

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION**

**ADDENDUM TO THE ENVIRONMENTAL IMPACT REPORT FOR THE  
GATEWAY VILLAGE PROJECT, MADERA COUNTY**

**PREPARED IN SUPPORT OF WASTE DISCHARGE REQUIREMENTS  
FOR  
ROOT CREEK WATER DISTRICT  
RIVERSTONE WASTEWATER TREATMENT FACILITY**

**FEBRUARY 2015**

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Attachments:

2007 Gateway Village Project Environmental Impact Report

## **I. INTRODUCTION**

The Central Valley Regional Water Quality Control Board (Central Valley Water Board or Board) has prepared this Addendum to the Gateway Village Project's Environmental Impact Report (EIR), which was certified by the Madera County Board of Supervisors on 11 September 2007 (SCH #2005091071).

This Addendum was prepared in connection with the Board's consideration of Waste Discharge Requirements (WDRs) that will regulate wastewater treatment, handling, and disposal at the proposed Wastewater Treatment Facilities that are to be built by Riverstone Development, LLP to Root Creek Water District (RCWD) specifications. The WWTF will be owned and operated by RCWD to serve the Riverstone Project (formerly the Gateway Village Project; hereafter referred to as Project) in southeastern Madera County. This Addendum explains why minor differences between the Project as evaluated in the EIR and the Project as proposed to the Central Valley Water Board do not require the preparation of a subsequent EIR.

## **II. PROJECT BACKGROUND**

The Project is a proposed mixed-use master planned community. Wastewater generated by the Project will be treated at new wastewater treatment facilities (WWTF) that are to be constructed on a 20-acre parcel southwest of the Project near Road 40 and Avenue 11.

According to the 2007 EIR, the WWTF will be built and expanded in phases as the development grows. As initially proposed, the first phase WWTF would treat up to 550,000 gallons per day (gpd), and would produce disinfected secondary recycled water suitable for reuse on a variety of edible and non-edible crops, including the orange trees grown within the recycled water use area. As initially proposed, the recycled water produced by the WWTF would be stored in lined ponds and then applied to crops.

The EIR envisioned that when the Project grew and would require treatment over 550,000 gpd, a new, upgraded WWTF would be built. The second-phase WWTF would produce "disinfected tertiary recycled water" as defined in California Code of Regulations, title 22 ("Title 22") section 60301.230. Disinfected tertiary recycled water has no use restrictions under Title 22.

## **III. NEED FOR ADDENDUM TO THE ENVIRONMENTAL IMPACT REPORT**

Permits and approvals are required from both the Central Valley Water Board and the State Water Resource Control Board's Division of Drinking Water (DDW) when treated domestic wastewater will be recycled; the Board prescribes waste discharge requirements pursuant to Water Code section 13263, and DDW approves the engineering report that is required by Section 60323 of Title 22.

As initially proposed, the recycled water use area would be planted with tree crops that would produce food for human consumption (currently citrus and pistachios). However, a 2003 memorandum authored by the DDW and the California Department of Public Health, Food and Drug Branch (DFB) that was intended to supplement Title 22 protections requires that effluent recycled on orchard and vineyard crops meet, at a minimum, secondary standards and be disinfected so that it does not exceed a most probable number (MPN) of total coliform bacteria per 100 milliliters of 2.2 (commonly referred to as “disinfected secondary-2.2 recycled water”). Engineering considerations make reliably producing disinfected secondary-2.2 recycled water infeasible. In addition, meeting this standard at a non-tertiary facility requires large doses of chlorine, which generally increases the salinity of the recycled water and would result in the generation of harmful disinfection byproducts.

After discussing the Project with staff at the Central Valley Water Board and DDW, the project proponent revised its proposal and now proposes not to provide disinfection and not to irrigate food crops with recycled water until a WWTF capable of producing disinfected tertiary recycled water can be built. This means that in the initial phase of the Project, when the volume of wastewater to be recycled is minimal, the WWTF would discharge treated wastewater to unlined evaporation/percolation ponds, not to food crops. When flows reach 300,000 gpd (not 550,000 gpd, as initially proposed), the project proponent proposes to construct a new upgraded WWTF that will generate disinfected tertiary recycled water suitable for unrestricted reuse.

The changes to the Project therefore include: a switch from an initial-phase WWTF that discharges treated effluent directly to food crops to a WWTF that discharges treated effluent to evaporation/percolation ponds, the lowering of the threshold at which a second-phase WWTF capable of producing disinfected tertiary recycled water will be built, and recognition that the initial-phase WWTF will produce Class B biosolids, not Class A biosolids.

#### **IV. CEQA ENVIRONMENTAL REVIEW REQUIREMENTS**

When a lead agency already has a certified EIR, the California Environmental Quality Act (CEQA)(Pub. Resources Code, § 21000 et seq.) does not require the preparation of a subsequent EIR to address changes to the project or its circumstances unless:

- (a) substantial changes are proposed in the project which will require major revisions of the EIR or negative declaration;
- (b) substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the EIR or negative declaration; or
- (c) new information, which was not known and could not have been known at the time the EIR was certified as complete or the negative declaration was adopted, becomes available. (Cal. Code Regs. tit. 14, § 15162.)

Although there are differences between the Project as evaluated in the EIR and the Project as proposed to the Central Valley Water Board, the Board does not believe that these changes are “substantial” and would need to be addressed in a subsequent EIR. Instead, it is appropriate for the Board to prepare an addendum to the EIR since “.. only minor technical changes or additions are necessary...” and since “none of the conditions ... calling for the preparation of a subsequent EIR or negative declaration have occurred.” (Cal. Code Regs., tit. 14, § 15164.)

Based on the facts described in detail below, none of the conditions triggering preparation of a subsequent EIR have occurred. The Board has therefore prepared this Addendum to be considered as an attachment to the 2007 EIR, which evaluates the modifications proposed in wastewater treatment, handling, and disposal procedures for the Project and assesses all potential environmental impacts associated with the proposed modifications.

In accordance with the applicable regulations, an addendum need not be circulated for public review, but can be included in or attached to the certified EIR. (Cal. Code Regs., tit. 14, §15164(c).) However, the Board has nonetheless invited public comments on this addendum in order to fully inform its decision making process.

## V. POTENTIAL IMPACTS FROM THE AMENDED PROJECT

In preparing this Addendum, the Board compared the details provided for the proposed wastewater treatment facilities in the 2007 EIR with the information provided in the Report of Waste Discharge (RWD) submitted to the Board for the Project on 20 June 2014. The Board noted three technical modifications or changes between the information provided on wastewater treatment and disposal procedures described in the 2007 EIR and those provided in the 2014 RWD.

These changes and their potential environmental impacts are discussed below.

1. *During the initial phase of the Project, the project proponent now proposes to switch from the discharge of disinfected secondary treated effluent to food crops to the discharge of undisinfected secondary treated effluent to unlined evaporation/percolation ponds.*

The recycled water treatment and disinfection requirements in Title 22, section 60301 et seq. are designed to minimize the threat to public health through exposure to pathogens associated with treated domestic wastewater. As described above, the discharge of disinfected secondary effluent to food crops as described in the EIR is technically infeasible and could create a risk to public health. To resolve this issue, the project proponent now proposes to discharge undisinfected secondary effluent to unlined ponds until flows approach 300,000 gpd, at which point it will replace the initial WWTF with a new WWTF constructed to produce tertiary disinfected recycled water suitable for unrestricted reuse.

Potential environmental impacts from this proposed change include:

- a. A decrease in the potential exposure of the public to pathogens.

The potential exposure of the public to pathogens will be less than the initial phase wastewater treatment and distribution scenario proposed in the 2007 EIR. While wastewater recycling is considered safe due to regulatory constraints, the distribution of recycled water to food crops can result in several potential pathways for public exposure to pathogens in off-spec recycled water through:

- i. cross connections of recycled water piping and potable water and irrigation water piping;
- ii. contact during recycled water applications where public access is not stringently precluded;
- iii. contact with the food products to which off-spec recycled water has been applied; and
- iv. contact with soils in the recycled water use areas.

The changes proposed for the initial phase of the Project will eliminate these pathways by confining the undisinfected secondary effluent to evaporation/percolation ponds from which public access will be precluded by substantial fencing and signs.

Though the discharge of secondary undisinfected wastewater to unlined ponds also poses a potential pathway for pathogens to reach groundwater, this risk is de minimis. This is due to the fact that most technical references indicate that two to five feet of soil is sufficient to remove pathogens from percolating effluent such that they will not migrate to groundwater. At the site of the proposed ponds, there is approximately 200 feet of soil between the proposed pond inverts and first-encountered groundwater. Boring logs show soils in the vicinity of the proposed ponds consist of interbedded sands, silts, and clays. Pathogens in the undisinfected effluent discharged to the ponds will be removed by alteration and filtering through the soil column, and with approximately 200 feet to first-encountered groundwater, will not result in pathogen impacts on groundwater. Therefore, the public will be less at risk of pathogen exposure as a result of this change.

- b. A potential change in opportunities to recycle effluent.

As mentioned above, although the 2007 EIR indicates that disinfected secondary effluent will be applied to crops during the initial phase of the Project, regulatory policy and engineering issues preclude the Board from issuing waste discharge requirements for such a discharge until a tertiary WWTF is constructed.

Although the project proponent will not be irrigating food crops with effluent during the initial phase of the Project, the project proponent now proposes to replace the initial WWTF with a tertiary WWTF when Project flows reach 300,000 rather than the 550,000 gpd analyzed in the 2007 EIR. This will enable recycling of tertiary-treated water to begin at that lower flow. These changes will result in only an insignificant short term reduction in recycling opportunities for the Project. Due to the importation of surface water and the Project's recharge obligations to RCWD (discussed in the following sub-section), there will be no short- or long-term reduction in the total quantity of water recharge to the aquifer. Therefore, the potential threat to the environment as a result of this change is insignificant.

c. A potential change to the water balance within Root Creek Water District.

While some water is lost in the process of percolating wastewater, every gallon of water used for crop irrigation results in a gallon of groundwater not pumped from the aquifer. Therefore, the switch from irrigating crops with recycled water to percolating wastewater during the initial phase of the Project and discharge of recycled water to unlined ponds during later stages of the Project could reduce the potential volume of water returned to the aquifer by as much as 50 percent.

However, RCWD has already committed to utilize a combination of direct recharge and in-lieu irrigation to reduce groundwater overdraft and to more than offset the Project's groundwater use. By virtue of this commitment and the agreements made to fulfill this commitment, RCWD has the capacity to replenish the difference between irrigating crops with recycled water and percolating effluent.

The project proponents made a commitment to more than offset groundwater use during the development and approval of the Project's Specific Plan and Infrastructure Master Plan. In 2001, Ken Schmidt & Associates completed a hydrological study of the Root Creek service area (Schmidt report) that found that the average regional overdraft within the Root Creek service area at the time was about 3,400 acre-feet per year. RCWD entered into commitments with ensure this overdraft was eliminated. These commitments extend to the Project, as it falls within RCWD's boundary.

RCWD has sufficient and reliable water supplies to eliminate the overdraft within RCWD and to meet Project water demand without relying on recycled water. This was verified by a Water Supply Assessment prepared for the Project by Provost & Pritchard in 2007.

Because of RCWD's recharge obligation to offset the net consumptive use within the District, there will be no short- or long-term reduction in the total quantity of

water recharge to the aquifer due to Project changes. Therefore, the potential threat to the environment as a result of this change is insignificant.

2. *The project proponent now proposes to switch from storing recycled water in lined ponds and relying on crops to remove nutrients (including nitrogen) to storing and disposing of effluent in unlined evaporation/percolation ponds and providing for total nitrogen removal to 10 mg/L.*

Nitrate as nitrogen is a plant nutrient and, at the State Primary Maximum Contaminant Level (MCL) of 10 mg/L, a drinking water contaminant that can cause methemoglobinemia (Blue Baby Syndrome). Most secondary effluent contains total nitrogen in concentrations that, when transformed into nitrate as nitrogen, can percolate through the soil and cause groundwater to exceed the MCL. The over-application of nitrogen to crops can also cause groundwater to exceed the MCL for nitrate as nitrogen of 10 mg/L. To address this issue, the 2007 EIR proposed that recycled water be applied at agronomic rates and that the WWTF ponds be lined to limit effluent percolation to groundwater. As described under Section V.1 above, the project proponent no longer proposes to recycle water during the initial phase of the Project. The project proponent now proposes an initial discharge of secondary undisinfected effluent to evaporation/percolation ponds. After the initial phase, the project proponent will put into service a tertiary WWTF, and disinfected tertiary recycled water will be applied to local crops and landscaping. Recycled water will be stored in unlined ponds. To mitigate potential environmental impacts from the discharge of wastewater to unlined ponds, the project proponent now proposes to provide for total nitrogen removal to 10 mg/L or less for both the initial secondary and later tertiary WWTFs.

Potential environmental impacts from the proposed change include:

- a. Groundwater degradation and/or pollution from effluent percolation to groundwater from the unlined ponds.

The nitrate as nitrogen concentrations in shallow groundwater in the area ranges from 4.2 to 17.4 mg/L. Both the initial secondary and later tertiary WWTFs will provide nitrogen removal such that the final effluent will have a total nitrogen concentration of 10 mg/L or less. Total nitrogen will be subject to partitioning and removal in both the unlined ponds and as the effluent percolates through the 200 feet of soil that overlies groundwater. As a result, the effluent discharge from the unlined ponds to groundwater will have a nitrate as nitrogen concentration less than the MCL of 10 mg/L, and likely less than 6 mg/L. Therefore, the potential threat to the environment as a result of this change is equal to or less than that proposed in the 2007 EIR.

- b. Groundwater degradation and/or pollution from the over-application of nitrogen to the use areas.

With the proposed treatment, the overall amount of nitrogen applied by the discharge to the recycled water use areas would be less than with storage in lined ponds and reclamation on crops as proposed in the 2007 EIR. Further, as discussed in its Antidegradation Analysis, the project proponent has added additional measures to reduce salinity and ensure the discharge to the ponds meets water quality objectives. Together, these represent a higher level of treatment and protection of groundwater quality than proposed in the 2007 EIR.

3. *During the initial phase of the Project, the WWTF will produce Class B biosolids, not Class A biosolids*

There are federal regulations that classify and regulate biosolids, which are the nutrient-rich organic materials resulting from the treatment of domestic sewage in a treatment facility. (40 C.F.R. § 503.) The federal regulations differentiate between Class A biosolids, which contain no detectible levels of pathogens, and Class B biosolids, which are treated, but still may contain detectible levels of pathogens. Class A biosolids are subject to fewer restrictions, and may be directly applied to land in many agricultural and public settings. Class B biosolids may also be applied to land, but there are additional restrictions placed on the use of Class B biosolids.

In looking at disposal options for its biosolids the project proponent determined that landfill disposal was the most viable option. Since the landfill can take Class B biosolids, it was deemed unnecessary to invest the cost required to provide the necessary treatment to meet Class A requirements during the initial phase of the Project. The initial secondary WWTF will generate wasted sludge that will be temporarily stored at the WWTF in lined sludge drying beds or transport bins before being transported off-site for disposal. The temporary storage of Class B biosolids at the WWTF, where public access is precluded, will not increase the potential threat to public health. Further, the WDRs include specifications that require implementation of treatment controls to prevent odor or nuisance conditions from extending beyond the WWTF boundaries. The WDRs also require that biosolids be disposed of at an appropriately permitted facility. Therefore, any potential threat to the environment from this modification is insignificant.

Based on the above factors, the potential environmental impacts that could occur as a result of the proposed modifications in wastewater treatment, handling, and disposal are not significant.

## **VI. CUMULATIVE IMPACT ANALYSIS**

Under CEQA, a cumulative impact may result when two or more individual effects, when considered together, are considerable or would compound or increase other environmental impacts. (Cal. Code Regs., tit. 14, § 15355.) The Central Valley Water Board also considered information on the proposed modifications in wastewater treatment, handling, and disposal procedures for the Project with regard to potential related impacts from other aspects of the Project and found that with the proposed mitigation measures and temporary nature of the proposed changes, the proposed modifications will not introduce any new significant cumulative impacts to the Project that were not analyzed in the EIR.

## **VII. CONCLUSION**

Based on the information summarized in this Addendum, none of the circumstances set forth in Public Resources Code section 21166 or California Code of Regulations, title 14, section 15162 (a) that would require the preparation of a subsequent EIR are present for this Project. Specifically, technical review of the Project finds that (i) no substantial changes are proposed that will require major revisions in the previous CEQA analysis due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; (ii) no substantial changes have occurred with respect to the circumstances under which the Project is to be undertaken that will require major revisions to the previous CEQA analysis due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; and (iii) there is no new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the CEQA analyses were adopted, that shows new significant effects, substantially more severe significant effects, or additional feasible mitigation measures. Therefore, the Central Valley Water Board finds that this Addendum is appropriate to address the additional information now available regarding the Project.

## VIII. LIST OF REFERENCES

1999. Agreement Concerning Agricultural Municipal and Industrial Water Use Within Root Creek Water District, by and between Root Creek Water District, Friant Water Users Authority, Madera Irrigation District, Chowchilla Water District.
2001. Kenneth D. Schmidt & Associates and Provost & Pritchard Engineering Group, Inc. Hydrogeologic Investigation Southeastern Madera County.
2006. Provost & Pritchard Engineering Group, Inc. Gateway Village Infrastructure Master Plan.
2007. Provost & Pritchard Engineering Group, Inc. Water Supply Assessment for Gateway Village.
2007. Madera County Board of Supervisors. Gateway Village Project, Environmental Impact Report.
2014. Provost & Pritchard Consulting Group. Report of Waste Discharge, Riverstone WWTF, Madera County.
2014. Provost & Pritchard Consulting Group. Antidegradation Study and Water Quality Assessment, Riverstone Effluent Storage and Reclamation for Landscape and Agricultural Irrigation at San Joaquin River Ranch.
2014. Kenneth D. Schmidt & Associates. Monitor Well Installation Report and Antidegradation Analysis for Riverstone WWTF.