

ITEM: 12

SUBJECT: City of Turlock, Water Quality Control Facility, Stanislaus County

BOARD ACTION: *Consideration of NPDES Permit Renewal and Time Schedule Order*

BACKGROUND: The City of Turlock (Discharger) is the owner and operator of the City of Turlock Water Quality Control Facility (Facility) that serves a population of approximately 78,200 people and 10 significant industrial users. (The current residential monthly sewer charge is \$37.10.) The Facility serves the City of Turlock and the community service districts of Keyes and Denair, and receives primary treated effluent from the City of Ceres.

Tertiary treated effluent from the Facility is currently discharged to Harding Drain, a constructed agricultural drain and a water of the United States. The Discharger is planning to construct a dedicated pipeline to transport and discharge treated wastewater to the San Joaquin River. The proposed National Pollutant Discharge Elimination (NPDES) permit authorizes a major discharge of up to 20 million gallons per day (mgd).

The Discharger petitioned the State Water Resources Control Board (State Water Board) to review the decision of the Regional Water Resources Control Board (Central Valley Water Board) regarding adoption of existing Order No. 5-01-122 and the associated existing Cease and Desist Order (CDO) No. 5-01-123. To address the petition, the State Water Board adopted Water Quality Order 2002-0016 on 3 October 2002, remanding the NPDES permit and the CDO to the Central Valley Water Board for modifications.

Although a tentative NPDES Permit was proposed to be adopted in April 2004, the permit renewal was deferred based on the anticipated change in discharge location. The Discharger's petition to the State Water Board for change in the point of discharge was approved on 7 July 2006. Subsequent to issuance of a permit from the Army Corps of Engineers, the Discharger intends to commence pipeline construction as soon as possible. The duration of construction is approximately 18 months.

The proposed NPDES Permit contains new and/or more stringent effluent limitations for aluminum, copper, selenium, carbon tetrachloride, chlorodibromomethane, dichlorobromomethane, ammonia, nitrate, and electrical conductivity at Discharge Point No. 001 for the discharge to Harding Drain. The proposed NPDES permit also contains new and/or more stringent effluent limitations for aluminum, iron, manganese, copper, lead, silver, selenium, carbon tetrachloride, chlorodibromomethane, dichlorobromomethane, ammonia, nitrate, and electrical conductivity at Discharge Point No. 002 for the discharge to the San Joaquin River. A Time Schedule Order (TSO), including time schedules and corresponding interim effluent limitations, is proposed for the new and more stringent effluent limitations with which the Discharger is unable to immediately comply.

Three tentative NPDES Permits and TSOs were issued for public comment between December 2008 and October 2009. The tentative orders addressed major issues regarding allowable mixing zones and the development of effluent limitations for hardness-dependent metals.

The Discharger submitted a mixing zone study on 16 June 2009 requesting the mixing zones and dilution credits for chlorodibromomethane, dichlorobromomethane, carbon tetrachloride, and nitrate.

ISSUES: The major issues discussed in the public comments are summarized below. Changes have been made to the proposed NPDES Permit in response to the comments. Further detail on all comments is included in Central Valley Water Board staff Response to

Comments.

Discharger and CVCWA Comments

Metal Translators: The Discharger requests that translators derived in its study evaluating effluent data be used to calculate water quality criteria for copper, lead, and zinc for the discharge to Harding Drain. Central Valley Water Board staff concurs that it is appropriate to adjust water quality criteria for the discharge to Harding Drain using the appropriate translators. Therefore, the criteria for copper, lead, and zinc, used for calculating the proposed applicable water quality-based effluent limitations (WQBELs) have been revised accordingly.

Applicability of MUN for Harding Drain: The effluent limitations for carbon tetrachloride, chlorodibromomethane, and dichlorobromomethane are based on the protection of the municipal and domestic supply (MUN) beneficial use. CVCWA comments that the Central Valley Water Board has inappropriately applied the MUN designation to Harding Drain. The Discharger further requests that the effluent limitations established for the discharge to the San Joaquin River, which allow for dilution, be applied to the discharge to Harding Drain.

The more lenient effluent limitations for these constituents allowed for discharge to the San Joaquin River are due to the available dilution due to flow in the River. The Harding Drain does not provide the same level of dilution; therefore, the Central Valley Water Board cannot allow dilution credits. Harding Drain has the designated MUN use through implementation of the State Water Board Drinking Water Policy (Resolution No. 88-63). The MUN use can only be removed through a Basin Plan amendment. Therefore, the proposed NPDES permit must regulate the discharge to Harding Drain to protect the MUN beneficial use.

Compliance Schedules: The Discharger requests compliance schedules for aluminum, iron, manganese, and nitrate to be included in the proposed NPDES Permit rather than in a separate TSO. Central Valley Water Board staff does not concur that compliance schedules for iron and manganese are necessary. Therefore, compliance schedules for these constituents are not been included in the proposed permit or TSO. The effluent limitation for nitrate is based on the primary Maximum Contaminant Level (MCL), which is not considered a "new interpretation" of a narrative objective. Therefore, a compliance schedule for nitrate cannot be included in the proposed NPDES Permit. Similarly, the annual average effluent limitation for aluminum is based on the Secondary MCL; therefore the compliance schedule for all aluminum effluent limitations is included in the proposed TSO. (It is anticipated that the corrective actions necessary to achieve compliance with the annual average human health-based effluent limitation and the monthly-average and maximum-daily limitations for protection of aquatic life, will be the same and will be conducted simultaneously. Therefore, a joint compliance schedule for all aluminum effluent limitations is included in the proposed TSO.)

Assimilative Capacity for Nitrate: The Discharger submitted an analysis of assimilative capacity for nitrate in the San Joaquin River and requests that effluent limitations for nitrate at Discharge Point No. 002 be calculated considering dilution. Based on its review of the Discharger's dilution/mixing zone study, Central Valley Water Board staff concludes that dilution should be allowed for nitrate. Based on the Discharger's dilution study, a dilution ratio of up to 5.8-to-1 may be allowed for the calculation of effluent limitations for nitrate. The Discharger further requested that the dilution factor be limited to 2.4-to-1, to reflect a mixing zone at which a performance-based effluent limitation can be achieved. Board staff concurs with the use of the smaller mixing zone for nitrate that represents the performance of the existing Facility and has included a more stringent performance-based effluent limitation of 31 mg/L, that implements the reduced dilution, for the discharge to the San Joaquin River.

Compliance Schedule for Electrical Conductivity (EC): The Discharger and CVCWA comment that the tentative NPDES Permit includes a time schedule for compliance with

final EC effluent limitations by 1 January 2016 while the total maximum daily load (TMDL) in the Basin Plan requires final compliance with the salinity water quality objectives by 28 July 2022 (28 July 2026 for critically dry years). Thus, the Discharger and CVCWA request that the compliance schedule be consistent with the TMDL. Based on information provided in the Discharger's comments, the Discharger will need to immediately start investigating and implementing costly upgrades that may be unnecessary should source control efforts succeed. Therefore, the proposed EC compliance schedule has been revised to be consistent with the TMDL.

Reclamation: The Discharger requests that reclamation requirements be removed from the tentative NPDES Permit, and instead, be placed in water reclamation requirements separately issued and adopted by the Central Valley Water Board. Central Valley Water Board staff does not concur. California Water Code (CWC) section 13523 states that the Central Valley Water Board shall, in the judgment of the Board, deems it is necessary to protect the public health, safety, or welfare, prescribe water reclamation requirements for water which is used as reclaimed water. The proposed NPDES Permit serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4, Division 7 of the CWC (commencing with section 13260), and water reclamation requirements may be included in WDRs.

CSPA Comments

Antidegradation Analysis: CSPA comments that the tentative NPDES Permit contains an inadequate antidegradation analysis. Central Valley Water Board staff does not concur. Based on the guidance provided by the State Water Board's Administrative Policy Update (APU) 90-004 Antidegradation Policy Implementation for NPDES Permitting, and EPA guidance, Board staff concluded that the discharger is only required to conduct a simple, rather than complete, antidegradation analysis. Central Valley Water Board staff concluded that the proposed NPDES Permit is consistent with federal and State antidegradation regulations.

Mixing Zone: CSPA comments that the tentative NPDES Permit allows a mixing zone that does not comply with the requirements of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP) or the Basin Plan. Central Valley Water Board staff does not concur. The Discharger provided a dilution/mixing zone study. Based on the results of the study, the proposed NPDES Permit grants a 19.9:1 dilution credit for human health criteria. The mixing zone and dilution credits are in compliance with the SIP and the Basin Plan, follow USEPA's *Technical Support Document for Water Quality-based Toxic Control* (TSD) guidance, and are adequately protective of the beneficial uses of the receiving water. The Fact Sheet (Attachment F) has been revised to provide additional rationale for the authorized mixing zone.

Electrical Conductivity: CSPA comments that the tentative NPDES Permit contains a compliance schedule for EC that violates the Basin Plan, federal regulations, and the CWA. Central Valley Water Board staff does not concur. The compliance schedule contained in the proposed NPDES Permit is based on the TMDL for Salt and Boron in the Lower San Joaquin River. The compliance schedule is consistent with the Basin Plan and State Water Board Resolution No. 2008-0025, *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits*. No changes have been made to the compliance schedule in the proposed NPDES Permit.

Mgmt. Review _____
28/29 January 2010
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670