

ITEM: 21

SUBJECT: City of Stockton, Stockton Regional Wastewater Control Facility, San Joaquin County

BOARD ACTION: *Consideration of Time Schedule Order and NPDES Permit Renewal (NPDES No. CA0079138)*

BACKGROUND: The City of Stockton (Discharger) is the owner and operator of the City of Stockton Regional Wastewater Control Facility (Facility), a publicly owned treatment works. The Discharger provides sewerage service for the City of Stockton, Port of Stockton and surrounding unincorporated areas of San Joaquin County and serves a population of approximately 326,000. The design daily average flow capacity of the Facility is 55 million gallons per day (mgd). The Facility's current average effluent discharge rate is approximately 26 mgd.

On 23 October 2008, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) adopted Order R5-2008-0154, prescribing waste discharge requirements for the Facility, which permits an average dry weather flow of 55 mgd of tertiary treated effluent to the San Joaquin River, within the Sacramento-San Joaquin Delta. The United States Environmental Protection Agency and the Central Valley Water Board have classified this discharge a major discharge.

The proposed NPDES permit renewal does not allow for an increase in the discharge from the current permit. The proposed NPDES permit renewal includes new effluent limitations for methylmercury and more stringent effluent limits for nitrate plus nitrite (as N). Additionally, effluent limitations for aluminum, bis-2 (ethylhexyl) phthalate, cyanide, manganese, and molybdenum have been removed from the proposed NPDES permit because these constituents no longer have reasonable potential to cause or contribute to an exceedance of the applicable water quality objectives.

A permit alternative for the regulation of nitrate plus nitrite is also provided in the agenda package to be considered by the Central Valley Water Board. The proposed permit does not allow a mixing zone and includes a final effluent limit for nitrate plus nitrite of 10 mg/L (as N). The permit alternative identifies changes to the proposed permit that allows a mixing zone and dilution for nitrate plus nitrite with a final effluent limitation of 26 mg/L (as N) from April 1 – September 30 and 30 mg/L (as N) from October 1 – March 31.

ISSUES: A Notice of Public Hearing was sent to the discharger and interested parties on 26 March 2014 for a 30-day public comment period. Public comments on the tentative NPDES permit were received on 21 April 2014 from the California Urban Water Agencies (CUWA), and on 25 April 2014 from the Central Valley Clean Water Association (CVCWA), San Luis & Delta-Mendota Water Authority and State Water Contractors (Water Contractors) and the Discharger. United States Environmental Protection Agency, Region IX (USEPA) provided late comments on 29 April 2014. The following is a summary of the comments on the major permitting issues and Central Valley Water Board staff responses. Detailed comments and responses are included in the Staff Response to Comments document included in the agenda package.

Support Nitrate Plus Nitrite Option. The Discharger and CVCWA support the proposed Nitrate Plus Nitrite Option. This option provides a seasonal performance based effluent limitation on nitrate plus nitrite (as N) of 26/30 mg/L.

Central Valley Water Board staff does not concur. The Central Valley Water Board is concerned with the effects of the discharge of nutrients, including nitrate and nitrite, on biologically sensitive aquatic resources and critical habitats, as are present in the Delta, and the impact of nutrients on the use of the water for municipal uses. The proposed

limits are necessary to address cultural eutrophication, which is the adverse effects of excess human-caused nutrient inputs. Due to the existing conditions of the Delta, point source dischargers need to reduce nutrient levels. The proposed nitrate plus nitrite effluent limit is based on the technical capability of publicly-owned treatment works and is readily achievable using standard denitrification technologies. The limit is protective of the MUN beneficial use, and is a technologically achievable limit that results in a reduction in nutrient loadings from the previous Order that is protective of aquatic life beneficial uses.

Interim Total Methylmercury Effluent Limitation. The Discharger and CVCWA are concerned with the approach to the calculation of the interim total mercury loading effluent limitation (57 grams/year), specifically the flow and effluent quality data used to derive the performance-based interim limitation. The Discharger is concerned that historical discharge rates should not have been used to make the calculation to set the interim effluent limitation, but instead the permitted discharge rate should be used. Additionally, the Discharger is concerned that using data after the Facility was upgraded to tertiary filtration unfairly penalizes them for early implementation of actions to reduce mercury in their effluent prior to adoption of the Delta Methylmercury TMDL.

Central Valley Water Board staff agrees that the Discharger has implemented early reductions of mercury and would be unfairly penalized if the current data were used to calculate the interim limits. Therefore, the interim limits for mercury have been recalculated using the same dataset that was used to develop the Discharger's waste load allocation (i.e., August 2004 – July 2005). This period is prior to the Discharger constructing tertiary filtration, and is consistent with the intent to not penalize dischargers for early implementation of mercury controls. The proposed Permit has been modified to include an interim limit for total mercury of 217 grams/year.

Time Schedule Order (TSO) for Trihalomethanes (THMs). The Discharger requests two of the internal due dates within the TSO be extended to ensure compliance with such milestones: 1) Design and Construction; and 2) Startup and Testing of Upgrades.

Central Valley Water Board staff concurs and has made the requested changes to the due dates.

Monitoring Requirements. CUWA requests the Discharger continue monitoring the effluent weekly for total Kjeldahl nitrogen (TKN) and the receiving water weekly/monthly for nitrogen constituents (nitrate, nitrite, TKN) contending that these are constituents of concern for the Facility until denitrification facilities are constructed and operational.

Central Valley Water Board staff has concluded that the tentative Permit requires sufficient monitoring as part of the Effluent and Receiving Water Characterization Monitoring. Bi-monthly (i.e. every other month) samples will be collected from the effluent and upstream receiving water and analyzed for TKN, nitrate and nitrite. The tentative Permit also requires weekly effluent monitoring for nitrate, nitrite, and ammonia. Additionally, the Delta Regional Monitoring Program is expected to include receiving water monitoring for drinking water constituents of concern in the San Joaquin River.

Support Nitrate Plus Nitrite in Proposed Permit. The Water Contractors and USEPA support the tentative Permit, and in particular support the revised ammonia limits based on the 2013 National Ambient Water Quality Criteria for Ammonia and the more stringent nitrate plus nitrite limit of 10 mg/L.

Central Valley Water Board staff appreciates the comment.

Stockton Deep Water Ship Channel Dissolved Oxygen TMDL. USEPA is concerned that the proposed Permit does not include dissolved oxygen effluent limits that are consistent with wasteload allocations and assumptions contained within the TMDL. USEPA believes Central Valley Water Board staff's decision not to carry forward the dissolved oxygen effluent limits from previous Order R5-2008-0154 may be inconsistent with the TMDL.

Central Valley Water Board staff concurs. Although the Facility improvements have reduced the discharge of oxygen demanding substances substantially and have resulted in increased DO in the Deep Water Ship Channel, the river, at times, continues to exceed the water quality objectives. In accordance with the Control Program for Factors Contributing to the DO Impairment in the Stockton Deep Water Ship Channel Portion of the San Joaquin River, the proposed Order has been modified to carry forward the DO effluent limitations from the previous Order.

Monitoring Requirements for Edge of Mixing Zone and Total Nitrogen. USEPA requested the proposed Permit include receiving water monitoring for trihalomethanes (THMs) at the edge of the approved mixing zone. In addition, USEPA requested the Facility's effluent be monitored for total nitrogen.

Central Valley Regional Board staff does not concur that monitoring for THMs is necessary at the edge of the mixing zone. Receiving water monitoring at the edge of a mixing zone, especially a human carcinogen mixing zone under tidal conditions, does not provide useful information. With regard to total nitrogen monitoring, this information can be calculated using the monitoring in the proposed Permit for nitrate (as N), nitrite (as N), ammonia (as N) and total Kjeldahl nitrogen.

RECOMMENDATION: Adopt NPDES Permit Renewal and Time Schedule Order

Mgmt. Review AWL

Legal Review _____

5/6 June 2014

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