

ITEM: 10

SUBJECT: City of Rio Vista, Northwest Wastewater Treatment Plant, Solano County

BOARD ACTION: *Consideration of Order Amending Waste Discharge Requirements Order R5-2010-0081(NPDES Permit No. CA0083771)*

BACKGROUND: The City of Rio Vista (Discharger) owns the Northwest Wastewater Treatment Plant (Facility). The Facility serves a residential development northwest of the City of Rio Vista with a population of approximately 3,400. On 29 July 2010, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) adopted Order R5-2010-0081 (Permit), prescribing waste discharge requirements that permits the discharge of tertiary treated municipal wastewater to the Sacramento River, within the Sacramento-San Joaquin Delta.

The Facility utilizes membrane filtration followed by ultraviolet light (UV) disinfection to remove pathogens from the discharge for public health protection. The current Permit includes general UV disinfection operating specifications to ensure the Facility is adequately disinfecting its wastewater to protect public health and meet the requirements of the Department of Public Health. The Discharger requested modification of the UV disinfection operating specifications based on new facility-specific operational information that demonstrates the necessary level of disinfection to meet the disinfection requirements of the Permit.

The proposed permit amendment includes revised UV disinfection operating specifications based on the Discharger's UV system design criteria that ensure compliance with the disinfection requirements. The proposed amendment also includes minor modifications to the Monitoring and Reporting Program.

ISSUES: A Notice of Public Hearing was sent to the discharger and interested parties on 24 October 2012 with a 30-day public comment period. Public comments on the tentative Order Amending NPDES permit were received on 27 November 2012 from the Central Valley Clean Water Association (CVCWA). The following is a summary of the comments and Central Valley Water Board staff responses.

CVCWA comments that both turbidity and the UV operating criteria impermissibly specify the manner of compliance with the Tentative Order's WDRs and violates section 13360 of the California Water Code. Thus, CVCWA requests to remove all operational and maintenance requirements prescribed in the Tentative Order and revise them to allow the Discharger to select the manner of compliance with WDRs.

Based on recommendations by DPH, Order R5-2010-0081 (NPDES Permit) requires disinfection at a level equivalent to Title 22 disinfected secondary-23 recycled water. This requirement is necessary to protect public health from contact with partially diluted treated municipal wastewater. The NPDES Permit includes effluent limits and operating specifications to ensure this level of disinfection, including effluent limits for total coliform organisms and operating specifications for the ultraviolet (UV) disinfection system (e.g., turbidity, UV dose, and UV transmittance). The proposed Order modifies the UV specifications in the NPDES Permit based on a site-specific study conducted by the Discharger. Compliance with the total coliform organisms effluent limits and UV disinfection operating specifications demonstrates compliance with the equivalency to Title 22 secondary-23 recycled water.

Central Valley Water Board staff does not concur that compliance with total coliform organism effluent limits alone is sufficient to ensure that the necessary disinfection

process has taken place. Total coliform organisms are used as an indicator parameter to evaluate the effectiveness of the treatment system to adequately disinfect the wastewater of pathogens, viruses, and bacteria. DPH developed the requirements for total coliform organisms based on the use of chlorine disinfection. UV disinfection does not disinfect the wastewater in the same manner as chlorine, so DPH developed additional UV operating specifications for facilities that use UV disinfection to ensure adequate disinfection is provided. The existing NPDES Permit, similar to other NPDES permits, currently includes the general UV operating specifications recommended by DPH. The proposed Order modifies the UV specifications considering the facility-specific evaluation of the disinfection system in place at this Facility that meets disinfection requirements recommended by DPH, which in this case is Title 22 disinfected secondary-23 recycled water. The operating specifications in the Permit are necessary to ensure the wastewater is adequately disinfected in accordance with DPH recommendations and do not violate section 13360 of the Water Code.

Legal arguments concerning the Central Valley Water Board's purported failure to comply with Water Code section 13360 are similarly misplaced. For example, as the court noted in *Tahoe-Sierra Preservation Council v. State Water Resources Control Board* (1989) 210 Cal.App.3d 1421, 1438, "Section 13360 is not a sword precluding the regulation of discharges of pollutants. . . .If, under present conditions of knowledge and technology, there is only one manner in which compliance may be achieved, that is of no moment" (citing *Pacific Water Conditioning Assn., Inc. v. City Council* (1977) 73 Cal.App.3d 546, 554). The court went on to say that "Where the lack of available alternatives is a constraint imposed by present technology and the laws of nature rather than a law of the Water Board specifying design, location, or type of construction or particular manner of compliance, there is no violation of Section 13360."

In this case, the proposed permit requirements (i.e., total coliform effluent limits, turbidity specifications, and UV operating specifications) are merely ensuring compliance with DPH disinfection requirements. Furthermore, the Discharger specifically has chosen a UV disinfection system as opposed to other treatment technologies (such as chlorine). With the Discharger's choice of selecting UV disinfection comes the corresponding obligation to comply with DPH disinfection requirements. The Discharger's choice of a UV disinfection system requires site-specific UV operating specifications to ensure disinfection equivalent to Title 22 disinfected secondary-23 recycled water as reflected in the Central Valley Water Board's proposed permit amendment. Finally, even assuming for the sake of argument that the proposed permit requirements were the only manner in which to comply with DPH disinfection requirements, this argument also fails. See, e.g., *Tahoe-Sierra Preservation Council*, 73 Cal.App.3d at p. 1438 (dismissing Plaintiff's claim that there is a violation of Water Code section 13360 even if there is only one manner of meeting a discharge standard is feasible).

RECOMMENDATION: Adopt Proposed Order

Mgmt. Review _____
Legal Review _____

31 January/1 February 2013 Board Meeting
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Rancho Cordova, CA 95670