

ITEM: 11

SUBJECT: Town of Discovery Bay Community Services District Wastewater Treatment Plant, Contra Costa County

BOARD ACTION: Consideration of NPDES Permit Renewal

BACKGROUND: The Town of Discovery Bay Community Services District is the owner (hereinafter Discharger) and Southwest Water is the operator of the Discovery Bay Wastewater Treatment Plant (hereinafter Facility), a publicly owned treatment works (POTW). Treated secondary effluent is discharged to Old River. The proposed NPDES permit authorizes a major discharge of up to 2.1 million gallons per day (mgd) to Old River. The Discharger provides sewerage service for the Town of Discovery Bay and serves a population of approximately 16,000.

The Discharger changed its outfall location to Old River during the period of the current Order. The Discharger also switched from utilizing chlorine compounds for disinfection to using ultraviolet light for disinfection of the effluent. The proposed NPDES permit contains several changes from the current Order, including the removal of some effluent limits due to there being no reasonable potential based on monitoring results and process changes. In addition, the proposed permit includes the results of mixing zone studies required in the current Order and grants dilution credits.

The Discharger, the California Sportfishing Protection Alliance (CSPA), the State Water Contractors (SWC), the California Urban Water Agencies, and the San Luis & Delta-Mendota Water Authority (Authority) and Westlands Water District (Westlands) submitted comments on the tentative NPDES Permit issued for public review on 24 September 2008. Some minor changes have been made to the proposed permit in response to the comments received and is included in the agenda package.

ISSUES: The major issues discussed in the public comments are summarized below. Further detail on all comments is included in Regional Water Quality Control Board (Regional Water Board) staff Responses to Comments:

Average Dry Weather Flow Limit – The Discharger has requested that the new Order contain a 3.0 million gallon per day (mgd) average dry weather flow (ADWF) limit with a 2.1 mgd interim limit until such time that the District submit for Executive Officer approval adequate engineering, CEQA, and anti-degradation analyses justifying the increased flow.

The Discharger has not provided the necessary data and information for Regional Water Board staff to determine if a flow increase is appropriate. Therefore, the ADWF will remain as limited in the proposed permit (2.1 mgd).

Copper Effluent Limitation – The commenter requests that the copper limitations in the proposed permit be increased to allow the full dilution credit. The Discharger states that effluent copper is believed to be from the water supply system and that work in the community regarding copper pipe corrosion rates may result in an unknown impact in copper concentrations. The proposed permit contains an average monthly effluent limitation (AMEL) of 50 µg/L and a maximum daily effluent limitation (MDEL) of 70 µg/L. The

Discharger is requesting an effluent copper limit AMEL of 172 µg/L and a MDEL of 323 µg/L.

The effluent limitations for copper in the proposed permit are based on the 95th and 99th percentiles of effluent monitoring data, which represent the AMEL and MDEL, respectively. If the full dilution credit was applied (e.g. allowing the full assimilative capacity of the receiving water) the effluent limitations would be 3 to 4 times greater than the past treatment plant performance. This would not be consistent with State Water Resources Control Board Resolution 68-16 (Antidegradation Policy). Regional Water Board staff have determined that the proposed limits allow dilution to the extent that is consistent with the Antidegradation Policy and the development of the proposed effluent limits are consistent with the manner in which limitations are calculated per the SIP and EPA's Technical Support Document utilizing the 95th and 99th percentiles.

UV Disinfection – CSPA commented that the Discharger is using ultraviolet light (UV) for disinfection purposes while operating a secondary treatment facility. The commenter wants the Discharger to be required to consult with the California Department of Public Health regarding the adequacy of the UV system to provide for proper disinfection.

Regional Water Board staff has consulted with the Department of Public Health to ensure the operational and monitoring requirements are adequate to provide proper disinfection. The operational requirements along with continuous monitoring requirements for turbidity and UV transmittance will ensure adequate disinfection of the wastewater.

Proposed Permit Does Not Comply with Title 27 for the Disposal of Sludge – CSPA states that while domestic wastewater may be exempt under circumstance from Title 27, sludge is not exempt. The commenter feels the proposed permit does not comply with CCR Title 27 and needs to be amended accordingly.

Wasted biosolids from the biological treatment process are stored in clay lined ponds prior to being ultimately sent to solar driers. Once dried, the biosolids are tested to determine compliance with the Class A biosolids standards found in 40 CFR Part 503. The Discharger is currently attempting to be classified a Class A biosolids facility. Currently biosolids are stored in the sludge drying building or adjacent to the building. Groundwater effluent limits and monitoring requirements were carried forward in the proposed permit from previous Orders.

Mixing Zone Discussion – CSPA commented that the proposed permit does not adequately provide information concerning the mixing zone granted the Discharger or address mixing zone requirements in the SIP.

As stated in the fact sheet, studies, data, and other information from the Discharger and its technical consultants were used in determining the appropriateness of the mixing zone request. These studies and information are a part of the public record and are available for review. The use of mixing zones, and the requirements for their inclusion in NPDES permits, is contained in State regulations. The requirements in these regulation were examined along with the information submitted by the Discharger to

determine if dilution credits were to be granted, and to what extent. The fact sheet in the permit has been modified to provide a more thorough explanation of the mixing zone analysis as well as a more thorough delineation of the mixing zone boundaries which are the same as the boundaries defined in the current Order.

Electrical Conductivity (EC) effluent limitation – CSPA contends the effluent limitation for EC in the proposed Permit will be eliminated subject to an illegal “pay to pollute” requirement. The proposed “pay to pollute” requirement establishes an illegal tax (or fee) beyond the authority of the Regional Board.

Salinity is a problem throughout the Central Valley that is being worked on by the Regional Water Board and other parties. The proposed Permit requires the Discharger to take all reasonable steps within their control to reduce effluent salinity. Some means of reducing salinity are beyond the immediate control of the Discharger, such as the salinity of the water supply for the community, or are legally beyond the control of the Discharger, such as requiring removal of existing on-site regenerating water softeners. Salinity removal technologies such as ultra-filtration and reverse osmosis exist, but these are expensive, have other significant environmental impacts, and are judged not feasible to pursue at this time [SWRCB Order WQ2005-0005 regarding the City of Manteca]. For salinity impacts that cannot be eliminated by the Discharger, the proposed Permit requires participation in the broader salinity planning efforts to address salinity reduction beyond the direct control of the Discharger.

EC Effluent Limitation - The San Luis & Delta-Mendota Water Authority (Authority) and Westlands Water District (Westlands) commented that the proposed permit impose an electrical conductivity (EC) limitation of 2,700 µmhos/cm (annual average), while the Bay Delta Plan and the Basin Plan impose much more stringent requirements.

The proposed Order includes salinity requirements that are consistent with the Bay Delta Plan and Basin Plan. However, the limits are not in effect. The State Water Board found in WQO 2005-005 for the City of Manteca that the imposition of effluent limits that would require the construction and operation of reverse osmosis facilities to treat discharges prior to implementation of other measures to reduce the salt loading in the discharge was not a reasonable approach. The proposed Order provides reasonable salinity controls that put the Discharger on the path to reducing its salt loading to the Delta. An annual average effluent limit of 2700 µmhos/cm for EC is required to cap the discharge at current levels, and the Discharger is required to develop and implement a Salinity Plan to reduce the salinity in the discharge. Should the Discharger fail to adequately meet this requirement, the proposed Order requires immediately compliance with the effluent limits that are based on the Bay-Delta Plan water quality objectives for the geographical location. Compliance with these salinity requirements will result in a salinity reduction in the effluent discharged to the receiving water.