

December 4, 2014

Ms. Kati Carpenter
Engineering Geologist
Central Valley Regional Water Quality Control Board
1685 E. Street
Fresno, CA 93706

(via email)

Ms. Pamela Creedon
Executive Director
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive #200
Rancho Cordova, CA 95670

(via email)

Re: Agenda Item No. 33 of the December 5/6 Agenda
Root Creek Water District Waste Discharge Requirements

Dear Ms. Carpenter and Ms. Creedon,

This letter responds to points made by Mr. Jeff Reid of McCormick Barstow, LLP, in his letter to you on this subject dated today, as well as the memo from Mr. Tyler Hunt of AECOM attached to Mr. Reid's letter. Root Creek Water District is aware of and has considered each of the issues raised, and all are in fact addressed in the Report of Waste Discharge ("ROWD") and Antidegradation Study submitted in connection with the subject Waste Discharge Requirements. Each of the points made is addressed below.

1. Mr. Reid's letter, page 1, paragraph 1

Mr. Reid asserts that changes made in the project since approval of the Gateway Village Specific Plan EIR constitute significant changes requiring additional CEQA study. This point will be further addressed in a letter to you from Root Creek Water District's counsel, but in short, the ROWD points out each of the "deviations" identified in AECOM's memo, which occurred as a result of additional refinement of the project subsequent to the EIR, including changes resulting from discussions and meetings with both Madera County Resources Management Agency and CVRWQCB staff.

Each of the refinements is discussed in the ROWD and Antidegradation Study in its appropriate context, and found to be not significant because the changes in many cases result in decreased environmental impacts versus the original assumptions of the EIR, and in no case do they result in any potential for new or increased environmental impact.

2. Mr. Reid's letter, page 2, paragraphs 1 and 2

Mr. Reid states here that the Water Supply Assessment for the Gateway Village Specific Plan called for the recycling of effluent in order to achieve water balance. While that's true, it misses

the point of the Water Supply Assessment and the EIR, which is that the Gateway Village project is required not only to offset its own water use through a combination of effluent recycling and importation of surface water, it is required to bring in an additional 3,400 acre-feet of water per year as offset against the total overdraft within the district.

The ROWD states clearly that once the Ultimate Plant is in place, at approximately 17% total build-out, all effluent will be recycled and will be used for irrigation, offsetting groundwater pumping on a 1:1 basis. In the early stage of the project, when the Interim Plant is in place, the Project will still be responsible to meet its water balance obligations. Root Creek already has its supplemental surface water contract in place, is already delivering surface water to the District for this purpose, and would be able to fully meet its water balance obligations in the early years of the project even without credit from effluent percolation or recycling.

There is no negative impact to this shift in emphasis to surface water for groundwater recharge in the early years of the project.

3. Mr. Reid's letter, page 2, paragraphs 1 and 2

Mr. Reid states that the EIR called for the storage of effluent in lined rather than unlined ponds. This change reflects a change in Water Board policy since the EIR was written, allowing incidental percolation of effluent when doing so will not degrade the groundwater in the basin. The Antidegradation study (ROWD, Appendix A) demonstrates that this is the case, both for the advanced secondary effluent to be produced by the Interim Plant, and for the Title 22 effluent to be produced by the Ultimate Plant.

The incidental percolation reduces evaporation losses and provides additional water to the underground without degradation, which is considered to be an environmental benefit versus the assumptions in the EIR.

4. AECOM memo, "deviation 1"

The memo notes that the EIR states the initial effluent was to be disinfected secondary, while the ROWD calls for undisinfected secondary. The statement in the memo is only partly true. The ROWD also proposes adding nitrogen removal as a treatment process, which is a refinement of the information considered in the EIR.

Both the addition of nitrogen removal and the elimination of chlorine disinfection are intentional and beneficial changes designed to keep the effluent from degrading the underground. Section 7.5.1 of the Antidegradation study (page 33) notes that the groundwater in the area is of poor quality for nitrate, with levels in existing wells ranging from 27.9 to 41.7 mg/l. The nitrogen removal processes used in both the Initial and Ultimate plants will result in effluent having total nitrogen concentrations of 10 mg/l or less, well below existing levels.

No disinfection is proposed for the Interim Plant for two reasons. First, none is needed, as bacteria kill occurs in the anaerobic soil through which the effluent will percolate. Static groundwater levels in the area of the WWTP parcel and the Effluent Storage Pond complex are approximately 216 to 218 feet below ground surface (ROWD, Table 10, page 33), and it is anticipated that bacteria kill would be virtually complete by the time effluent reaches that depth. The second reason is that chlorine used for disinfection would leave chlorine residual and/or chlorine by-products in the effluent. While the bacteria will be killed by the anaerobic conditions,

and therefore will not degrade groundwater, the chlorine residual or by-products would persist and would be degrading to groundwater.

Contrary to the assertion of the AECOM memo, the refinements in process proposed in the ROWD provide greater protection of the environment than those originally analyzed in the EIR.

5. AECOM memo, "deviation 2"

The memo notes the initial effluent disposal method is changed from reclamation to cropland to percolation/evaporation, and implies this is a negative. The method of disposal has changed, but there is no new or increased negative impact. In fact, the method was changed largely to address concern over reclamation of secondary effluent to the citrus orchards identified in the EIR. While reclamation of disinfected secondary effluent per the EIR to citrus may be allowable, the practice is not favored by CVRWQB staff due to perceived lack of reliability in achieving adequate bacteria kill in water applied to these food crops. For that reason the alternative described in the ROWD is preferable.

As discussed above, percolation through over 200 feet of soil before reaching groundwater will provide a very high degree of bacteria kill, and this method provides a greater level of protection of the environment than the process analyzed in the EIR.

6. AECOM memo, "deviation 3"

Notes that storage of effluent is proposed to be in unlined versus lined ponds. This was discussed above under the response to point 3 above.

7. AECOM memo, "deviation 4"

Notes that the footprint for the Initial Plant does not provide for chlorine contact chambers or other disinfection equipment. That's true, since no disinfection is being proposed for the Initial Plant, for the reasons discussed under point 4 above. Note that the Ultimate Plant site layout (ROWD, Figure 3, page 6) shows UV disinfection equipment, which is preferable to the Department of Drinking Water for effluent that will be recycled onto food crops, which will be the case when the Ultimate Plant comes on line.

8. AECOM memo, "deviation 5"

Notes that sludge classification is reduced from Class "A" to Class "B" and implies this is a health hazard. In fact, Class "B" sludge is acceptable for disposal to a landfill, which appears to be the only feasible alternative at this time. Class "A" sludge is required if the sludge is to be used as soil amendment, however, no options for such use appear to be available to Root Creek. The EIR did analyze the landfill alternative and no adverse environmental impacts from that method of disposal were identified.

In summary, the processes described in the ROWD are the result of additional refinement that is normal in the course of project design. Each is discussed in the ROWD and Antidegradation study, which confirm that the project will not result in any new or substantially more severe environmental impacts and no further CEQA review is required. Those documents present the technical data, including engineering and hydrogeological work, necessary to demonstrate that both the Initial Plant and the Ultimate Plant will provide treatment of wastewater and disposal of

effluent in a manner that is not degrading to the basin groundwater and is in the best interest of the people of the State of California.

As noted, some of the changes have been made as a result of discussions with CVRWQCB staff in order to refine the project in accordance with current CVRWQB policies. None of the changes result in any additional potential for environmental impact, and all of the changes have been approved by the Root Creek Water District Board of Directors acting in their capacity as a Responsible Agency to the original EIR. As discussed, many of the changes were incorporated into the project because they reduce the potential for environmental impacts.

We respectfully request that the Water Board approve the Draft Waste Discharge Requirements as published.

Sincerely Yours,



David McGlasson, PE
Project Engineer



12/4/14