July 30, 2015

Thaddeus L. Bettner  
General Manager  
Glenn-Colusa Irrigation District

Subject: Comments for the Glenn-Colusa Irrigation District Draft Environmental Impact Report regarding the Groundwater Supplemental Supply Project

Dear Mr. Bettner;

Butte Environmental Council (BEC) and the undersigned individuals and groups (signatories) submit the following comment letter to the Glenn-Colusa Irrigation District (GCID or District) Board and Staff regarding the GCID Groundwater Supplemental Supply Project (GWSS or Project) Draft Environmental Impact Report (DEIR). Concerned citizens of the northern Sacramento Valley recognize that it is important to this region to support existing agricultural productivity, but that it is long past the time needed to realize the limitations and variability of our natural water supply. We must learn to live within the confines of that system and realize increased reliance on our groundwater system is not prudent.

We appreciate the opportunity to comment on the DEIR, but question the resolve of the GCID Board and Staff to approach this project and development of the Final Environmental Impact Report (FEIR) with objectivity and an appropriate level of due diligence in their role as Lead Agency. Neither of which have been shown to be characteristics of Board decisions to date regarding any of the components of this project, such as the conversion of “test wells” for extraction without the requisite environmental review; lack of transparency in District water supply and demand; the complaint of a supply deficit while contracting sales for transfer of surplus supplies to regions south of the Delta; and the mining of groundwater 24/7 from wells that have yet to be analyzed under a certified EIR to meet undocumented deficit needs while continuously pumping groundwater for sale and transfer to the Tehama Colusa Canal Authority.
The signatories brought forward the following concerns during the environmental assessment which were not adequately addressed by the DEIR:

1. The nature and scope of the Project needs to be clearly defined.
2. The “no project” alternative lacks thoughtful evaluation of District practices.
3. The DEIR lacks thoughtful consideration of project alternatives.
4. Cumulative impact analysis is inadequate.

Signatories of this letter also expressed concerns regarding Responsible and Trust Agency appointments and add comments herein with respect to the Lead Agency designation.

5. GCID is inappropriate as designation of Lead Agency: Glenn and Colusa County as entities with general governmental powers should be designated instead.
6. The Counties of Glenn and Colusa (absent their designation as Lead Agency), Tehama, and Butte must be designated as “Responsible Agencies” with open and transparent consultation and information sharing in the context of protecting a sole source aquifer system for all constituents overlying the aquifer systems of the Tuscan and Tehama Formations.
7. The California Department of Fish and Wildlife must be identified as “Trustee Agency” with responsibility of ensuring enough water can be maintained in all tributaries to and within the main stem, the Sacramento River.

Finally, the signatories of this letter question the District’s right to extract groundwater under water right laws that have been in existence for more than a century and within the context of sustainable groundwater management under the most recent groundwater laws passed September 2014. The inability of the District to render this right would eliminate the need for this Project and lift Lead Agency responsibilities from the governmental agencies of Glenn and Colusa for said Project.

8. The District must show under what right they have to legally extract groundwater for reasonable and beneficial use: correlative or overlying rights; appropriative rights; or prescriptive rights.

Each of these concerns is described in detail below.

**1. The nature and scope of the Project needs to be clearly defined.**

The DEIR fails to define the extent and characteristics of the referenced aquifer including recharge sources. According to GCID’s 2009 published report *Glenn-Colusa Irrigation District Test-Production Well Installation and Aquifer Testing*, the five existing wells tap the Tuscan Formation aquifer system and the source of water to the aquifer zones screened in GCID Well E1 is most likely from the foothills and mountains to the east and north; data from shallow observation wells suggests the Sacramento River as a possible source of recharge. The five new wells are estimated to tap the Tehama Formation. What are the known differences between these formations that could affect the groundwater flow modeling simulation? How have these differences been accounted for with respect to the model calibration and input parameters such as deep percolation?
The 2014 report by Drs. Todd Greene and Karin Hoover, *Hydrostratigraphy and Pump-test Analysis of the Lower Tuscan/Tehama Aquifer, Northern Sacramento Valley, CA* provides an improved hydrostratigraphic model of the project area, which could strengthen models used to predict well water drawdown effects from pumping as well as improving the understanding of aquifer connectivity. They also provide valid cautions surrounding pump tests from these formations and analyses of resulting performance data. **To what extent have these results been used to inform recalibration of the model and analyses of the resulting model data used for this Project?**

SacFEM2013 disaggregates the valley into Water Budget Areas (WBA) delineated by similarities in the availability and source of water governing water use, including rainfall averages. From the *SacFEM2013: Sacramento Valley Finite Element Groundwater Flow Model User’s Manual* (CH2M HILL and MBK Engineers, Inc., 2015), it appears that the entire District is encompassed within one WBA. The DEIR fails to explain how the WBA(s) specific to this project are characterized. According to published results for the SacFEM analysis of 2013 water transfers the District engaged in, annual rainfall is incorrectly subdivided into monthly quantities. This would reduce the monthly demand for applied water. Water rights information is used to determine whether adequate surface water supply is available to meet demand, and if not, agricultural pumping is modeled to meet the demand. Through this process, the magnitude and distribution of agricultural pumping across the valley is estimated. Are pumping estimates evenly distributed across a WBA? In the case of this Project the wells are clustered in a very small area, how does SacFEM account for this form of distribution?

It stands to reason that a model whose domain covers the entire Sacramento Valley Groundwater Basin would be a considerable overkill for a Project of this size, and that results critical to the area of concern would be masked by conditions, parameters and characteristics that are not similar to the Project domain. How are these results analyzed to provide a true assessment of impacts from the Project? For example, how closely do the performance data of the 1,100 production wells used to estimate properties of the aquifer system, such as transmissivity, match data for wells in the Project area? The oversimplification that must take place in a model of this size, limits the ability to carefully evaluate impacts and accurately define foreseeable risks. Are aquifer system properties specific to a WBA and layer, in other words lumped, or appropriately distributed based on the well data? The Lower Tuscan Aquifer Project results published May 2013 show that transmissivity values of three test sites within Butte County vary by an order of magnitude. Does the model allow for this kind of spatial variation in parameters both vertically and horizontally?

Similar to the environmental impact analysis performed for this Project, SacFEM2013 including the Integrated Water Flow Model Demand Calculator (IDC) was used to model the Sacramento Valley under the LTWTP. Experts that critiqued results of the LTWTP identified a number of weaknesses. Listed were concerns over the wells selected versus those that were not used to calibrate the model; it was identified that no clear basis exists for the placement of agricultural pumping demands to layers 2, 3, & 4 only; and calculation methodologies for aquifer transmissivity were questioned. To what extent did these
published concerns help shape modifications to model inputs used during the simulation and forecasting for this Project?

2. The “no project” alternative lacks thoughtful evaluation of District practices.

The U.S. Bureau of Reclamation (USBR) states, within the Long-Term Water Transfer Program (LTWTP) documentation, that surface water deliveries have been stable over the last ten years. How can the District then justify a need to turn to groundwater production?

Demands for surface water within the Sacramento Valley have been relatively stable since 2005. This can be seen through review of Reclamation delivery data to Sacramento River Settlement Contractors, other water service contractors, and diversion data from other river systems. The majority of surface water demands and the associated water rights and contracts were developed many decades ago and have been stable over the most recent decade.

Governor Brown issued an Executive Order on April 1st, 2015, mandating that all agricultural water suppliers with irrigable lands in excess of 25,000 acres quantify their water supply and demand for the years 2013-2015 by the end of this year. Reporting such a water budget would have been a less expensive, more transparent, and sustainable action the District should have undertaken prior to initiating the Project. It is believed that such a report would show the District does not need to mine groundwater, and is doing so simply for the sake of bolstering its water portfolio for sales.

The IDC model component of SacFEM2013 was calibrated against a detailed water budget analysis from GCID. It is pertinent to the public and governmental agencies to see the specific details of this water budget. A “water budget” in the context of Sustainable Groundwater Management Act 2014 (SGMA) means an accounting of the total groundwater and surface water entering and leaving a basin including the changes in the amount of water stored; and should include the timing of surface water supply availability and timing of agricultural demands.

The FEIR must contain a clear accounting of how 28,500 acre-feet (AF) will supplement a district that has annual surface water rights of nearly a million AF. The analysis must clearly identify the impact to district productivity from a loss of supply given the potential of a 75% water supply allocation (and all others that the district has had to address in the last decade).

The FEIR should include a compilation of all wells used and volumes pumped, over the last five years, throughout the District to currently augment the District’s surface supply, including District owned wells; wells used for the Commingling Program; and those wells used to transfer groundwater out of the Colusa Subbasin to other Districts within the northern Sacramento Valley. In addition, the list of wells should include those that may be used for groundwater substitution transfers should the USBR make a call for transfer water from the District as listed in their LTWTP documentation. The assessment should clearly show how all wells in the District will be used throughout the irrigation season and beyond (February 14 through March 16 and April 1st through November 15) and clearly define when a deficit of 28,500 AF will occur and how this relatively small (in comparison to the District’s rights) fraction of groundwater will address needs across the District.
3. The DEIR lacks thoughtful consideration of project alternatives.

This year, the District claimed a supply deficit and declared surplus available for transfers. They have rights to divert enough water in 2015 (underestimated at 618,000 acre-feet) to provide all irrigable lands (over estimated at 132,000 acres) 4.7 acre-feet throughout the year. Willing sellers within the District idled ~18,000 acres for transfers; roughly the same quantity listed under the ‘Conservation’ alternative. A true conservation alternative would involve cutting back the applied water unit duty by 5% (roughly the same percentage of the District’s dry or critically dry year water allocation produced by the proposed Project).

Idling 20,000 acres does not appear to be an issue when producing a surplus of water and those idling land become willing sellers; a problem arises when idling involves a financial decrease. GCID’s fiduciary responsibility precludes thoughtful consideration of anything that costs their membership money.

4. Cumulative impact analysis is inadequate.

The DEIR fails to take into consideration local plans and policies affecting groundwater supplies such as SGMA, changes to BMOs, and any current and future ordinances that affect the correlative rights of all overlying landowners within the region.

There exists no transparency to current District practices such as the Commingling Program, the groundwater substitution transfer program for TCCA, the idling program for out-of-region transfers, and others with potential similar effects not yet revealed by the District.

5. GCID is inappropriate as designation of Lead Agency: Glenn and Colusa County as entities with general governmental powers should be designated instead.

The District is a quasi-public, quasi-governmental agency with a single and limited purpose to provide surface water to landowners within their district boundaries under their water rights and those held by the United States, to operate the Central Valley Project.

The legislation under SGMA is clear, undesirable results must not expand or increase beyond what they were on January 1, 2015. Therefore, determining the nature, extent and size of undesirable results as of January 1, 2015 is critical to achieving sustainability goals as defined by SGMA. The following lists the undesirable results, statutorily specified under SGMA, applicable to the medium- and high-priority groundwater basins overlying the Tuscan and Tehama Formations that constitute the sole source aquifer system for hundreds of thousands of citizens:

- Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply if continued over the planning and implementation horizon of SGMA.
- Significant and unreasonable reduction of groundwater storage.
- Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies.
- Significant and unreasonable land subsidence that substantially interferes with surface land uses.
- Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water.
In the absence of fully promulgated GSAs, the best way for counties overlying these basins to comply with the intent of the legislature would be to require a moratorium on new groundwater extraction in high and medium priority basins. The moratorium should remain in place until a GSP is adopted and approved by DWR as consistent with SGMA and its regulations. In addition, the District must demonstrate to the satisfaction of the overlying counties and DWR that the undesirable results listed above are not occurring and will not be exacerbated by new groundwater extraction. Furthermore, no open or otherwise and adverse continuous use of groundwater should be allowed until sustainability is achieved.

6. The Counties of Glenn and Colusa (absent their designation as Lead Agency), Tehama, and Butte must be designated as “Responsible Agencies” with open and transparent consultation and information sharing in the context of protecting a sole source aquifer system for all constituents overlying the aquifer systems of the Tuscan and Tehama Formations.

GCID, who currently will be certifying the Final EIR for said project, has an inherent conflict of interest due to their fiduciary duty to solely benefit the members within their District. They have no responsibility to either protect the environment or their neighbors, whether locals within the District, citizens living south of the District, or residents and the environment dependent solely on the aquifer system of the Sacramento Valley.

Numerous documents explain that the aquifer system that supports the economy and environment of the northern Sacramento Valley underlies several counties. A Memorandum of Understanding for water resource coordination, collaboration, and communication was drafted and signed in January 2006 by these counties. As Responsible Agencies, the counties maintain ultimate police powers and jurisdiction by law over natural resources, which are held in trust for the people. Therefore, these counties rightfully have discretionary approval over all projects affecting the public trust.

7. The California Department of Fish and Wildlife must be identified as “Trustee Agency” with responsibility of ensuring enough water can be maintained in all tributaries to and within the main stem, the Sacramento River.

As a Trustee Agency, the California Department of Fish and Wildlife is a state agency having jurisdiction by law over natural resources such as surface water with regard to the fish and wildlife of the state affected by a project which are held in trust for the people of the State of California.

The relationship between groundwater pumping and stream flow has been inadequately recognized in the DEIR. The mechanisms influencing groundwater movement, recovery processes, and interactions between surface water and groundwater must be understood before more high-production wells are placed in production ultimately impacting the streams and rivers of this region. No open or otherwise and adverse continuous use of groundwater should be allowed until sustainability is achieved. The District must clearly demonstrate the nature and extent of impacts that pumping groundwater has on surface water and can show no increased depletions of interconnected surface will occur.
8. The District must show under what right they have to legally extract groundwater for reasonable and beneficial use: correlative or overlying rights; appropriative rights; or prescriptive rights.

The District has no statutory authority relating to groundwater, it does not own enough land to warrant groundwater extraction and has yet to prove that applied surface water has percolated to the depth and location from which District owned wells could recover.

While surface water districts are recognized as public agencies, nowhere in state law have they been assigned responsibility over groundwater resources. This project in context with GCID’s past and undoubtedly future participation in water transfers can be construed as the ‘taking’ of a public resource. This project must have oversight and leadership from the counties with jurisdictional responsibility of our common resource: groundwater. To date, GCID has shown no inclination to due diligence in resource protection, such as consultation with other affected agencies or identification of known impacts due to mining groundwater in the region. Groundwater is neither theirs to take nor theirs to profit from.

Conclusion

It is our hope that the GCID Board will recognize the legal, ethical and environmental flaws of said Project and cast a vote for the ‘no project alternative.’ Short of that favorable outcome, the Final Environmental Impact Report (EIR) must clearly address the issues outlined in these comments.

Sincerely,

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