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NORTH KERN WATER STORAGE DISTRICT

November 13, 2015

TO: Project Manager - Keith Wallace
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California Department of Water Resources
Division of Integrated Regional Water Management
Financial Assistance Branch
Post Office Box 942836
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FROM: Ram Venkatesan, P.E., District Engineer

RE: North Kern Water Storage District's Prop 84 IRWM Implementation Grant Application with the Department of Water Resources

REQUEST CONSIDERATION FOR POINTS NOT AWARDED FOR Q#7, Q#8, AND #11.

North Kern Water Storage District (North Kern) appreciates the opportunity to provide comments regarding the scoring of the Prop 84 IRWM Implementation Grant Application that contained two Projects in their Proposal. Project 1 was sponsored by North Kern and Project 2 was sponsored by a Disadvantaged Community (DAC), Lost Hills Utility District (LHUD). North Kern is providing the following comments to support awarding the points indicated as "no" on the applicants posted score sheet.

Regarding the overall Proposal Map, a point was awarded that shows the location of each project on Figure 2-1. The Proposal contains two project specific map views for which a point was initially awarded for Project 1 (Figure 2-2) and Project 2 (Figure 2-3) according to the score sheet posted for the application. Posted on the Department of Water Resources (DWR) website was a score sheet showing a tie score with the highest score achieved within the Funding Area. Upon requesting why the posted score was not reflected in the tabled total score, the explanation was that the score sheet was inadvertently posted. Regardless, the information presented in the North Kern application contained the information asked for in question number 7, as evident in Figure 2-3, presented in the application materials, as indicated in the following information.

Q#7. *Is there a project map that shows the location of the project and the areas and water resources affected by the project?* For DWR to award a full score, the application must contain:

A map of the project that includes the location of the project, the areas affected by the project, and the water resources affected by the project.

Information presented in Figure 2-3 of the application supports awarding a full score for Q#7. *Page 21* of the application states: "A project-specific map is given as Figure 2-3. The map shows the location of the LHUD wells on the land owned by the LHUD, which is a location approximately 12 miles east of the Lost Hills community." The LHUD New Well No. 3 Project in the application is defined as a component of the overall LHUD system improvement program. All of the Project 2 components that funding is being requested for in this Proposal are shown on Figure 2-3.

The LHUD DAC Project is described on *page 20* of the application as follows: "Funds previously received from DWR are now being used to complete the 60 percent design of the new well, and IRWM implementation grant funding is being requested to complete the well design, and for the construction and testing of the well and of the 1,300 foot-long, 8-inch pipeline that will connect the well with the LHUD's nearby raw water storage tanks."

Figure 2-3 shows the location of the new well and the new pipeline that delivers raw water to water tanks at the Water Treatment Plant. These components are shown are Figure 2-3 and are the only elements for which DWR funding was requested. Furthermore, this is the only water resource areas affected by this project.

With respect to the water resources affected by the project, the application states on *page 21*, "The affected water resource will be the aquifer zones from which the new well will draw water and the slightly shallower zones tapped by existing wells where pumping demands will diminish. Because LHUD relies entirely on groundwater as its source of supply and it does not have a physical connection to surface water, surface water resources will be unaffected."

As shown on Figure 2-3, the water resource affected by the project is the groundwater to be pumped as a source of supply, an area indicated on the figure as the zone of influence for groundwater extraction from the new well. Based on the aforementioned reasons presented above, the applicant requests reconsideration of the score in *Q#7 to be a 'yes'*.

Q#8. *Are the anticipated primary and secondary physical benefits of the project described and quantified with the units specified in Table 5?* For DWR to award a full score, a properly completed Table 5 is required for the primary and secondary physical benefit of each project. If the primary and secondary physical benefits were not clearly identified or quantified for each year of the project's lifecycle using the specific units provided in the instructions for Table 5, a response of "no" will be given. For DAC projects that do not include construction, benefits do not need to be quantified, but must be qualitatively described.

North Kern requests reconsideration of the score obtained in this application based on the interpretation of the statement: "using the specific units provided in the instructions for Table 5". Table 5 of the North Kern application utilized AFY units for the Primary Benefit for both projects. However, the Secondary Benefits for both projects were expressed in appropriate

units not provided in the instructions for Table 5. The following paragraphs describe our reasoning in selecting the units we did.

For Project No. 1, North Kern WSD Drought Relief Project, Table 5 is filled out in the application on *page 9* of *section 2*. Because water provided by the project is delivered by gravity, substitution of this new water supply for pumped groundwater reduces both energy consumption and emission of greenhouse gases. Language on page 18 of the PSP states that eligible physical benefits include "Amount of **energy** produced or **saved**, and amount of **greenhouse gases** that can be **avoided**", thereby encouraging applicants to consider these benefits. Because none of the units specified for quantification of benefits in Table 5 are suitable for quantifying reductions in energy use or in greenhouse gas emissions, we chose to apply the appropriate units to enable us to correctly quantify these benefits listed on page 18 of the PSP.

For Project No. 2, LHUD New Well No. 3: Project, Table 5 is filled out in the application on *pages 23* and *24* in *section 2*. The secondary benefit for this project was based on quantity (AFY) and concentration (ppb) (µg/l is equivalent to ppb and mg/l is equivalent to ppm) as identified in the Comments section of the table. For the Secondary Benefit, the benefit of the reduced arsenic concentration (ppb) in source water was expressed in terms of reduced water treatment costs, which is an appropriate, equivalent unit of measure for the secondary benefit presented in the application on row 3.

While it may be appropriate to express water quality improvements in units, such as mg/l, it may be more appropriate if the improved water quality results in environmental benefits, here, the benefit to the DAC is the reduced costs of water treatment (typically expressed in $ for treatment of a water quality constituent (parameter) with a change in concentration based in µg/l and/or mg/l). The economic burden the DAC must bear in operation and maintenance costs are typically not covered by either state or federal grant programs. Further, in *Table 5-2, Comment No. 5 (page 24)* the application states that after project implementation, the arsenic concentration of the produced water will decline from 30 ppb (or µg/l) to 21 ppb, or a 30 percent reduction. Therefore, the expected water quality improvement resulting from the project was assessed and applied to qualify the project's true benefit.

Based on the items presented in this application, the applicant requests reconsideration of the score in *Q#8*.

The following text is repeated here from the DWR PSP with the places highlighted where the applicant based its development of Table 5. Given the reduced funding award, a likely result is a proportional split of the grant award funding to the two partially funded projects. This may also result in the LHUD Project No. 2 only able complete the design phase of the well, which means Table 5 would not be necessary for Project No. 2.

PROJECT PHYSICAL BENEFITS

Physical benefits are the expected measurable accomplishments of a project. To be eligible to receive IRWM Grant funding, each project must have multiple benefits (Public Resources Code §75026.(a)). Physical benefits should be based on estimated measures of project accomplishments over the period of analysis and consistent with the provided need described above. Examples of physical benefits include, but are not limited to:

- Amount of water supply produced, saved, or recycled.
- Types (constituents) and amounts of water quality improvement provided, and the amount of water treated or improved.
- Types and amounts of environmental benefits provided, such as the types of species and their numbers benefited, acreage of habitat or floodplain improved, restored or protected, amount of flow provided, or habitat units restored or protected. If a Habitat Evaluation Procedure has been performed, provide information from that analysis.
- Amount of energy produced or saved, and amount of greenhouse gases that can be avoided.

Table 5 must be used to present physically quantifiable benefits. Each project must present two benefits, but no more. The primary and secondary benefits should be clearly identified.

Projects intending to provide direct water-related benefits to a project area entirely comprised of a DAC that are in the planning or design phase and not intending to complete construction with this solicitation do not need to quantify benefits (i.e., complete Table 5). However, applicants must provide a qualitative description of the proposed work and the anticipated benefits of the project upon completion of construction.

Table 5 – Annual Project Physical Benefits Project Name: _____ Type of Benefit Claimed: _____ Units of the Benefit Claimed : _____ Anticipated Useful Life of Project (years): _____			
(a)	(b)	(c)	(d)
	Physical Benefits		
Year	Without Project	With Project	Change Resulting from Project (c) – (b)
2015			
2016			
2017			
Etc. through Last Year of Project Life			
Comments:			

To complete Table 5, the applicant should use the following steps:

- Format a table that will display one of the physical benefits claimed for the project (Excel file containing this table can be found here: http://www.water.ca.gov/irwm/grants/resources_forms.cfm.
- Once the table has been appropriately formatted, provide the following information:
  - Row (1) Project name
  - Row (2) Identify the exact type of physical benefit being claimed and specify if it is the primary or secondary benefit
  - Row (3) Select one of following unit that corresponds to the benefit claimed:
    - For water supply produced, saved, or recycled, enter acre-feet per year (AFY)
    - For water quality, enter constituent concentration reduced in mg/L
    - For flood damage reduction, enter inundated acres reduced in acres
    - For habitat improved, restored or protected, enter habitat restored in acres
    - For fishery benefits, enter increased fishery flow rate in cubic feet per second (cfs)
    - For species protection, enter number of species benefited

Q#11. Does the proposed project effectively address long-term drought preparedness?
For the DWR to award a full score, the application must contain: A demonstration that the project contributes to sustainable water supply and reliability during water shortages and will achieve one or more of the following:

- Promote water conservation, conjunctive use, reuse and recycling
- Improve landscape and agricultural irrigation efficiencies
- Achieve long-term reduction of water use
- **Efficient groundwater basin management**
- Establish system interties
- Solutions that yield a new water supply such as seawater desalination

Drought preparedness projects do not include drought emergency response actions, such as trucking of water or lowering well intakes.

The applicant's concern on scoring for Q#11 is related to Project No 2, LHUD New Well No 3. A score sheet was released indicating a "yes" score for Q#11 for Project No. 2. For some uncertain reasoning, the score reported as "yes" was later changed to "no". As stated on *page 24* of *Section 2* of the application, LHUD has completed and provided a Preliminary Engineers Report in this application (completed June, 2015 and included as Appendix E of Section 2) that evaluated five alternative water supply projects. The report concluded that this proposed feasible project would increase the reliability of LHUD's system by improving the physical connection to the source supply - groundwater.

Given that LHUD groundwater wells are within a State Water Project Contractor's service area, switching to a connection to surface water supply, which is an unreliable surface supply, instead of improving their existing groundwater wells would not improve their long-term drought situation. Available surface supplies, such as ones delivered from the California Aqueduct, when available, already recharge the common groundwater basin through delivery to Semitropic, who already has recharge facilities in place to recharge contract surface water supplies for entities with contract supplies under Kern County Water Agency. LHUD relies on the common groundwater basin where its wells are located within Semitropic. Semitropic, similar to other SWP Contractors, recharges the groundwater when importing SWP. In this particular operations, as identified in the Preliminary Engineers Report, LHUD operates the well field and Lost Hills Water District (LHWD) has a surface water, SWP contract and has an agreement with Semitropic, which includes three components:

1. Grandfathered-in extraction rights.
2. Increased extraction rights based on purchasing/retiring the land where the wells are located.
3. An agreement/account which they maintain for the delivery of SWP into Semitropic.

Page 26 of the application states that Well No. 3 is a new facility. This project aims to replace an existing well (60+ years) that has outlived its useful life and improve the quality for the groundwater source water by zone testing and screening the new well. The proposed Project 2 is a long-term drought preparedness project to meet the needs of a DAC's drinking water source. The project aligns with *Table 1* – Statewide Priorities, Drought Preparedness "**Efficient groundwater basin management**" since it is more effective and efficient for the large agricultural water district to recharge the groundwater with surface water supplies

under existing contracts and has existing recharge facilities (in-lieu and direct recharge ponds) to recharge the groundwater basin.

Stated in *Table 9* – Critical Water Supply or Water Quality Need Program Preference Project Examples of the DWR 2015 IRWM Grant Program Guidelines (*page 85*), examples of a critical water supply need include: "**Replacement** of water supply **wells** that have exceeded their useful life (older than **50 years**).

Page 2 of *Section 2* of the application states that the drought emergency responses being taken the by LHUD are being funding by other entities to rehabilitate and deepen two of the three district wells.

We hope the justification provided above will allow you to consider rescoring our projects. Once again North Kern appreciates the opportunity to provide comments regarding the scoring of the Prop 84 IRWM Implementation Grant Application.

Very truly yours,

Ram Venkatesan
District Engineer