

ATTACHMENT 1

Response to Comments Graton Community Services District Wastewater Treatment, Reclamation and Disposal Facility, WDID No. 1B84060OSON Order No. R1-2012-0016

Two comment letters were received regarding the December 29, 2011 draft Waste Discharger Requirements/NPDES permit for the Graton Community Services District Wastewater Treatment, Reclamation, and Disposal Facility. The letters were received from:

- A. Graton Community Services District, January 27, 2012 letter signed by Robert Rawson, General Manager*
- B. California Department of Public Health, February 2, 2012 letter signed by Janice Thomas, District Engineer, Sonoma District Drinking Water Field Operations Branch*

A. Graton Community Services District – Letter Dated January 27, 2012

Comment 1. Graton is concerned that new reporting requirements in the proposed permit will require limited staff and financial resources to be spent on report preparation and directed away from the primary task of handling operation and maintenance of the wastewater treatment facility, and some of the required technical reports will force the district to hire outside specialists and licensed engineers without achieving any appreciable improvement in water quality. These new requirements will be expensive for Graton to budget for at a time when sewer rates are already unaffordable for many in the community.

Response: The Regional Water Board has received this concern from other dischargers who are subject to the expanded reclamation requirements that are being placed in Regional Water Board permits. The Regional Water Board recognizes that there is some initial concern from dischargers regarding these regulations because they are new and unfamiliar, thus they seem like they will be difficult and time-consuming to implement and comply with. The Regional Water Board anticipates that these requirements will be less burdensome than they appear. For example, although the programmatic and/or site specific technical report(s) required by section D of Attachment G of the permit must be developed by a certified or registered professional, these plans apply to new recycled water sites and can be developed with a lot of already existing best management practices for operation and maintenance of irrigation systems and some basic calculations to determine whether or not hydraulic and nitrogen agronomic rates are being achieved. In addition, the basic structure for these plans can be developed by leveraging the resources of several dischargers. Costs can be controlled by obtaining multiple bids from a variety of different professionals who may be qualified to perform the work.

The requirement for a technical report regarding existing agricultural recycled water use sites (Provision VI.C.2.b of the Order) does not explicitly require the involvement of a certified or registered professional.

See also response to Comment 9, below.

The draft permit was not changed in response to this comment.

Comment 2. Graton requests that the interim maximum daily effluent limitation for ammonia be less stringent than the final limits. Graton requests that the interim limit be set at 12 mg/L as requested in Graton’s ammonia infeasibility study report.

Response: Graton correctly identifies the fact that the proposed permit establishes an interim effluent limitation for ammonia that is more stringent than even the most stringent maximum final effluent limitation of 9.6 mg/L. The intent of an interim effluent limitation is to provide a less stringent requirement for an interim period of time to allow the Discharger time to identify a means to comply with the final effluent limitations. Since Graton submitted an Infeasibility Study report that identifies a plan and time schedule to achieve compliance with final ammonia effluent limitations, it is appropriate to establish an interim effluent limitation for ammonia. Table 9 of the Order has been changed as follows:

Table 9. Interim Effluent Limitations – Discharger Point 002 (Discharge to Atascadero Creek)

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Total Ammonia	mg/L	---	8 <u>12</u>

Section IV.E.2.d of the Fact Sheet has been changed as follows: “The Discharger requested an interim ammonia effluent limitation of 12 mg/L based on the highest ammonia concentration monitored to date. As discussed further in section 3 below, Regional Water Board staff believes that the Discharger is capable of achieving an the Order establishes an interim effluent limitation of 8 12 mg/L as requested by the Discharger.”

Section IV.E.3 (third paragraph) of the Fact Sheet has been changed as follows: “Interim effluent limitations have been established for total ammonia. The interim effluent limitation of 8 12 mg/L for total ammonia, established in section IV.A.3.b. of the Order, is effective no later than April 30, 2017. The interim effluent limitation for ammonia is based on demonstrated Facility performance based on a review of Discharger data for the period of December 2005 through ~~December 2010~~ April 2011. ~~Although the Discharger requested an interim effluent limitation of 12 mg/L based on the maximum effluent concentration, effluent ammonia data collected between January and April 2011 was not considered due to the fact that the Discharger documented in its November 17, 2011 Infeasibility Report that effluent ammonia data collected in 2011 is not representative of Facility performance. The Infeasibility Report identified the fact that the permanent effluent pump that transfers stored effluent to the discharge line~~

~~failed and was replaced by a smaller temporary pump that was withdrawing effluent from a pond location that is not representative of normal Facility performance.”~~

Comment 3. Graton further expresses concern about the feasibility of the treatment plant consistently meeting water quality-based final effluent limitations for ammonia due to the presence of waterfowl in Graton’s effluent storage ponds that hold the treated effluent prior to discharge to surface waters. Graton states that they reserve the right to an affirmative defense if they fail to meet the ammonia standard.

Response: Staff’s review of Graton’s data shows that Graton could currently meet final ammonia effluent limitations in the discharge from the effluent storage ponds approximately 50 percent of the time. The proposed permit provides Graton with the entire permit term, if needed, to come into full compliance with final ammonia effluent limitations. If Graton finds that the effluent storage ponds can’t be managed to meet final ammonia effluent limitations, Graton has the opportunity to evaluate other compliance strategies. Other dischargers in the North Coast Region, including Windsor, have successfully addressed ammonia in their effluent and have not had compliance issues discharging from effluent storage ponds similar to Graton’s.

The draft permit was not changed in response to this comment.

Comment 4: Graton objects to the reduction in the wet weather flow capacity from the current 0.85 mgd to 0.58 mgd proposed in the draft permit. The treatment process relies on equalization in the treatment ponds to achieve a peak design flow of 0.85 mgd, even though the tertiary filters are designed for a peak flow of 0.58 mgd.

Response: Regional Water Board staff agrees that it is appropriate to retain the wet weather flow capacity of the wastewater treatment plant due to the equalization capacity at the treatment plant. The proposed permit has been modified to acknowledge that the wet weather flow capacity of the treatment plant is 0.85 mgd. Prohibition III.I already recognizes the full wet weather capacity of the plant. Section II.B (last sentence of third paragraph) of the Order and section II.A.3 (second sentence of fourth paragraph) of the Fact Sheet have been changed to read, “The permitted wet-weather Facility flow has been reduced in this Order from 0.85 mgd to 0.58 mgd has been retained from Order No. R1-2004-0038 to recognize that the tertiary system is the limiting factor for treatment flow the treatment process relies on equalization in the treatment ponds to achieve a peak design flow of 0.85 mgd.” In addition, Table 4 of the Order and Table F-1 of the Fact Sheet have been modified as follows:

Facility Design Flow	0.14 mgd (average daily dry-weather design flow); 0.397 mgd average daily wet-weather flow (based on design of tertiary filters) 0.58 <u>0.85</u> mgd, peak wet-weather flow (based on design of tertiary filters)
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Comment 5: Graton is concerned about the requirement to achieve compliance with technology-based effluent limitations for biochemical oxygen demand (BOD) and total

suspended solids (TSS) prior to discharge to the effluent storage ponds. Graton believes that the proposed permit should recognize that additional removal of BOD and TSS occurs in the storage ponds as a result of the long detention times and additional treatment that includes aeration, recirculation of effluent within the ponds, aqua-marine shadow application, and duckweed removal. Graton is concerned that their proposed change in disinfection methods may reduce their ability to reduce soluble BOD because they will no longer have the oxidizing capabilities of chlorine. Graton specifically requests that EFF-002 (discharge from storage ponds to surface waters) remain the point of compliance for BOD until compliance at EFF-001 (discharge of disinfected, treated effluent to storage ponds) can be demonstrated.

Response: The current permit, Order No. R1-2004-0038, requires compliance monitoring for technology-based effluent limitations for BOD and TSS at Discharge Point 001, which is a point immediately following treatment and disinfection that is prior to the discharge to the effluent storage ponds. Regional Water Board staff is aware that Graton has been monitoring at monitoring points not required by the current Monitoring and Reporting Program, but the current permit does not recognize Discharge Point 002 (point of discharge from the effluent storage ponds to Atascadero Creek) as the compliance monitoring point. However, it is appropriate for Graton to request that the proposed permit recognize that there is treatment for BOD and TSS in the effluent storage ponds. Regional Water Board staff discussed this issue with Graton after receiving the comment letter, and agreed to establish Discharge Point 002 (Monitoring Location EFF-002) as the interim compliance monitoring point for BOD and TSS for the existing secondary Facility. Once the Facility is upgraded to include AWT, it is anticipated that the upgraded Facility will produce an effluent that will meet the AWT effluent limitations at Discharge Point, thus the compliance monitoring point for compliance with final effluent limitations for BOD and TSS will remain at Discharge Monitoring Point 001. The following changes were made to the draft permit:

Modify Interim Effluent Limitations IV.A.3.a as follows: “For the duration of operation of the existing Facility, as well as during the initial 90 day start-up period after activation of the upgraded Facility, the Discharger shall maintain compliance with the following interim effluent limitations at Discharge Point ~~001~~002, with compliance measured at Monitoring Location ~~EFF-001~~ EFF-002, as described in the attached MRP (Attachment E)....”

Modify Table 8 as follows: “Table 8. Interim Effluent Limitations– Discharge Point ~~001~~002 (Discharge to ~~from~~ Storage Ponds to Atascadero Creek)”

Modify Table E-7 of the Monitoring and Reporting Program to add BOD₅ as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Suspended Solids	mg/L	Grab	Monthly	Standard Methods
Biochemical Oxygen Demand 5-Day @ 20° C (BOD ₅)	mg/L	Grab	Monthly	Standard Methods

Modify Section VI.B of the Fact Sheet to add a new second paragraph as follows: “The permit allows interim compliance monitoring for BOD₅ and TSS at Discharge Point 002 (Discharge from Effluent Storage Ponds to Atascadero Creek) because monitoring has demonstrated that additional treatment for BOD₅ and TSS occurs in the effluent storage ponds due to long detention times, the use of aeration, and the use of Aqua Marine Shadow to reduce algal growth.”

Comment 6: Graton requests that monitoring of effluent for temperature at Discharge Point 001 prior to commencement of the pasteurization disinfection system be a grab sample rather than continuous monitoring requirement. Graton acknowledges that continuous monitoring is reasonable and necessary upon commencement of the pasteurization disinfection system and that it is reasonable to establish baseline effluent temperature conditions with grab samples because temperatures in the treatment ponds remain relatively constant over a 24-hour period.

Response: Regional Water Board staff agrees that daily grab sampling of the effluent is a reasonable means to establish baseline effluent temperature conditions in light of the fact that pond temperatures generally don't change significantly over a 24-hour period. Footnote 24 to Table E-6 has been modified to read as follows: “Temperature monitoring at EFF-001 using grab samples taken at the time of day when effluent temperatures are the highest shall start on the effective date of this Order (prior to start-up of the pasteurization disinfection process) in order to establish baseline effluent temperature prior to the use of the pasteurization disinfection system. Temperature monitoring shall continue. Upon start-up of the pasteurization disinfection system the Discharger shall monitor effluent temperature continuously.”

Comment 7: Graton requests that the discussion regarding the cost of compliance be revised to reflect the 2012 increase in sewer rates “to reflect the reality that sewer rates are increasingly unaffordable” based on the definition of affordability developed by the State Water Board Small Community Waste Water Strategy.

Response: Per Graton's request, section IV.D.3 (ninth paragraph) of the Fact Sheet has been revised as follows: “The Graton Community Services District recently raised its annual sewer charges in 2011 to \$1,499.40 per equivalent single-family dwelling (ESD) placing Graton's sewer rate at one of the highest in Sonoma County. Graton CSD sewer rates are 3.4 percent of the median household income (MHI) of \$43,999 per year. Graton proposes to increase sewer charges another 5 percent in 2012 to \$1,574.37 per ESD (3.58% of MHI). A document prepared by the State Water Board

Small Community Wastewater Strategy staff indicates that a rate of 1.5 to 2 percent of MHI is generally an affordable baseline for evaluating sewer rate affordability. In light of the fact that Graton CSD sewer rates are already above the level considered affordable by the State Water Board, the Discharger requests that the Regional Water Board consider cost and true value in writing additional requirements into the renewed permit.”

Comment 8: Graton views the requirement for hydraulic agronomic application rates to be an unreasonable standard that fails to consider potential benefits of reclaimed water irrigation of redwood trees on Graton’s property at higher than agronomic rates to augment stream flows for in-stream and downstream beneficial uses by off-setting the high rate of evapotranspiration of riparian willow groves along Atascadero Creek. Graton further proposes to investigate the difference in cost and requirements involved in obtaining a NPDES discharge designation for the 20.5 acre property that Graton owns and uses for irrigation of its redwood trees.

Response: Regional Water Board staff have discussed the issue of irrigation versus disposal with Graton representatives and made it clear that the Regional Water Board would require special studies and groundwater monitoring if Graton chose to pursue disposal (irrigation at greater than hydraulic agronomic rates), rather than agronomic irrigation at any recycled water use site. Graton’s ROWD did not include any documentation to demonstrate that disposal of treated effluent on the 20.5 acre redwood forest parcel could be done in a manner that does not exceed water quality objectives and does not adversely impact beneficial uses of groundwater or surface water. Graton may elect to submit additional information to be considered when this permit is renewed again in five years.

Furthermore, Graton’s proposal to evaluate the potential of establishing an NPDES discharge for this parcel is problematic due to the fact that the Basin Plan prohibits surface water discharges of waste during the period of May 15 through September 30 each year, the time period when application of treated effluent would achieve Graton’s stated goals of supporting the water needs of the riparian willows and augment stream flows.

The draft permit was not changed in response to this comment.

Comment 9: Graton states that the reclamation requirements in the proposed permit, including technical reports regarding existing recycled water use, and the agronomic nitrogen rate requirement, provide disincentives for farmers to use reclaimed water for their crops and vineyards.

Response: See response to Comment 1, above. In addition, Graton’s comment states that the nutrient content of its treated effluent is expected to be below drinking water standards and describes the typical irrigation and fertilization practices of vineyards, including management practices that likely result in hydraulic and nutrient agronomic application during the irrigation season. Regional Board Staff believes that it would take

a minor amount of effort to develop the Irrigation Management Plan that is required in the draft permit, by identifying these practices along with calculations that show that the amount of recycled water applied is less than or equal to the hydraulic and nutrient requirements of the vines.

To achieve greater cost and time efficiencies in the development of technical report requirements, including Operations and Maintenance/Irrigation Management Plans, it is possible that several dischargers subject to the new reclamation requirements (or a larger group representing the recycled water providers) could leverage their resources to develop this information regarding vineyards for inclusion in all of their Irrigation Management Plans. Several organizations such as the Natural Resources Conservation Service, local Resource Conservation Districts, UC Cooperative Extension, the Farm Bureaus, and other non-profit organizations are available to provide information to growers regarding management practices and this information could be pulled together for use in Irrigation Management Plans.

Graton's comment further stated, "... A farmer utilizing potable water with higher nitrogen levels than Graton reclaimed effluent would not be prevented from applying that water to their crops." The Regional Water Board is in the process of developing an Irrigated Lands program that will address various issues related to agricultural irrigation, including nutrient issues, regardless of the source.

The draft permit was not changed in response to this comment.

B. California Department of Health Services

Comment 1. Throughout the draft Order, the term "Advanced treated effluent" is used to identify the tertiary effluent. "Advanced treated" suggests reverse osmosis. NCRWQCB should replace the term with "Disinfected tertiary" as stated in Title 22, Section 60301.230.

Response: It would be difficult to exclude the term "advanced treated effluent" from the draft permit because this is the term used in the Basin Plan to refer to a wastewater treatment plant that utilizes filtration in addition to oxidation to achieve a higher level of BOD, TSS and turbidity removal. The following footnote has been added to the first mention of the term "advanced treated wastewater" in Table 2 on the first page of the draft permit: "The terms "advanced treated effluent", "advanced wastewater treatment", and "tertiary effluent" are used interchangeably in this permit. These terms all refer to the advanced wastewater treatment process described in Finding II.A of the permit. The term "advanced wastewater treatment" is used in the Water Quality Control Plan for the North Coast Region (Basin Plan). The term "tertiary effluent" is used in the California Department of Public Health's Recycled Water Criteria contained in Chapter 3, Division 4 of Title 22 of the California Code of Regulations, sections 60301 through 60355." This has been a standard footnote in Regional Water Board permits for

facilities that have tertiary level treatment, but was inadvertently left out of this draft permit.

Comment 2. CDPH's letter also included comments on Graton's January 3, 2012 Title 22 Recycled Water Engineering Report.

Response: Regional Water Board staff made several minor changes to the draft permit to provide consistency with CDPH's stated requirements and to provide clarity. The changes are identified as follows:

- a. Table E-6 was modified to include a reporting requirement for chlorine disinfection CT, in the event that the chlorine disinfection system is used after completion of the advanced wastewater treatment upgrade. Table E-6 was changed as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Disinfection CT ²³	mg-min/L	Calculate	Daily	---

²³ Disinfection CT shall be calculated whenever the Discharger uses chlorine for disinfection following completion of the AWT upgrade. CT monitoring requirements are described in detail in section IX.B of this MRP.

- b. Section IX.B of the MRP has been modified as follows:

IX.B.1. **“Monitoring.** The chlorine residual of the effluent shall be monitored continuously at the end of the chlorine contact chamber at a point prior to dechlorination and recorded, and the modal contact time shall be determined at the same point.

IX.B.2. **“Compliance.** The Discharger shall demonstrate that a minimum chlorine residual of 1.5 mg/L is present at the end of the chlorine contact chamber and that the chlorine residual is adequate to ensure compliance with total coliform effluent limitations. In addition, the chlorine disinfection CT (the product of total chlorine residual and modal contact time) shall not fall below 450 mg-min/L, with a modal contact time of at least 90 minutes.

Each day the Discharger shall calculate the CT values for the following conditions:

- Modal contact time under highest daily flow and corresponding chlorine residual.
- Modal contact time under lowest daily flow and corresponding chlorine residual.
- Lowest chlorine residual and corresponding modal contact time.
- Highest chlorine residual and corresponding modal contact time.

The lowest calculated CT value under the aforementioned conditions shall be reported as the daily CT value on the monthly self-monitoring report.

- c. Attachment G, Water Reclamation Requirements and Provisions of draft permit has been revised as follows:
- i. New Water Reclamation Requirement B.8 was added as follows: “The Discharger shall identify a site User Supervisor (per title 22, section 7586) for each of the recycled water use sites (including daytime and emergency contact telephone numbers). The Discharger shall conduct quarterly interviews with each site User Supervisor to determine whether system modifications have been made properly, to solicit their assessment of system peculiarities, and to verify employee training. Any identified problems or permit violations identified shall be addressed promptly.”
 - ii. Water Reclamation Requirement B.8 was changed to B.9 and changed as follows: “The Discharger shall require each ~~recycled water user~~ site User Supervisor and all employees who are routinely in the field to report all violations of recycled water regulations identified in this Order, including incidents of unauthorized irrigation activity and runoff incidents to the Discharger’s water reclamation inspector. If it is determined that irrigation is unauthorized, the inspector shall notify the site User Supervisor and the Regional Water Board by telephone within 24 hours and submit a written report within 15 days describing the corrective actions taken. All reported violations of recycled water regulations shall be included in the Discharger’s quarterly recycled water monitoring report, including incidental runoff events that the Discharger is aware of.”
 - iii. Water Reclamation Requirement B.17 (now B.18) was changed as follows: “The portions of the recycled water piping system that are in areas subject to access by the general public shall not include any hose bibs. Only quick couplers that differ by size and color from those used on the potable water system shall be used on the portions of the recycled water piping system in areas subject to public access. All precautions shall be taken to avoid any cross-connection to the recycled water system.”