

Binkley Associates, Inc.

CONSULTING ENGINEERS

HYDRAULICS · WATER RESOURCES · WATER AND SEWAGE FACILITIES

November 8, 2017

Pete Kampa, General Manager
Lake Don Pedro Community Services District
9751 Merced Falls Road
La Grange, CA 95329

VIA EMAIL ONLY

RE: Water Wells and MID POU

Dear Pete:

In response to your email dated 11/3/17 regarding Ranchito #1 and service outside the Merced Irrigation District (MID) Place of Use (POU), once the well is reconnected it should be operated at the flow recommended in the final report by The Source Group (dated 10/22/15). They recommend operating at 75 gpm for the first emergency season and monitoring flow and drawdown weekly at a minimum. The drawdown must be reviewed periodically to determine whether the flow is sustainable or should be adjusted. I see this as an ongoing monitoring and reevaluation process that should be incorporated into normal operations for all the wells, as the available flow can change seasonally or annually.

When we did the Ranchito #1 study about six years ago, the actual production of Ranchito well was nearly equal the maximum day demand outside POU based on data from 2000-2011. Based on the data you recently sent for 2013-2016, it appears that overall usage outside the POU has decreased significantly. This is partially due to removal of certain properties from the outside POU list based on current interpretation of the POU boundary map, and we speculate also likely due to drought reductions and leak repairs. If demand increases again to or above pre-2011 levels, there may be some months where the demand outside the POU is more than is pumped by the Ranchito well. I understand that it is required to balance on a monthly basis. Therefore, I agree that the new drought wells should be operated monthly, probably in rotation, and that water (in addition to Ranchito #1) be included in the accounting reported to MID. This will ensure that there are no future violations.

In regards to the Board being concerned about permanently dedicating water from the new wells outside POU, I don't think that is what you are doing with the above operating scenario. What you are doing is using the new wells to provide a buffer to avoid violation during very high demand periods. The purpose is for compliance and reporting.

If the Board is interested in serving *new/future* customers outside the POU, it needs to be done carefully. The wells were constructed with primarily emergency drought funding for emergency use. To dedicate water from the new wells to new outside POU customers, at a minimum (additional items may be recommended or required):

1. The new customer should be either A) be required to pay an appropriate amount based on their anticipated demand into a fund for development of additional new well(s) in the

future, or B) be required to locate and fully develop a new water source that meets their demand and connect it to the District's raw water infrastructure. A versus B would depend on their development proposal and the amount of water available from the drought wells.

2. The District must obtain a formal technical prediction on the long term continuous (or rotating) operation yield of the new wells and officially adopt this as the available supply which can be dedicated to new outside POU customers. In addition, The District should adopt a factor of safety for that yield to avoid violation (such as 50% based on State Waterworks Standards hard rock well yield requirements). This yield would need to be reevaluated annually at a minimum. Once this demand is all accounted for by new customers, construction of the new well(s) would need to commence, utilizing the money paid into the fund, before additional customers outside POU could be served.
3. Confirm that the LDPCSD water permit has been revised to include the new wells as a source of supply at the anticipated yields determined in (2) for non-emergency use.
4. Ensure there are not any regulatory restrictions on these wells due to the fact they were constructed and funded for emergency use.
5. Resolve POU boundary mapping conflicts in a manner that is acceptable to and approved by MID and the other agencies involved.

I acknowledge and validate your comment on well water being much less expensive, and I agree it makes sense to utilize the three new drought wells to some extent in addition to the need to regularly exercise the pumps and equipment. So, regarding the duration of pumping and the rotation schedule for the drought wells during non-emergency use, I defer to Paul Horton from The Source Group for a specific formal recommendation. The suggested flows in their report were focused on the short term (up to 6 month) continuous operation of the wells during a drought emergency. Their report does suggest that once you have operated the wells for an extended period and have obtained flow and drawdown data for that period, they can analyze it and make additional recommendations ("refined predictions") on optimal operation for the long term. You may have enough data now for their input. Their input could provide a useful starting point for establishing routine operation and monitoring of these wells, while allowing adequate recovery such that you will be reasonably assured of the availability of water for the next drought or intake emergency.

Please do not hesitate to call if you have any questions.

Very truly yours,
Binkley Associates, Inc.
Engineer for Lake Don Pedro Community Services District

By: _____
Elizabeth A. Binkley, P.E.
Principal

cc: Board of Directors (c/o Syndie Marchesiello)