

ITEM: 12

SUBJECT: City of Angels Wastewater Treatment Plant, Calaveras County

BOARD ACTION: *Consideration of Order Amending Waste Discharge Requirements Order No. R5-2007 0031 (NPDES No. CA0079588)*

BACKGROUND: The Regional Water Quality Control Board, Central Valley Region, (Central Valley Water Board) adopted Waste Discharge Requirements Order No. R5-2007-0031 on 3 May 2007, for the City of Angels Wastewater Treatment Plant (Facility) in Calaveras County. The City of Angels (Discharger) maximizes disposal of treated wastewater to land via spray irrigation of 61 acres of pastureland and reclamation of 110 acres on the Greenhorn Creek Golf Course. Wastewater flows exceeding the land disposal and storage capacity of the Facility are to be discharged seasonally to Angels Creek. The Facility is permitted to discharge seasonally up to an average daily flow of 1.9 million gallons per day of tertiary treated wastewater to Angels Creek, a water of the United States.

Order No. R5-2007-0031 includes Discharge Prohibition III.E., which prohibits the discharge to surface water unless there is at least a 20:1 flow ratio (Angels Creek: effluent) for the discharge. Although a 20:1 flow ratio is required, there was insufficient information at the time Order No. R5-2007-0031 was adopted to allow dilution credits. Therefore, Reopener Provision VI.C.1.f. was included in Order No. R5-2007-0031 to allow the permit to be reopened should the Discharger provide sufficient information to allow dilution credits. Since adoption of Order No. R5-2007-0031, the Discharger provided a mixing zone study demonstrating that assimilative capacity and dilution are available in the receiving water. The proposed Order amends Order No. R5 2007-0031 to allow dilution credits for compliance with human health and aquatic toxicity criteria, based on new available information that was not available when the existing Order was adopted. The allowance of dilution credits results in less stringent water quality-based effluent limitations for ammonia, bis(2-chloroethyl)ether, dichlorobromomethane, copper, lead, and zinc, and the numeric chronic whole effluent toxicity monitoring trigger. Other associated changes are made throughout Order No. R5-2007-0031 (NPDES permit) and the fact sheet, due to the allowance of dilution credits.

The following documents are provided electronically in the agenda package that is posted on the Central Valley Water Board's website:

- City of Angels Mixing Zone Study
- City of Angels Antidegradation Analysis

ISSUES: The Discharger, California Department of Fish and Game (DFG), and the California Sportfishing Protection Alliance (CSPA) submitted public comments regarding the proposed Order amending the NPDES Permit. The major issues discussed in the public comments are summarized below. Some minor changes have been made to the proposed Order and proposed amended permit in response to the comments. Further detail on all public comments is included in Central Valley Water Board staff Responses to

Comments.

Factual Corrections: The Discharger identified several factual errors/typos in the proposed Order and amendment. The proposed Order and amended permit have been corrected accordingly.

Effluent Limits Exceed Water Quality Criteria: DFG comments that the effluent limits for ammonia, copper, lead, and zinc exceed water quality criteria and are therefore not protective of aquatic life. The proposed amendment allows a mixing zone and dilution, which results in water quality-based effluent limitations (WQBELs) with compliance measured at the end-of-pipe that exceed the applicable criteria. The WQBELs ensure that the water quality criteria are met at the edge of the mixing zone. The definition of a mixing zone is "...a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall waterbody." (*Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California* (SIP), Appendix 1-4) As discussed in detail in Section IV.C.2.c of the Fact Sheet, the mixing zone was established based on a mixing zone study performed by the Discharger and meets all of the requirements of the SIP.

Bioassessments: DFG recommends a bioassessment be required as part of the proposed permit. The effluent and receiving water monitoring and reporting requirements in an NPDES permit provide the Central Valley Water Board with information to assure that the Discharger is complying with its permit requirements. A bioassessment of the receiving water provides valuable information that characterizes the health of the receiving water environment and impacts from potentially varying sources within the watershed. However, it does not provide discharge-specific information relating to the regulation of the specific point source discharge. Therefore, in general, bioassessments are not required in an NPDES permit for an individual discharge.

Zone of Passage not provided: DFG comments that the proposed mixing zone is too large for the creek and would not allow safe fish passage. The stream width within the mixing zone varies from 18 feet to 8 feet; an 8-foot width creek cannot accommodate a mixing zone while allowing a zone of passage.

The proposed mixing zone allows for a zone of passage in three ways:

1) The proposed amendment requires that the diffuser extend no more than one-half of the creek width.

2) The dilution credit for acute toxicity is only half of the available dilution determined to be available at 36 feet downstream of the discharge where the plume is fully mixed across the stream width. Thus, the acute mixing zone is estimated to only extend 18 feet downstream, which means the receiving water will be in compliance with acute criteria before the plume reaches all of the way across the stream. This ensures a portion of the creek to be always

in compliance with acute criteria, thus providing a zone of passage, and

3) The permit requires compliance with an acute toxicity effluent limitation with compliance determined based on performing 96-hour acute bioassays using 100% effluent. Therefore, the proposed permit addresses this concern.

Biostimulation: DFG comments that it is not clear that adequate studies have been conducted to address nutrient loading and biostimulation. For the proposed discharge this is not a concern for several reasons. The discharge will comprise no more than 5% of the creek flow and ammonia concentrations will be below aquatic toxicity criteria within a short distance. Ammonia concentrations that could result in biostimulation are significantly greater than the aquatic toxicity water quality criteria. Furthermore, the discharge is seasonal, will be intermittent, and only occur during wet winters.

Mixing Zone for “new” NPDES Discharger not Allowed: CSPA comments that the proposed Amendment to relax effluent limitations by applying a mixing zone for a “new” NPDES discharge is contrary to State Policy, Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) and Federal Regulations, California Toxics Rule, 40 CFR 131, Implementation. The proposed permit amendment does not allow compliance schedules for meeting water quality-based effluent limitations for CTR or non-CTR criteria. The commenter seems to be confusing a dilution credit with a compliance schedule and assumes that the discharge has not been in compliance with the permit. The Discharger is required to immediately comply with the effluent limitations in the permit when it initiates the discharge to Angels Creek.

Mixing Zone does not Comply with State Policy and Basin Plan: CSPA states that the proposed permit amendment contains an allowance for a mixing zone that does not comply with the requirements of the SIP or the Basin Plan.

Central Valley Water Board staff disagrees and has provided detailed responses to this and other extensive comments in the Staff Response to Comments document provided in the agenda package.

Hardness: CSPA states that the proposed permit amendment establishes Effluent Limitations for metals based on the hardness of the effluent as opposed to the ambient upstream receiving water hardness as required by the California Toxics Rule. As detailed in the Fact Sheet (Section IV.c.2.b.), the effluent limitations for metals with hardness-dependent CTR criteria are based on the actual ambient receiving water hardness. Therefore, the proposed Order has not been modified.

Mgmt. Review _____
Legal Review LTO

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