

May 6, 2020

Paula Rasmussen  
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sent via email to  
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**Subject: Three Valleys Municipal Water District Bonanza Spring Study**

Dear Ms. Rasmussen:

We are in receipt of your letter, dated April 29, 2020, to Three Valleys Municipal Water District (Three Valleys) regarding the Bonanza Spring Study (the Study). We are pleased that the Colorado River Basin Regional Water Quality Control Board (RWQCB) has taken an interest in this matter and hope that we can rely on your continued involvement in this important study. Bonanza Spring is a key water resource in the Mojave Desert, and the Study is critical to providing an improved understanding of the hydrology of the spring.

In your letter you conclude that the Study requires permitting with the RWQCB and highlight three areas of concern that you believe support such a determination. In this letter, the three areas of concern will be addressed individually. Overall, we believe the concerns expressed do not factually represent the Study that is being contemplated; therefore, we do not believe any permits from the RWQCB are necessary. In fact, the underlying goal of the study is the protection of Bonanza Spring and its water quality. We understand that the RWQCB may have been provided alternative information about the study by an outside party; therefore, we appreciate the opportunity to correct this misinformation. We also would request an opportunity to meet with staff at the RWQCB to discuss the study in further detail.

**1. Dredged Fill Materials**

Your letter states, *“If the monitoring wells for the Project are located within the Bonanza Spring (waters of the state), well installation activities would likely be subject to the State Water Resources Control Board’s (State Water Board) Order No. 2004-0004-DWQ, General Waste Discharge Requirements for Dredged Fill Discharges to Waters Deemed by the US Army Corps of Engineers to be Outside of Federal Jurisdiction.”*

There are no plans to install any monitoring wells within Bonanza Spring; therefore, State Water Board No. 2004-0004-DWQ has no application to this study work. Monitoring wells being contemplated as part of this study are only proposed for the bedrock catchment above Bonanza

Spring and proximate to Bonanza Wash, an ephemeral stream; however, none are located within Bonanza Spring.

The monitoring wells presently being contemplated are expected to be constructed on federal land. All work will be performed in accordance with permits issued by the US Bureau of Land Management (BLM) and the County of San Bernardino. In addition, the locations for monitoring wells will be subject to biological screening and clearance before drilling begins.

## **2. Discharges to Land with a Low Threat to Water Quality**

Your letter states, *“During the monitoring well installation phase, drilling activities will result in discharge of boring waste and monitoring well purge water to land. These discharges to land likely will have low threat to water quality and low volume with minimal pollutant concentrations, and therefore will likely be subject to State Water Board Order No. 2003-0003-DWQ, Statewide General Waste Discharge Requirements (WDRs) for Discharges to Land with a Low Threat to Water Quality.”*

During the well installation phase, no boring waste or well purge water will be discharged to land near the Spring; therefore, State Water Board Order No. 2003-0003-DWQ does not apply. Following normal practice for the thousands of monitoring wells installed in California each year, all drill cuttings, all purge water, and all decontamination rinse water will be discharged to sealed 55-gallon drums. No discharges to land will occur. These drums will be removed from the drilling site.

We are not aware of any monitoring wells installed in California using such discharge practices being subject to State Water Board Order No. 2003-0003-DWQ.

## **3. Slug Test and Geochemical Assessment**

Your letter states, *“The scoping plan for the Project also proposes to conduct a slug test and geochemical assessment by adding “tracer” to the groundwater.”* The paragraph goes on to describe various types of tracers discussed in the scoping plan, and further states, *“Because this activity triggers discharges that may impact the groundwater quality, individual WDRs may be required to conduct these tests.”*

During the geochemical assessment, no tracer will be added to groundwater; therefore, individual WDRs are not be required. The tracers discussed in the scoping plan are only the naturally occurring elements in any groundwater system, nothing will be added to the groundwater. The study proposes to carefully take groundwater samples and analyze the samples for these naturally occurring elements. Such samples are taken from tens of thousands of monitoring wells and water supply wells in California each year. We are not aware of any groundwater samples collected in this manner in California requiring individual WDRs. To

reiterate, during the geochemical assessment, no chemical will be added to groundwater, only samples will be taken of groundwater.

During the hydraulic testing, we expect that slug testing will be performed at the contemplated monitoring wells. After purging of water for groundwater sampling (see above), the recovery of water levels in the well is measured (rising-head slug test). For this recovery test, no water or chemical is added to the well. In addition to this recovery test, a slug may be added to the well to perform a falling and rising-head slug test. This slug is not a chemical, but a solid piece of pipe that simply displaces water in the well (i.e., as the pipe is added, the water level in the well rises). After displacement of the water, the water level slowly recedes (falling-head slug test), the slug is then removed, the water level falls, and then recovers to a pre-testing level (rising-head slug test). The change in water level over time can be analyzed to provide a measure of the hydraulic conductivity (K) of the aquifer. This procedure is common technician practice employed at thousands of monitoring wells throughout California each year. We are not aware of any slug tests performed at wells in California requiring individual WDRs.

### **Closing**

To summarize, it appears there has been a misunderstanding of some of the monitoring activities proposed in the Study, as discussed above, and we hope the information provided herein clarifies what is being proposed. Given this clarification, we do not believe that permits from the RWQCB are required. Importantly: (1) Monitoring wells will not be installed in Bonanza Spring; (2) wastes will not be discharged to land during well installation; and (3) no tracers will be added to groundwater.

Again, thank you for taking an interest in this important study. As indicated, we would be happy to meet with staff at the RWQCB at any time to discuss the study in further detail. We would also welcome your designation of a staff member to participate in a peer review of the Study (see Section 1.8 of the Scoping Plan). Should you have any questions, please do not hesitate to contact us at (714) 770.8040 or via email at [brandon.eisen@aquilologic.com](mailto:brandon.eisen@aquilologic.com).

Sincerely,  
**Aquilologic, Inc.**

A handwritten signature in blue ink, appearing to read "Brandon Eisen".

Brandon Eisen, PG, CHg  
*Project Manager and Senior Hydrogeologist*