

Regional Water Quality Control Board
North Coast Region

Executive Officer's Summary Report
8:30 A.M., Thursday, December 6, 2012
Santa Rosa

ITEM: 9

SUBJECT: **Public Hearing** on Order No. R1-2012-0101, to consider adoption of Waste Discharge Requirements to renew NPDES permit for the **Occidental County Sanitation District and Sonoma County Water Agency** for the **Occidental Wastewater Treatment Facility**, WDID No. 1B830010SON, NPDES No. CA0023051, Sonoma County (*Cathleen Goodwin*)

BOARD ACTION: Consider adoption of renewed NPDES Permit, Order No. R1-2012-0101.

BACKGROUND: The Regional Water Board adopted an NPDES Permit and Waste Discharge Requirements, Order No. 93-42 on May 27, 1993, for the Occidental County Sanitation District (CSD) Wastewater Treatment Facility (WWTF).

The Sonoma County Water Agency (SCWA) submitted a Report of Waste Discharge (ROWD) on behalf of Occidental CSD on January 14, 2009, for renewal of the existing permit.

The Occidental CSD owns the Occidental WWTF and the SCWA operates and maintains the WWTF under contract with Occidental CSD. The Occidental CSD and SCWA are collectively referred to as the Permittee.

The WWTF consists of a collection, treatment and disposal system, which serves a population of approximately 650, including residential and commercial customers in the Town of Occidental. The WWTF is designed to provide secondary treatment for an average annual dry weather flow of 0.05 million gallons per day (mgd) and a peak wet weather flow of 0.252 mgd.

The WWTF consists of a headworks, one aeration pond, one settling pond, chlorination, dechlorination, and pH adjustment. The headworks is located at the lift station and consists of a grit chamber, wet well, and wet well overflow storage tank. Secondary treated, disinfected, dechlorinated wastewater is discharged year-round to Graham's Pond, a 10 million gallon

reservoir that overflows to Dutch Bill Creek, a tributary to the Russian River. During the period of October 1 through May 14, the Permittee intermittently discharges combined effluent and storm water from Graham's Pond to Dutch Bill Creek at one percent of the flow of Dutch Bill Creek as measured at the Camp Meeker bridge. During the period of May 15 through September 30, the Permittee irrigates an 8.26 acre cattle pasture with effluent stored in Graham's Pond. The pasture and Graham's Pond are privately owned and the pasture is located adjacent to and immediately downgradient from Graham's Pond.

The following narrative duplicates the narrative describing issues under the Cease and Desist Order item for this Permittee in today's agenda.

ISSUES:

Significant issues identified and addressed in the proposed permit include the following:

Long History of Enforcement

The WWTF has a long history of Basin Plan and effluent limitation violations.

Basin Plan Violations. The Basin Plan requires all WWTFs that discharge to surface waters in the Russian River Basin to provide advanced wastewater treatment. In addition, the Basin Plan prohibits discharges to surface waters during the period of May 14 through September 30. Occidental CSD provides only secondary treatment and discharges year-round to Graham's Pond. The Permittee has utilized Graham's Pond as a year-round effluent storage reservoir since approximately 1977. However, Regional Water Board analysis has determined that Graham's Pond is a water of the United States due to its construction and location within an existing headwaters drainage system. Graham's Pond is an in-stream pond that was constructed at the headwaters of Dutch Bill Creek, originally for use as an agricultural pond. Graham's Pond receives runoff from upstream slopes and several small drainages into the pond.

Effluent Limitation and Other Violations. During the term of the previous Order, the Permittee experienced violations of biochemical oxygen demand (BOD₅), total suspended solids, settleable solids, chlorine residual, pH, total coliform and acute toxicity effluent limitations. Non-effluent violations included

several sanitary sewer overflows, spills related to a leak in the effluent settling pond, effluent discharges to receiving water at greater than 1% of the stream flow, and several missing data violations. After the Permittee completed its collection system replacement project in 2007, the number of discharge rate violations decreased from 18 to 11, unauthorized discharges decreased from 16 to 4, and sanitary sewer overflows decreased from 5 to 1.

Effluent limitation violations are assessed at the point that effluent is discharged to Graham's Pond because Graham's Pond has been identified as a water of the US. Numerous acute toxicity violations have not been investigated well and may be related to high ammonia in the effluent discharge.

Violations of BOD₅, TSS, settleable solids, coliform and pH have decreased since completion of the collection system replacement project in 2007. These violations have been intermittent and sometimes episodic (a cluster of violations over a short period of time), but the reason for the violations is not typically evident or identifiable.

Enforcement Actions. Since 1997, several enforcement actions have been taken against the Permittee, including five cease and desist orders (CDO), two administrative civil liability (ACL) complaints, and two ACL orders. The last enforcement action occurred in 2007. Violations that have occurred between 2007 and 2012 will be the subject of a future enforcement action.

Development of a Compliance Project

In response to the CDOs and ACLs described under the Basin Plan Violation and Effluent Limitation Violation headings, above, several potential capital improvement projects (CIPs) were evaluated between 1997 and 2009, including a subsurface disposal system, an AWT upgrade to serve Occidental and Camp Meeker, an AWT upgrade to serve Occidental, and construction of a pipeline to convey wastewater from Occidental to the Russian River County Sanitation District WWTF in Guerneville. Each of these projects were subsequently deemed environmentally, technically, and/or financially infeasible to complete.

Pursuant to requirements in CDO No. 2005-0085, the Permittee completed a collection system replacement project in 2007 that resulted in a reduction of the amount of infiltration and inflow to the WWTF. Since completion of this

project there has been a reduction in the number of effluent limitation and discharge rate violations of Order No. 93-42.

Order No. R1-2005-0085 required completion of a CIP by June 30, 2010. The Permittee submitted a feasibility study and water balance to Regional Board staff in July 2008 (and amended in September 2008) for a project to eliminate discharges to surface waters. Since that time, the Permittee has been evaluating a project that includes construction of a new storage pond to replace Graham's Pond, development of a recycled water program, an increase in irrigation acreage, and elimination of discharges to surface waters (referred to in ROWD as a zero discharge facility, meaning that all discharges will be to land rather than surface waters). The project would also incorporate water conservation measures. The Permittee has been submitting quarterly progress reports to the Regional Board.

Although progress has been slow, the Permittee has identified a potential recycled water storage pond site for which it has initiated necessary geotechnical evaluations, environmental studies, and preliminary design. The proposed project would include increasing the irrigation area of the Loades' property (currently 8 acres) and adding new recycled water uses to increase the irrigation acreage to approximately 18 acres. The Permittee must complete a CEQA document in the near future. Project costs are estimated to be \$5 million dollars, and a funding source for the project has not been identified.

"Narrative duplicated in CDO item ends here.

A Cease and Desist Order (CDO) has been developed for concurrent adoption with this permit renewal. The CDO (Order No. R1-2012-0102) includes a compliance schedule requiring the Permittee to complete the CIP by December 1, 2017, and achieve compliance with all permit requirements by January 30, 2018.

The Regional Water Board intends to place this Facility under either an individual WDR or a general reclamation permit prior to implementation of the CIP. However, the proposed permit includes language that would allow the Permittee to operate the upgraded wastewater treatment and reclamation facility under the terms of the proposed permit in the event that adoption of new waste discharge requirements for the zero discharge facility is delayed.

Violations of Order No. R1-2012-0101

The Permittee cannot achieve immediate compliance with the renewed permit until it completes a CIP. As identified in the discussion above, the Permittee cannot comply with the AWT and seasonal discharge prohibitions in the Basin Plan. Furthermore, the Permittee is unable to comply with AWT effluent limitations for BOD₅, TSS, and coliform, nor effluent limitations for ammonia and California Toxics Rule (CTR) priority pollutants. CDO No. R1-2012-0102 includes interim effluent limitations that apply during the term of the compliance schedule and protection from mandatory minimum penalties if the Permittee maintains compliance with the terms of the CDO.

Comment Letters

Comments were received from three parties: SCWA, on behalf of Occidental CSD; US Environmental Protection Agency (USEPA); and the California Department of Health Services (CDPH).

Permittee's Comments. Regional Water Board Staff met with the SCWA on October 16, 2012, to discuss the Permittee's concerns regarding the draft permit. The SCWA, on behalf of Occidental CSD, submitted a letter dated October 22, 2012, addressing the Permittee's concerns and several requested changes to the permit. Comments received from the Permittee requested the following:

- Flexibility in the permit conditions to allow operation of the proposed storage pond and addition of new recycled water users under the terms of the permit.
- Modification of permit effluent limits to better reflect conditions at the plant, such as removal of pH limits applied at the discharge point from Graham's Pond due to the fact that the Permittee has no control over pH leaving Graham's Pond, only effluent discharged to Graham's Pond.
- Removal of minimum chlorine residual effluent limitations as a means to demonstrate adequate chlorination. For a secondary treatment plant, it is only necessary for the Permittee to demonstrate that there is chlorine residual combined with meeting total coliform limits as a means to demonstrate adequate disinfection.
- Postponement of chronic toxicity requirements until the State Board adopts the new *Policy for Toxicity Assessment*

and Control (Toxicity Policy) based on the fact that the new toxicity requirements will be significantly different from the existing toxicity requirements.

- Clarification regarding calculation of ammonia effluent limitations.
- Modification of upstream receiving water monitoring requirements to recognize that the upstream station only has flow in response to large storms.
- Removal of bromoform and chloroform monitoring requirements because historic monitoring data demonstrates no reasonable potential for exceedance of applicable water quality objectives.
- Reduction of monitoring frequency for acute toxicity, the priority pollutants copper, lead, mercury, silver, cyanide, chlorodibromomethane, dichlorobromomethane, and bis (2-ethylhexyl) phthalate to help reduce the cost of monitoring.

Changes were made to the proposed permit in response to most of the Permittee's comments. The permit was not changed in response to the Permittee's request for postponement of chronic toxicity requirements due to the fact chronic toxicity requirements must be included in all NPDES permits.

USEPA Comments. USEPA's comments required modifications to the reasonable potential analysis that resulted in inclusion of effluent limitations for cyanide and modification to the average monthly effluent limitation for copper.

CDPH Comments. Comments from CDPH addressed the following issues:

- Request for clarification regarding the terms advanced wastewater treatment and disinfected tertiary
- Clarification regarding the application of secondary and tertiary requirements
- The need for a permit requirement for submittal of a Title 22 Recycled Water Engineering Report.

Changes were made to the proposed permit, as necessary to provide the clarity requested in CDPH's comments.

Responses to comments and additional minor changes made to the permit by Regional Water Board Staff are described in greater detail in the Response to Comments document which also includes a description of several other changes that Regional Water Board staff made to the proposed permit. The three comment letters received are also attached.

SIGNIFICANT CHANGES:

The proposed Order No. R1-2012-0101 contains several significant changes from the existing permit, Order No. 93-42 as follows:

- Updated permit format using the permit template established by The State Water Board.
- Tertiary effluent limitations that apply to discharges to surface waters are included in the permit and apply at the point that effluent is discharged to Graham's Pond. This means that the permit identifies a year-round discharge to surface waters, in violation of the Basin Plan seasonal discharge prohibition. The CDO that is scheduled for adoption concurrently with the proposed permit provides a compliance schedule for the Permittee to come into compliance with all requirements of the proposed permit.
- Final effluent limitations for ammonia and monitoring requirements are included due to the fact that monitoring data demonstrated reasonable potential for ammonia. In addition, the proposed permit includes updated acute and chronic toxicity requirements (including monitoring requirements) and requirements to investigate evidence of toxicity with a toxicity reduction evaluation.
- New effluent limitations and requisite monitoring for the CTR priority pollutants copper, lead, silver, cyanide, DCBM, CDBM, and bis(2-ethylhexyl) phthalate have been established based on an evaluation of monitoring data submitted with the ROWD that showed reasonable potential for these pollutants.
- More stringent effluent limitations for chlorine residual have been established based on criteria for the protection of aquatic life. The new effluent limitations include a monthly average limit of 0.01 mg/L and a maximum daily limit of 0.02 mg/L. These requirements are more stringent than the requirement in the previous permit to achieve non-detectable levels at a detection limit of 0.1 mg/L. The WWTF is equipped with a continuous chlorine residual

meter that achieves the new chlorine residual requirements.

- Recycled water requirements that apply to current and any expanded use of recycled water. The language included in the proposed permit is a simplified version of the reclamation language that is used in permits for larger WWTFs that recycle. The simplified language is appropriate due to the fact that the existing and future recycled water uses are expected to be agricultural uses that require disinfected secondary recycled water. The proposed permit requires an evaluation of agronomic rates and the implementation of best management practices to prevent runoff of recycled water to surface waters and to protect groundwater, as well as compliance with all Water Code and Title 22 requirements related to recycled water.
- Source control requirements are included due to the fact that this small facility has reasonable potential for a number of priority pollutants. The Permittee is required to implement public outreach activities and conduct a source control survey of all non-domestic facilities in the service area of the WWTF that might discharge pollutants that could pass through or interfere with the operation or performance of the WWTF.
- New receiving water limitations and monitoring requirements have been added for total dissolved solids and specific conductance. These requirements are established pursuant to the Basin Plan.
- New standard language has been added requiring electronic submittal of monitoring reports.

RECOMMENDATION: Adopt NPDES Permit, Order No. R1-2012-0101 as proposed.

SUPPORTING DOCUMENTS:

1. Hearing Procedure
2. Proposed NPDES Permit
3. Response to Comments/Staff Changes Document
4. Comment Letters
 - i. US Environmental Protection Agency
 - ii. California Department of Public Health
 - iii. Sonoma County Water Agency
5. Public Notice