greater pumping capacity and wresting control of and developing one's neighbor's water sources. The ancient Sumerians began these practices, which are still widely in play. These approaches do not protect or perpetuate water sources for future generations and usually resemble mining operations more than reforestation processes. It's hard to believe that, in the 21st century, more enlightened solutions are not available.

Of course, providing more pumping capacity through any means will necessitate more borrowing by the District, resulting in extensive mandatory rate increases. Outdoor conservation and water efficiency methods that work are extant and much cheaper and actually defend and protect water sources.

Did the Water District thoroughly explore all options before committing to this expensive and invasive water supply enhancement project?

If not, perhaps they should take another look.

4-2

Respectfully submitted: Lucinda Sue Crosby

Response to Comment 4-1: This comment states that the project is not needed because current pumping capacities are adequate for existing and future demand for up to a decade because of conservation, a poor economy, and fewer new jobs at NAWS China Lake. Master Responses 7 and 8 addresses this comment.

Response to Comment 4-2: This comment states that other alternatives that do not involve pumping, particularly outdoor conservation and water efficiency methods, should be evaluated and selected. Master Response 10 addresses this portion of the comment.

This comment also states that pumping alternatives will cause the IWVWD to acquire debt and raise rates. Master Response 11 addresses this portion of the comment. The IWVWD Board will consider many factors when determining whether or not to approve the Proposed Project, including the project cost. Project cost was included as part of one of the project objectives: provide a cost-effective, safe, and reliable source of domestic water supply for the IWVWD's customers. Alternatives were selected for evaluation that met this project objective.

Letter 5

December 1, 2011

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

RE: IWVWD Water Supply Improvement Project, Draft EIR comments

Dear Mr. Mulvihill,

We are opposed to the IWVWD Water Supply Improvement Project. It is unnecessary, too costly and detrimental to our co-op well. Our specific concerns with the Draft Environmental Impact Report are enumerated in this comment letter.

We are property owners in south Inyokern and members of the Donna Sue Water Company. Our community well is located approximately 1.65 miles from the proposed IWVWD well enhancement, and would be negatively impacted by increased pumping. We feel that the mitigation measures in the DEIR are inadequate. Merely offering to monitor nearby domestic and co-op wells is not adequate either. Once a well is dry, there is no more water for that well owner. **5-1**

Under California Water Law the IWVWD is an appropriator and is only entitled to any surplus water that may be available. All domestic and coop well owners have a superior overlying right to water. The Indian Wells Valley has been in overdraft for 50 years and easily meets the State definition of being in critical overdraft, which means that there is no surplus water. Therefore any increased water needs that the Water District claims cannot be met by increased pumping at existing wells or by drilling new wells. A comprehensive water enhancement plan must be developed and put into practice before there is increased Water District pumping or new Water District wells. **5-2**

It is essential that the final EIR contain measures to extend the life of the aquifer as long as possible and fully consider all other claimants to IWV groundwater. Ways to do this were spelled out clearly as far back as 1993 in the Bureau of Reclamation's report "Indian Wells Valley Groundwater Project." This study provided plans for lengthening the life of our aquifer supply by aggressive conservation, blending, saline water recovery, water reclamation and water importation. Another possible approach would be to buy up and retire agricultural properties or, at the least, facilitate increased agricultural irrigation efficiency. The Water District has not initiated or even seriously discussed many of these water saving options except for a recently initiated customer conservation effort which has had some success. However, one wonders if this conservation success will continue with the elimination of the Water District position of Education and Conservation Coordinator. **5-3**

The justification for the present project is that the Water District needs additional capacity to meet the needs of the maximum demand days in the summer. The Initial Study claims that there is a "higher demand than capacity on the maximum demand days which occur in the summer months." How can this be true if demand has fallen 17% over the past four years, due to conservation? In fact, no high demand day failures to provide water over the past four years have occurred. In fact, there were no reductions in water capacity this past summer on the highest demand day, even though one existing well was not pumped at all and another pumped only lightly. The Water District currently has greater than 20% redundancy. So no additional capacity is needed. **5-4**

If water conservation and efficiency efforts were aggressively pursued, the Water District could achieve an additional 30-40% total drop in average per capita usage by their customers. This drop in usage would give additional redundancy and could be achieved with far less monetary expenditure than the current proposal.

Finally, The WSIP DEIR fails to recognize existing cooperative interties with the Navy and Searles' Valley Minerals set up in 1991 for the exact purpose stated for the project—"redundancy" on peak demand days and for well failure emergencies. The intertie with the Navy was tested in 1991, and was found to be capable of delivering in excess of 3,000 gallons per minute in either direction. This amounts to the running capacity of 2½ standard Water District wells. For a fraction of the cost of the proposed project, the Water District could bring the interties up to modern service standards.

5-4
Continued

Our excellent well water was a key factor in purchasing our property in Inyokern. From our perspective, practically just about every element in the WSIP, if implemented, would degrade our water supply and quality. This is unacceptable.

Respectfully submitted,

Kathryn Kvapil Richard L. LaShure

Kathryn Kvapil and Richard L. LaShure
P. O. Box 196
Inyokern, CA 93527
desert_encelia@veriozn.net

Response to Comment 5-1: This comment states that the mitigation measure proposed for water level impacts (Mitigation Measure H-1) is inadequate because it only provides for well monitoring. Mitigation Measure H-1 also provides mitigation options that will be negotiated between the IWVWD and the well owner so that the owner does not experience a loss of pre-Project land use. Master Response 4 addresses this issue in more detail.

Response to Comment 5-2: This comment states that the District is not entitled to additional water. Master Response 12 addresses this issue.

Response to Comment 5-3: 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 5-4: This comment states that no additional capacity is needed because demand has fallen in recent years. Master Responses 7 and 8 address this issue.

The comment further states that alternatives, such as additional conservation and the purchase of water from the Navy using the existing intertie should be adopted. These alternatives were discussed in the Draft EIR. The additional conservation alternative was considered and rejected and the alternative of water purchase from the Navy was examined, and could be adopted by the District's Board. Master Responses 9 and 10 address this issue.

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Letter 6

received
12/7/11

Penelope LePome
635 N. Rio Bravo Street
Ridgecrest CA 93555
760 375-5287
Email: plepome@earthlink.net

Indian Wells Valley Water District
500 W. Ridgecrest Boulevard
Ridgecrest CA 93555

December 6, 2011

RE: Water Supply Improvement Project DEIR Comment

Tom Mulvihill and members of the IWVWD Board:

I oppose the proposed project because it is not needed and will increase the cost of water distribution.

The project is not necessary because water use is declining. Whether this is due to cooler weather, climate change, a decrease in population, or increased water conservation, this is a long term trend. 6-1

Peak water usage for 2011 was on August 26 with 12.865 Mgal. Given the nominal well capacity as stated in the DEIR of 16.70 Mgal/day, redundancy is close to 30%. We already have redundancy.

In addition, the IWVWD has MOU agreements for intertie with the Navy Base in the event of an emergency. 6-2

If there should be a day of higher use demand, it would not hurt members of our community to be given short-term restrictions on water use. This could bring the need for conserving groundwater water into clearer focus and increase conservation.

Building this project would have detrimental effects to nearby well owners, causing further drops in their well levels. This statement is based on past experience. 6-3

Instead of this project, the Water District should be pursuing ways to enhance water supply through desalinization or other ways of treating non-potable water and increasing water conservation measures. 6-4

Sincerely,

Penelope LePome

Penelope LePome

Response to Comment 6-1: This comment states that the project is not necessary because water use is declining. Master Responses 7 and 8 address this issue.

Response to Comment 6-2: This comment states that water should be purchased from the Navy using the existing intertie, or rationing should be implemented (as would occur with the No Project Alternative) if maximum day demand could not be met. Both alternatives of purchasing water from the Navy and the No Project Alternative were examined in the EIR. Master Response 9 further addresses this issue.

Response to Comment 6-3: This comment states that implementation of the Proposed Project would cause water level drops in nearby wells. This impact has been discussed in the EIR, and mitigation has been provided for the impacts. Master Responses 1 and 4 address this issue.

Response to Comment 6-4: This comment states that other alternatives should be selected, such as desalinization or water conservation. Master Responses 9 and 10 address this issue.

Letter 7

4 DECEMBER 2011

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

DRAFT EIR COMMENTS

Name: ***Dennis and Karen Sizemore***

Address: ***243 Strecker Street, Ridgecrest, CA 93555***

E-mail: kdsizemore@gotsky.com

COMMENTS:

We want to go on record opposing the Indian Wells Valley Water District WSIP Program as presented in the draft EIR. Our property is located at 243 Strecker Street. We are private well owners and within the two mile radius of WSIP proposed well 35. The well located on our property has only been in service a few years; during the summer of 2011 the measured drop in our static water level has doubled.

Indian Wells Valley Water District recently laid off 25% of its work force, supposedly due to lower water sales. How can you possibly undertake a multi-million dollar water improvement program when water consumption is down considerably? This concerns us because a portion of our retirement funds is invested in the water district. **7-1**

We support alternative #3 as outlined in your proposed EIR. Your claim that it would take too long to get authorization from the Navy is less than factual. Secretary of the Navy in Washington D.C. has encouraged all facility commanders to make a special effort to be good citizens and support their host cities. **7-2**

The intertie agreements and the appurtenances are already in place both with China Lake and the Chemical Plants in Searles Valley. I direct your attention to the NACC agreement with the District to Recital 2.4 which states "The district is also in need of a backup supply of water in the event of well failure or other emergency. In addition, the District is in need of additional pumping capacity to meet its summertime peak demands."

7-2 Continued

Recital 4.2 "Each party shall have the right to receive water from the other in case of emergency or water shortage. 4.3 "The District shall have the right to receive water from NACC to meet the District's peak demands". With these two intertie agreements in place, which obviously are designed to protect all entities in case of water shortages or well failures, how can you possibly justify spending millions of dollars for something which you already have in place?

The Water District management has lost all credibility by pursuing this needless water improvement program. What makes this situation worse is the district is planning on paying for this with borrowed money at an interest rate of 5% or greater. The Water District carries a AA+ bond rating. What would happen if the bond agencies discovered the IWVWD laid off 25% of personnel due to low water sales and financial difficulties?

7-3

How could the audit performed by Burkey Cox Evans Bradford & Alden possibly have given you an excellent rating and clean bill of health after you laid off one-fourth of your work force because of financial problems?

Your responsibility as a public agency goes far beyond that of other water consumers. The real reason for the WSIP program is to increase pumping capacity to assure the district's larger share of the aquifer in the event of adjudication.

We encourage you again to do the common sense ideal and select Alternative #3.

Dennis Sizemore

Karen L. Sizemore

Dennis Sizemore
243 Strecker Street
Ridgecrest, CA 93555

(760) 377-4905

kdsizemore@gotsky.com

Response to Comment 7-1: This comment states that the project is not needed because water consumption is lower, and also that the project is too expensive. Master Responses 7, 8, and 11 address these issues.

Response to Comment 7-2: This comment states that Alternative 3 should be selected. Alternative 3, obtaining water from existing Navy wells, is analyzed as an alternative to the Proposed Project in the EIR. The District's Board could choose to adopt this alternative, although the Navy has indicated that adoption of this alternative could take several years with no guarantee of approval and would require the completion of a National Environmental Policy Act document by the Navy. Additional information is provided in Master Response 9.

Response to Comment 7-3: This comment states that the Proposed Project would be too costly. Master Response 11 addresses this issue.

Letter 8

received 12/7/11

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

Draft EIR COMMENTS

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

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

Name Jack Tipton

Address 828 S. Jacks Ranch Rd

Street **City** **Zip Code**

E-mail JackRNch@GMAIL.com Ridgecrest 93555

Comments can also be submitted to:

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

Email: iwvwd@iwvwd.com

All comments must be postmarked by December 9, 2011.

Comments

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

See Back

Private wells are in peril

The Indian Well Water district is planning a deeper well and Deeping existing wells. I would like to voice a strong objection to the water district's new water pumping plan. I also think they want to avoid the operation of their new treatment plant to save operating costs, this will put a heaver load on the south/west field. If the district needs more water during peak demands, they can install more water storage tanks. 8-1

It is clear what the new, deeper, wells are for. They are for the future, when the aquifer is pulled far down beyond present levels. As it is nearly impossible to hold any individual entity responsible for our wells going dry. The IWV water district is free to blame NWC, alfalfa growers, small orchards, the Inyokern Service District and the Trona water company for future dry wells. They also think that the aquifer is flat on the bottom and the sides are straight, because their studies indicate that the water table drop will not accelerate with time. 8-2

As a long standing residency and ownership of this property (53 years) gives my water rights priority over IWV Water District. As the aquifer is pumped lower, I can expect more dissolvable solids in the water. The Indian Wells Water District will not except responsible for this either. 8-3

When I drilled my first well in 60's the water stood at 283'. I am currently on my third well, the water level is 360'. At 73 PPB of arsenic, we need to use a reverse osmoses filter for our drinking water. It's unknown what effect new, deeper wells will have. But the current annual drop is undoubtedly having an effect right now. More, deeper wells will certainly create more cones of depression, resulting in many local wells going dry. 8-4

I am fortuned that our area has high arsenic because the district had to abandon the well on the corner of Jacks Ranch Road and Ridgecrest blvd. After 3 years of it's operation, our water table started dropping about 10 foot a year. Fortunately, the water table has risen back to the valley's average after the district's well was shut down.

Jack Tipton, Ridgecrest, Ca

Response to Comment 8-1: This comment states that more water storage tanks should be used to provide water during peak demands. The construction of more water storage to provide supplemental water supply during equipment outages on maximum demand days was considered and rejected in the EIR because the large tanks that would be required (approximately 8.4 million gallons of storage for a 7 day supply) would not only be costly (approximately $10.5 million), but the water stored inside would be subject to stagnation and other water quality problems. Master Response 10 further addresses this issue.

Response to Comment 8-2: This comment states that the IWVWD would not mitigate for the effects of the Proposed Project on water levels. Mitigation H-1 provides mitigation for those wells that would be affected by the Proposed Project. Master Response 4 provides additional detail on mitigation for water level changes from the Proposed Project. Master Response 5 provides additional information regarding cumulative impacts to groundwater quantity in the basin.

Response to Comment 8-3: This comment states that the Proposed Project would affect water quality in individual wells. The EIR discusses effects to water quality in Section 3.8.3.3. Master Response 6 provides additional information on this issue.

Response to Comment 8-4: This comment states that the Proposed Project would affect the water levels in nearby wells. The potential for impacts to water levels in local wells are discussed in Section 3.8.3.3 of the Draft EIR, which concludes that the operation of Well 35 would have the potential to affect water levels in wells within 2 miles of Well 35. Mitigation has been provided to ensure the current land uses supported by these wells can be maintained. Master Responses 1 through 5 provide additional information on the water level analysis and mitigation.