

**Regional Water Quality Control Board
Central Valley Region
Board Meeting – 5-6 February 2015**

**Response to Written Comments for
The City of Lathrop
Lathrop Consolidated Treatment Facility
Tentative Waste Discharge Requirements and Master Recycling Permit**

At a public hearing scheduled for 5 and 6 February 2015, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) will consider adoption of Waste Discharge Requirements (WDRs) and a Master Recycling Permit for the City of Lathrop's Consolidated Treatment Facility (CTF). This document contains responses to written comments received regarding the tentative WDRs and Master Recycling Permit. Written comments were required by public notice to be received by the Central Valley Water Board by close of business on 26 December 2014 to receive full consideration. Comments were received from the City of Lathrop and the Central Valley Clean Water Association.

Written comments are summarized below, followed by the responses of Central Valley Water Board staff. Based on the comments, Central Valley Water Board staff made several changes to the tentative WDRs to correct and clarify the findings and made changes to address comments as appropriate. Central Valley Water Board staff also made some changes to correct typographical errors and to improve clarity.

CITY OF LATHROP'S COMMENTS

On 23 December 2014, the City of Lathrop (City) submitted written comments regarding the tentative WDRs. The City's comments identified some issues and requested certain changes to correct and clarify the findings of the tentative WDRs, and to revise certain discharge requirements. Most of the requested changes were made and the City generally concurs with the revised WDRs and Master Recycling Permit. The resolution of key issues is summarized below.

City Comment No. 1: The City clarified the operational status of several groundwater monitoring wells referenced in the WDRs and requested that reference to wells that have been abandoned or destroyed be deleted from the findings of the proposed Order.

RESPONSE: There are currently over 60 groundwater monitoring wells associated with the CTF and the recycled water use areas. Some of the wells were not constructed by the City and are not located on City-owned land. The City has provided some limited information about monitoring wells that have been properly destroyed and others that cannot be recovered in the field and are presumed damaged or lost. Staff relied on the water quality data from all monitoring wells to perform the antidegradation analysis and develop appropriate discharge and monitoring requirements. Although certain wells used for that analysis may no longer exist, they are cited in the findings as a record of the data upon which staff relied.

The City's legal right to access to some of the wells is currently unknown and future development of some areas where groundwater monitoring wells are present is on private property not under the control of the City of Lathrop, so those wells could be damaged or destroyed during land development activities. Therefore, the proposed Order requires a complete stand-alone report that documents the status of each well, as well as well ownership information and City access agreements. After the report has been submitted, staff will work with the City to determine which wells should be maintained as future monitoring wells.

City Comment No. 2: The City suggested the inclusion of a new finding specifying that groundwater monitoring will not be needed for “small planned and future recycled water Use Areas because groundwater degradation is not expected to occur.” The City also requested that Provision H.1.f be amended to include a determination whether groundwater monitoring would be necessary as planned and future recycled water Use Areas are brought into use.

RESPONSE: In general, the recycled water Use Areas are spread out over a very large area, shallow groundwater quality beneath the use areas does not meet the water quality objective for TDS, and the treated effluent is of higher quality than ambient groundwater conditions. Therefore, in all but a few areas, it is highly unlikely that the discharge could cause discernible degradation, so only those areas should be the focus of future groundwater monitoring efforts. Staff revised the proposed WDRs to clarify findings that discuss groundwater quality (primarily Findings 47, 48, 62, and 63), the potential for degradation to occur as a result of recycled water use, and where groundwater monitoring is/should be required. Provision H.1.f was revised as requested.

City Comment No. 3: The City requested revision of the Groundwater Limitations because pre-discharge and/or background groundwater quality exceeds the MUN water quality objectives (Primary and/or Secondary MCLs) in many planned recycled water use areas. In such cases, the Controllable Factors Policy applies and the groundwater limitations should prohibit degradation for those constituents.

RESPONSE: The Groundwater Limitations of the Tentative Order stated:

Release of waste constituents from any portion of the CTF and recycled water Use Areas shall not cause groundwater to:

- 1. Exceed a total coliform organism level of 2.2 MPN/100 mL over any seven-day period.*
- 2. Contain constituents in concentrations that exceed either the Primary or Secondary MCLs established in Title 22 of the California Code of Regulations.*
- 3. Contain taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.*

Compliance with these limitations shall be determined using approved statistical methods.

Upon further review, the groundwater limitations in the tentative Order were not consistent with the antidegradation analysis or staff’s intent. They have been revised as follows to address this comment:

Release of waste constituents from any portion of the CTF and recycled water Use Areas shall not cause groundwater to:

- 1. Contain any of the specified constituents in a concentration statistically greater than the maximum allowable concentration tabulated below. The wells to which these requirements apply are specified in the Monitoring and Reporting Program.*

Constituent	Maximum Allowable Concentration ¹
<i>TDS</i>	<i>Current groundwater quality</i>
<i>Nitrate nitrogen</i>	<i>Current groundwater quality</i>

¹ *“Current groundwater quality” means the quality of groundwater as evidenced by monitoring completed as of the date of this Order for each of the specified compliance monitoring wells listed in the Monitoring and Reporting Program.*

2. *Exceed a total coliform organism level of 2.2 MPN/100 mL over any seven-day period.*
3. *Except as specified in 1 above, contain constituents in concentrations that exceed either the Primary or Secondary MCLs established in Title 22 of the California Code of Regulations. For TDS, the upper level Secondary MCL of 1,000 mg/L is applicable.*
4. *Except as specified in 1 above, contain taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.*

Compliance with these limitations shall be determined using approved statistical methods.

Subparagraph 1 would apply to compliance wells for which pre-discharge groundwater quality exceeds a tabulated water quality objective, and subparagraphs 3 and 4 would apply to compliance wells for which pre-discharge groundwater quality meets the water quality objective. Subparagraph 2 would apply to all compliance wells. The applicability of these subparagraphs for each compliance well was added to the Monitoring and Reporting Program (MRP). If additional wells are designated as compliance wells in the future, the Executive Officer can issue a revised MRP specifying the applicability of subparagraphs 1, 3, and 4 based on pre-discharge groundwater monitoring data for each new well.

City Comment No. 4: The City requested that the Water Recycling Specification F.6, F.8, F.9, F.10 and F.14 be revised to address the City’s comments.

RESPONSE: The following changes were made to address the City’s concerns.

Water Recycling Specification	Revisions Made
F.6	Crops or landscape vegetation shall be grown on the Use Areas., and The cropping activities shall be sufficient managed to take up all of the nitrogen applied, including any fertilizers and manure.
F.8	Hydraulic loading of recycled water and supplemental irrigation water (if any) shall be at reasonable agronomic rates designed to: <ol style="list-style-type: none"> a. Maximize crop nutrient uptake; b. Maximize breakdown of organic waste constituents in the root zone; and

Water Recycling Specification	Revisions Made				
	<p>c. Minimize the percolation of waste constituents below the root zone.</p> <p>The Regional Water Board recognizes that some leaching of salts is necessary manage salt in the root zone of crops for production. Leaching shall be managed to minimize degradation of groundwater, maintain compliance with the groundwater limitations of this Order, and prevent pollution.</p>				
F.9	<p>Use areas shall be inspected as frequently as necessary to ensure continuous compliance with the requirements of this Order. The Discharger shall conduct periodic inspections of the recycled water use areas to determine compliance with the requirements of this Order. If an inspection reveals noncompliance, or threat of noncompliance, with the requirements of this Order, the Discharger shall temporarily stop the recycled water use immediately and implement corrective actions to ensure compliance before recommencing the use of recycled water.</p>				
F.10	<p>Use areas where public access is allowed shall be irrigated during periods of minimal use (typically between 9 p.m. and 6 a.m.) to reduce public exposure.</p>				
F.14	<p>Use areas and recycled water impoundments shall be designed, maintained, and operated to comply with the following setback requirements:</p> <p>...</p> <table border="1" data-bbox="581 1209 1393 1346"> <thead> <tr> <th data-bbox="581 1209 1060 1278">Setback Definition</th> <th data-bbox="1060 1209 1393 1278">Minimum Irrigation Setback (feet)</th> </tr> </thead> <tbody> <tr> <td data-bbox="581 1278 1060 1346">Edge of Use Area to domestic water supply well</td> <td data-bbox="1060 1278 1393 1346">400 50</td> </tr> </tbody> </table>	Setback Definition	Minimum Irrigation Setback (feet)	Edge of Use Area to domestic water supply well	400 50
Setback Definition	Minimum Irrigation Setback (feet)				
Edge of Use Area to domestic water supply well	400 50				

City Comment No. 5: The city stated that the requirement for separation between recycled water conveyance pipelines and potable water conveyance pipelines in Water Recycling Specification F.27 is not consistent with current Division of Drinking Water Title 22 regulations or recommendations, and suggested revisions that reference to the American Water Works Association Guidelines for Distribution of Non-Potable Water and Guidelines for the On-Site Retrofit of Facilities Using Disinfected Tertiary Recycled Water, and a 9 February 2005 DDW letter titled, Recycled Water Main and Sanitary Sewer Force Main Separation Requirements.

RESPONSE: Title 22 includes specific requirements for separation between recycled water pipelines and potable water pipelines that are applicable, so the requested revision was not made. However, the requirement was modified as follows:

Horizontal and vertical separation between pipelines transporting recycled water and those transporting potable water shall comply with Title 22, section 64572, except to the extent that DDW has specifically approved a variance.

City Comment No. 6: The City requested that the monitoring requirements for recycled water storage ponds and use areas be revised to be consistent with the recently-adopted Statewide General WDRs for Use of Recycled Water (Order 2014-0090-DWQ). The City was particularly concerned with the requirement in the tentative MRP that required daily inspections of the numerous planned use areas, including many small public landscaped areas such as turf grass and street medians.

RESPONSE: The requirement to monitor dissolved oxygen and pH in the recycled water storage ponds was removed as requested, and the frequency of pond liner and berm inspection was reduced to quarterly to address this concern. Additionally, the MRP was revised to specify separate requirements for monitoring and inspection of agricultural and landscape use areas with less emphasis on monitoring and inspecting the landscaped use areas, which are numerous and generally quite small.

CENTRAL VALLEY CLEAN WATER ASSOCIATION'S COMMENTS

On 24 December 2014, the Central Valley Clean Water Association (CVCWA) submitted written comments regarding the tentative WDRs. CVCWA's comments identified some issues and requested certain changes to the tentative WDRs and Master Recycling Permit. Some of the changes were made as requested and some were not.

CVCWA Comment No. 1: CVCWA states that the groundwater limitations of the tentative WDRs prohibit the discharge from causing exceedance of primary and secondary MCLs, but did not specify which of the secondary MCLs for TDS is considered to be the water quality objective. CVCWA requested that the groundwater limitations be revised to specify that the upper secondary MCL of 1,000 mg/L is the applicable objective for TDS.

RESPONSE: The groundwater limitations were revised to address this comment as described in the response to the City of Lathrop's Comment 3.

CVCWA Comment No. 2: CVCWA states that the performance-based effluent limit for TDS is not consistent with the implementation provisions of the Basin Plan related to establishing limits when naturally occurring background water quality already exceeds the applicable water objectives. Additionally, they state that imposing a performance-based limit for a community that is endeavoring to conserve water in extreme drought conditions and working to expand its recycled water uses will set up the District for a permit violation. CVCWA requests that the performance-based limit for TDS be removed or at least set the limit at 1,000 mg/L to be consistent with background groundwater quality conditions.

RESPONSE: Despite the poor quality of groundwater underlying much of the recycled water use areas, it is appropriate to set a performance-based effluent limit for TDS to ensure that the Discharger continues to implement best efforts, rather than allowing effluent salinity to increase indefinitely.

The proposed effluent limit represents a significant increase over the previous effluent limit of 600 mg/L and was requested by the City in its Report of Waste Discharge. Accordingly, that value formed the basis of the antidegradation analysis, from which staff concluded that the use of recycled water is not likely to cause discernible degradation of groundwater quality for TDS due to the poor quality of pre-discharge shallow groundwater at most of the existing and

planned recycled water use areas. To increase the TDS effluent limit as CVCWA requests would require a new antidegradation analysis and the outcome of that analysis might not be the same.

Staff recognizes that more aggressive water conservation will likely lead to higher effluent salinity, but it has not been demonstrated that an increase to 1,000 mg/L is an inevitable consequence of water conservation in Lathrop. In the future, if the City can show that its water conservation efforts have led, or will inevitably lead, to a violation of the proposed limit, the WDRs can be reopened to consider increasing that limit.

CVCWA Comment No. 3: CVCWA states that Discharge Specification D.1 requires compliance with the groundwater limitations, and is therefore duplicative and creates unnecessary liability. The specific language could impose liability on the District for acts of others which are beyond its control.

RESPONSE: Staff disagrees with CVCWA's comment that this specification is duplicative and unnecessary. Violations of the groundwater limitations may occur when waste disposal is improperly managed. Discharge Specification D.1 requires the City to properly manage their waste disposal in a way that will not cause a violation of the groundwater limitations.

CVCWA Comment No. 4: CVCWA stated that as a Master Recycling Permit, the Tentative Order includes some recycled water specifications not based on the criteria in Title 22, are more stringent than those criteria, or do not provide the necessary caveat that Lathrop may proceed in a manner different than what is required in Title 22 with approval from the Division of Drinking Water (DDW). Specifically,

- a. Specifications that are not part of Title 22 should be deleted from the Order and any deviations from Title 22 should be explained.
- b. Water Recycling Specification F.27 requires specific horizontal and vertical separation between pipelines transporting recycled water and pipelines transporting domestic supply with no qualification that the Division of Drinking Water could grant a variance. Water Recycling Specification F.27 should be deleted or qualified by the addition of "except as approved by DDW".
- c. Water Recycling Specification F.14 imposes some setback requirements for recycled water use areas that are more stringent than Title 22. The requirement should be deleted or at least revised to delete the setback requirement of 25 feet between Use Areas and manmade or natural surface water drainage courses.

RESPONSE:

- a. The recycled water specifications include applicable criteria from Title 22 and other requirements as necessary for the protection of water quality. It is both appropriate and the Board's longstanding practice to impose certain requirements that may be more stringent than the Title 22 regulations as needed to implement the Basin Plan. However, in addition to the revisions described in the response to City of Lathrop's Comment above, several of the Water Recycling Specifications were revised to address CVCWA's concerns.
- b. See response to City of Lathrop Comment 5.

- c. Because some of the landscape recycled water Use Areas are located adjacent to surface water drainage courses, Water Recycling Specification F.14 was amended to specify that the 25-foot setback from surface waters applies only to the agricultural irrigation Use Areas.