



July 30, 2010

Mr. Iain Fisher  
CEQA Project Manager  
Energy Division  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102-3296

Re: Tule Wind Project - Response to Data Request No. 8

Dear Mr. Fisher:

Pacific Wind Development, Inc., a wholly owned subsidiary of Iberdrola Renewables, Inc. (IBR) received your Data Request No. 8 regarding the Tule Wind Project. Enclosed is IBR's response.

If you have questions regarding this information, please contact me at 503-796-7781 or Patrick O'Neill at 858-712-8313.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeffrey Durocher", with a long horizontal line extending to the right.

Jeffrey Durocher  
Wind Permitting Manager

cc (via e-mail): Greg Thomsen, BLM (GThomsen@blm.gov)  
Thomas Zale, BLM (Thomas\_Zale@blm.gov)  
Jeffery Childers, BLM (jchilders@blm.gov)  
Rica Nitka, Dudek (rnitka@dudek.com)  
Patrick O'Neill, HDR Engineering (Patrick.oneill@hdrinc.com)

Encl: Groundwater Investigation Workplan, O'Neal et al (2010) and O'Neal, et al 2009), Low Frequency sound and infrasound from wind turbines, Colby, et al., Wind Turbine Sound and Health Effects, (2009).  
Viewshed Analysis.

## Water Resources

1. Please provide a groundwater investigation for the Tule Wind project, if available.

**Response:** Iberdrola Renewables has initiated a Groundwater Investigation with the County of San Diego DPLU and County Groundwater Geologist in response to this data request, although this specific evaluation was not earlier identified during scoping or otherwise. HDR developed a Workplan that will meet the County requirements and guidelines (attached). The Groundwater Investigation will include a basin-wide evaluation of the groundwater. The final Groundwater Investigation report will provide a description of the existing setting and hydro geologic conditions, regulatory framework (County Groundwater Ordinance), impacts associated with groundwater extraction to the basin, including an analysis of 50% reduction of groundwater in storage, and a groundwater monitoring and mitigation plan.

The results of this study will supplement the well data previously provided regarding construction water sources, as well as the conservative water use assessment discussed in the applicant's response to Data Request No. 7.

The investigation will proceed immediately following the County's approval of the Workplan. The drawdown portion of the evaluation will take 72 hours to complete. Although well tests are contingent upon the County Groundwater Geologist's approval of the Workplan, we anticipate that preliminary data and results of the well test will be available the week of August 16<sup>th</sup>.

2. Please provide water quality/hydrology/drainage studies for the entire study area of the Tule Wind project area. At a minimum the studies shall address existing conditions (i.e., hydrologic setting, water quality, existing drainage patterns, and peak flows), regulatory framework, potential adverse effects (i.e., post project drainage patterns, increased peak flow or sediment/pollutant loading), and proposed mitigation (detailed description of proposed mitigation measures/best management practices).

**Response:** Previously, Iberdrola Renewables submitted a Preliminary Storm Water Management Plan and Preliminary Drainage Summary (October, 2009) for the portions of the project site that occur on land under the jurisdiction of the County of San Diego. These documents were also submitted to the County of San Diego with the Major Use Permit application (October 9, 2009). Preparation of a Stormwater Management Plan and Drainage Study is currently underway in response to this data request. These documents will address the portions of the project site that occur on land under the jurisdiction of the County. These documents will be based upon the grading plans that will be revised by August 10, 2010. At this time, we estimate that storm water and drainage analysis can incorporate the grading plan input and be submitted to the CPUC and County of San Diego the week of August 23, 2010.

3. It is understood that Iberdrola is conducting groundwater testing and anticipates using groundwater for construction and operation; however, for a worst-case analysis, please provide written verification from a water agency that they will be able to

provide the quantity of water required for construction and operation of the project, should groundwater not be a viable source of water.

**Response:** As discussed in item number 1, above a Groundwater Investigation is being initiated with the county of San Diego Department of Land Use and Planning and the County Groundwater Geologist. A Workplan has been developed to address County requirements and guidelines, of which the investigation will proceed immediately following the County's approval of the Workplan. Based on the preliminary information provided by Rough Acres Ranch, Iberdrola Renewables is confident that an adequate water supply is available from the existing wells. As a back-up option, the Ewiiapaayp Tribe has committed to allow Iberdrola to utilize water from existing wells that are to be tested at the same time that the previously identified wells are tested, as discussed with respect to item 1, above. Other off-site options to obtain groundwater for construction purposes are also being evaluated as additional sources of backup water, and potential suppliers will be identified to the lead agencies. Final letters of availability cannot be issued by a water agency until the CEQA process is complete.

4. Please provide a groundwater investigation for the Tule Wind project, if available.

**Response:** Please see response to Item 1, above.

5. Please provide water quality/hydrology/drainage studies for the entire study area of the Tule Wind project area. At a minimum the studies shall address existing conditions (i.e., hydrologic setting, water quality, existing drainage patterns, and peak flows), regulatory framework, potential adverse effects (i.e., post project drainage patterns, increased peak flow or sediment/pollutant loading), and proposed mitigation (detailed description of proposed mitigation measures/best management practices).

**Response:** Please see response to Item 2, above.

6. It is understood that Iberdrola is conducting groundwater testing and anticipates using groundwater for construction and operation; however, for a worst-case analysis, please provide written verification from a water agency that they will be able to provide the quantity of water required for construction and operation of the project, should groundwater not be a viable source of water.

**Response:** Please see response to Item 3, above.

### **Project Description**

7. As requested by BLM during the preparation of the EIR/EIS (comments embedded in the EIR/EIS project description sent to Iberdrola for review on March 24, 2010, and in a subsequent email on May 18, 2010), please provide cut-and-fill quantities required for construction of the Tule Wind Project. A close approximation would be acceptable.

**Response:** Based on the Draft Grading Plan (July 23, 2010) the County portion of the project will include the following estimated project quantities of 208,000 cubic yards

(cy) cut and 191,300 cy fill for a net cut excess of 17,300 cubic yards. This was previously calculated and provided to the County in the context of its processing of the Major Use Permit application. The grading plan is currently under revision, and will address the larger project site. Updated calculations will be provided.

The project proponent, in response to the March 24, 2010 project description, provided the BLM with sample grading plans, notably without cut and fill quantities, on March 29, 2010. A follow up discussion with Jeffery Childers specifically clarified that the BLM was requesting grading plans showing limits of grading and at that time the BLM was not requesting cut and fill amounts for federal land portions of the project. This was also an agenda item on the March 31, 2010 biweekly conference call. Despite any confusion related to the need for these details, the applicant has engaged an engineering firm to develop the cut and fill amounts for the non-County portions of the project. The results are expected to be available on August 10, 2010 and will be transmitted to the CPUC.

### **Biological Resources**

8. Please provide all current GIS data for plant and wildlife species points and polygons with population size attribute data, if available.

**Response:** HDR has provided to Dudek FTP access to all available GIS data, including vegetation maps, wildlife points, and the location of the QCB sighting. All the data collected during the first two phases of the rare plant surveys is currently being reviewed as part of HDR's QA/QC process. The phase one and two rare plant data is a very large and complex dataset. HDR anticipates being able to submit the remaining data on August 6<sup>th</sup>.

9. Please provide quantification (number of individuals and acreages) of impacts to species points and polygons.

**Response:** HDR provided quantification of impacts as part of the Biological Technical Report (BTR). The evaluation of impacts related to rare plants is ongoing and likely to change as internal QA/QC reviews are completed and additional data collected during the third phase of the surveys is incorporated into the BTR.

10. Please provide conceptual information regarding proposed habitat compensation for upland communities, wetland communities, and special-status species. At a minimum, please provide information on mitigation approach, location, and resources.

**Response:** There are two primary forms of mitigation that are being evaluated. These are:

- 1) On-site mitigation practices which reduce or minimize impacts include best management practices, monitoring and protection of sensitive resources to the extent practicable. Mitigation options on Rough Acres Ranch and the Ewiiapaayp tribal land may be available in the form of restoration of disturbed land and preservation of restored and existing high-quality habitat.

Mitigation for temporary impacts will be accomplished through revegetation of the temporarily impacted areas. A Revegetation Plan will be prepared.

- 2) **Off-Site Mitigation Options:** Off-site mitigation that preserves non-project lands for protection of resources. The project is taking a habitat based method for preservation in its planning, similar to the MSCP approach where preservation of appropriate habitat/vegetation will mitigate for all the individual species that use that habitat. Currently off-site mitigation areas are being evaluated for this project. The ideal site would be a contiguous area of land that is adjacent to the project and contains the same or similar habitats and resources, including QCB. Additionally sites which provide greater connectivity of lands and are adjacent to wilderness or ACEC-designated areas are preferred over areas that do not meet these criteria. The project team is currently evaluating specific options. Evaluation of mitigation opportunities includes determining the willingness of land owners to sell their property as well as other encumbrances on the properties. The details of the mitigation plan will largely depend on the outcome of those discussions.

## **Visual Resources**

11. The County of San Diego requested that a viewshed analysis be incorporated into the EIR/EIS. As Iberdrola did prepare this for the Applicant's Environmental Document, please provide a high-resolution .jpg file of the critical view map (without logos or figure numbers).

**Response:** The high-resolution .jpg of the critical view map (Visual Resources Technical Report – Figure 2) will be transmitted to Dudek's attention via HDR's FTP site.

12. The BLM requested that additional detail be rendered into the visual simulations (e.g., access roads). Please provide updated simulations with these features rendered into applicable simulations (high-resolution .jpg files). Please also resend high-resolution .jpg files for simulations that are not altered.

**Response:** Limited visibility of proposed access roads occur in some of the visual simulations provided to date because they are shielded by topography, and based on the scope and scale of the visual simulations for a project of this scope and scale, the access roads are a minor feature in the landscape. Changes to the same visual simulations are implicated by both Data Request No. 8 and 10 (submitted by the CPUC on July 28, 2010). Updated visual simulations in high-resolution .jpg format will be provided as part of Data Request No. 10. Because of the methods used to render the visual simulations these changes should be made simultaneously to ensure the most accurate depiction of proposed conditions. During the rendering process all appropriate changes will be made and submitted in keeping with the August 4, 2010 deadline.

13. In order to provide additional details of which turbines are shown in the visual simulations, please indicate the turbine numbers that are seen in the visual simulations for the project.

**Response:** The number of wind turbines visible from each simulation is as follows:

Visual Simulation Figure Number	Number of Wind Turbines Visible	Turbines Visible
Figure 3 – Boulevard	4	R-11, R-12, G-18, G-19
Figure 4 – Boulevard Substation Tie-In	0	
Figure 5 – McCain Valley Road 1	0	
Figure 6 – McCain Valley Road 2	3	R-13, R-8, R-9
Figure 7 – Lark Canyon OHV	2	R-10, R-11
Figure 8 – Carrizo Gorge	5	F-1, F-2, F-3, F-4, F-6
Figure 9 – Ribbonwood Road	8	R-12, R-11, G-12, G-13, G-14, G-15, G-16, G-17
Figure 10 – Old Highway 80	0	

14. Please provide a landscaping plan for the proposed collector station and operation and maintenance building sites and the proposed alternative site on Rough Acres Ranch.

**Response:** The selection of the preferred location for the collector station and operations and maintenance building has not been finalized at this stage in the environmental process. At this stage of the project, a landscape plan has not been prepared. When the location of these structures is known, Iberdrola Renewables will be able to provide a landscape plan.

In the event that one of the alternative O&M/Substation sites located on County lands has been selected through the environmental review process, a landscaping plan will be completed prior to issuance of the Major Use Permit to comply with the County standards.

**Noise**

15. Please provide quantifiable data to demonstrate that low-frequency sound and infrasound will not create noise or health impacts on existing sensitive receptors using the “How To’ Guide to Criteria for Siting Wind Turbines to Prevent Health Risks From Sound,” Version 2.1, dated October 28, 2008, prepared by George W. Kamperman and Richard R. James.

**Response:** Providing quantifiable data to demonstrate that low frequency sound and infrasound will not create noise or health impacts using the noise limits advocated in the “How To’ Guide to Siting Wind Turbines to Prevent Health Risks from Sound” requires acoustical modeling of turbine noise using data with spectral content that

ranges from 4 Hz to 10 kHz. Wind turbine manufacturers measure and report noise emissions in accordance with the international standard (IEC61400-11). This standard does not require manufacturers to report octave band sound power levels at frequencies below the 63 Hz octave band. The noise limits advocated in the “How To’ Guide to Siting Wind Turbines to Prevent Health Risks from Sound” require the use of wind turbine noise emissions data at frequencies that are not currently available from the turbine manufacturers. Therefore the data is not available within the wind turbine industry. Further, this data does not exist elsewhere. Kamperman and James advocate using the quietest 10 percent of the quietest ten minutes during the evening hours to serve as the pre-construction background noise level, by which to assess increase above existing conditions. Using such a metric and selective time period misrepresents existing noise levels. Use of the L90 metric excludes 90% of existing noise including common everyday noises. This is basically equivalent to putting on earplugs that block out 90% of all sound and claiming that what you hear is representative of existing sound levels. Accordingly, the maximum emission above existing noise limits suggested by Kamperman and James use an inappropriate metric for establishing the pre-construction noise environment.

The “How To Guide” referred to reflects the opinion of its authors and not an accepted standard or guideline. The American National Standards Institute (ANSI) standards for interior sounds and acceptability of low frequency sounds in bedrooms, schools and hospitals, and for thresholds of annoyance and beginning of rattles should be used. The “How To’ Guide to Siting Wind Turbines to Prevent Health Risks from Sound” is based upon the assumption that health effects are caused by exposure to wind turbine noise, which has not been clinically substantiated by qualified public health and medical professionals. The American Wind Energy Association (AWEA) and the Canadian Wind Energy Association (CanWEA), in representing the North American wind energy industry, established a multidisciplinary scientific advisory panel comprised of medical doctors, audiologists, and acoustical professionals to conduct a review of current scientific literature available on the issue of perceived health effects of wind turbines. After reviewing available evidence, the levels and frequencies of the wind turbine sounds and considering the panel’s experience with sound exposures in occupational settings, the panel concluded there is no reason to believe that the sounds from wind turbines could plausibly have direct adverse health consequences. A copy of the expert panel review is attached. A recent paper by O’Neal et al (2010) summarizes infrasound and low frequency noise measurements conducted at an operating project and compares the results to relevant ANSI standards. The full study is also attached. O’Neal et al (2009). This analysis concluded that the relevant low frequency criteria were satisfied within 305 meters – this is substantially closer than the 735 meters feet to the closest residence to this project. A copy of O’Neal’s publication is attached hereto.

## MEMORANDUM

**TO:** Patrick O'Neill, HDR

**FROM:** Sarah J. Battelle, Geo-Logic Associates

**DATE:** September 1, 2010

**SUBJECT: ESTIMATE OF AVAILABLE GROUNDWATER  
TULE WIND PROJECT  
EAST SAN DIEGO COUNTY, CALIFORNIA**

---

At your request, this memorandum presents a summary of the water needs identified for the Tule Wind Project construction and the availability of local water, both on site and from adjacent water providers. The data presented herein is based on a site reconnaissance and inquiries made of water suppliers. Construction water supply requirements are provided from discussions with Iberdrola Renewables (IBR), the project proponent.

The project will include the construction of up to 134 wind turbines and associated roads, transmission lines and support facilities. Based on information provided by IBR, the following water requirements have been estimated for the project construction (all work is anticipated to be performed over five-day work weeks):

1. Road Construction – Up to 120,000 gallons per work day will be required over a 72-day construction period. With continuous water storage, 24-hours per day, seven days per week, it is estimated that well production of 60 gallons per minute (gpm) will be required to support this work.
2. Turbine Foundation Concrete Mixing – Depending on the turbine, each foundation will require 7,500 to 15,000 gallons of water per foundation. As many as three foundations could be constructed each day; requiring up to 45,000 gallons of water per day. The maximum continuous pumping rate (24-hours per day, seven days per week), required to support concrete mixing for three turbine foundations per day is equivalent to 22 gpm.
3. Dust Control – During construction, 50,000 to 100,000 gallons per working day will be required for dust control on project roads. The maximum continuous pumping rate required for dust control would be 50 gpm for an estimated nine-month construction period.

As indicated above, it is anticipated that the water supply source will be available 24 hours per day, seven days per week. The contractors on the project will provide temporary water storage to ensure that there is adequate water supply available for required project water needs.

IBR has indicated that there will be some overlap of water uses as the project progresses. The initial road construction alone will be conducted until there is sufficient access to begin turbine foundation construction. At that time, with the combination of road construction, turbine foundation concrete mixing and dust control, the estimated peak water use will be approximately 250,000 gallons per day, requiring continuous pumping of 124 gpm (24-hours per day, seven days per week). This peak water demand will drop quickly after the initial road building activity is completed. Once road construction is complete, the peak water demand level is estimated to be about 130,000 gallons of water per day (equivalent to a 65 gpm pumping rate with pumping 24-hours per day, seven days per week). Once the subsequent 72-day turbine foundation work is complete, water demand will be reduced further to a maximum of 100,000 gallons of water per day (50 gpm of continuous pumping 24-hours per day, seven days per week) for the remainder of the nine month construction period requiring water. Subsequent site work is not expected to require additional groundwater supply. Further, when the Tule Wind Project turbines become operational, only a limited quantity of water will be required, estimated at 2,500 gallons per day to supply the operations and maintenance building services and support staff.

Based on the conservative peak water use requirements of 250,000 gallons per day (associated with road construction, concrete mixing and dust control activities), an estimated continuous supply of water (24-hours per day, seven days per week) will be required from wells pumping at a cumulative continuous rate of 124 gpm. Although there are several wells on the project site, two wells on the project site have been identified as readily available for project use:

1. One well is located on Rough Acres Ranch approximately one to two miles north of Interstate 8 between Ribbonwood Road and McCain Valley Road. Drilled in 2009, data provided on the well log for this well indicates that the estimated well yield is 60 gpm. A 72-hour constant rate aquifer pumping test was performed at this well at 50 gpm. Based on the current preliminary test data, there was very little response from pumping in the adjacent observation well, about 30 feet from the pumping well, and therefore it is reasonable to assume that sustained pumping at 50 gpm, at a minimum can be achieved from this well;
2. One well is located on the Ewiiapaayp Reservation, about 7 miles north of Interstate 8 on La Posta Road. A 72-hour constant rate aquifer pumping test was conducted at this well at 80 gpm. Based on the preliminary test results it is reasonable to assume that sustained pumping at 80 gpm is feasible at this well location.

Therefore, based on the preliminary data from two recent pumping tests with a combined total pumping rate of 130 gpm, it is likely that the necessary water supply requirements for the project (124 gpm of continuous pumping, seven days a week) can be met from these two wells.

There are four potential additional water supply sources available for the project. The State Correctional Facility is located about one half mile north of Interstate 8 off of McCain Road. This correctional facility maintains two wells with estimated production of

45 and 65 gpm. The Live Oak Springs Resort located south of Interstate 8 on Old Highway 80 about ¾-mile northwest of the intersection with Highway 94 may provide a source of water supply. This resort (and water company) operates a well that pumps about 40,000 gallons per day (25 to 30 gpm) and maintains a 100,000 gallon pond, and two large tanks with an additional 50,000 gallons of storage capacity. The Jacumba Community Service District (CSD) also has indicated that they are able to provide 20,000 to 40,000 gallons of water per day, equivalent to about 14 to 28 gpm. Finally, the City of El Centro has indicated that they are willing to sell wastewater plant effluent to the project for use during the construction phase.

In summary, as outlined above, the available on-site groundwater can provide the required project water requirements through continuous pumping at a rate of 124 gpm. With off-site water from the State Correctional Facility, Live Oak Springs Resort, and Jacumba CSD, as well as possible wastewater plant effluent provided from the City of El Centro for purchase, there is ample additional water available to support the project water supply needs.

If you have any questions, please call me at (858) 451-1136.



## MEMORANDUM

**TO:** Patrick O'Neill, HDR

**FROM:** Sarah J. Battelle, Geo-Logic Associates

**DATE:** September 7, 2010

**SUBJECT: ESTIMATE OF AVAILABLE GROUNDWATER  
TULE WIND PROJECT  
EAST SAN DIEGO COUNTY, CALIFORNIA**

---

At your request, this memorandum presents a summary of the water needs identified for the Tule Wind Project construction and the availability of local water, both on site and from adjacent water providers. The data presented herein is based on a site reconnaissance and inquiries made of water suppliers. Construction water supply requirements are provided from discussions with Iberdrola Renewables (IBR), the project proponent.

The project will include the construction of up to 134 wind turbines and associated roads, transmission lines and support facilities. Based on information provided by IBR, the following water requirements have been estimated for the project construction (all work is anticipated to be performed over five-day work weeks):

1. Road Construction – Up to 120,000 gallons per work day will be required over a 72-day construction period. With continuous water storage, 24-hours per day, seven days per week, it is estimated that well production of 59.5 gallons per minute (gpm) will be required to support this work.
2. Turbine Foundation Concrete Mixing – Depending on the turbine, each foundation will require 7,500 to 15,000 gallons of water per foundation. Assuming that two foundations are constructed each day in accordance with the 72-day work schedule; up to 30,000 gallons of water per day would be required. The maximum continuous pumping rate (24-hours per day, seven days per week), required to support concrete mixing for three turbine foundations per day is equivalent to 14.8 gpm.
3. Dust Control – During construction, 50,000 to 100,000 gallons per working day will be required for dust control on project roads. The maximum continuous pumping rate required for dust control would be 49.6 gpm for an estimated nine-month construction period.

As indicated above, it is anticipated that the water supply source will be available 24 hours per day, seven days per week. The contractors on the project will provide temporary water storage to ensure that there is adequate water supply available for required project water needs.

IBR has indicated that there will be some overlap of water uses as the project progresses. The initial road construction alone will be conducted until there is sufficient access to begin turbine foundation construction. At that time, with the combination of road construction, turbine foundation concrete mixing and dust control, the estimated peak water use will be approximately 250,000 gallons per day, requiring continuous pumping of 124 gpm (24-hours per day, seven days per week). This peak water demand will drop quickly after the initial road building activity is completed. Once road construction is complete, the peak water demand level is estimated to be about 130,000 gallons of water per day (equivalent to a 65 gpm pumping rate with pumping 24-hours per day, seven days per week). Once the subsequent 72-day turbine foundation work is complete, water demand will be reduced further to a maximum of 100,000 gallons of water per day (50 gpm of continuous pumping 24-hours per day, seven days per week) for the remainder of the nine month construction period requiring water. Subsequent site work is not expected to require additional groundwater supply. Further, when the Tule Wind Project turbines become operational, only a limited quantity of water will be required, estimated at 2,500 gallons per day to supply the operations and maintenance building services and support staff.

Based on the conservative peak water use requirements of 250,000 gallons per day (associated with road construction, concrete mixing and dust control activities), an estimated continuous supply of water (24-hours per day, seven days per week) will be required from wells pumping at a cumulative continuous rate of 124 gpm. Although there are several wells on the project site, two wells on the project site have been identified as readily available for project use:

1. One well is located on Rough Acres Ranch approximately one to two miles north of Interstate 8 between Ribbonwood Road and McCain Valley Road. Drilled in 2009, data provided on the well log for this well indicates that the estimated well yield is 60 gpm. A 72-hour constant rate aquifer pumping test was performed at this well at 50 gpm utilizing the existing pump. Based on the current preliminary test data, there was very little response from pumping in the adjacent observation well, about 30 feet from the pumping well, and therefore it is reasonable to assume that sustained pumping at 50 gpm, at a minimum can be achieved from this well. Further, with a higher volume pump it may be possible to pump at greater volumes without significant impacts to other adjacent groundwater users;
2. One well is located on the Ewiiapaayp Reservation, about 7 miles north of Interstate 8 on La Posta Road. A 72-hour constant rate aquifer pumping test was conducted at this well at 80 gpm. Based on the preliminary test results it is reasonable to assume that sustained pumping at 80 gpm is feasible at this well location.

Therefore, based on the preliminary data from two recent pumping tests with a combined total pumping rate of 130 gpm, it is likely that the necessary water supply requirements for the project (124 gpm of continuous pumping, seven days a week) can be met from these two wells.

There are four potential additional water supply sources available for the project. The State Correctional Facility is located about one half mile north of Interstate 8 off of McCain Road. This correctional facility maintains two wells with estimated production of 45 and 65 gpm. The Live Oak Springs Resort located south of Interstate 8 on Old Highway 80 about ¾-mile northwest of the intersection with Highway 94 may provide a source of water supply. This resort (and water company) operates a well that pumps about 40,000 gallons per day (25 to 30 gpm) and maintains a 100,000 gallon pond, and two large tanks with an additional 50,000 gallons of storage capacity. They have committed to providing 40,000 for immediate use and up to 80,000 gallons per day with additional storage tanks (pers. comm., September 8, 2010); equivalent to 28 to 55 gpm. The Jacumba Community Service District (CSD) also has indicated that their well produces 200 gpm and they will commit up to 40,000 gallons per day to the project (pers. comm., September 8, 2010); equivalent to about 28 gpm. Will serve letters from the Live Oak Springs Resort and Jacumba CSD are attached. Finally, the City of El Centro has indicated that they are willing to sell wastewater plant effluent to the project for use during the construction phase.

In summary, as outlined above, the available on-site groundwater can provide the required project water requirements through continuous pumping at a rate of 124 gpm. Current pumping test results indicate at least 130 gpm can be achieved from the two tested wells, and potential greater volumes with a higher volume pump at the Rough Acres Ranch test well. However, with off-site water from the State Correctional Facility, Live Oak Springs Resort, and Jacumba CSD for purchase, an additional 80,000 to 120,000 gallons of water per day, or approximately 55 to 83 gpm of water could be available to support the project water supply needs; ample water for the nine-month construction period. With these additional off-site sources, the combined on-site and off-site water could be equivalent to an estimated 213 gpm could be made available in support of the project. In addition, wastewater plant effluent may be available from the City of El Centro for purchase. It is concluded that there is ample water available from on- and off-site sources to support the project water supply needs.

If you have any questions, please call me at (858) 451-1136.