ORDER NO. R1-2012-0016

NPDES NO. CA0023639
WDID NO. 1B84060OSON

WASTE DISCHARGE REQUIREMENTS AND MASTER RECLAMATION PERMIT

FOR THE

GRATON COMMUNITY SERVICES DISTRICT
WASTEWATER TREATMENT, RECLAMATION AND DISPOSAL FACILITY
SONOMA COUNTY

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 1. Discharger Information

Discharger	Graton Community Services District
Name of Facility	Graton Community Services District Wastewater Treatment, Reclamation and Disposal Facility
Facility Address	250 Ross Lane
	Sebastopol, CA 95472
	Sonoma County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board, North Coast Region have classified this discharge as a minor discharge.	

Discharges by Graton Community Services District (CSD) to the discharge points identified below are subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Current: Secondary treated effluent Upgrade: Advanced treated effluent[1]	38° 26′ 58″ N	122° 52′ 46″ W	Storage Ponds
002	Current: Secondary treated effluent Upgrade: Advanced treated effluent	38° 26′ 49″ N	122° 52′ 51″ W	Atascadero Creek
003	Discharge to the reclamation distribution system Current: Secondary treated effluent Upgrade: Advanced treated effluent	---	---	---
004	Treated effluent transfer to the Forestville Water District Wastewater Treatment Plant	---	---	---

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	March 15, 2012
This Order shall become effective on:	May 1, 2012
This Order shall expire on:	April 30, 2017
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	August 1, 2016

IT IS HEREBY ORDERED, that this Order supersedes Order No. R1-2004-0038 and Monitoring and Reporting Program (MRP) No. R1-2004-0038 upon the effective date specified in Table 3. This action in no way prevents the Regional Water Board from taking any enforcement action for past violations of the previous permit. If any part of this Order is subject to a temporary stay of enforcement, unless otherwise specified, the Discharger shall comply with the analogous portions of Order No. R1-2004-0038 and MRP No. R1-2004-0038, which shall remain in effect for all purposes during the pendency of the stay.

I, Catherine Kuhlman, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on March 15, 2012.

Original Signed By
Catherine Kuhlman, Executive Officer

[1] 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 “advanced 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.

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I. FACILITY INFORMATION

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 4. Facility Information

Discharger	Graton Community Services District
Name of Facility	Graton Community Services District Wastewater Treatment, Reclamation and Disposal Facility
Facility Address	250 Ross Lane
	Sebastopol, CA 95472
	Sonoma County
Facility Contact, title, and Phone	Robert W. Rawson, General Manager, (707) 823 -1542
Mailing Address	P.O. Box 534, Graton, CA 95444
Type of Facility	Publicly Owned Treatment Works (POTW)
Facility Design Flow	0.14 million gallons per day (mgd), average daily dry-weather flow; 0.397 mgd average daily wet-weather flow (based on design of tertiary filters) 0.85 mgd, peak wet-weather flow

II. FINDINGS

The California Regional Water Quality Control Board, North Coast Region (hereinafter Regional Water Board), finds:

A. Background. Graton Community Services District (hereinafter Discharger) is currently discharging pursuant to Order No. R1-2004-0038 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0023639. The Discharger submitted a Report of Waste Discharge (ROWD), dated April 2, 2009, and applied for a NPDES permit renewal to discharge up to 0.14 mgd of treated wastewater from the Graton CSD Wastewater Treatment Plant (hereinafter Facility). Additional information was submitted on August 1, 2011, identifying modifications to the Facility upgrade project to change the disinfection method to pasteurization and the biosolids processing method to composting. The Discharger submitted an infeasibility study report related to chlorine residual and ammonia on November 17, 2011. The application was deemed complete on November 19, 2011.

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and State laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. Facility Description. The Discharger owns and operates a wastewater collection, treatment, and disposal facility and provides sewerage service to a population of approximately 1045 in the Graton Service Area. The collection system consists of

approximately 6.5 miles of 6, 8, and 12 inch asbestos cement pipelines and two lift stations.

Current treatment operations at the Facility include the headworks (solids removal and flow meter), two aerated ponds, a settling pond, a chlorine disinfection basin, and two effluent storage ponds. The aerated ponds provide primary and secondary treatment of wastewater. The ponds provide a capacity of 1.25 million gallons each. The settling pond provides flow equalization and storage, and settling of suspended solids. Wastewater flows by gravity through all three ponds. Flow from the settling pond is pumped to the chlorine contact tank for disinfection. Disinfected secondary effluent is stored in two effluent storage ponds, which have a combined capacity of 23 million gallons and up to 162 days of detention time. The Discharger relies on natural dilution and natural dissipation of the chlorine in the storage ponds rather than chemical dechlorination. Effluent from the Facility currently meets requirements for title 22 disinfected, secondary-2.2 recycled water standards. The treatment facility has design treatment capacities of 0.14 mgd (average dry-weather flow) and 0.85 mgd (maximum daily wet-weather flow).

The Discharger plans to upgrade the Facility to provide advanced wastewater treatment to comply with the Basin Plan requirement that discharges of municipal waste to the Russian River and its tributaries meet advanced treated wastewater standards. The Facility upgrade will also meet the disinfected tertiary standards contained in Chapter 3, Division 4, title 22 of the California Code of Regulations. The Discharger's upgrade project includes replacement of the existing headworks equipment with automated headworks equipment, installation of a suspended air flotation process for solids removal and a Fuzzy Filter compressible media deep bed filtration system for tertiary filtration, and replacement of chlorine disinfection with a cogeneration/pasteurization disinfection system. The Discharger also plans to replace the effluent pump and to implement biosolids composting. The tertiary upgrade project has been designed to treat up to an average daily flow of 0.397 mgd and peak daily flow of 0.58 mgd in order to handle anticipated wet-weather flows. The permitted wet-weather Facility flow of 0.85 mgd has been retained from Order No. R1-2004-0038 to recognize that the treatment process relies on equalization in the treatment ponds to achieve a peak design flow of 0.85 mgd.

During the wet season (October 1 - May 14), treated effluent is discharged to Atascadero Creek, at a rate not to exceed 1 percent of the creek flow. Because Atascadero Creek is tributary to the Russian River via Green Valley Creek, the Basin Plan requires that discharges are of advanced treated wastewater and must meet a median coliform level of 2.2 Most Probable Number (MPN) per 100 milliliters (mL).

During the dry season (May 15 - September 30) and other periods as allowed by the permit, effluent from the effluent storage ponds is reclaimed for agricultural irrigation, including frost control on vineyards. The Facility currently provides recycled water to 6 users, irrigates a 20.5 acre parcel on-site, and is in discussions to add 5 additional users. The Discharger plans to expand its reclamation system to include urban uses after its

tertiary upgrade project is completed. The Discharger has written agreements with individual recycled water customers. Discharge to Atascadero Creek is prohibited during this period.

A designated transfer pipeline exists between the Facility and the Forestville Water District Wastewater Treatment, Reclamation, and Disposal Facility, and has been used to transfer treated effluent between the two facilities, for operational flexibility. Transfer of secondary treated effluent from the Facility to Forestville for advanced wastewater treatment and disposal may occur when treatment capacity is available at Forestville. If the transfer pipeline is used to convey secondary effluent, tertiary treated effluent transferred from Forestville to Graton would only be considered tertiary after one full pipe volume of tertiary water passes through the pipeline. Upon completion of Graton's tertiary upgrade project, the transfer pipeline will only be used to transfer tertiary effluent.

Sludge that collects in the aeration and settling ponds is periodically removed and may be disposed of at sites (i.e., landfills, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements. Sludge was removed most recently in 2007 and disposed of at a permitted landfill site. The Discharger plans to construct a biosolids composting facility with the intent of utilizing composted biosolids on agricultural land owned by Graton CSD. The biosolids operation will be permitted separately.

Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

C. Legal Authorities. This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (Water Code, commencing with section 13370). It shall serve as a NPDES permit for point source discharges from this Facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260.)

D. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information submitted as part of the Discharger's ROWD (permit application), through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E and G are also incorporated into this Order.

E. California Environmental Quality Act (CEQA). This Order serves as both an NPDES permit for discharges to water of the U.S. and as WDRs for discharges to waters of the state (the land discharges). The Regional Water Board's responsibilities under CEQA differ for NPDES-related discharges and WDR-related discharges.

Pursuant to Water Code section 13389, an action to adopt an NPDES permit is exempt from the provisions of CEQA contained in Public Resources Code sections 21100-21177. Accordingly, this exemption from CEQA applies to the Regional Water Board's action to adopt those portions of the Order that regulate NPDES discharges.

Similarly, the Regional Water Board's action in approving those parts of the Order that regulate WDR-related discharges is exempt from CEQA as an existing facility with no expansion of use beyond that existing at the time of the lead agency's determination pursuant to Title 14, CCR, section 15301.

This Order also includes a process for Regional Water Board approval of new recycled water use sites. This approval process will include compliance with CEQA as necessary. The approval process requires demonstration that a CEQA analysis has been conducted for any proposed recycled water use project. The approval process also requires the Discharger to submit technical information necessary to demonstrate that any proposed recycled water use areas will be irrigated using the most stringent of the hydraulic and nutrient agronomic rate and include best management practices that are protective of surface and ground water quality as described in Attachment G to this Order.

F. Technology-based Effluent Limitations. Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations[2], requires that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at Part 133 and Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).

G. Water Quality-Based Effluent Limitations. Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information;

[2] All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

(2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

H. Water Quality Control Plans. The Regional Water Board adopted a *Water Quality Control Plan for the North Coast Region* (hereinafter the Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to Atascadero Creek, which is located within the Guerneville Hydrologic Subarea of Lower Russian River Hydrologic Unit, are described in Table 5, below.

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
002	Atascadero Creek	Existing: ▪ Municipal and Domestic Supply (MUN) ▪ Agricultural Supply (AGR) ▪ Industrial Service Supply (IND) ▪ Ground Water Recharge (GWR) ▪ Freshwater Replenishment (FRSH) ▪ Navigation (NAV) ▪ Water Contact Recreation (REC-1) ▪ Non-Contact Water Recreation (REC-2) ▪ Commercial and Sport Fishing (COMM) ▪ Warm Freshwater Habitat (WARM) ▪ Cold Freshwater Habitat (COLD) ▪ Wildlife Habitat (WILD) ▪ Preservation of Rare, Threatened, or Endangered Species (RARE) ▪ Migration of Aquatic Organisms (MIGR) ▪ Spawning, Reproduction, and/or Early Development (SPWN) ▪ Estuarine Habitat (EST)
		Potential: ▪ Industrial Process Supply (PRO) ▪ Hydropower Generation (POW) ▪ Shellfish Harvesting (SHELL) ▪ Aquaculture (AQUA)

Discharge Point	Receiving Water Name	Beneficial Use(s)
001, 002, and 003	Groundwater	Existing ▪ Municipal and Domestic Supply (MUN) ▪ Industrial Service Supply (IND) ▪ Industrial Process Supply (PRO) ▪ Agricultural Supply (AGR) ▪ Freshwater Replenishment (FRSH)

Note: Estuarine Habitat is not present in Atascadero Creek or Green Valley Creek

In addition to the beneficial uses set out in the Basin Plan, there are several implementation plans that include actions intended to meet water quality objectives and protect beneficial uses of the North Coastal Basin. For the Russian River and its tributaries, no point source waste discharges are allowed from May 15 through September 30 and during all other periods when the waste discharge flow is greater than one percent of the receiving stream's flow. For municipal waste discharged from October 1 through May 14, the discharge must be of advanced treated wastewater, and must meet a median coliform level of 2.2 Most Probable Number (MPN) per 100 milliliters (mL).

Requirements of this Order implement the Basin Plan.

I. National Toxics Rule (NTR) and California Toxics Rule (CTR). USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995, and November 9, 1999. About 40 criteria in the NTR are applicable to discharges in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

J. State Implementation Policy. On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

K. Compliance Schedules and Interim Requirements. The provision in section 2.1 of the SIP that allowed for the use of compliance schedules and interim limitations in an NPDES permit for CTR constituents ended on May 18, 2010. Based on a discharger's request and demonstration that it is infeasible to comply with an effluent limitation derived from a CTR

criterion, compliance schedules may be allowed in a cease and desist order or time schedule order adopted by the Regional Water Board.

The State Water Board adopted Resolution No. 2008-0025 on April 15, 2008, titled *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits*, which includes compliance schedule policies for pollutants that are not addressed by the SIP. This Policy became effective on August 27, 2008.

This Order includes a compliance schedule and an interim effluent limitation for ammonia. It also contains interim effluent limitations for BOD5, TSS, and chlorine residual. The compliance schedules for BOD5, TSS, and chlorine residual are contained in a cease and desist order (CDO). The current CDO is Order No. R1-2012-0015. A detailed discussion of the basis for the compliance schedule and interim effluent limitation is included in the Fact Sheet.

L. Alaska Rule. On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes. (40 CFR § 131.21; 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

M. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on 5-day biochemical oxygen demand (BOD_5), total suspended solids (TSS), and pH. Restrictions on these pollutants are discussed in sections IV.B.2 and 3 of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum applicable federal technology-based requirements. In addition, this Order contains effluent limitations for BOD_5 and TSS that are more stringent than the minimum federal technology-based requirements and are necessary to meet water quality standards established in the Basin Plan.

WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to section 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR and the SIP, which was approved by USEPA on May 18, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by

USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to section 131.21(c)(1). The remaining water quality objectives and beneficial uses (specifically the addition of the beneficial uses Water Quality Enhancement (WQE), Flood Peak Attenuation/Flood Water Storage (FLD), Wetland Habitat (WET), Native American Culture (CUL), and Subsistence Fishing (FISH), and the General Objective regarding antidegradation in the Basin Plan) implemented by this Order were approved by USEPA on March 4, 2005, and are applicable water quality standards pursuant to section 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

The Regional Water Board has considered the factors in Water Code section 13263, including the provisions of Water Code section 13241, in establishing these requirements.

N. Antidegradation Policy. Section 131.12 requires that the State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. As discussed in detail in section IV.D.1 of the Fact Sheet the permitted discharges are consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.

O. Anti-Backsliding Requirements. Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Effluent limitations for copper, lead, zinc, and chloroform plus dichlorobromomethane have been removed from the Order, and thus are less stringent than in the previous Order. All other limits in this Order are at least as stringent as the effluent limitations in the previous Order, as discussed in the Fact Sheet.

Monitoring data for copper, lead, zinc, and chloroform plus dichlorobromomethane collected over the term of Order No. R1-2004-0038 did not indicate reasonable potential to cause or contribute to any exceedances of applicable water quality objectives. The lack of reasonable potential for copper, lead, zinc, and chloroform plus dichlorobromomethane constitutes new information, which permits the removal of effluent limitations for these four constituents.

New effluent limitations for total residual chlorine have been established in this Order. The new limitations are numerical and expressed as a monthly maximum limitation of 0.01 mg/L and a maximum daily limitation of 0.02 mg/L. In the previous Order, the

effluent limitation was expressed as “nondetect” with a detection limit of 0.1 mg/L. The new limitations, although no longer expressed as “nondetect”, are in effect more stringent limitations because the discharge is required to achieve an effluent concentration of total residual chlorine that is numerically lower than was required to be demonstrated by the previous Order.

P. Endangered Species Act. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the State. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

Q. Monitoring and Reporting. Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

R. Standard and Special Provisions. Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.

S. Provisions and Requirements Implementing State Law. The provisions/requirements in subsections III.E, III.F, IV.B, IV.C, IV.D.1, and V.B of this Order and sections VI, VII, VIII.B, IX.A, X.D.2, and X.D.3 (g., i., and k.) of the MRP are included to implement State law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

T. Notification of Interested Parties. The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.

U. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

III. DISCHARGE PROHIBITIONS

A. The discharge of any waste not disclosed by the Discharger or not within the reasonable contemplation of the Regional Water Board is prohibited.

B. Creation of pollution, contamination, or nuisance, as defined by section 13050 of the Water Code is prohibited.

C. The discharge of sludge or digester supernatant is prohibited, except as authorized under section VI.C 5.c. (Sludge Disposal and Handling Requirements) of this Order.

D. The discharge or reclamation use of untreated or partially treated waste (receiving a lower level of treatment than described in section II.A of the Fact Sheet) from anywhere within the collection, treatment, or disposal systems is prohibited, except as provided for in Attachment D, Standard Provision G (Bypass).

E. Any sanitary sewer overflow (SSO) that results in a discharge of untreated or partially treated wastewater to (a) waters of the State, (b) groundwater, or (c) land that creates pollution, contamination, or nuisance, as defined in Water Code section 13050 (m) is prohibited.

F. The discharge of waste to land that is not owned by or under agreement to use by the Discharger is prohibited, except for use for fire suppression as provided in title 22, sections 60307 (a) and (b) of the California Code of Regulations.

G. The discharge of waste at any point not described in Finding II.B or authorized by a permit issued by the State Water Board or another Regional Water Board is prohibited.

H. The discharge of wastewater effluent from the Facility to the Russian River or its tributaries is prohibited during the period from May 15 through September 30 of each year.

I. The mean daily dry-weather flow of waste in excess of 0.14 mgd measured over a period of 30 consecutive days is prohibited. The maximum daily wet-weather flow of waste in excess of 0.85 mgd is prohibited.

J. During the period from October 1 through May 14, discharges of treated wastewater to Atascadero Creek, tributary to the Russian River via Green Valley Creek, shall not exceed one percent of the flow of Atascadero Creek, as measured at the Green Valley Road Bridge in the same calendar month. For purposes of this Order, compliance with this discharge prohibition shall be determined as follows:

1. The discharge of advanced treated wastewater shall be adjusted at least once daily to avoid exceeding, to the extent practicable, one percent of the most recent daily flow measurement of Atascadero Creek as measured at Green Valley Road Bridge. Daily flow shall be based on flow meter comparisons reasonably read between the hours of 12:01 am to 12:00 midnight; and

2. In no case shall the total volume of advanced treated wastewater discharged in a calendar month exceed one percent of the total volume of Atascadero Creek at Green Valley Road Bridge in the same calendar month. At the beginning of the discharge season, the monthly flow volume comparisons shall be based on the date when the discharge commenced to the end of the calendar month. At the end of the discharge season, the monthly flow volume shall be based on the first day of the calendar month to the date when the discharge ceased for the season.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations

1. Final Effluent Limitations – Discharge Point 001 (Discharge to Storage Pond)

a. The discharge of advanced treated wastewater, as defined by the Facility's treatment design and the numerical limitations below, shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001, as described in the attached MRP (Attachment E). The advanced treated wastewater shall be adequately oxidized, filtered and disinfected as defined in Title 22, Division 4, Chapter 3, California Code of Regulations (CCR).

Table 6. Final Effluent Limitations – Discharge Point 001 (Discharge to Storage Ponds)

Parameter	Units	Effluent Limitations		
		Average Monthly[3]	Average Weekly[2]	Maximum Daily[2]
Biochemical Oxygen Demand 5-day @ 20°C (BOD_5)	mg/L	10	15	

[3] See Definitions in Attachment A and Compliance Determination discussion in section VII of this Order.

Parameter	Units	Effluent Limitations		
		Average Monthly[3]	Average Weekly[2]	Maximum Daily[2]
	lbs/day[4,5]	33	50	
Total Suspended Solids (TSS)	mg/L	10	15	
	lbs/day[3,4]	33	50	

b. **Percent Removal.** The average monthly percent removal of BOD_5 and TSS shall not be less than 85 percent. Percent removal shall be determined from the monthly average value of influent wastewater concentration in comparison to the monthly average value of effluent concentration for the same constituent over the same time period.

c. **Total Coliform Bacteria.** Disinfected effluent discharged at Discharge Point 001 shall not contain coliform bacteria in excess of the following concentrations:

(1) The median concentration shall not exceed an MPN of 2.2 per 100 mL, using the bacteriological results of the last 7 days for which analysis have been completed[6]; and

(2) The number of coliform bacteria shall not exceed an MPN of 23 per 100 mL in more than one sample in any 30-day period.

(3) No single sample shall exceed an MPN of 240 total coliform bacteria per 100 mL.

d. **Settleable Solids.** The discharge shall not contain any measurable settleable solids.

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[4] Mass-based effluent limitations for the tertiary treatment plant have been established based on the average daily design flow of the tertiary filters of 0.397 MGD.

[5] Compliance with concentration- and mass-based effluent limitations for the same parameter shall be determined separately. See section VII.H of this Order regarding compliance with mass-based effluent limitations.

[6] See section VII.I of this Order regarding compliance with 7-day median requirement.

2. **Final Effluent Limitations – Discharge Point 002 (Discharge to Atascadero Creek)**

   a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 002, with compliance measured at Monitoring Location EFF-002 as described in the attached MRP:

Table 7. Final Effluent Limitations – Discharge Point 002 (Discharge to Atascadero Creek)

Parameter	Units	Effluent Limitations			
		Average Monthly[2]	Maximum Daily[2]	Instantaneous Minimum[2]	Instantaneous Maximum[2]
pH	standard units	--	--	6.5	8.5
Total Residual Chlorine	mg/L	0.01	0.02	---	---
Cyanide	µg/L	4.0	9.2	---	---
Dichlorobromomethane	µg/L	0.56	1.2	---	---
Total Ammonia[7] (November through March)	mg/L	4.0	11	---	---
Total Ammonia[6] (October, April, and May)	mg/L	2.6	9.6	---	---

   b. **Acute Toxicity.** There shall be no acute toxicity in treated wastewater discharged to Atascadero Creek. The Discharger will be considered compliant with this limitation when the survival of aquatic organisms in a 96-hour bioassay of undiluted effluent complies with the following:

      (1) Minimum for any one bioassay: 70 percent survival; and

      (2) Median for any three or more consecutive bioassays: at least 90 percent survival.

      Compliance with this effluent limitation shall be determined in accordance with section V.A of the Monitoring and Reporting Program (Attachment E).

3. **Interim Effluent Limitations**

   a. For the duration of operation of the existing Facility, as well as during the initital 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 002, with compliance measured at Monitoring Location EFF-002,

[7] See Fact Sheet section IV.C.4.c.(2) for explanation of total ammonia effluent limitations.

as described in the attached MRP (Attachment E). These interim effluent limitations shall apply in lieu of the corresponding effluent limitations specified for the same parameters that will take effect upon activation of the upgraded Facility.

Table 8. Interim Effluent Limitations – Discharge Point 002 (Discharge from Storage Ponds to Atascadero Creek)

Parameter	Units	Effluent Limitations		
		Average Monthly[8]	Average Weekly[2]	Maximum Daily[2]
Biochemical Oxygen Demand 5-day @ 20°C (BOD_5)	mg/L	30	45	
	lbs/day[9,10]	50	90	
Total Suspended Solids (TSS)	mg/L	30	45	
	lbs/day[8,9]	45	60	

b. Beginning with the effective date of this Order and ending June 1, 2014 for total residual chlorine, and no later than April 30, 2017 for total ammonia, the Discharger shall maintain compliance with the following interim effluent limitations at Discharge Point 002, with compliance measured at Monitoring Location EFF-002 as described in the MRP:

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

Parameter	Units	Effluent Limitations	
		Average Monthly[2]	Maximum Daily[2]
Total Residual Chlorine	mg/L	---	0.1
Total Ammonia	mg/L	---	12

B. Land Discharge Specifications – Not Applicable

This section is not applicable to the Discharger as treated wastewater is not discharged to or applied to land for the purpose of disposal.

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[8] See Definitions in Attachment A and Compliance Determination discussion in section VII of this Order.

[9] Mass-based effluent limitations for the tertiary treatment plant have been established based on the average daily design flow of the tertiary filters of 0.397 MGD.

[10] Compliance with concentration- and mass-based effluent limitations for the same parameter shall be determined separately. See section VII.H of this Order regarding compliance with mass-based effluent limitations.

C. Reclamation Specifications - Discharge Point 003 (All Authorized Reclamation Sites[11]) and Discharge Point 004 (Transfers to Forestville Water District)

1. Reclamation Requirements

a. The Discharger shall comply with applicable state and local requirements regarding the production and use of reclaimed wastewater, including requirements of Water Code sections 13500 – 13577 (Water Reclamation) and California Department of Public Health (CDPH) regulations at title 22, sections 60301 – 60357 of the California Code of Regulations (Water Recycling Criteria).

b. The Discharger shall submit to CDPH and the Regional Water Board a Recycled Water Engineering Report prepared in accordance with title 22. The Discharger shall receive approval of its title 22 engineering report from CDPH and operate its reclamation system in accordance with all CDPH requirements.

c. The Discharger shall comply with the requirements contained in Reclamation Requirements and Provisions – Attachment G of this Order.

2. Reclamation Specifications

a. Discharges to the reclamation distribution system and to the transfer pipeline to Forestville Water District are from the on-site recycled water storage pond; therefore, final effluent limitations identified in sections IV.A.1.a and IV.A.1.c, above must be met at Discharge Point 001 for discharges to the reclamation distribution system and for transfers to Forestville Water District. 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, effluent limitations identified in section IV.A.3.a, above must be met at Discharge Point 001 for discharges to the reclamation distribution system and for transfers to Forestville Water District.

b. 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 may only provide its secondary-2.2 recycled water to recycled water use site categories identified in sections 60304(b) (disinfected secondary-2.2 uses), 60304(c) (disinfected secondary-23 uses), and 60304(d) (undisinfected secondary).

c. Upon completion of the Discharger's AWT upgrade project, the Regional Water Board Executive Officer may authorize the addition of recycled water use sites as

[11] Authorized reclamation sites means sites which have been evaluated for CEQA compliance and addressed in the Discharger's title 22 Recycled Water Engineering Report and approved by the State Department of Public Health and Regional Water Board.

identified in section 60304(a) of title 22. Section 60304(a) of title 22 requires recycled water that has been adequately oxidized, filtered and disinfected. Attachment G to this Order identifies specific requirements applicable prior to approval of new recycled water use sites.

d. During periods of discharge to the recycled water system and transfers to Forestville Water District, the Discharger shall maintain compliance with the following effluent limitations at Discharge Point 003/004 as measured at Monitoring Location REC-001(discharge from storage pond to reclamation system) as described in the MRP.

Table 10. Reclamation Specifications – Discharge Point 003 (Discharge to Reclamation Distribution System) and Discharge Point 004 (Transfers to Forestville Water District)

Parameter	Units	Discharge Specifications			
		Average Monthly[2]	Daily Maximum[2]	Instantaneous Minimum[2]	Instantaneous Maximum[2]
pH	standard units	---	---	6.0	9.0

D. Other Requirements

1. Filtration Process Requirements

a. **Fuzzy Filter Design Criteria.** The Fuzzy Filter design shall incorporate the following design criteria

(1) The Fuzzy Filter utilizes quasi-spherical, highly porous and compressible synthetic plastic that shall meet the following media design specifications:

(a) Media Depth: 30 inches of uncompressed filter media

(b) Effective Size of Media: 1.25 inches

(c) Uniformity Coefficient of Media: 1.50

(d) If other media materials and fabrication are proposed, additional demonstration studies must be conducted and receive approval by CDPH.

(2) Piping and process controls shall be provided to use filtered water in lieu of unfiltered water for the wash cycle.

(3) The wash water outlet shall be below the filtered water effluent line with an invert difference of 1.5 feet.

(4) Process controls shall have the capability of confirming positions of filter effluent and wash water valving with alarm capability for malfunction.

b. **Filtration Rate.** The rate of filtration through the Fuzzy Filters, as measured at Monitoring Location INT-001a, shall not exceed 30 gallons per minute per square foot.

c. **Turbidity.**

(1) Pretreatment processes shall be designed and operated to ensure that the turbidity of the influent to the Fuzzy Filter does not exceed any of the following specifications at Monitoring Location INT-001a:

(a) 10 Nephelometric Turbidity Units (NTU) more than 5 percent of the time within a 24-hour period; and

(b) 15 NTU at any time.

(2) The effluent from the AWT filtration system shall at all times be filtered such that the filtered effluent does not exceed any of the following specifications at Monitoring Location INT-001b, prior to discharge to the disinfection unit:

(a) An average of 2 NTU during any 24-hour period;

(b) 5 NTU more than 5 percent of the time during any 24-hour period; and

(c) 10 NTU at any time.

d. Filtered effluent that does not meet the filtration rate and turbidity requirements specified above shall not enter the reclamation distribution system and shall be automatically diverted to an upstream treatment process unit or to emergency storage as soon as the Discharger is aware of the exceedance. Alternatively, the Discharger may cease transfers through the Fuzzy Filter until the problem is corrected. The Discharger shall provide notification of non-compliance with the filtration process requirements as required in section VI.A.2.b of this Order.

e. Operations Plan. The Discharger's operations plan shall provide the following details with regard to the filtration process:

(1) Assurances that the performance goal of adequate backwash duration is provided to ensure effective solids removal. The operations plan shall describe how this goal will be met under all conditions.

(2) Operational configurations, including percent compression and loading rate based on site-specific pilot work and/or available performance data from systems with similar secondary effluent water quality characteristics.

f. Any proposed changes made in the manufacturing practices that may result in a change in the physical attributes or character of this filter shall be reviewed in advance by CDPH to determine whether the modifications will require additional testing.

2. **Disinfection System Requirements**

a. **Chlorine Disinfection System.** Requirements for the chlorine disinfection system are applicable until such time that the pasteurization disinfection is installed and in operation, and upon approval by the CDPH and the Regional Water Board Executive Officer. Treated effluent shall be disinfected in a manner that ensures effective pathogen reduction. The disinfection specifications shall be met at the end of the disinfection process (Discharge Point 001, Monitoring Location EFF-001):

(1) A minimum chlorine residual of 1.5 mg/L shall be maintained at the end of the disinfection process.

(2) Upon completion of the tertiary upgrade project and prior to adding any recycled water use sites that require disinfected tertiary effluent, the chlorine disinfection process shall provide a CT value[12] of not less than 450 milligram-minutes per liter at all times. Prior to adding any recycled water use sites that require disinfected tertiary effluent, the Discharger shall complete a tracer study in accordance with CDPH requirements to demonstrate that the chlorine disinfection system complies with this requirement or demonstrate that the pasteurization disinfection system meets all Order requirements and has CDPH approval.

(3) In the event of a chlorination system failure, the Discharger shall cease transfers of inadequately disinfected effluent to storage. Any inadequately disinfected effluent shall be diverted to an upstream treatment process unit or to emergency storage as soon as the Discharger is aware of the problem. The Discharger shall provide notification of non-compliance with disinfection process requirements as required by section VI.A.2.b of this Order.

[12] The CT value is the product of total chlorine residual and modal contact time measured at the same period. The modal contact time is the amount of time that elapsed between the time that a tracer, such as salt or dye, is injected into the influent at the entrance of the chlorination chamber and the time that the highest concentration of the tracer is observed in the effluent from the chamber.

b. **Pasteurization Disinfection Requirements.** Requirements for the pasteurization disinfection system are applicable once the system is installed and operational, upon approval by the CDPH and the Regional Water Board. The chlorination disinfection system shall be the primary disinfection method until such time that the Discharger receives complete and final approval of the pasteurization disinfection system by CDPH and the Regional Water Board Executive Officer. In addition to the following requirements, the Discharger shall comply with any additional requirements specified by CDPH based on CDPH review of the title 22 engineering report and results of performance testing of the completed pasteurization disinfection system.

(1) Temperature.

(a) Pasteurization temperatures must be at or above a minimum of 180° F, with that temperature maintained continuously for a minimum contact time of ten seconds at all times.

(b) The temperature of the pasteurized effluent discharge to the effluent storage pond shall not exceed 78° F. In addition, the Discharger shall demonstrate that there is adequate detention time in the effluent storage ponds to allow the stored effluent temperature to drop in relation to ambient air temperatures and to levels that do not pose a threat to water quality during periods of discharge to surface waters.

(2) Upon completion of construction and prior to operation, the minimum contact time and temperature must be demonstrated to the satisfaction of CDPH, spanning a range of flow from the low flow to the high flow, with two intermediate flow points.

(3) Upon completion of construction and prior to operation, a 6-point bioassay must be performed on the pasteurization unit using seeded MS2 coliphage. The bioassay must be conducted over a range of flow from the low flow to the high flow, with two intermediate flow points. Results, documenting virus disinfection performance of the system to the standards in section 60301.230 of title 22 of the CCR, must be submitted to CDPH and the Regional Water Board Executive Officer for approval.

(4) Upon completion of construction and prior to operation, the accuracy and repeatability of the on-line temperature probes (thermocouples) must be demonstrated to CDPH. In addition, calibration checks shall be performed quarterly.

(5) On-line monitoring of flow and temperature must be implemented in a manner similar to that documented in the July 2007 Carollo Engineers report titled

RP&P Wastewater Pasteurization System Validation Report as further identified in requirement IV.D.2.b.(6), below.

(6) Operational and Maintenance Criteria.

(a) Flow meters and thermocouples used for temperature monitoring shall be factory calibrated prior to installation. Thermocouples shall be factory calibrated over the temperature range that they will be monitoring.

(b) Flow and temperature shall be continuously monitored as specified in the MRP.

(c) The temperature throughout the cross-section of the vessel should be uniform.

(d) The use of multiple thermocouples to characterize temperature variability is recommended at the preheater influent (INT-002a) and preheater effluent (INT-002b) monitoring locations.

(e) The thermocouple design shall allow for quarterly calibration checks of duty thermocouples with a reference thermocouple. The design should allow the replacement of a duty thermocouple with a standby calibrated thermocouple, in the event that a duty thermocouple requires removal for recalibration.

(f) The duty air flow meter shall be periodically checked in accordance with the manufacturer's operating instructions using a backup air flow meter.

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. Compliance with receiving water limitations shall be measured at monitoring locations described in the MRP (Attachment E). Discharges from the Facility shall not cause the following:

1. The discharge shall not cause the dissolved oxygen concentration of the receiving water to be depressed below 7.0 mg/L. Additionally, the discharge shall not cause the dissolved oxygen content of the receiving water to fall below 10.0 mg/L in more than 50 percent of the samples, or below 7.5 mg/L more than in more than10 percent of samples collected in a calendar year. In the event that the receiving waters are determined to have a dissolved oxygen concentration of less than 7.0 mg/L, the discharge shall not depress the dissolved oxygen concentration below the existing level.

2. The discharge shall not cause the pH of receiving waters to be depressed below 6.5 nor raised above 8.5. Within this range, the discharge shall not cause the pH of the receiving waters to be changed at any time more than 0.5 units from that which occurs naturally.

3. The discharge shall not cause the turbidity of receiving waters to be increased more than 20 percent above naturally occurring background levels.

4. The discharge shall not cause receiving waters to contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.

5. The discharge shall not cause receiving waters to contain floating materials, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.

6. The discharge shall not cause receiving waters to contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance or adversely affect beneficial uses.

7. The discharge shall not cause coloration of receiving waters that causes nuisance or adversely affects beneficial uses.

8. The discharge shall not cause bottom deposits in receiving waters to the extent that such deposits cause nuisance or adversely affect beneficial uses.

9. The discharge shall not cause or contribute concentrations of biostimulatory substances to receiving waters that promote objectionable aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.

10. The discharge shall not cause receiving waters to contain toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in humans, plants, animals, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods, as specified by the Regional Water Board.

11. The discharge shall not cause a measurable temperature change in the receiving water at any time, unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses. At no time or place shall the temperature be increased by more than 5°F above natural receiving water temperature.

12. The discharge shall not cause an individual pesticide or combination of pesticides to be present in concentrations that adversely affect beneficial uses. The discharge shall not cause bioaccumulation of pesticide, fungicide, wood treatment chemical, or other toxic pollutant concentrations in bottom sediments or aquatic life to levels which are harmful to human health.

13. The discharge shall not cause receiving waters to contain concentrations of pesticides in excess of the limiting concentrations set forth in Table 3-2 of the Basin Plan or in excess of more stringent Maximum Contaminant Levels (MCLs) established for these pollutants in title 22, Division 4, Chapter 15, Articles 4 and 5.5 of the California Code of Regulations.

14. The discharge shall not cause receiving waters to contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise affect beneficial uses.

15. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board, as required by the federal Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the Clean Water Act, or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

16. The discharge shall not cause concentrations of chemical constituents to occur in excess of limits specified in Table 3-2 of the Basin Plan or in excess of more stringent MCLs established for these pollutants in title 22, Division 4, Chapter 15, Articles 4 and 5.5 of the California Code of Regulations.

17. The discharge shall not cause receiving waters to contain radionuclides in concentrations which are deleterious to human, plant, animal or aquatic life, nor which result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal or indigenous aquatic life.

B. Groundwater Limitations

Receiving water limitations for groundwater are based on water quality objectives in the Basin Plan and are a required part of this Order. Discharges from the Facility shall not cause exceedance of applicable water quality objectives or create adverse impacts to beneficial uses of groundwater. Discharges from the Facility shall not cause the following:

1. The collection, storage, and use of wastewater shall not cause or contribute to a statistically significant degradation of groundwater quality unless a technical

evaluation is performed that demonstrates that any degradation that could reasonably be expected to occur, after implementation of all regulatory requirements reasonable best management practices, will not violate groundwater quality objectives or cause impacts to beneficial uses of groundwater.

2. The collection, treatment, storage, and/or use of wastewater or recycled water shall not cause alterations of groundwater that result in chemical concentrations in excess of limits specified in title 22, sections 64435 (Tables 2 and 3) and 64444.5, or the Basin Plan. The collection, storage, and use of wastewater or recycled water shall not cause groundwater to contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

VI. PROVISIONS

A. Standard Provisions

1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.

2. **Regional Water Board Standard Provisions.** The Discharger shall comply with the following Regional Water Board standard provisions:

   a. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

   b. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, interim or final effluent limitation, land discharge specification, reclamation specification, receiving water limitation, or provision of this Order that may result in a significant threat to human health or the environment, such as inundation of treatment components, breach of pond containment, sanitary sewer overflow, irrigation runoff, etc., that results in a discharge to a drainage channel or a surface water, the Discharger shall notify Regional Water Board staff within 24 hours and report orally and in writing to the Regional Water Board staff all unauthorized spills of waste. Spill notification and reporting shall be conducted in accordance with section X.E of the MRP.

   c. Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board,

Division of Water Rights, and receive approval for such a change. (Water Code § 1211)

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the MRP included as Attachment E to this Order, and future revisions thereto.

C. Special Provisions

1. Reopener Provisions

a. **Standard Revisions.** If applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA, or amendments thereto, the Regional Water Board may reopen this Order and make modifications in accordance with such revised standards.

b. **Reasonable Potential.** This Order may be reopened for modification to include an effluent limitation, if monitoring establishes that the discharge causes, or has the reasonable potential to cause or contribute to, an excursion above a water quality criterion or objective applicable to the receiving water.

c. **Whole Effluent Toxicity.** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened to include a numeric chronic toxicity effluent limitation based on that objective.

d. **303(d)-Listed Pollutants.** If an applicable TMDL program is adopted, this Order may be reopened and effluent limitations for the pollutant(s) that are the subject of the TMDL will be modified or imposed to conform this Order to the TMDL requirements. If the Regional Water Board determines that a voluntary offset program is feasible for and desired by the Discharger, then this Order may be reopened to reevaluate the effluent limitations for the pollutant(s) that are subject of the TMDL and, if appropriate, to incorporate provisions recognizing the Discharger's participation in an offset program.

e. **Water Effects Ratios (WERs) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for copper, lead, and zinc. If the Discharger performs studies to determine site-specific WERs and /or site-

specific dissolved-to-total metal translators and submits a report that demonstrates that WER or translator studies were performed in accordance with USEPA or other approved guidance, this Order may be reopened to modify the effluent limitations for the applicable constituents.

f. **Nutrients.** This Order contains effluent limitations for ammonia and monitoring requirements at EFF-002 for ammonia, nitrate, and phosphorus and at REC-001 for ammonia, nitrate, nitrite, and organic nitrogen. If new water quality objectives for nutrients are established, or if monitoring data indicate the need for effluent limitations for any of these parameters, this Order may be reopened and modified to include new or modified effluent limitations, as necessary.

g. **Salt and Nutrient Management Plans.** The Recycled Water Policy adopted by the State Water Board on February 3, 2009, and effective May 14, 2009, recognizes the fact that some groundwater basins in the State contain salts and nutrients that exceed or threaten to exceed water quality objectives in the applicable Basin Plans, and that not all Basin Plans include adequate implementation procedures for achieving or ensuring compliance with the water quality objectives for salt or nutrients. The Recycled Water Policy finds that the appropriate way to address salt and nutrient issues is through the development of regional or subregional salt and nutrient management plans rather than through imposing requirements solely on individual recycled water projects. The Regional Water Board is developing a plan to address salt and nutrient management. This Order may be reopened to incorporate provisions consistent with any salt and nutrient management plan(s) adopted by the Regional Water Board.

2. **Special Studies, Technical Reports and Additional Monitoring Requirements**

a. **Toxicity Reduction Requirements**

(1) **Whole Effluent Toxicity.** In addition to a limitation for whole effluent acute toxicity at Discharge Point 002, the MRP requires routine monitoring for whole effluent chronic toxicity to determine compliance with the Basin Plan's narrative water quality objective for toxicity. As established by the MRP, if either of the effluent limitations for acute toxicity are exceeded (a single sample with less than 70% survival or a three sample median of less than 90% survival) or if the chronic toxicity monitoring triggers of 1.0 TUc (where TUc = 100/NOEC)[13] are exceeded, the Discharger shall conduct accelerated monitoring as specified in section V. of the MRP.

[13] This Order does not allow any credit for dilution for the chronic condition. Therefore, a TRE is triggered when the effluent exhibits a pattern of toxicity at 100% effluent.

Results of accelerated toxicity monitoring will indicate a need to conduct a TRE, if toxicity persists; or it will indicate that a return to routine toxicity monitoring is justified because persistent toxicity has not been identified by accelerated monitoring. TREs shall be conducted in accordance with the TRE Workplan prepared by the Discharger pursuant to Section VI.C.2.a.(2) of this Order, below.

(2) **Toxicity Reduction Evaluations (TRE) Workplan.** The Discharger submitted a TRE workplan to the Regional Water Board on February 8, 2006. This plan shall be reviewed at least once every 5 years and updated as necessary in order to remain current and applicable to the discharge and discharge facilities. The Discharger shall notify the Regional Water Board of this review and submit any revision of the TRE workplan with each ROWD.

The TRE workplan shall describe the steps the Discharger intends to follow if toxicity is detected, and should include at least the following items:

(a) A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.

(b) A description of the facility's methods of maximizing in-house treatment efficiency, good housekeeping practices, and a list of all chemicals used in the operation of this Facility.

(c) If a toxicity identification evaluation (TIE) is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor).

(3) **Toxicity Reduction Evaluations (TRE) Implementation.** The TRE shall be conducted in accordance with the following:

(a) The TRE shall be initiated within 30 days of the date of completion of the accelerated monitoring testing, required by Sections V.A.4.c. and V.B.9 of the MRP, observed to exceed either the acute or chronic toxicity parameter.

(b) The TRE shall be conducted in accordance with the Discharger's TRE Workplan.

(c) The TRE shall be in accordance with current technical guidance and reference material including, at a minimum, the USEPA manual EPA/833B 99/002.

(d) The TRE may end at any stage if, through monitoring results, it is determined that there is no longer consistent toxicity. The Discharger shall notify the Regional Water Board of this determination.

(e) The Discharger may initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. TIEs shall be conducted in accordance with current technical guidance and reference material, including, at a minimum, the Discharger shall use the USEPA acute and chronic manuals, EPA/600/6-91/005F (Phase I), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III).

(f) As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the source(s) and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with chronic toxicity parameters.

(g) Many recommended TRE elements accompany required efforts of source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. To prevent duplication of efforts, evidence of complying with requirements of recommendations of such programs may be acceptable to comply with requirements of the TRE.

(h) The Regional Water Board recognizes that chronic toxicity may be episodic and identification of a reduction of sources of chronic toxicity may not be successful in all cases. Consideration of enforcement action by the Regional Water Board will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

b. **Technical Report(s) Regarding Existing Recycled Water Use Sites.** The Discharger provides recycled water to several existing recycled water use sites. Technical information is needed to assess these recycled water use sites to determine if they meet recycled water requirements identified in the Statewide Recycled Water Policy adopted by the State Water Board in 2009 and in Attachment G of this Order. **Within 120 days of the effective date of this Order**, the Discharger shall prepare and submit, for approval by the Regional Water Board Executive Officer, a workplan describing the Discharger's plan and time schedule for (1) assessing existing recycled water use sites and submittal of programmatic and/or site-specific technical reports in accordance with Water Reclamation Technical Report Requirements in section D of Attachment G to this Order; and (2) complying with Reclamation Requirement VII.B. (Recycled Water Production and Use) in the MRP. The workplan shall lead to the submittal of technical information that is sufficient to (1) determine whether or not recycled

water is being applied at nutrient and hydraulic agronomic rates, (2) describe best management practices (BMPs) being implemented at each recycled water use site, (3) evaluate if BMPs are adequate to prevent and minimize the potential for surface runoff and impacts to groundwater, and (4) identify any additional BMPs that are needed to meet the requirements of this Order. If more than two years are needed to complete the assessment of all sites, the workplan shall include a plan to prioritize the assessment of recycled water use sites over time until all recycled water use site assessments are completed. The workplan shall also include a task to submit a corrective action plan to address any recycled water use that is found to exceed agronomic rates or to be resulting in runoff of recycled water to surface waters.

c. **Storage Pond Technical Report.** The Discharger shall prepare and submit for approval by the Regional Water Board Executive Officer a Storage Pond Technical Report **within four years of the effective date of this Order**. The Technical Report shall utilize existing information to provide a description of each recycled water storage pond used by the Discharger in order for Regional Water Board staff to assess whether the storage ponds are adequately designed to minimize the potential for recycled water to cause adverse impacts to areal groundwater and beneficial uses thereof. The Technical Report shall include, but not be limited to construction date (or estimate if actual date is not known), construction details (thickness of any clay liner, impermeability, construction details, etc.), and operation and maintenance procedures that are used (e.g., berm and liner inspections, etc.).

3. **Best Management Practices and Pollution Prevention**

a. Pollutant Minimization Program (PMP)

The Discharger shall, as required by the Regional Water Board Executive Officer, develop and conduct a PMP as further described below when there is evidence (e.g., sample results reported as detected, but not quantified (DNQ) when the effluent limitation is less than the method detection limit (MDL), sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either:

(1) A sample result is reported as DNQ and the effluent limitation is less than the RL; or

(2) A sample result is reported as ND and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in MRP section X.B.4.

(3) The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

(4) An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;

(5) Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;

(6) Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;

(7) Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and

(8) An annual status report that shall be submitted as part of the Facility's Annual Report due March 1st to the Regional Water Board and shall include:

(a) All PMP monitoring results for the previous year;

(b) A list of potential sources of the reportable priority pollutant(s);

(c) A summary of all actions undertaken pursuant to the control strategy; and

(d) A description of actions to be taken in the following year.

4. **Construction, Operation and Maintenance Specifications**

a. The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with this Order. Proper operation and maintenance includes adequate laboratory quality control and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Discharger only when necessary to achieve compliance with the conditions of this Order. (title 40, section 122.41 (e))

b. The Discharger shall maintain an updated Operation and Maintenance (O&M) Manual for the Facility. The Discharger shall update the O&M Manual, as necessary, to conform to changes in operation and maintenance of the Facility. The O&M Manual shall be readily available to operating personnel onsite and for review by State or federal inspectors. The O&M Manual shall include the following.

(1) Description of the Facility's table of organization showing the number of employees, duties and qualifications and plant attendance schedules (daily, weekends and holidays, part-time, etc.). The description should include documentation that the personnel are knowledgeable and qualified to operate the treatment facility so as to achieve the required level of treatment at all times.

(a) Detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation and equipment.

(b) Description of laboratory and quality assurance procedures.

(c) Process and equipment inspection and maintenance schedules.

(d) Description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the Discharger will be able to comply with requirements of this Order.

(e) Description of preventive (fail-safe) and contingency (response and cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. These plans shall identify the possible sources (such as loading and storage areas, power outage, waste treatment unit failure, process equipment failure, tank and piping failure) of accidental discharges, untreated or partially treated waste bypass, and polluted drainage.

5. **Special Provisions for Municipal Facilities (POTWs Only)**

a. Wastewater Collection Systems

(1) Statewide General WDRs for Sanitary Sewer Systems

On May 2, 2006, the State Water Board adopted State Water Board Order No. 2006-003-DWQ (Statewide General WDRs for Sanitary Sewer Systems). Order No. 2006-0003-DWQ requires all public agencies that currently own or operate sanitary sewer systems to apply for coverage under the General WDRs. The deadline for existing dischargers to apply for coverage under State Water Board Order No. 2006-003-DWQ was November 6, 2006. On February 20, 2008, the State Water Board adopted Order No. WQ 2008-0002-EXEC (Adopting Amended Monitoring and Reporting Requirements for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems). The Discharger shall maintain coverage under, and shall be subject to the requirements of Order Nos. 2006-0003-DWQ and WQ-2008-

0002-EXEC and any future revisions thereto for operation of its wastewater collection system.

In addition to the coverage obtained under Order No. 2006-0003-DWQ, the Discharger's collection system is part of the treatment system that is subject to this Order. As such, pursuant to federal regulations, the Discharger must properly operate and maintain its collection system [40 CFR 122.41(e)], report any non-compliance [40 CFR 122.41(l)(6) and (7)], and mitigate any discharge from the collection system in violation of this Order [40 CFR 122.41(d)].

(2) Spills and Sanitary Sewer Overflows

(a) The Discharger shall take all feasible steps to stop spills and sanitary sewer overflows (SSOs) as soon as possible. All reasonable steps should be taken to collect spilled material and protect the public from contact with wastes or waste-contaminated soil or surfaces.

(b) The Discharger shall report orally and in writing to the Regional Water Board staff all SSOs and unauthorized spills of waste. Spill notification and reporting shall be conducted in accordance with section X.E of the MRP.

b. Source Control Provisions

The Discharger shall perform source control functions and provide a summary of source control activities conducted in the annual report (due March 1st to the Regional Water Board). Source control functions and requirements shall include the following:

(1) Implement the necessary legal authorities to monitor and enforce source control standards, restrict discharges of toxic materials to the collection system and inspect facilities connected to the system.

(2) If waste haulers are allowed to discharge to the Facility, establish a waste hauler permit system, to be reviewed by the Regional Water Board Executive Officer, to regulate waste haulers discharging to the collection system or Facility.

(3) National Pretreatment Standards: Prohibited Discharges

(a) General prohibitions. Pollutants introduced into wastewater treatment facilities (WWTFs) by a non-domestic source shall not pass through [40 CFR 403.3(n)] the WWTF or interfere [40 CFR 403.3(i)] with the operation

or performance of the WWTF. These general prohibitions and the specific prohibitions in paragraph (b) of this provision apply to all non-domestic sources introducing pollutants into a WWTF whether or not the source is subject to other National Pretreatment Standards or any national, state, or local pretreatment requirements.

(b) Specific prohibitions. In addition, the following pollutants shall not be introduced into a WWTF:

(i) Pollutants that create a fire or explosion hazard in the WWTF;

(ii) Pollutants that will cause corrosive structural damage to the WWTF, but in no case discharges with pH lower than 5.0, unless the WWTF is specifically designed to accommodate such discharges;

(iii) Solid or viscous pollutants in amounts that will cause obstruction to the flow in the WWTF resulting in interference;

(iv) Any pollutant, including oxygen demanding pollutants (BOD_5, etc.) released in a discharge at a flow rate and/or pollutant concentration that will cause interference with the WWTF;

(v) Heat in amounts which will inhibit biological activity in the WWTF resulting in interference, but in no case heat in such quantities that the temperature at the WWTF exceeds 40°C (104°F) unless the Regional Water Board, upon request of the WWTF, approves alternate temperature units;

(vi) Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass-through;

(vii) Pollutants that result in the presence of toxic gases, vapors, or fumes within the WWTF in a quantity that may cause acute worker health and safety problems; or

(viii) Any trucked or hauled pollutant, except at discharge points designated by the WWTF.

(4) Conduct an industrial waste survey to identify all dischargers that might discharge pollutants that could pass through or interfere with the operation or performance of the Facility.

(5) Perform public outreach to educate industrial, commercial, and residential users about the importance of preventing discharges of industrial and toxic wastes to the wastewater treatment plant.

(6) Perform ongoing inspections and monitoring, as necessary, to ensure adequate source control.

c. **Sludge Disposal and Handling Requirements**

(1) Sludge, as used in this Order, means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screenings generated during preliminary treatment. Biosolids refers to sludge that has been treated, tested, and demonstrated to be capable of being beneficially and legally used pursuant to federal and State regulations as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities.

(2) All collected sludges and other solid waste removed from liquid wastes shall be removed from screens, sumps, ponds, and tanks as needed to ensure optimal plant operation and disposed of in accordance with applicable federal and State regulations.

(3) The use and disposal of biosolids shall comply with all of the land application and disposal requirements in 40 CFR 503, which are enforceable by the USEPA, not the Regional Water Board. If during the life of this Order, the State accepts primacy for implementation of 40 CFR 503, the Regional Water Board may also initiate enforcement where appropriate.

(4) Sludge or biosolids that are disposed of in a municipal solid waste landfill or used as daily landfill cover shall meet the applicable requirements of 40 CFR 258. In the annual self-monitoring report, the Discharger shall report the amount of sludge placed in a landfill and the landfill(s) which received the sludge or biosolids.

(5) The beneficial use of biosolids by application to land as soil amendment is not covered or authorized by this Order. Biosolids that are applied to land as soil amendment by the Discharger within the North Coast Region shall comply with State Water Board Water Quality Order No. 2004-0012-DWQ (General Waste Discharge Requirements for the Discharge of Biosolids to Land as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities) or other permits issued by the Regional Water Board.

(6) The Discharger shall take all reasonable steps to prevent and minimize any sludge use or disposal in violation of this Order that may adversely affect human health or the environment.

(7) Solids and sludge treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, and shall not result in groundwater contamination.

(8) Solids and sludge treatment and storage sites shall have facilities adequate to divert surface water runoff from adjacent areas, to protect the boundaries of the site from erosion, and to prevent drainage from the treatment and storage site. Adequate protection is defined as protection from at least a 100-year storm.

(9) The discharge of sewage sludge and solids shall not cause waste material to be in a position where it is, or can be, conveyed from the treatment and storage sites and deposited in the waters of the State.

d. **Discharge of Biosolids**

For the discharge of biosolids from the Facility, the Discharger shall comply with the following requirements:

(1) Statewide General WDRs for Discharge of Biosolids to Land

If applicable, the Discharger shall obtain authorization to discharge under and meet the requirements of the State Water Board Water Quality Order No. 2004-0012-DWQ (General Waste Discharge Requirements for the Discharge of Biosolids to Land or Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities). For existing discharges of biosolids to land, the Discharger shall submit a Notice of Intent to Comply within 180 days of the effective date of this Order. For future discharges of biosolids to land, the Discharger shall submit a Notice of Intent to Comply in accordance with the enrollment requirements of Order No. 2004-0012-DWQ; or

(2) Alternatively, the Discharger may dispose of biosolids at another appropriately permitted facility.

(3) New sludge treatment and storage facilities must comply with the Water Code and California Code of Regulations title 27 requirements for the protection of water quality.

e. **Operator Certification**

Supervisors and operators of municipal WWTFs shall possess a certificate of appropriate grade in accordance with title 23, CCR, section 3680. The State Water Board may accept experience in lieu of qualification training. In lieu of a

properly certified WWTF operator, the State Water Board may approve use of a water treatment facility operator of appropriate grade certified by CDPH where water reclamation is involved.

f. **Adequate Capacity**

If the Facility or effluent disposal areas will reach capacity within 4 years, the Discharger shall notify the Regional Water Board. A copy of such notification shall be sent to appropriate local elected officials, local permitting agencies, and the press. Factors to be evaluated in assessing reserve capacity shall include, at a minimum, (1) comparison of the wet-weather design flow with the highest daily flow, and (2) comparison of the average dry-weather design flow with the lowest 30-day flow. The Discharger shall demonstrate that adequate steps are being taken to address the capacity problem. The Discharger shall submit a technical report to the Regional Water Board showing how flow volumes will be prevented from exceeding capacity, or how capacity will be increased, within 120 days after providing notification to the Regional Water Board, or within 120 days after receipt of Regional Water Board notification, that the Facility will reach capacity within four years. The time for filing the required technical report may be extended by the Regional Water Board. An extension of 30 days may be granted by the Regional Water Board Executive Officer, and longer extensions may be granted by the Regional Water Board itself. [CCR title 23, section 2232]

6. **Other Special Provisions**

a**. Storm Water**

Within 90 days of the adoption of this Order, the Discharger shall submit, for Regional Water Board Executive Officer approval, a Storm Water Pollution Prevention Plan (SWPPP) and monitoring plan (collectively, the Plans). The Plans shall identify sources of pollutants that could be discharged through the Discharger's storm water collection system, the specific measures that the Discharger will implement to manage the potential pollutant sources to reduce storm water pollution, and specific pollutants that will be monitored and the monitoring frequency to verify that the management measures that the Discharger implements are effective.

7. **Compliance Schedules**

a. **Compliance Schedule for Final Effluent Limitations for Total Ammonia**

The Discharger shall comply with the following compliance schedule to achieve compliance with final effluent limitations for total ammonia specified in section IV.A.2.a (Table 7) of this Order.

Table 11. Compliance Schedule for Final Effluent Limitations for Ammonia

Task Number	Task Description	Compliance Date
1	Implement nitrogen management plan identified in the November 17, 2011 Graton CSD Infeasibility Report to reduce ammonia concentrations to levels that comply with final effluent limitations identified in this Order.	October 1, 2012
2	Monitor nitrogen compounds (ammonia, nitrate, nitrite, Total Kjeldahl Nitrogen, and organic nitrogen) and submit report demonstrating compliance with final ammonia effluent limitations and maintenance of effluent nitrogen concentrations below 10 mg/L. If the Discharger's nitrogen management plan does not achieve consistent compliance with final ammonia effluent limitations and maintenance of total nitrogen at or below 10 mg/L, the written report shall also include, for Regional Water Board Executive Officer approval, a workplan to evaluate methods of complying with final ammonia effluent limitations.	October 1, 2013
3	If the Discharger is unable to demonstrate compliance with final ammonia effluent limitations by October 1, 2013, the Discharger shall submit annual reports identifying progress toward compliance with final total ammonia effluent limitations.	October 1 of each year beginning October 1, 2014
4	The Discharger shall comply with final effluent limitations for total ammonia.	April 30, 2017

b. **Compliance Schedules for BOD_5, TSS, and Chlorine Residual.** Compliance schedules for BOD_5, TSS, and chlorine residual are established in a CDO. The current CDO is Order No. R1-2012-0015.

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section IV of this Order will be determined as specified below.

A. General

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in the MRP of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

B. Multiple Sample Data

When determining compliance with an AMEL for priority pollutants, and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure.

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

C. Average Monthly Effluent Limitation (AMEL)

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that

sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

D. Average Weekly Effluent Limitation (AWEL)

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar week exceeds the AWEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Discharger will be considered out of compliance for that calendar week. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week.

E. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge (or when applicable, the median determined by subsection B, above, for multiple sample data of a daily discharge) exceeds the MDEL for a given parameter, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

F. Instantaneous Minimum Effluent Limitation

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

G. Instantaneous Maximum Effluent Limitation

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken

within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

H. Mass-Based Effluent Limitations

Compliance with mass- -based effluent limitations shall be determined as follows:

1. Weekly Average. Compliance with the weekly mass-based average limitation shall be determined using the following formula:

   lbs/day = 8.34 * Ce * Q, where

   Ce = average of effluent concentrations collected during the calendar week (mg/L) (Sunday through Saturday)

   Q = average flow rate averaged over the same calendar week (mgd)

2. Monthly Average. Compliance with the monthly mass-based average limitation shall be determined using the following formula:

   lbs/day = 8.34 * Ce * Q, where

   Ce = average of effluent concentrations collected during the calendar month (mg/L)

   Q = average flow rate averaged over the same calendar month (mgd)

I. Bacteriological Limitations

1. Median. The median is the central tendency concentration of the pollutant. The data set shall be ranked from low to high, ranking the ND concentrations lowest, DNQ determinations next, followed by quantified values. The order of the individual ND and DNQ determinations is not important. The median value is determined based on the number of data points in the data set. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, the median is the average of the two middle values, unless one or both points are ND or DNQ, in which case the median value shall be the lower of the two middle data points. DNQ is lower than a detected value, and ND is lower than DNQ.

2. Compliance with the 7-day median will be determined as a rolling median during periods when sampling occurs more frequently than weekly. During periods when sampling is weekly, each weekly sample shall represent the 7-day median.

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ), also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL): the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL): the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Bioaccumulative pollutants are those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic pollutants are substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV) is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge: Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass; or (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ) are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Effective Concentration (EC) is a point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Karber. EC25 is the concentration of toxicant (in percent effluent) that causes a response in 25 percent of the test organisms.

Effluent Concentration Allowance (ECA) is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in USEPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration is the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code

section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inhibition Concentration (IC). The IC25 is typically calculated as a percentage of effluent. It is the level at which the organisms exhibit 25 percent reduction in biological measurement such as reproduction or growth. It is calculated statistically and used in chronic toxicity testing.

Inland Surface Waters are all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation: the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation: the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL) means the highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median is the middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

Method Detection Limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML) is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

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 water body.

Not Detected (ND) are those sample results less than the laboratory's MDL.

Ocean Waters are the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

Persistent Pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP) means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Regional Water Board.

Publicly Owned Treatment Works (POTW) means a treatment works as defined in section 212 of the Clean Water Act (CWA), which is owned by a State or municipality as defined by section 502(4) of the CWA. [Section 502(4) of the CWA defines a municipality as a city, town, borough, county, parish, district, association, or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes). This definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the Clean Water Act, which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.

Reporting Level (RL) is the ML (and its associated analytical method) used for reporting and compliance determination. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Satellite Collection System is the portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

Source of Drinking Water is any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

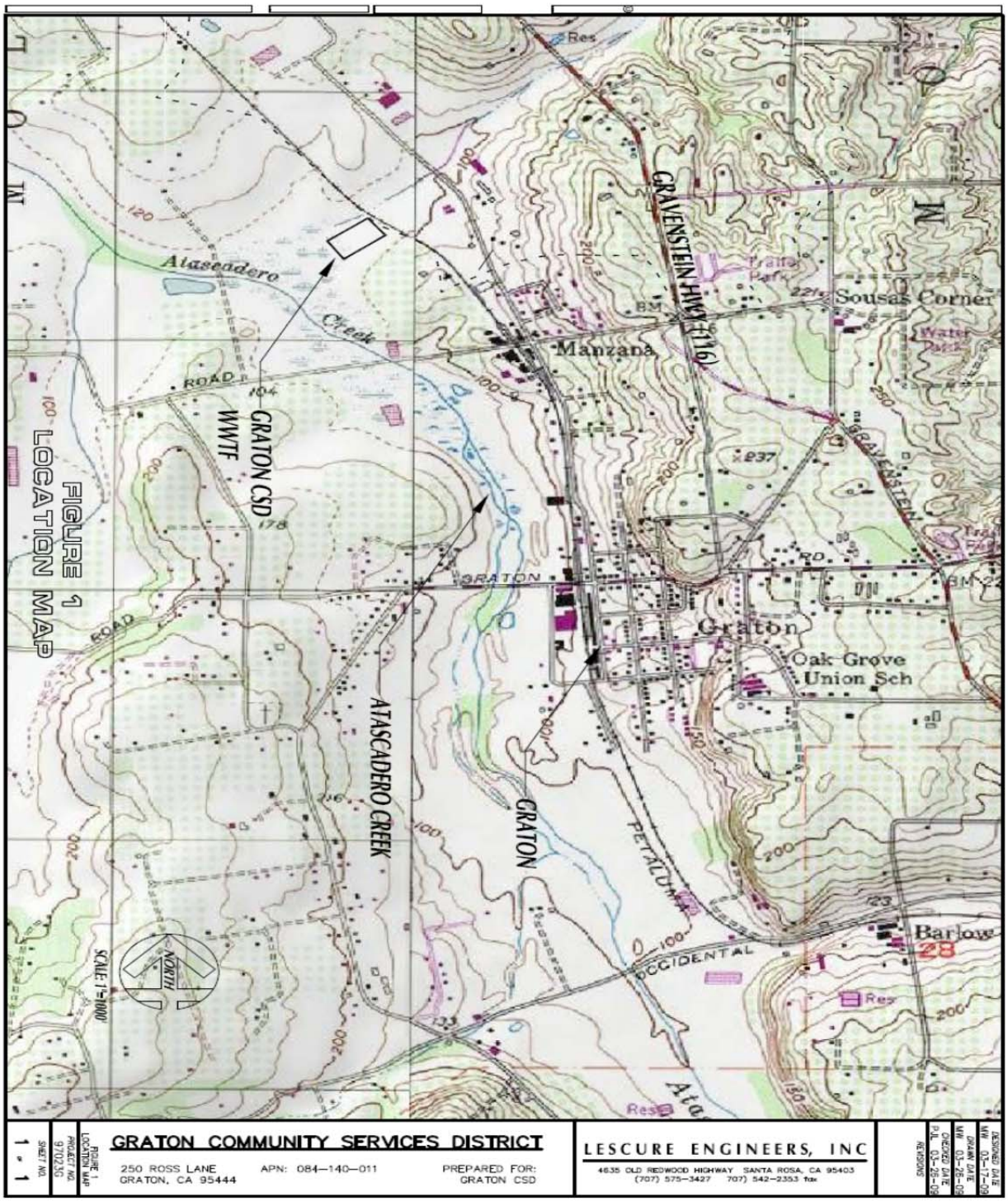
Standard Deviation (σ) is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

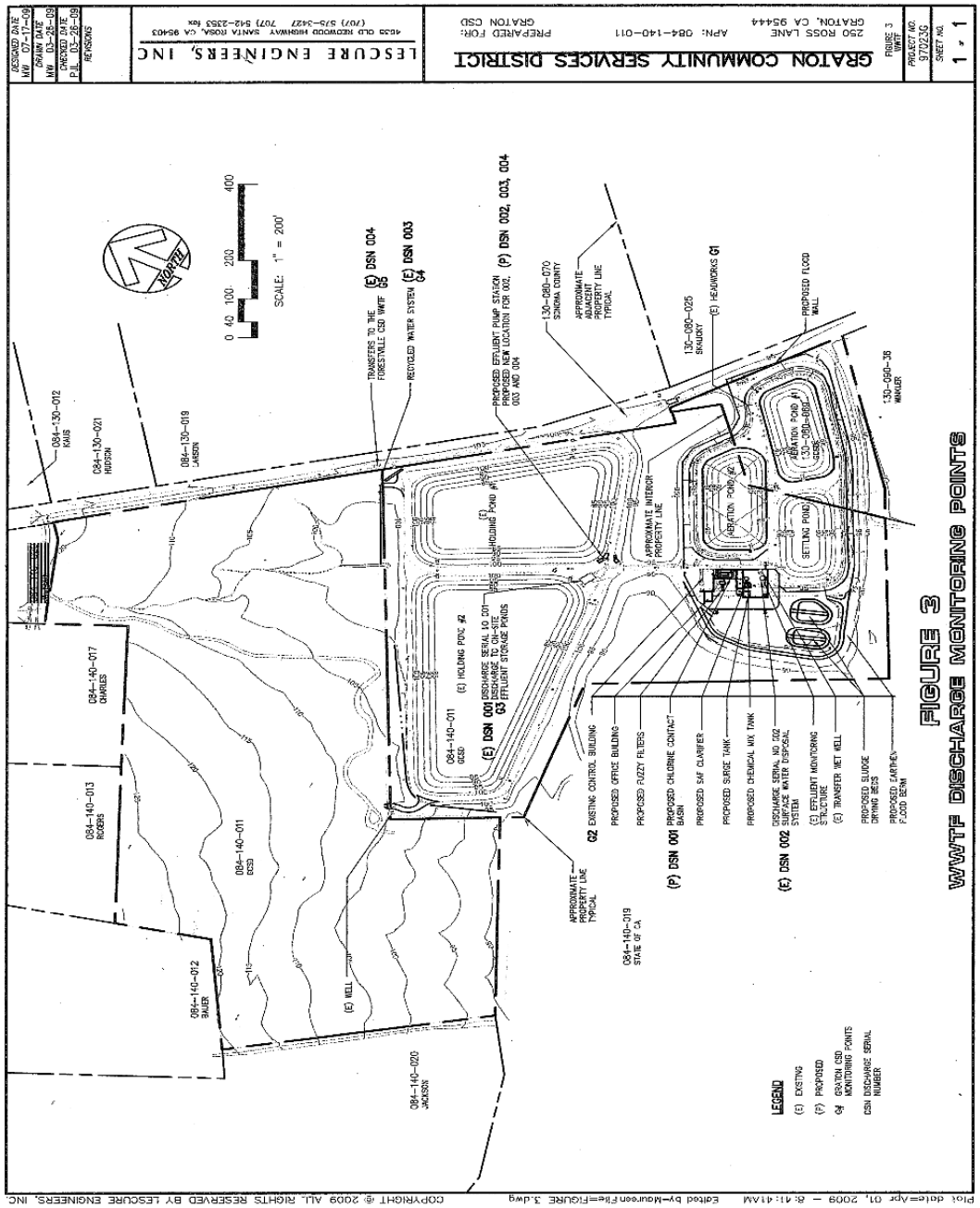
where:
x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

Toxicity Reduction Evaluation (TRE) is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

ATTACHMENT B – FACILITY MAP



ATTACHMENT C-1 – WWTF LAYOUT_MONITORING LOCATIONS



ATTACHMENT C-2 – WASTEWATER FLOW SCHEMATIC

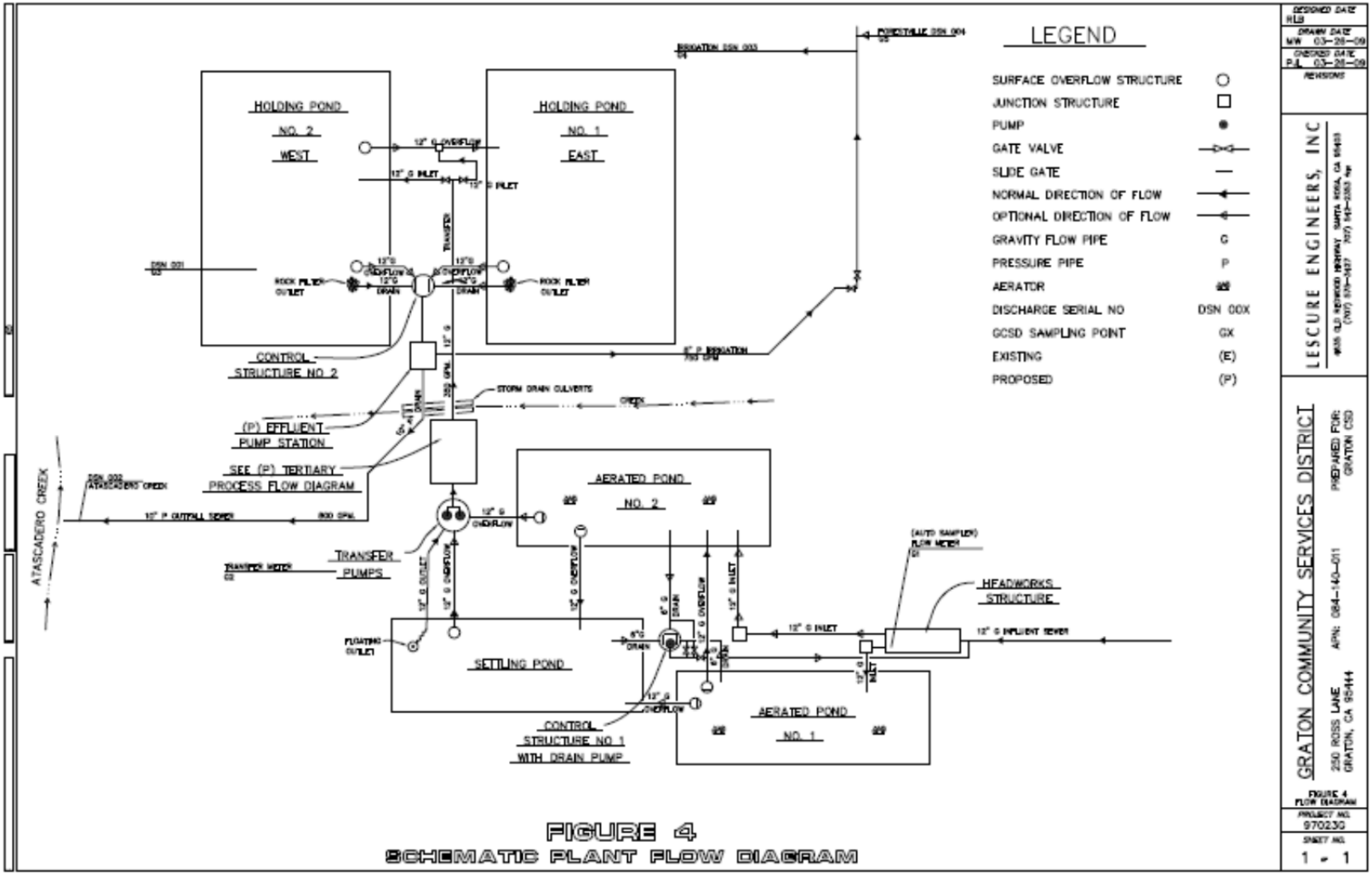
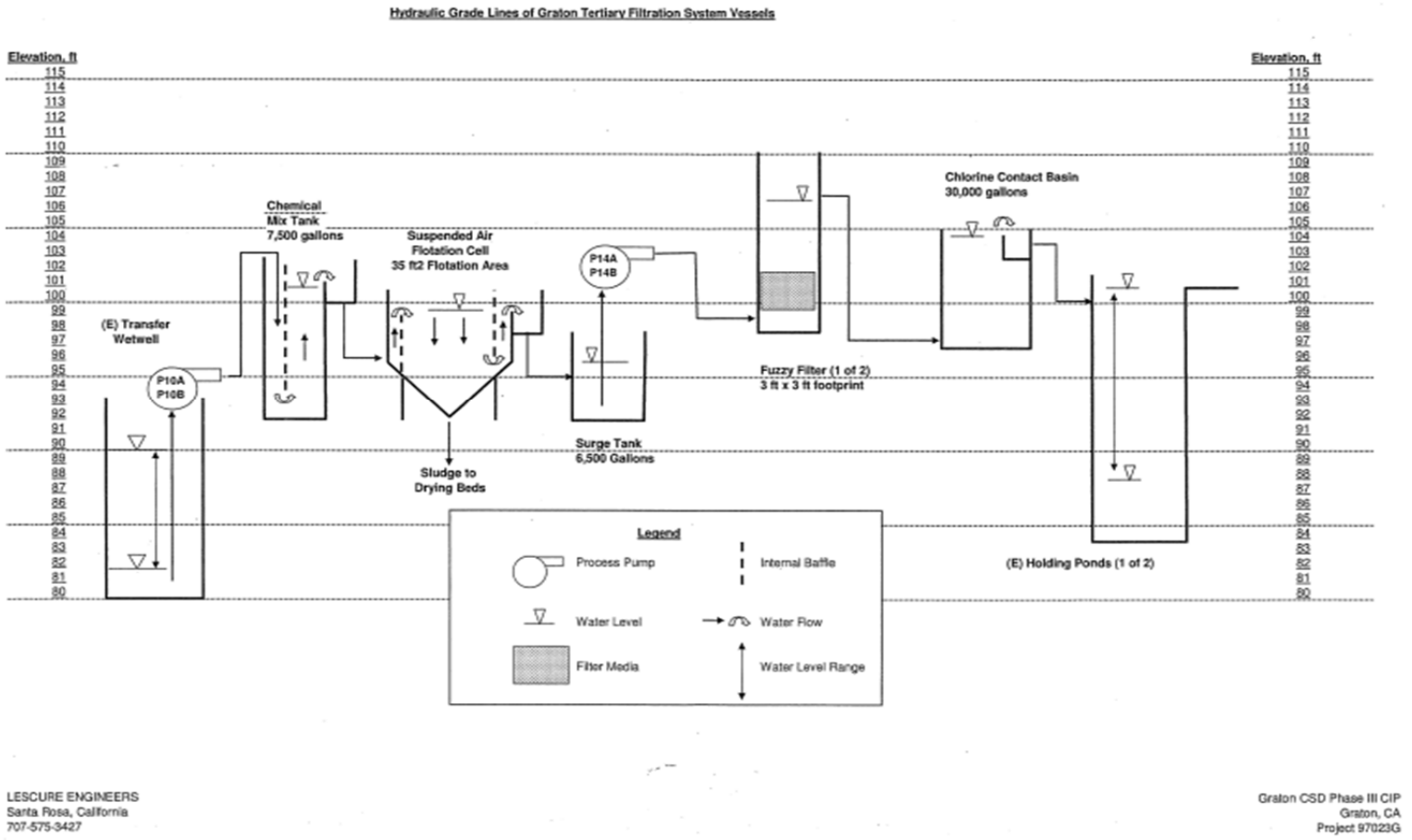


FIGURE 4
SCHEMATIC PLANT FLOW DIAGRAM

ATTACHMENT C-3 – FACILITY TERTIARY PROCESS FLOW SCHEMATIC



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 CFR § 122.41(a).)

2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 CFR § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 CFR § 122.41(c).)

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR § 122.41(d).)

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 CFR § 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR § 122.41(g).)

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 CFR § 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 CFR § 122.41(i); Wat. Code, § 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 CFR § 122.41(i)(1));

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 CFR § 122.41(i)(2));

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 CFR § 122.41(i)(3)); and

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (40 CFR § 122.41(i)(4).)

G. Bypass

1. Definitions

   a. “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR § 122.41(m)(1)(i).)

   b. “Severe property damage” means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR § 122.41(m)(1)(ii).)

2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the

provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 CFR § 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR § 122.41(m)(4)(i)):

   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR § 122.41(m)(4)(i)(A));

   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR § 122.41(m)(4)(i)(B)); and

   c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.6 below. (40 CFR § 122.41(m)(4)(i)(C).)

4. Burden of Proof. In any enforcement proceeding, the Discharger seeking to establish the bypass defense has the burden of proof.

5. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 CFR § 122.41(m)(4)(ii).)

6. Notice

   a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 CFR § 122.41(m)(3)(i).)

   b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 CFR § 122.41(m)(3)(ii).)

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include

noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 CFR § 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR § 122.41(n)(2).)

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR § 122.41(n)(3)):

   a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR § 122.41(n)(3)(i));

   b. The permitted facility was, at the time, being properly operated (40 CFR § 122.41(n)(3)(ii));

   c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 CFR § 122.41(n)(3)(iii)); and

   d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 CFR § 122.41(n)(3)(iv).)

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 CFR § 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 CFR § 122.41(f).)

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 CFR § 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 CFR § 122.41(l)(3); § 122.61.)

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR § 122.41(j)(1).)

B. Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order. (40 CFR § 122.41(j)(4); § 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 CFR § 122.41(j)(2).)

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 CFR § 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 CFR § 122.41(j)(3)(ii));

3. The date(s) analyses were performed (40 CFR § 122.41(j)(3)(iii));

4. The individual(s) who performed the analyses (40 CFR § 122.41(j)(3)(iv));

5. The analytical techniques or methods used (40 CFR § 122.41(j)(3)(v)); and

6. The results of such analyses. (40 CFR § 122.41(j)(3)(vi).)

C. Claims of confidentiality for the following information will be denied (40 CFR § 122.7(b)):

1. The name and address of any permit applicant or Discharger (40 CFR § 122.7(b)(1)); and

2. Permit applications and attachments, permits and effluent data. (40 CFR § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR § 122.41(h); Wat. Code, § 13267.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 CFR § 122.41(k).)

2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR § 122.22(a)(3)).

3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 CFR § 122.22(b)(1));

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR § 122.22(b)(2)); and

c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 CFR § 122.22(b)(3).)

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR § 122.22(c).)

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 CFR § 122.22(d).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR § 122.22(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 CFR § 122.41(l)(4)(i).)

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or

disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 CFR § 122.41(l)(4)(ii).)

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR § 122.41(l)(4)(iii).)

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 CFR § 122.41(l)(5).)

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 CFR § 122.41(l)(6)(i).)

2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 CFR § 122.41(l)(6)(ii)):

   a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(A).)

   b. Any upset that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(B).)

   c. Violation of a maximum daily discharge limitation for any of the pollutants listed in this Order to be reported within 24 hours [40 CFR § 122.41(l)(6)(ii)(C)]

3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR § 122.41(l)(6)(iii).)

F. Planned Changes

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 CFR § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 CFR § 122.41(l)(1)(i)); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions – Notification Levels VII.A.1). (40 CFR § 122.41(l)(1)(ii).)

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 CFR § 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements. (40 CFR § 122.41(l)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 CFR § 122.41(l)(7).)

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 CFR § 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following (40 CFR § 122.42(b)):

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 CFR § 122.42(b)(1)); and

2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order. (40 CFR § 122.42(b)(2).)

3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 CFR § 122.42(b)(3).)

Attachment E – Monitoring and Reporting Program

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (CFR) at 40 CFR 122.48 requires that all National Pollutant Discharge Elimination System (NPDES) permits specify monitoring and reporting requirements. California Water Code (Water Code) sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

A. Wastewater Monitoring Provision. Composite samples may be taken by a proportional sampling device approved by the Regional Water Board Executive Officer or by grab samples composited in proportion to flow. In compositing grab samples, the sampling interval shall not exceed one hour.

B. If the Discharger monitors any pollutant more frequently than required by this Order, using test procedures approved by 40 CFR Part 136 or as specified in this Order, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the monthly and annual discharger monitoring reports.

C. Laboratories analyzing monitoring samples shall be certified by the California Department of Public Health (CDPH) in accordance with the provisions of Water Code section 13176, and must include quality assurance / quality control data with their analytical reports.

D. Compliance and reasonable potential monitoring analyses shall be conducted using commercially available and reasonably achievable detection limits that are lower than the applicable effluent limitation. If no Minimum Level (ML) value is below the effluent limitations, the lowest ML shall be selected as the Reporting Level (RL). Table E-1 lists the test methods the Discharger may use for compliance and reasonable potential monitoring to analyze priority pollutants with effluent limitations.

Table E-1. Test Methods and MLs for Priority Pollutants

CTR#	Constituent	Types of Analytical Methods MLs (µg/L)		
		Colorimetric	Gas Chromatography (GC)	Gas Chromatography/ Mass Spectroscopy (GCMS)
14	Cyanide	5	---	---
27	Dichlorobromomethane	---	0.5	2

II. MONITORING STATION LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-2. Monitoring Station Locations

Discharge Point	Monitoring Location	Monitoring Location Description
--	INF-001	Untreated influent wastewater collected at the plant headworks at a representative point preceding primary treatment.
--	INT-001a	Secondary treated effluent following the suspended air flotation pretreatment unit and immediately prior to the filtration unit.
---	INT-001b	Advanced treated effluent immediately following the advanced wastewater (AWT) filtration process and prior to the disinfection process.
---	INT-002a	Pasteurization preheater influent
---	INT-002b	Pasteurization preheater effluent. (A point in the pasteurization disinfection process for demonstrating compliance with pasteurization temperature and contact time requirements.)
001	EFF-001	Treated wastewater after disinfection but prior to discharge to the effluent storage ponds.
002	EFF-002[14]	Treated wastewater discharged from the effluent storage ponds to Atascadero Creek.
003	REC-001[14]	Treated wastewater following all treatment and storage in either of the storage ponds, and before it enters the reclamation distribution system.
004	REC-001[14]	Treated wastewater following all treatment and storage in either of the storage ponds, and before it enters the designated transfer pipeline for delivery to the Forestville Water District for further treatment and discharge to Jones Creek or is used for reclamation.
--	RSW-001	Upstream receiving water monitoring location in Atascadero Creek, upstream of the discharge at Discharge Point 002 at a location that is not influenced by the discharge.
--	RSW-002	Downstream receiving water monitoring location in Atascadero Creek immediately downstream of the discharge at Discharge Point 002 in the area influenced by the discharge.

[14] EFF-002 and REC-001 are the same location, the sampling point following the effluent storage pond. Different Discharge Point Names have been assigned due to differences in monitoring requirements at EFF-002 (discharge to surface waters) and REC-001 (discharge to reclamation system).

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

The Discharger shall monitor influent to the Facility at Monitoring Location INF-001 as follows:

Table E-3. Influent Monitoring – Monitoring Location INF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	24-hr Composite	Monthly	Standard Methods[15]
Total Suspended Solids	mg/L	24-hr Composite	Monthly	Standard Methods
Settleable Solids	mL/L	Grab	Monthly	Standard Methods
Influent Flow[16]	mgd	Meter	Continuous	--

IV. EFFLUENT MONITORING REQUIREMENTS

A. Intermediate Monitoring Locations INT-001 and INT-002

1. The Discharger shall monitor wastewater to and from the advanced wastewater treatment (AWT) filtration treatment system (Monitoring Locations INT-001a and INT-001b) and prior to disinfection as follows:

Table E-4. Monitoring for AWT Filtration Process – Monitoring Locations INT-001a and INT-001b

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Turbidity[17]	NTU	Meter	Continuous	Standard Methods

2. The Discharger shall monitor advanced treated effluent to and from the pasteurization disinfection unit (Monitoring Locations INT-002a and INT-002b) as follows:

[15] In accordance with the current edition of Standard Methods for Examination of Water and Wastewater (American Public Health Administration) or current test procedures specified in 40 CFR Part 136.

[16] Each month, the Discharger shall report average daily flow rate and average monthly flow calculated over the calendar month.

[17] Turbidity monitoring requirements are described in detail in section IX.A of this MRP.

Table E-5. Monitoring for Pasteurization Disinfection System – Monitoring Locations INT-002a and INT-002b

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Temperature[18]	° F	Meter (thermocouple)	Continuous	Standard Methods

B. Monitoring Location EFF-001

The Discharger shall monitor treated wastewater to be discharged to the storage ponds at Monitoring Location EFF-001 as follows:

Table E-6. Effluent Monitoring for Discharge to Storage– Monitoring Location EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Effluent Flow[16]	mgd	Meter	Continuous	---
Biochemical Oxygen Demand 5-Day @ 20° C (BOD_5)	mg/L	Grab	Weekly	Standard Methods
	lbs/day	Calculate	Weekly	---
Total Suspended Solids	mg/L	Grab	Weekly	Standard Methods
	lbs/day	Calculate	Weekly	---
Settleable Solids	mL/L	Grab	Weekly	Standard Methods
pH	s.u.	Grab	Daily	Standard Methods
Total Coliform Bacteria	MPN/100 mL	Grab	Daily[19]	Standard Methods
Chlorine, Total Residual[20, 21]	mg/L	Meter	Continuous[22]	Standard Methods
Disinfection CT[23]	mg-min/L	Calculate	Daily	---

[18] Temperature monitoring requirements are described in detail in section IX.C of this MRP.

[19] Total coliform sampling shall be daily when discharging to the reclamation distribution system. Total coliform sampling may be decreased to weekly when discharging to surface waters.

[20] Chlorine residual monitoring at Monitoring Location EFF-001 shall demonstrate that a chlorine residual is present after chlorination. This monitoring shall occur continuously when discharging effluent from the chlorine contact tank to the storage pond.

[21] Upon approval of the pasteurization disinfection process by the Regional Water Board Executive Officer, chlorine monitoring may be discontinued after the chlorination disinfection process is no longer in use.

[22] Report minimum daily chlorine residual.

[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.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Temperature[24]	°F	Meter	Continuous	Standard Methods

C. Monitoring Location EFF-002

The Discharger shall monitor treated wastewater to be discharged to Atascadero Creek at Monitoring Location EFF-002, when discharges occur, as follows:

Table E-7. Effluent Monitoring for Discharges to Atascadero Creek – Monitoring Location EFF-002

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Effluent Flow[16]	mgd	Meter	Continuous	--
Dilution Rate	% of stream flow	Calculate	Daily	--
Total Suspended Solids	mg/L	Grab	Monthly	Standard Methods
Biochemical Oxygen Demand 5-Day @ 20° C (BOD_5)	mg/L	Grab	Monthly	Standard Methods
Settleable Solids	mL/L	Grab	Monthly	Standard Methods
pH[25]	standard units	Grab	Daily	Standard Methods
Chlorine, Total Residual	mg/L	Grab	Daily[26]	Standard Methods
Dissolved Oxygen	mg/L	Grab	Daily	Standard Methods
Temperature[25]	°F	Grab	Daily	Standard Methods
Cyanide, Total (as CN)	µg/L	Grab	Monthly	EPA Method 335[27]
Dichlorobromomethane	µg/L	Grab	Monthly	EPA Method 624
Acute Toxicity[27]	% Survival	Grab	Monthly	See Section V.A below

[24] 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 use of the pasteurization disinfection system. Upon start-up of the pasteurization disinfection system, the Discharger shall monitor effluent temperature continuously.

[25] Monitoring for temperature and pH shall occur concurrently with monitoring for ammonia to calculate the un-ionized fraction.

[26] Chlorine residual monitoring at Monitoring Location EFF-002 shall demonstrate that there is no detectable chlorine during periods of discharge to Atascadero Creek. Samples collected to demonstrate complete dechlorination shall be collected at a point following disinfection and prior to discharge to Atascadero Creek. All chlorine residual measurements shall be reported as total chlorine residual. Total chlorine residual monitoring may be discontinued once the pasteurization disinfection process is installed and initiated, upon approval by the Regional Water Board. If chlorine is added at any point in the wastewater treatment process, chlorine residual monitoring shall occur to demonstrate that chlorine is not present.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Chronic Toxicity[27]	TUc	Grab	Annually	See Section V.B below
Chronic Toxicity (narrative)	Passed/ Triggered[28]			---
Hardness, Total (as $CaCO_3$)[29]	mg/L	Grab	1X/Year	Standard Methods
CTR Pollutants[30]	µg/L	Grab	1X/Permit Term	Standard Methods
Title 22 Pollutants[31]	µg/L	Grab	1X/Permit Term	Standard Methods
TCDD Equivalents	µg/L	Grab	1X/Permit Term	EPA Method 1613
Nitrate Nitrogen, Total (as N)	mg/L	Grab	Monthly	Standard Methods
Ammonia Nitrogen, Total (as N)[32]	mg/L	Grab	Monthly	Standard Methods
Ammonia Nitrogen, Un-ionized (as N)	mg/L	--	Monthly	Calculation
Phosphorus, Total (as P)	mg/L	Grab	Monthly	Standard Methods

[27] Whole effluent acute and chronic toxicity shall be monitored in accordance with the requirements of section V of this Monitoring and Reporting Program.

[28] The Discharger shall include reporting regarding compliance with the narrative toxicity objective in Receiving Water Limitation V.A.10 by reporting whether the chronic toxicity test passed or failed in relation to the chronic toxicity trigger of 1 TUc. For narrative chronic toxicity reporting, "Passed" shall be reported when chronic toxicity effluent results do not trigger accelerated testing (e.g., a result of ≤1TUc = 100/NOEC). "Triggered" shall be reported when chronic toxicity effluent results trigger accelerated testing by exceeding the chronic toxicity trigger of 1 TUc = 100/NOEC.

[29] Monitoring for effluent and receiving water hardness shall be conducted concurrently with effluent sampling for CTR pollutants. In addition, effluent hardness shall be collected one time per year, during a wet-weather period during the discharge season that is likely to represent lowest effluent hardness (e.g., typically sometime between mid-December and mid-March immediately following a period of sustained rainfall)

[30] CTR pollutants are those pollutants identified in the California Toxics Rule at 40 CFR 131.38.

[31] The title 22 pollutants are those pollutants for which the Department of Public Health has established Maximum Contaminant Levels (MCLs) at title 22, Division 4, Chapter 15, sections 64431 (Inorganic Chemicals) and 64444 (Organic Chemicals) of the California Code of Regulations. Duplicate analyses are not required for pollutants that are identified both as CTR and title 22 pollutants. Monitoring required in future permit terms may be reduced to only those pollutants detected in the title 22 sampling conducted during this permit term.

[32] Monitoring for ammonia shall be concurrent with acute whole effluent toxicity monitoring (Section V.A.1 of this MRP). Effluent and receiving water temperature and pH shall be recorded at the time of the ammonia sample.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity Testing

The Discharger shall conduct acute whole effluent toxicity testing (WET) to determine compliance with the effluent limitation for acute toxicity at Discharge Point 002 established by section IV.A.2.b of the Order.

1. **Test Frequency.** The Discharger shall conduct acute WET testing in accordance with the schedule established by this MRP while discharging at Discharge Point 002, as summarized in Table E-7, above.

2. **Sample Type.** For 96-hour static renewal or 96-hour static non-renewal testing, the effluent samples shall be grab samples collected at Monitoring Location EFF-002.

3. **Test Species.** Test species for acute WET testing shall be the rainbow trout, *Oncorhynchus mykiss*. At least one time every 5 years, the Discharger shall conduct one suite of acute WET testing using an invertebrate, the water flea (*Ceriodaphnia dubia*) and a vertebrate, rainbow trout (*Oncorhynchus mykiss*). After this screening period, monitoring shall be conducted annually using the most sensitive species. The next two species acute WET test shall be conducted by **March 2013**.

4. **Test Methods.** The presence of acute toxicity shall be estimated as specified in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (USEPA Report No. EPA-821-R-02-012, 5th edition or subsequent editions), or other methods approved by the Regional Water Board Executive Officer.

   Test procedures related to pH control, sample filtration, aeration, temperature control and sample dechlorination shall be performed in accordance with the USEPA method and fully explained and justified in each acute toxicity report submitted to the Regional Water Board. The control of pH in acute toxicity tests is allowed, provided the test pH is maintained at the effluent pH measured at the time of sample collection, and the control of pH is done in a manner that has the least influence on the test water chemistry and on the toxicity of other pH sensitive materials such as some heavy metals, sulfide and cyanide.

   a. **Test Dilutions.** The acute toxicity test shall be conducted using 100 percent effluent collected at Monitoring Location EFF-002.

   b. **Test Failure.** If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger shall re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.

c. **Accelerated Monitoring.** If the result of any acute toxicity test fails to meet the single test minimum limitation (70 percent survival), and the testing meets all test acceptability criteria, the Discharger shall take two more samples, one within 14 days and one within 21 days following receipt of the initial sample result. If any one of the additional samples do not comply with the three sample median minimum limitation (90 percent survival), the Discharger shall initiate a Toxicity Reduction Evaluation (TRE) in accordance with section VI.C.2.a.(2) of the Order. If the two additional samples are in compliance with the acute toxicity requirement and testing meets all test acceptability criteria, then a TRE will not be required. If the discharge stops before additional samples can be collected, the Discharger shall contact the Regional Water Board Executive Officer within 21 days with a plan to demonstrate compliance with the effluent limitation.

d. **Notification.** The Discharger shall notify the Regional Water Board in writing 14 days after the receipt of test results exceeding the acute toxicity effluent limitation. The notification will describe actions the Discharger has taken or will take to investigate and correct the cause(s) of toxicity. It may also include a status report on any actions required by this Order, with a schedule for actions not yet completed. If no actions have been taken, the reasons shall be given.

e. **Reporting.** Test results for acute toxicity tests shall be reported according to section 12 (Report Preparation) of *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* or in an equivalent format that clearly demonstrates that the Discharger is in compliance with effluent limitations, and other permit requirements.

B. Chronic Toxicity Testing

The Discharger shall conduct chronic toxicity testing to demonstrate compliance with the Basin Plan's water quality objective for toxicity. The Discharger shall meet the following chronic toxicity testing requirements:

1. **Test Frequency.** The Discharger shall conduct annual chronic WET testing in accordance with the schedule established by this MRP while discharging at Discharge Point 002, as summarized in Table E-7, above.

2. **Sample Type.** Effluent samples from Monitoring Location EFF-002 shall be grab samples. For toxicity tests conducted on-site and requiring renewals, grab samples collected on consecutive days are required. When tests are conducted off-site, a minimum of three samples shall be collected, in accordance with USEPA test methods.

3. **Test Species.** Test species for chronic WET testing shall be a vertebrate, the fathead minnow, *Pimephales promelas* (larval survival and growth), an invertebrate, the water flea, *Ceriodaphnia dubia* (survival and reproduction test), and a plant, the

green algae, *Selanastrum capricornutum* (growth test). The Discharger shall conduct two suites of chronic WET testing using the three species listed above, two times at the beginning of every five year period. After this screening period, monitoring shall be conducted annually using the most sensitive species. The next two sets of multiple species chronic WET test shall be conducted by **March 2013**.

4. **Test Methods.** The presence of chronic toxicity shall be estimated as specified in USEPA's *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms* (USEPA Report No. EPA-821-R-02-013, or subsequent editions).

   Test procedures related to pH control, sample filtration, aeration, temperature control and sample dechlorination shall be performed in accordance with the USEPA method and fully explained and justified in each acute toxicity report submitted to the Regional Water Board. The control of pH in chronic toxicity tests is allowed, provided the test pH is maintained at the pH of the receiving water measured at the time of sample collection, and the control of pH is done in a manner that has the least influence on the test water chemistry and on the toxicity of other pH sensitive materials such as some heavy metals, sulfide and cyanide.

5. **Test Dilutions.** The chronic toxicity test shall be conducted using a series of at least five dilutions and a control. The series shall consist of the following dilution series: 12.5, 25, 50, 75, and 100 percent, and a control. Control and dilution water shall be receiving water collected at an appropriate location upstream of the discharge point. Laboratory water may be substituted for receiving water, as described in the USEPA test methods manual, upon approval by the Regional Water Board Executive Officer. If the dilution water used is different from the culture water, a second control using culture water shall be used.

6. **Reference Toxicant.** If organisms are not cultured in-house, concurrent testing with a reference toxicant shall be conducted. Where organisms are cultured in-house, monthly reference toxicant testing is sufficient. Reference toxicant tests also shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc.).

7. **Test Failure.** If either the reference toxicant test or the chronic toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger shall re-sample and re-test as soon as possible, not to exceed 14 days following notification of test failure.

8. **Notification.** The Discharger shall notify the Regional Water Board in writing within 14 days after the receipt of test results that indicate an exceedance of the monitoring trigger for chronic toxicity during regular or accelerated monitoring.

9. **Accelerated Monitoring Requirements.** If the result of any chronic toxicity test exceeds the chronic toxicity monitoring trigger of 1.0 TUc as specified in section VI.C.2.a. of the Order, and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring. Accelerated monitoring shall consist of four additional effluent samples and dilution series (specified in V.B.5, above) – with one test for each test species showing toxicity results exceeding the toxicity trigger. Accelerated monitoring test shall be conducted approximately every week over a 4 week period.

   Testing shall commence within 14 days of receipt of initial sample results which indicated an exceedance of the chronic toxicity trigger. If the discharge will cease before the additional samples can be collected, the Discharger shall contact the Regional Water Board Executive Officer within 21 days with a plan to address elevated levels of chronic toxicity in effluent and/or receiving water. The following protocol shall be used for accelerated monitoring and TRE implementation:

   a. If the results of four consecutive accelerated monitoring tests do not exceed the chronic toxicity trigger of 1.0 TUc, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring. However, if there is adequate evidence of a pattern of effluent toxicity, the Regional Water Board's Executive Officer may require that the Discharger initiate a TRE.

   b. If the source(s) of the toxicity is easily identified (i.e. temporary plant upset), the Discharger shall make necessary corrections to the facility and shall continue accelerated monitoring until four 4 consecutive accelerated tests do not exceed the monitoring "trigger." Upon confirmation that the chronic toxicity has been removed, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring.

   c. If the result of any accelerated toxicity test exceeds an effluent limitation or monitoring trigger, the Discharger shall cease accelerated monitoring and, within 30 days of the date of completion of the accelerated monitoring test, initiate the TRE Workplan developed in accordance with Section VI.C.2.a.(2) of the Order to investigate the cause(s) and identify corrective actions to reduce or eliminate the chronic toxicity. Within 30 days of completing the TRE Workplan implementation, the Discharger shall submit a report to the Regional Water Board including, at a minimum:

      (1) Specific actions the Discharger took to investigate and identify the cause(s) of toxicity, including a TRE WET monitoring schedule;

      (2) Specific actions the Discharger took to mitigate the impact of the discharge and prevent the recurrence of toxicity;

(3) Recommendations for further actions to mitigate continued toxicity, if needed; and

(4) A schedule for implementation of recommended actions.

C. Chronic Toxicity Reporting

1. **Routine Reporting.** All toxicity test reports shall include the contracting laboratory's complete report provided to the Discharger and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals.

   The WET test report shall contain a narrative report that includes details about WET test procedures and results, including the following:

   a. **Test Procedures**

      (1) Receipt and handling of the effluent sample that includes a tabular summary of initial water quality characteristics;

      (2) The source and make-up of the lab control/diluent water used for the test;

      (3) Any manipulations done to lab control/diluent and effluent such as filtration, nutrient addition, etc.;

      (4) Identification of any reference toxicant testing performed;

      (5) Tabular summary of test results for control water and each effluent dilution and statistics summary to include calculation of NOEC;

      (6) EC, TUc and IC25;

      (7) Identification of any anomalies or nuances in the test procedures or results;

      (8) Summary and Conclusions section.

   b. **Test Results.** Test results shall include, at a minimum, for each test:

      (1) Sample date(s);

      (2) Test initiation date;

      (3) Test species;

      (4) Endpoint values for each dilution (e.g., number of young, growth rate, percent survival);

(5) NOEC value(s) in percent effluent;

(6) IC15, IC25, IC40, and IC50 values (or EC15, EC25…etc.) in percent effluent;

(7) TUc values (100/NOEC);

(8) Mean percent mortality (±s.d.) after 96 hours in 100 percent effluent (if applicable);

(9) NOEC and LOEC values for reference toxicant test(s);

(10)IC50 or EC50 value(s) for reference toxicant test(s);

(11)Available water quality measurements for each test (e.g., pH, DO, temperature, conductivity, hardness, salinity, ammonia);

(12) Statistical methods used to calculate endpoints;

(13) The statistical output page, which includes the calculation of percent minimum significant difference (PMSD); and

(14) Results of applicable reference toxicant data with the statistical output page giving the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD and dates tested; the reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory; and any information on deviations from standard test procedures or problems encountered in completing the test and how the problems were resolved.

2. **Quality Assurance Reporting.** Because the permit requires sublethal hypothesis testing endpoints from methods 1006.0 and 1007.0 in the test methods manual titled *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms* (EPA-821-R-02-014, 2002), in-test variability must be reviewed for acceptability and variability criteria (upper and lower PMSD bounds) must be applied, as directed under section 10.2.8 – *Test Variability* of the test methods manual. Under section 10.2.8, the calculated PMSD for both reference toxicant test and effluent toxicity test results must be compared with the upper and lower PMSD bounds variability criteria specified in Table 6 – *Variability Criteria (Upper and Lower PMSD Bounds) for Sublethal Hypothesis Testing Endpoints Submitted Under NPDES Permits*, following the review criteria in paragraphs 10.2.8.2.4.1 through 10.2.8.2.4.5 of the test methods manual. Based on this review, only accepted effluent toxicity test results shall be reported.

3. **Compliance Summary.** The monthly discharger self-monitoring reports shall contain an updated chronology of chronic toxicity test results expressed in TUc, and

organized by test species, type of test (survival, growth or reproduction), and monitoring frequency (routine, accelerated, or TRE). The final report shall clearly demonstrate that the Discharger is in compliance with effluent limitations and other permit requirements.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

This section is not applicable to the Discharger as treated wastewater is not discharged to or applied to land for the purpose of disposal. The Discharger reclaims treated wastewater; thus, the Discharger has Reclamation Monitoring Requirements rather than Land Discharge Monitoring Requirements.

VII. RECLAMATION MONITORING REQUIREMENTS

The following reclamation requirements are applicable during periods when the reclamation system is being used. Monitoring requirements identified in this section are not applicable during periods when all effluent is discharged to Atascadero Creek.

A. Recycled Water Monitoring

The Discharger shall monitor treated, disinfected wastewater prior to reclamation at Monitoring Location REC-001 as follows:

Table E-8. Reclamation Monitoring Requirements – Monitoring Location REC-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow[33]	mgd	Meter	Continuous	Meter
pH	Standard units	Grab	Weekly	Standard Methods
Nitrate Nitrogen[34]	mg/L	Grab	Monthly[35]	Standard Methods
Nitrite Nitrogren[34]	mg/L	Grab	Monthly[35]	Standard Methods
Ammonia Nitrogen[34]	mg/L	Grab	Monthly[35]	Standard Methods
Organic Nitrogen[34]	mg/L	Grab	Monthly[35]	Standard Methods
TDS	mg/L	Grab	Monthly[35]	Standard Methods
Chloride	mg/L	Grab	Monthly[35]	Standard Methods

[33] Each month, the Discharger shall report the number of days that treated wastewater was used for reclamation at all authorized reclamation sites, as well as the average and maximum daily flow rate.

[34] Monitoring for nitrate, nitrite, ammonia and organic nitrogen is for the purpose of determining total nitrogen concentration for agronomic rate calculations.

[35] The monitoring frequency for nutrients and salts may be reduced or eliminated if monitoring data demonstrates that any of concentrations of these constituents are consistently lower than water quality objectives for protection of groundwater.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Boron	mg/L	Grab	Monthly[35]	Standard Methods
Sodium	mg/L	Grab	Monthly[35]	Standard Methods
Visual Observations[36]	--	--	Daily	Visual

B. Reclamation Water Production and Use

Recycled water quality characteristics and precipitation data shall be used to ascertain nitrogen loading rates at each recycled water use site. The following information shall be reported for any new use site added after the permit adoption date and for existing use sites upon completion of the agronomic rate evaluation required by Provision VI.C.2.b. of the Order.

Table E-9. Recycled Water Production and Use

Parameter	Units	Sample Type	Minimum Sampling Frequency
Volume of recycled water[37]	Acre-feet	Meter	Monthly
Total area of application	Acres	Observation	Monthly
Total Nitrogen application rate[38,39]	Lbs/Acre-Month	Calculation	Monthly
Rainfall	Inches	Gage	Daily

[36] During periods of discharge to the reclamation distribution system, visual observations shall be conducted at least weekly for agronomic applications and daily during periods of frost protection to verify compliance with recycled water requirements in Attachment G and shall confirm proper operation of the recycled water system and associated BMPs, and include a record of any malfunctions or findings of improper operation, including, but not limited to odors, evidence of surface run-off, or ponding that exceeds 24-hours. Visual observations may be performed by the irrigation users in accordance with the Discharger's user agreements. The monthly monitoring report shall include the daily volume of treated wastewater discharged to the irrigation system and any observations indicating non-compliance with the provisions of the waste discharge requirements.

[37] Estimation of the volume of recycled water shall not include other potable or non-potable "make-up" water used in conjunction with recycled water.

[38] Nitrogen application rate shall consider nitrogen content of the recycled water, based on effluent monitoring data.

[39] Nitrogen concentrations shall be calculated and reported "as N". For example, nitrate-nitrogen = 27 mg/L as NO_3 shall be converted and reported as nitrate-nitrogen = 6.1 mg/L as N using a conversion factor of

14.067 (N)/62.0049 (NO_3)

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Surface Water Monitoring Locations RSW-001 and RSW-002

The Discharger shall monitor upstream and downstream conditions in Atascadero Creek at Monitoring Locations RSW-001 and RSW-002, respectively, during periods of discharge to Atascadero Creek as follows:

Table E-10. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Suspended Solids	mg/L	Grab	Monthly	Standard Methods
Dissolved Oxygen	mg/L	Grab	Monthly	Standard Methods
pH[40]	standard units	Grab	Monthly	Standard Methods
Turbidity	NTU	Grab	Monthly	Standard Methods
Temperature[40]	°F	Grab	Monthly	Standard Methods
Hardness, Total (as $CaCO_3$)[29]	mg/L	Grab	1X/Permit Term	Standard Methods
Ammonia Nitrogen, Total (as N)[40]	mg/L	Grab	Monthly	Standard Methods
Un-ionized Ammonia (as N)	mg/L	Calculate	Monthly	--
Nitrate Nitrogen, Total (as N)	mg/L	Grab	Monthly	Standard Methods
Phosphorus, Total (as P)	mg/L	Grab	Monthly	Standard Methods
Cyanide	µg/L	Grab	Monthly	Standard Methods
CTR Pollutants[30, 41]	µg/L	Grab	1X/Permit Term	Standard Methods
Stream Flow[42]	mgd	Gage	Daily	---

B. Groundwater – Not Applicable

There are no groundwater monitoring requirements in this monitoring and reporting program except for those for reclamation water use sites, required above in VII.C. Groundwater monitoring may be established in the future, if necessary, to assess impacts of effluent discharge to the reclamation system.

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[40] Effluent and receiving water pH, temperature, and ammonia samples shall be collected on the same day and at approximately the same time for calculation of the un-ionized fraction. Receiving water monitoring for temperature shall also occur concurrently with effluent monitoring at EFF-002 when discharges are occurring to Atascadero Creek.

[41] Monitoring shall occur only at Monitoring Location RSW-001.

[42] Stream flow shall be measured on Green Valley Road Bridge.

IX. OTHER MONITORING REQUIREMENTS

A. Filtration Process Monitoring

Filtration process monitoring shall demonstrate compliance with section IV.D.1. (Filtration Process Requirements) of this Order and applies to all treated wastewater flows. The following filtration process monitoring shall be implemented:

1. **Effluent Filter Monitoring (Monitoring Location INT-001)**

   a. **Monitoring.** The turbidity of the filter effluent shall be continuously measured and recorded. Should the turbidity meter and recorder fail, grab sampling at a minimum frequency of 1.2 hours may be substituted for a period of up to 24 hours. The recorded data shall be maintained by the Discharger for at least 3 years. The daily maximum and 95th percentile turbidity results shall be reported for monitoring location INT-001a and the daily maximum, daily average, and 95th percentile turbidity results shall be reported for monitoring location INT-001b on the monthly monitoring reports.

   b. **Compliance.** Compliance with the turbidity limitations specified in the California Code of Regulations Water Recycling Criteria, as referenced in section IV.D.1.c of the Order shall be determined as follows:

      (1) Compliance with the daily average turbidity limitation shall be determined by averaging all turbidity readings collected in a calendar day, using the levels of recorded turbidity taken at intervals of no more than 1.2 hours over a 24-hour period.

      (2) Compliance with the 95th percentile effluent turbidity limitation specified in section IV.D.1.c.ii of this Order shall be determined using the levels of recorded turbidity taken at intervals of no more than 1.2 hours over a 24-hour period.

   c. **Reporting.** If the filter effluent turbidity exceeds 2 NTU based on a daily average or if the influent turbidity exceeds 5 NTU for more than 15 minutes, the incident shall be reported in the monthly self-monitoring report. If the filter effluent turbidity exceeds 10 NTU at any time, the incident shall be reported to the California Department of Public Health and the Regional Water Board by telephone within 24 hours in accordance with Provision VI.A.2.b of this Order. A written report describing the incident and the actions undertaken in response shall be included in the monthly self-monitoring report. Mitigation of the event shall consist of diverting all inadequately treated wastewater to temporary storage or an upstream process.

B. Disinfection Process Monitoring for Chlorine Disinfection System (Monitoring Location EFF-001)

Disinfection process monitoring shall demonstrate compliance with section IV.D.2.a (Disinfection Process Requirements for Chlorine Disinfection System) of this Order and applies to all treated wastewater flows. The following disinfection process monitoring requirements must be implemented:

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.

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:

   a. Modal contact time under highest daily flow and corresponding chlorine residual.
   b. Modal contact time under lowest daily flow and corresponding chlorine residual.
   c. Lowest chlorine residual and corresponding modal contact time.
   d. 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.

3. **Reporting.** If the chlorination equipment fails or the chlorine disinfection CT is less than 450 mg-min/L, the event shall be reported to the Regional Water Board and CDPH by telephone within 24 hours. The report shall describe the measures taken to bring the discharge into compliance. Upon discovery of the equipment failure or effluent limitation exceedance, inadequately treated and disinfected wastewater shall be diverted to a storage basin or an upstream process for adequate treatment.

C. Disinfection Process Monitoring for Pasteurization Disinfection System (Monitoring Locations INT-002a and INT-002b)

Pasteurization disinfection process monitoring shall demonstrate compliance with section IV.D.2.b (Disinfection Process Requirements for Pasteurization Disinfection System) of this Order and applies to all treated wastewater flows. The following disinfection process monitoring requirements must be implemented:

1. **Monitoring.** The flow to, and the temperature to and from the pasteurization preheater shall be monitored continuously and recorded.

2. **Compliance.** The temperature of the preheater influent shall not drop below 180°F at any time. The Discharger shall demonstrate that the minimum contact time of the effluent at this temperature is 10 seconds.

3. **Reporting.** The Discharger shall report the lowest daily preheater temperature and the minimum daily contact time. The Discharger shall also report the temperature of the effluent discharged to the effluent storage pond and effluent discharged from the effluent storage pond as required by sections IV.B (Table E-6) and IV.C (Table E-7) of this MRP.

D. Visual Monitoring of Discharge (EFF-002) and Receiving Water (RSW-002)

Visual observations of the discharge and the receiving water shall be recorded monthly and on the first day of each intermittent discharge. Visual monitoring shall include, but not be limited to, observations for floating materials, coloration, objectionable aquatic growths, oil and grease films, and odors. Visual observations shall be recorded and included in the Discharger's monthly monitoring reports.

E. Chlorine Use

Upon completion and use of the pasteurization disinfection process, the Discharger shall indicate in its monthly SMRs when it uses chlorine for operation and maintenance purposes or as backup to the pasteurization disinfection system. The Discharger shall report dates chlorine was used, the amount of chlorine used, the duration of use, the location of use, and how chlorinated wastewater, if any, was disposed (e.g., routed to the headworks, discharged to effluent storage pond, etc.). If chlorine is discharged to the effluent storage pond during the surface water discharge season, the Discharger shall monitor effluent for chlorine residual at monitoring location at EFF-002.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

2. **Schedules of Compliance.** The Discharger shall submit all reports and documentation required by compliance schedules that are established by this Order. Such reports and documentation shall be submitted to the Regional Water Board on or before each compliance date established by this Order. If noncompliance is reported, the Discharger shall describe the reasons for noncompliance and a specific date when compliance will be achieved. The Discharger shall notify the

Regional Water Board when it returns to compliance with applicable compliance dates established by schedules of compliance.

B. Self-Monitoring Reports (SMRs)

1. The Discharger shall submit electronic Self-Monitoring Reports (eSMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal. The Discharger shall maintain sufficient staffing and resources to ensure it submits eSMRs that are complete and timely. This includes provision of training and supervision of individuals (e.g., Discharger personnel or consultant) on how to prepare and submit eSMRs.

   Until State or Regional Water Board staff provide notification to the Discharger, the Discharger shall also submit hard copy SMRs.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit monthly SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-11. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	First day of second calendar month following month of sampling
Daily	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	First day of second calendar month following month of sampling
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	First day of second calendar month following month of sampling
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	First day of calendar month through last day of calendar month	First day of second calendar month following month of sampling

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Quarterly	Permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	First day of second calendar month following the quarter of sampling
Annually	Permit effective date	January 1 through December 31	March 1, each year
1X/Permit Term	Permit effective date	January 1 through December 31	180 days prior to permit expiration

4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable ML, the RL and the current MDL, as determined by the procedure in 40 CFR Part 136.

   The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

   a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

   b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

      For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

   c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

   d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

5. The Discharger shall submit SMRs in accordance with the following requirements:

a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The reported data shall include calculation of all effluent limitations that require averaging, taking of a median or other computation. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment. During periods of land discharge and/or reclamation discharge, the reports shall certify "land discharge" and/or "reclamation discharge".

b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify:

(1) Facility name and address;

(2) WDID number;

(3) Applicable period of monitoring and reporting;

(4) Violations of the WDRs (identified violations must include a description of the requirement that was violated and a description of the violation);

(5) Corrective actions taken or planned; and

(6) The proposed time schedule for corrective actions.

c. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

Regional Water Quality Control Board
North Coast Region
5550 Skylane Blvd., Suite A
Santa Rosa, CA 95403

C. Discharge Monitoring Reports (DMRs)

This section is not applicable to the Discharger because DMRs are not required for minor dischargers.

D. Other Reports

1. The Discharger shall report the results of any special studies, acute and chronic toxicity testing, TRE/TIE, Technical Reports Regarding Existing Recycled Water Use

Sites, Storage Pond Technical Report, and Pollution Minimization Program, required by Special Provisions – VI.C.2 and 3 of this Order.

2. **Water Reclamation System**

   a. **Reclamation Operations Reporting.** The Discharger shall submit reports pertaining to the operation, performance, monitoring, and other activities related to water reclamation as follows:

      (1) **Quarterly Recycled Water Report.** The Discharger shall submit a quarterly recycled water summary report, as required by section 13523.1(b)(4) of the Water Code, containing the following information:

         (a) Total volume of recycled water supplied to each recycled water user for each month of the reporting period;

         (b) Total number of recycled water use sites;

         (c) Locations of recycled water use sites, including a map and tabular summary with acreage and name of property owner;

         (d) A summary of recycled water use site inspections conducted by the Discharger or recycled water users and identification of recycled water user violations, including:

            (i) Inspection dates;

            (ii) All observations of recycled water over-application and/or runoff;

            (iii) Misuses of recycled water;

            (iv) Number and location of any cross-connections and/or improper backflow prevention devices; and

            (v) Any other violations of the Master Reclamation Permit or the Discharger's rules and regulations.

         (e) A summary of operational problems, plant equipment malfunctions, and any diversion of recycled water which does not meet the requirements specified in this Order.

         (f) Documentation of notifications to users if any recycled water was delivered that did not meet the requirements specified in this Order.

         (g) A record of equipment or process failures initiating an alarm, as well as any corrective and preventative actions; and

(h) Documentation of the Discharger's communication with recycled water users regarding nutrient concentrations in the recycled water pursuant to Water Reclamation Requirement B.9.b of Attachment G.

(2) **Annual Recycled Water Report.** The annual recycled water report shall include but not be limited to the following;

(a) A compliance summary and discussion of the compliance record for the prior calendar year, including:

(i) If violations occurred, the report shall also discuss the corrective actions taken and planned to bring the reclamation program into full compliance with this Order.

(ii) Upon approval of one or more Irrigation Management Plans, the annual report shall include an evaluation verifying that the application of recycled water to each use area occurred at reasonable agronomic rates identified in the Irrigation Management Plans required by section C.5 of Attachment G and utilizing the data required by Table E-7 of the MRP. If the agronomic rate evaluation determines that exceedances of the agronomic rate may be occurring, the Discharger shall identify and implement corrective actions to ensure recycled water use occurs at reasonable agronomic rates.

(iii) Certification that all reasonable BMPs and management practices were implemented to ensure efficient and compliant operation of the recycled water system; and

(iv) Identification of any other problems that occurred in the recycled water system during the prior year and plans to rectify those problems in the coming year.

(b) A summary of scheduled and non-scheduled maintenance of the reclamation system appurtenances and irrigation areas;

(c) Enforcement and monitoring activities that occurred during the previous year, and identification of any problems and how the problems were addressed; and.

(d) If applicable, a summary of all cross-connection testing and back-flow prevention activities (inspections, maintenance) and a summary of any problems identified, or certification that no problems occurred.

(e) Documentation of compliance with California Health and Safety Code section 116915 as specified in Water Reclamation Requirement B.16 of

Attachment G regarding the installation and marking of recycled water piping.

(3) **Other Recycled Water Reporting**

(a) New Use Site Reporting. The Discharger shall notify the Regional Water Board Executive Officer in anticipation of reclaiming water at a new location and far enough in advance of commencement of reclamation activities at the new location to provide sufficient time for submittal and approval of all technical information required by section D of Attachment G.

3. **Annual Report.** The Discharger shall submit an annual report to the Regional Water Board for each calendar year. The report shall be submitted by March 1st of the following year. The report shall, at a minimum, include the following:

   a. Both tabular and, where appropriate, graphical summaries of the monitoring data and disposal records from the previous year. If the Discharger monitors any pollutant more frequently than required by this Order, using test procedures approved under 40 CFR 136 or as specified in this Order, the results of this monitoring shall be included in the calculation and report of the data submitted SMR.

   b. A comprehensive discussion of the Facility's compliance (or lack thereof) with all effluent limitations and other WDRs, and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the Order.

   c. The names, certificate grades, and general responsibilities of all persons employed at the Facility;

   d. The names and telephone numbers of persons to contact regarding the Facility for emergency and routine situations;

   e. A statement certifying when monitoring instruments and devices were last calibrated, including identification of who performed the calibration;

   f. A statement certifying whether the current operation and management manual and spill contingency plan, reflect the wastewater treatment facility as currently constructed and operated, and the dates when these documents were last reviewed and last revised for adequacy.

   g. **Sanitary Sewer System Reporting.** The Discharger shall submit, as part of its annual report to the Regional Water Board, a description of the Discharger's activities within the sanitary sewer system over the previous 12 months. The report shall contain:

(1) A description of any change in the local legal authorities enacted to implement the Sewer System Management Plan (SSMP);

(2) A summary of the SSOs that occurred in the past year. The summary shall include the date, location of overflow point, affected receiving water (if any), estimated volume, and cause of the SSO, and the names and addresses of the responsible parties as well as the names and addresses of the property owner(s) affected by the sanitary sewer overflow.

(3) A summary of compliance and enforcement activities during the past year. The summary shall include fines, other penalties, or corrective actions taken as a result of the SSO. The summary shall also include a description of public participation activities to involve and inform the public;

(4) Documentation that all feasible steps to stop and mitigate impacts of sanitary sewer overflows have been taken.

h. **Source Control Activity Reporting.** The Discharger shall submit, as part of its annual report to the Regional Water Board, a description of the Discharger's source control activities, as required by Provision VI.C.5.b. of this Order.

(1) A copy of the source control standards.

(2) A description of the waste hauler permit system.

(3) A summary of the compliance and enforcement activities during the past year. The summary shall include the names and addresses of any industrial or commercial users under surveillance by the Discharger, an explanation of whether they were inspected, sampled, or both, the frequency of these activities at each user, and the conclusions or results from the inspection or sampling of each user.

(4) A summary of any industrial waste survey results.

(5) A summary of public participation activities to involve and inform the public.

i. **Biosolids Handling and Disposal Activity Reporting.** The Discharger shall submit, as part of its annual report to the Regional Water Board, a description of the Discharger's solids handling, disposal and reuse activities over the previous twelve months. At a minimum, the report shall contain:

(1) Annual sludge production, in dry tons and percent solids.

(2) A schematic diagram showing sludge handling facilities (e.g., digesters, thickeners, drying beds, etc.), if any and a solids flow diagram.

(3) Methods of final disposal of sludge:

(a) For any portion of sludge discharged to a sanitary landfill, the Discharger shall provide the volume of sludge transported to the land fill, the names and locations of the facilities receiving sludge, the Regional Water Board's WDRs order number for the regulated landfill, and the landfill classification.

(b) For any portion of sludge discharged through land application, the Discharger shall provide the volume of biosolids applied, the date and locations where biosolids were applied, the Regional Water Board's WDRs order number for the regulated discharge, a demonstration that the discharge was conducted in compliance with applicable permits and regulations, and, if applicable, corrective actions taken or planned to bring the discharge into compliance with WDRs.

(c) For any portion of sludge further treated through composting, the Discharger shall provide a summary of the composting process, the volume of sludge composted, and a demonstration and signed certification statement that the composting process and final product met all requirements for Class A biosolids.

j. **Storm Water Reporting.** The Discharger shall submit, as part of its annual report to the Regional Water Board, an evaluation of the effectiveness of the Discharger's best management practices (BMPs) to control storm water, as well as activities to maintain and upgrade these BMPs.

k. **Recycled Water Pipe Identification.** The Discharger shall document compliance with California Health and Safety Code section 116815 as specified in Water Reclamation Requirement B.16 of Attachment G regarding the installation and marking of recycled water piping.

E. Spills and Overflows Notification

1. All spills, unauthorized discharges, and sanitary sewer overflows (SSOs) equal to or in excess of 1,000 gallons or any size spill or SSO that result in a discharge to a drainage channel or a surface water:

   a. As soon as possible, but not later than **two (2) hours** after becoming aware of the discharge, the Discharger shall notify the State Office of Emergency Services (OES), the local health officer or directors of environmental health with

jurisdiction over affected water bodies or land areas, and the Regional Water Board.[43]

Information to be provided verbally to the Regional Water Board includes:

(1) Name and contact information of caller;
(2) Date, time and location of spill occurrence;
(3) Estimates of spill volume, rate of flow, and spill duration;
(4) Surface water bodies impacted, if any;
(5) Cause of spill;
(6) Cleanup actions taken or repairs made; and
(7) Responding agencies.

b. As soon as possible, but not later than **twenty-four (24) hours** after becoming aware of a discharge, the Discharger shall submit to the Regional Water Board a certification that the State Office of Emergency Services and the local health officer or directors of environmental health with jurisdiction over affected water bodies or land areas have been notified of the discharge. For the purpose of this requirement, "certification" means an OES certification number and, for the local health department, name of local health staff, department name, phone number and date and time contacted.

c. Within **five (5) business days**, the Discharger shall submit a written report to the Regional Water Board office. The report must include information provided in the verbal notification and additional information as follows:

(1) Other agencies notified by telephone and copies of reports submitted to other agencies;
(2) All available details related to the cause of the spill;
(3) Detailed description of cleanup actions and repairs taken; and
(4) Description of corrective actions that will be taken to minimize or prevent future spills.

d. In the cover letter of the monthly report, the Discharger shall include a brief written summary of the event and any additional details related to the cause or resolution of the event, including, but not limited to results of any water quality monitoring conducted.

2. All spills, unauthorized discharges, and sanitary sewer overflows (SSOs) less than 1,000 gallons that do not reach a drainage channel or a surface water:

[43] The contact number for spill reporting for the Office of Emergency Services is (800) 852-7550. The contact number of the Regional Water Board during normal business hours is (707) 576-2220. After normal business hours, spill reporting to OES will satisfy the 2 hour notification requirement for the Regional Water Board.

a. As soon as possible, but not later than **twenty-four (24) hours** after becoming aware of the discharge, the Discharger shall notify the Regional Water Board and provide the applicable information in requirement 1.a of this section.

b. In the cover letter of the monthly monitoring report, the Discharger shall include a written description of the spill event.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for dischargers in California. Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

WDID	1B84060SON
Discharger	Graton Community Services District
Name of Facility	Graton Community Services District Wastewater Treatment, Reclamation and Disposal Facility
Facility Address	250 Ross Lane
	Sebastopol, CA 95472
	Sonoma County
Facility Contact, title and Phone	Robert Rawson, General Manager, (707) 823-1542
Authorized Person to Sign and Submit Reports	Robert Rawson, General Manager, (707) 823-1542
Mailing Address	P.O. Box 534, Graton, CA 95444
Billing Address	Same as Mailing Address
Type of Facility	Publicly Owned Treatment Works (POTW)
Major or Minor Facility	Minor
Threat to Water Quality	1
Complexity	B
Pretreatment Program	No
Reclamation Requirements	Producer
Facility Permitted Flow	0.14 million gallons per day (mgd) (average daily dry-weather flow)

Facility Design Flow	0.14 mgd (average daily dry-weather design flow[44]); 0.397 mgd average daily wet-weather flow [45](based on design of tertiary filters) 0.85 mgd, peak wet-weather flow [46]
Watershed	Russian River Hydrologic Unit, Guerneville Hydrologic Subarea
Receiving Water	Atascadero Creek, tributary to Green Valley Creek, thence to the Russian River
Receiving Water Type	Inland surface water

A. Graton Community Services District (hereinafter Discharger) is the owner and operator of the Graton Community Services District Wastewater Treatment, Reclamation and Disposal Facility (hereinafter Facility), a POTW, as shown on Attachment B.

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and State laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. The Facility discharges wastewater to Atascadero Creek which is tributary to Green Valley Creek, thence the Russian River, all waters of the United States, and is currently regulated by Order No. R1-2004-0038 which was adopted on October 6, 2004 and expired on October 6, 2009. The Discharger is also regulated by Monitoring and Reporting Program (MRP) No. R1-2004-0038, which was adopted on October 6, 2004. The terms and conditions of the current Order and MRP have been automatically continued and remain in effect until new Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit are adopted pursuant to this Order.

C. The Discharger filed a Report of Waste Discharge (ROWD) and submitted an application for renewal of its WDRs and NPDES permit on April 1, 2009. Additional information was included in the Discharger's mitigated negative declaration addendum submitted on August 1, 2011 identifying modifications to the Facility upgrade project to change the disinfection method to pasteurization and the biosolids processing method to composting. The Discharger submitted an Infeasibility Report related to chlorine residual and ammonia on November 17, 2011. The permit application was deemed complete on November 19, 2011.

[44] Average dry-weather design flow is defined as the average of daily inflows calculated during the lowest consecutive 30-day period each calendar year.

[45] Average daily wet-weather design flow is defined as the as the highest average daily flow rate of wastewater that may be treated at any time. This flow rate limitation will generally apply during the wet season when influent flow increases above the average dry-weather flow.

[46] Maximum daily wet-weather design flow is defined as the maximum flow rate of wastewater that may be treated at any time. This flow rate limitation will generally apply during the wet season when influent flows increase above the average dry-weather flow.

II. FACILITY DESCRIPTION

The Discharger owns a wastewater collection, treatment, reclamation and disposal facility and provides sewerage service to a population of approximately 1,045 (Graton CSD Household Income Survey Final Report, June 30, 2009), including the following types of users: residential (411 parcels), commercial (11 parcels), industrial (3 parcels), recreational (1 parcel), government (2 parcels), utility (8 parcels) and institutional (4 parcels) in the Graton Service Area.

A. Description of Wastewater and Biosolids Treatment or Controls

The Facility is located immediately north of Graton, California adjacent to Sullivan Creek, Atascadero Creek, and the lower portion of Pitkin Marsh.

1. Collection System

The collection system was constructed in 1976 and consists of approximately 6.5 miles of 6, 8, and 12 inch asbestos cement pipelines and two lift stations. Lift station 1 is sized for 850,000 gallons per day and serves the majority of the system's flows. Lift station 2 conveys flows from two residences to the gravity collection system.

2. Existing Wastewater Treatment Facility

Current treatment operations at the Facility include the headworks (solids removal and flow meter), two aerated ponds, a settling pond, a chlorine disinfection basin, and two effluent storage ponds. The existing treatment facility has design treatment capacities of 0.14 mgd (average dry-weather flow) and 0.85 mgd (maximum daily wet-weather flow). Wastewater flows by gravity through all three treatment ponds.

The headworks was constructed in 1976 and was designed and built with a grit chamber, a solids comminutor and a flow measurement flow. The grit chamber requires manual removal of solids. The comminutor has since been removed, and therefore larger solids are removed manually. Solids are drained into a 5 gallon bucket and deposited in a trash container.

The aerated ponds provide primary and secondary treatment of wastewater. The ponds, which are clay lined with concrete banks, work in series or in parallel, and provide a capacity of 1.25 million gallons each. The ponds are typically operated in series. Each pond is mixed and aerated by two 10 horsepower surface splasher type aerators.

The settling pond is clay lined and provides flow equalization and storage, and settling of suspended solids. The settling pond has two outlet structures. A surface floater provides effluent transfer and a fixed gravity overflow directs effluent to a transfer wet well. Effluent from the settling pond can be redirected back to headworks, during

colder weather months, and the aerators in the aeration ponds may be idled to provide complete nitrification. Algal blooms in the settling pond contribute suspended solids and BOD_5; however, the use of Aqua Marine Shadow, a nontoxic proprietary food grade colorant (dye), has eliminated seasonal algal blooms and resultant TSS. Flow from the settling pond is pumped through the Control Building where it is chlorinated and flows to the storage ponds through the 10,800 gallon chlorine contact chamber. Dechlorination occurs passively in the storage ponds by oxidation.

3. **Planned Wastewater Treatment Facility Upgrades**

The Discharger is planning to upgrade the Facility to treat to California Code of Regulations title 22, disinfected tertiary standards. The previous permit required the upgrades to be completed by October 6, 2007, to comply with the Basin Plan requirement that municipal waste discharges to the Russian River and its tributaries be of advanced treated wastewater. The Discharger did not complete the capital improvements by this date, due to budget constraints.

The Discharger has completed construction of a flood wall project, which includes a concrete flood wall, earthen flood berm and a storm water detention system, to protect the Facility from winter flood events.

A Cease and Desist Order (CDO, Regional Water Board Order No. R1-2008-0109) was adopted by the Regional Water Board on December 11, 2008, and includes a time schedule for compliance with the Basin Plan Advanced Treatment Requirements. The CDO requires advanced wastewater treatment no later than October 6, 2012. A modified CDO is proposed for adoption concurrently with this Order to extend the compliance date for completion of the Discharger's tertiary upgrade project by 20 months.

The planned tertiary upgrade project has been designed to treat up to an average daily flow of 0.397 mgd and peak daily flow of 0.58 mgd in order to handle anticipated wet-weather flows. The permitted wet-weather Facility flow of 0.85 mgd has been retained from Order No. R1-2004-0038 to recognize that the treatment process relies on equalization in the treatment ponds to achieve a peak design flow of 0.85 mgd. The Discharger plans to replace the existing headworks equipment with automated headworks equipment, install a suspended air flotation (SAF) cell for solids removal, a Fuzzy Filter compressible media deep bed filtration system for tertiary filtration, and replace chlorine disinfection with a cogeneration/pasteurization disinfection system. The Discharger also plans to improve its recycled water delivery system with a new pump station and to implement biosolids composting. California Department of Health Services has approved both the Fuzzy Filter and the cogeneration/pasteurization processes as technologies that meet California Water Recycling Criteria for tertiary disinfected wastewater.

The Discharger intends for the cogeneration system to provide the primary power source for operation of the entire plant in lieu of purchased PG&E power. PG&E will be a backup source, and excess power will be sold to PG&E. Exhaust from the turbine(s) will be used to heat the tertiary filtered effluent to 180°F for 10 seconds in accordance with CDPH criteria for Title 22 tertiary disinfection. Additional energy will be captured following pasteurization to heat the buildings in lieu of propane or electric heaters. GCSD is currently proceeding with system specifications and engineering drawings and investigating the feasibility and efficacy of utilizing additional waste heat to enhance the biosolids composting process.

State Revolving funds and Proposition 50 funds from the North Coast Integrated Regional Water Management Plan will partially fund construction of the SAF and fuzzy filter processes. According to the Discharger, additional funds are needed to complete ancillary components for the SAF and fuzzy filter, including chemical, electrical, and utility storage buildings that are essential for protecting temperature-sensitive polymer, motor controls and instrumentation; electrical controls; solids dewatering components; pasteurization-cogeneration equipment; a records storage and control room; utility tie-ins; and post construction site work.

4. **Biosolids Management**

   Biosolids generated during the treatment process accumulate in the aeration and settling ponds, where they undergo anaerobic digestion and compaction. Over time, the volume of settled solids increases, reducing the retention time of flow through the pond. Sludge that collects in the aeration and settling ponds is periodically removed, and was removed most recently in 2007.

   The Discharger plans to construct a biosolids composting facility as part of its upgrade project. Biosolids composting will be accomplished in engineered containers designed specifically for composting. The manufacturers of these containers have indicated that these systems will produce either Class A or Class B biosolids. The Discharger plans to utilize Class A biosolids in its plant nursery operation, which primarily grows redwood trees. The Discharger is currently designing the composting system, including the integration of waste heat from the cogeneration process, if warranted.

   The biosolids operation will be permitted separately from this Order.

B. Discharge Points and Receiving Waters

1. The treatment, reclamation, and disposal facilities as well as the collection system are located in the Atascadero/Green Valley Creek drainage area in the South ½ of Section 17, T17N, R9W, MDB&M. A map of the area is shown in Attachment B to this Order.

2. The Discharger discharges secondary treated wastewater at Discharge Point 001 to on-site effluent storage ponds prior to discharge to the recycled water system or the surface water discharge system.

   The Facility has two effluent storage ponds which have a combined capacity of 23 million gallons. Holding Pond 1 (West) has a capacity of 13.8 million gallons and Holding Pond 2 (East) has a capacity of 9.1 million gallons. The ponds currently have an average dry-weather flow retention time of 233 days, an average wet-weather flow retention time of 129 days, and an average annual detention time of 162 days. Effluent from the Facility currently meets requirements for title 22 disinfected, secondary-2.2 recycled water standards.

3. During the wet-weather season (October 1 – May 14), effluent treated in accordance with permit requirements in section IV.A of the Order, is discharged from the on-site effluent storage ponds via a 1,000 foot long, 10-inch outfall pipe at Discharge Point 002 to Atascadero Creek, a water of the United States and a tributary to the Russian River via Green Valley Creek at a point latitude 38° 26′ 49″ N and longitude 122° 52′ 51″ W. The rate of discharge is governed by flow conditions in Atascadero Creek monitored at the Green Valley Road Bridge, and is limited to a rate not to exceed one percent of the flow of Atascadero Creek. A Cease and Desist Order (R1-2008-0109) requires the Discharger to achieve compliance with the Basin Plan requirement that municipal waste discharges to the Russian River and its tributaries be of advanced treatment wastewater no later than October 6, 2012.

4. During the dry-weather season (May 15 to September 30), and other periods as allowed under this Order, effluent from the effluent storage ponds is reclaimed for agricultural irrigation, including frost control on vineyards at Discharge Point 003. The Facility currently provides recycled water to 6 authorized users, irrigates a 20.5 acre parcel on-site, and is in discussions to add 5 additional users. The Discharger plans to expand its reclamation system to include urban uses after its tertiary upgrade project is completed. The Discharger has written agreements with individual recycled water customers. Discharge to Atascadero Creek is prohibited during this period.

   The Discharger's preferred disposal method is irrigation, rather than discharge to surface waters. The Discharger discharged an annual maximum of 24.2 million gallons to the reclamation distribution system during the previous permit term.

5. The secondary-treated and/or tertiary treated effluent may be transferred from the Facility to the Forestville Water District wastewater treatment facility at Discharge Point 004, a designated transfer pipeline between the Facility and the Forestville Water District Wastewater Treatment, Reclamation, and Disposal Facility. Effluent transfers between the two facilities provide operation flexibility.

Transfer of secondary treated effluent from the Facility to Forestville for advanced wastewater treatment and disposal may occur when treatment capacity is available at Forestville. If the transfer pipeline is used to convey secondary effluent, tertiary treated effluent transferred from Forestville to Graton would only be considered tertiary after one full pipe volume of tertiary water passes through the pipeline. Upon completion of Graton's tertiary upgrade project, the transfer pipeline will only be used to transfer tertiary effluent. The Discharger transferred effluent to Forestville Water District during 2004 (10.96 million gallons), 2005 (7.36 million gallons), and 2008 (3.14 million gallons). The transfer in 2008 was to assist Forestville in meeting its recycled water commitments.

Transfer of secondary or tertiary treated effluent from Forestville to the Facility may occur when storage capacity is available at Graton. The Discharger accepted tertiary treated effluent from Forestville in June 2011 (2.1 million gallons) when Forestville's effluent storage ponds were full due to lingering wet-weather that occurred after the allowed surface water discharge season ended.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

1. Effluent limitations contained in Order No. R1-2004-0038 for discharges from Discharge Point 001 (Monitoring Location EFF-001) when discharges to Atascadero Creek are occurring and representative monitoring data from the term of Order No. R1-2004-0038 are as follows.

Table F-2. Historic Effluent Limitations and Monitoring Data – Discharge Point 001

Parameter	Units	Effluent Limitations			Violation Data (From October 2004 to July 2011)	
		Average Monthly[47]	Average Weekly[48]	Maximum Daily[49]	Reported Value of Highest Violation	Number of Violations
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	30	45	--	31	10
	lbs/day (dry-weather)[50,51]	35	53	--	--	No Violations

[47] The arithmetic mean of all samples collected in a calendar month.

[48] The arithmetic mean of all samples collected in a calendar week, Sunday to Saturday.

[49] The maximum result of all samples collected in a calendar day.

[50] The mass discharge (lbs/day) is obtained from the following calculation of any calendar day:

$$\frac{8.34}{N}\sum^{N} Q_i C_i$$

Parameter	Units	Effluent Limitations			Violation Data (From October 2004 to July 2011)	
		Average Monthly[47]	Average Weekly[48]	Maximum Daily[49]	Reported Value of Highest Violation	Number of Violations
	lbs/day (maximum wet-weather)[50,51]	210	320	--	88.2	6
	% Removal	85	--	--	54 (minimum)	3
Total Suspended Solids	mg/L	30	45	--	--	No Violations
	lbs/day (dry-weather) [50,51]	35	53	--	--	No Violations
	lbs/day (maximum wet-weather) [50,51]	210	320	--	165.8	4
	% Removal	85	--	--	69 (minimum)	2
Settleable Solids	mL/L	<0.2	--	ND (<0.1)	0.3	4
Total Coliform Organisms	MPN/100 mL	23[52]	2.2[53]	240	1600	1
pH	standard units	--	--	6.0 – 9.0	5.9 – 9.2	4

2. Effluent limitations contained in Order No. R1-2004-0038 for discharges from Discharge Point 002 (Monitoring Location EFF-002) and representative monitoring data from the term of Order No. R1-2004-0027 are as follows. The previous permit required the Facility to implement advanced treatment by October 6, 2007, and

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in which N is the number of samples analyzed in any calendar day. Q_i and C_i are the flow rate (MGD) and the constituent concentration (mg/L), respectively, that are associated with each of the N grab samples, that may be taken in any calendar day. If a composite sample is taken, C_i is the concentration measured in the composite sample; and Q_i is the average flow rate occurring during the period over which samples are composited.

51 Mass-based effluent limitations are based on the Facility average dry-weather design flow of 0.14 MGD. During wet-weather periods when the flow rate into the Facility exceeds the dry-weather design flow, the mass emission limitations shall be calculated using the concentration-based effluent limitations and the actual daily average flow rates (not to exceed the peak design flow of 0.85 MGD) [for a maximum weekly load of 320 lb/day and a maximum monthly load of 320 lb/day.

52 The number of coliform bacteria shall not exceed a Most Probable Number (MPN) of 23 per 100 milliliters in more than one sample in any 30-day period. Compliance shall be determined based on a fixed calendar month, not a rolling 30-day average.

53 The median concentration shall not exceed a MPN of 2.2 per 100 milliliters, using bacteriological results of the last 7 days for which analyses have been completed. Compliance shall be determined as a rolling 7-day median.

established more stringent limitations for BOD_5 and TSS that represented effluent quality from tertiary treatment. The Facility had not completed the upgrades by this deadline and therefore a Cease and Desist Order (Order No. R1-2008-0109) was issued and contains a new time schedule for the Discharger to achieve compliance.

Table F-3. Historic Effluent Limitations and Monitoring Data – Discharge Point 002

Parameter	Units	Effluent Limitations			Violation Data (From October 2004 to July 2011)	
		Average Monthly[46]	Average Weekly[47]	Maximum Daily[48]	Reported Value of Highest Violation	Number of Violations
Total Chlorine	mg/L	--	--	<0.1	0.1	10
pH	standard units	--	--	6.5 – 8.5	--	No Violations
Copper, Total Recoverable	µg/L	[54]	--	[54]	11	1
Lead, Total Recoverable	µg/L	[55]	--	[55]	--	No Violations
Zinc, Total Recoverable	µg/L	[56]	--	[56]	--	No Violations
Chloroform + Dichlorobromomethane	µg/L	100	--	--	--	No Violations
Dichlorobromomethane	µg/L	--	--	5.7[57]	--	No Violations
	µg/L	0.56[58]	--	1.6[58]	--	No Violations
Acute Toxicity	% Survival	--	--	[59] [60]	--	No Violations

3. Effluent limitations contained in Order No. R1-2004-0038 for discharges from Discharge Point 003 and Discharge Point 004 (Monitoring Location REC-001) and

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[54] Attachment B to Order No. R1-2004-0038 provides calculated copper AMEL and MDEL values for a range of hardness values.

[55] Attachment C to Order No. R1-2004-0038 provides calculated lead AMEL and MDEL values for a range of hardness values.

[56] Attachment D to Order No. R1-2004-0038 provides calculated zinc AMEL and MDEL values for a range of hardness values

[57] Interim effluent limitation effective until October 6, 2009.

[58] Final effluent limitations effective on October 6, 2009.

[60] There shall be no acute toxicity in the effluent. Effluent is considered acutely toxic when there is: 1) less than 90 percent survival based on the median from any three or more consecutive bioassays, or 2) less than 70 percent survival 100 percent of the time.

representative monitoring data from the term of Order No. R1-2004-0027 are as follows:

Table F-4. Historic Effluent Limitations and Monitoring Data – Discharge Point 003 and Discharge Point 004 (During periods of discharge to the recycled water system or transfer to Forestville)

Parameter	Units	Effluent Limitations			Violation Data (From October 2004 to July 2011)	
		Average Monthly[46]	Average Weekly[47]	Maximum Daily[48]	Reported Value of Highest Violation	Number of Violations
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	30	45	--	44/65	6/25
	lbs/day (dry-weather)[50,51]	35	53	--	--	No Violations
	lbs/day (maximum wet-weather)[50]	[51]	[51]	--	--	No Violations
Total Suspended Solids	mg/L	50	65	--	--	No Violations
	lbs/day (dry-weather)[50,51]	58	76	--	--	No Violations
	lbs/day (maximum wet-weather)[50]	[51]	[51]	--	--	No Violations
Total Coliform Organisms	MPN/100 mL	23[52]	2.2[53]	240	--	No Violations
pH	s.u.	--	--	6.0 -9.0	--	No Violations
Settleable Solids	mL/L	0.1	--	0.2	--	No Violations

D. Compliance Summary

1. Violations Summary

In addition to the violations provided in the tables above, the Discharger also had several other permit violations during the term of Order No. R1-2004-0038 including an exceedance of the limitation on the volume of discharge to Atascadero Creek to not exceed one percent of stream flow; submittal of two late self-monitoring reports and eight late technical reports; and for discharging untreated wastewater to surface waters following a flood event in January 2006 that inundated the Facility with 4.85 million gallons of floodwater. The discharge of untreated wastewater was not addressed in a formal enforcement action due to the extreme weather conditions that caused this violation.

Order No. R1-2004-0038 also required the Discharger to achieve advanced wastewater treatment by October 6, 2007, at which time more stringent limitations for BOD_5 and TSS became effective. When the Discharger did not complete

upgrades according to the permit compliance schedule, the Discharger began to exceed the more stringent tertiary effluent limitations for BOD_5 and TSS until Cease and Desist Order No. R1-2008-0109 was adopted by the Regional Water Board on December 11, 2008. The CDO extended the compliance schedule for the Discharger to achieve tertiary effluent limitations to October 6, 2012.

2. Enforcement Action Summary

Important enforcement actions taken against the Discharger, related to violations of waste discharge and NPDES requirements, are summarized below.

a. **Administrative Civil Liability (ACL) Complaint No. R1-2007-0019.** This complaint was issued by the Regional Water Board Executive Officer on February 28, 2007, to address violations of effluent limitations contained in Order No. R1-2004-0038 that occurred between October 6, 2004, and October 20, 2006. The ACL Complaint describes violations of copper effluent limitations, and percent removal requirements for BOD_5 and TSS. In addition, the ACL Complaint addressed late submittal of two self-monitoring reports and eight technical reports required pursuant to Order No. R1-2004-0038. The late reports ranged from 46 to 677 days late. The ACL Complaint assessed a mandatory minimum penalty of $56,000.

b. **ACL Order No. R1-2007-0055.** Subsequent to issuance of ACL Complaint No. R1-2007-0019, the Discharger waived its right to a hearing and requested an opportunity to implement a Compliance Project (CP) and Supplemental Environmental Project (SEP) in lieu of the penalties assessed in ACL Complaint No. R1-2007-0019. The Discharger submitted a plan on May 25, 2007, to complete an SEP. The SEP involved Graton CSD providing funding to the Sonoma Land Trust to accomplish specific tasks related to the newly purchased Pitkin Marsh Preserve, including surveying plants and mapping the stream and wetland; development of a management and conservation plan; and community outreach. The SEP was completed between September 2007 and December 2008.

c. **Cease and Desist Order No. R1-2008-0109.** The previous permit required that on or after October 6, 2007, discharges to Atascadero Creek be adequately oxidized, filtered, and disinfected and not contain BOD_5 or TSS in concentrations that exceed 10 mg/L as a monthly average and 15 mg/L as a weekly average. The permit also included a schedule for compliance with Basin Plan advanced treatment requirements. The Discharger requested additional time to complete the remaining task in the compliance schedule, and cited financial constraints as the primary cause of delays in the schedule. The cease and desist order established a final date for compliance as no later than October 6, 2012.

d. **ACL Complaint No. R1-2011-0051.** This ACL Complaint was issued on April 12, 2011, to address violations of effluent limitations contained in Order No. R1-2004-0038 that occurred between November 1, 2006, and March 31, 2011. The ACL Complaint addresses 33 violations, including exceedances of effluent limitations for total residual chlorine, BOD_5, settleable solids, and TSS and excursions of effluent limitations for pH. The ACL Complaint assessed a mandatory minimum penalty of $84,000.

E. Planned Changes

The ROWD identified plans to upgrade the facility to tertiary treatment, update the disinfection system from chlorination to pasteurization, and to implement biosolids composting, all of which are described in sections II.A.2.6 and II.A.2.7 of the Fact Sheet.

This Order includes interim effluent limitations for BOD_5 and TSS pending completion of the Discharger's tertiary upgrade project. The compliance schedule for completion of the upgrade project is contained in Cease and Desist Order No. R1-2012-0016.

The Discharger also plans to implement measures to reduce ammonia concentrations as described in the Discharger's November 17, 2011 Infeasibility Report, and in accordance with the ammonia compliance schedule in section VI.C.7 of the Order.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section. This section provides supplemental information, where appropriate, for the plans, policies, and regulations relevant to the discharge.

A. Legal Authorities

This Order is issued pursuant to section 402 of the federal CWA and implementing regulations adopted by USEPA and chapter 5.5, division 7 of the California Water Code (Water Code, commencing with section 13370). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as WDRs and a Master Reclamation Permit pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with sections 13260 and 13520, respectively).

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100 through 21177. This action also involves the re-issuance of waste discharge requirements for an existing facility that discharges treated wastewater to land and as such, is also exempt from CEQA as an existing facility for which no expansion of design flow is being permitted pursuant to title 14, CCR, section 15301.

The Graton CSD Board of Directors certified a mitigated negative declaration (MND) on February 18, 2009, for the tertiary upgrade project which will be constructed within the footprint of the existing WWTF and does not result in an increase in treatment capacity. An addendum to the MND that addresses project modifications that include construction of a cogeneration/pasteurization disinfection unit and biosolids composting was certified by the Graton CSD Board of Directors on April 11, 2011 and reaffirmed on November 21, 2011.

When approving proposals for new recycled water sites, the Regional Water Board's action is subject to CEQA. Regional Water Board compliance with CEQA shall be addressed during the approval process for reclamation expansion areas set forth in Attachment G to this Order. The approval process requires demonstration that a CEQA analysis has been conducted for the proposed recycled water use project. The approval process also requires the Discharger to submit technical information necessary to demonstrate that any proposed recycled water use areas will be irrigated using the most stringent of the hydraulic and nutrient agronomic rate and include best management practices that are protective of surface and ground water quality, as described in Attachment G to this Order.

If the local agency (e.g., Discharger or other approved agency pursuant to CEQA regulations) has conducted an appropriate CEQA analysis, the Regional Water Board may review the CEQA document prepared by the local agency and make findings based on that document. If the local agency does not prepare a CEQA document, the Regional Water Board could act as the lead agency under CEQA and prepare the needed CEQA document, however, this could result in delays in project approval until such time that a proper CEQA analysis can be conducted by the Regional Water Board.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Quality Control Board (Regional Water Board) adopted a *Water Quality Control Plan for the North Coast Region* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. The Basin Plan, at page 2-18.00, establishes beneficial uses for groundwater as municipal and domestic supply, industrial service supply, industrial process supply, agricultural supply, and freshwater supply. Thus, beneficial uses applicable to Atascadero Creek and groundwater are as follows:

Table F-5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
002	Atascadero Creek, tributary to the Russian River via Green Valley Creek within the Guerneville Hydrologic Subarea of the Russian River Hydrologic Unit	Existing: Municipal and Domestic Supply (MUN) Agricultural Supply (AGR) Industrial Service Supply (IND) Ground Water Recharge (GWR) Freshwater Replenishment (FRSH) Navigation (NAV) Water Contact Recreation (REC-1) Non-Contact Water Recreation (REC-2) Commercial and Sport Fishing (COMM) Warm Freshwater Habitat (WARM) Cold Freshwater Habitat (COLD) Wildlife Habitat (WILD) Preservation of Rare, Threatened, or Endangered Species (RARE) Migration of Aquatic Organisms (MIGR) Spawning, Reproduction, and/or Early Development (SPWN) Estuarine Habitat (EST) Potential: Industrial Process Supply (PRO) Hydropower Generation (POW) Shellfish Harvesting (SHELL) Aquaculture (AQUA)
001, 002, and 003	Groundwater	Existing Municipal and Domestic Supply (MUN) Industrial Service Supply (IND) Industrial Process Supply (PRO) Agricultural Supply (AGR) Freshwater Replenishment (FRSH)

Note: Estuarine Habitat is not present in Atascadero Creek or Green Valley Creek

Requirements of this Order implement the Basin Plan.

2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995, and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the State. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

3. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP).

The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

4. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 CFR. § 131.21, 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

5. **Antidegradation Policy.** Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.

6. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations[61] section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

D. Impaired Water Bodies on CWA 303(d) List

Section 303(d) of the federal CWA requires states to identify waterbodies that do not meet water quality standards and are not supporting their beneficial uses after implementation of

[61] All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

technology-based effluent limitations on point sources. Each state must submit an updated list, the 303(d) List of Impaired Waterbodies, to USEPA by April of each even numbered year. In addition to identifying the waterbodies that are not supporting beneficial uses, the 303(d) list also identifies the pollutant or stressor causing impairment and establishes a schedule for developing a control plan to address the impairment. The CWA requires development of a total maximum daily load (TMDL) or other pollution control requirements for each 303(d) listed pollutant and water body contaminant. TMDLs establish the maximum quantity of a given pollutant that can be added to a water body from all sources without exceeding the applicable water quality standard for that pollutant and determine wasteload allocations (the portion of a TMDL allocated to existing and future point sources) and load allocations (the portion of a TMDL attributed to existing and future nonpoint sources).

On October 11, 2011, the USEPA provided final approval of the 303(d) list of impaired water bodies prepared by the State. The list identifies the entire Russian River watershed as impaired by excess sediment and elevated water temperatures, and Green Valley Creek as impaired for pathogenic indicator bacteria and dissolved oxygen. Pursuant to CWA section 303(d), the Regional Water Board will adopt TMDLs to address impairing pollutants in 303(d) listed waters, and then implement TMDLs, including through provisions of NPDES permits. The Regional Water Board expects to adopt TMDLs for pathogenic indicator bacteria in the Russian River in 2014, for sediment and temperature in the Russian River by 2019, and for dissolved oxygen in Green Valley Creek by 2021.

Aspects of the sediment impairing the Russian River include settleable solids, suspended solids, and turbidity. Settleable solids impact a waterbody when they collect on the bottom of a waterbody over time, making them a persistent or accumulative constituent. The impact of suspended solids and turbidity, by contrast, results from their concentration in the water column.

The discharge to surface water is not anticipated to cause or contribute to an exceedance of sediment in the receiving water. This finding is based in part by the summer discharge prohibition and the one percent flow limitation for the winter discharge. In addition, the Facility is required to upgrade treatment to tertiary levels during the term of the permit, which will further reduce discharges of suspended and settleable solids. Recycling of effluent is the preferred disposal method for the Discharger, and the Discharger anticipates five new recycled water users during the permit term, in addition to the six current users. Expansion of the use of recycled water may result in a reduction of the volume of effluent discharged to surface waters.

The discharge is not anticipated to contribute to impairments of the receiving water by temperature. The Discharger plans to replace chlorine disinfection of the effluent with pasteurization and the temperature of the effluent is expected to be increased by approximately 3° F. The discharge however, is directed to the storage ponds prior to discharge to surface water. Specific requirements for the pasteurization disinfection

system are established in section IV.D.2.b of the Order and the MRP includes daily effluent and monthly upstream and downstream receiving water monitoring requirements for temperature to monitor for compliance with receiving water limitations for temperature.

The discharge is not anticipated to contribute to impairments of the receiving water by pathogenic indicator bacteria. The Discharger's current disinfection system has demonstrated consistent compliance with coliform effluent limitations. In addition, upon completion of the Discharger's tertiary upgrade project, the Discharger must demonstrate that its pasteurization disinfection process achieves compliance with coliform effluent limitations, and inactivates and/or removes viruses utilizing testing methods approved by CDPH.

The monitoring and reporting program also includes daily effluent and monthly upstream and downstream receiving water monitoring requirements for dissolved oxygen to monitor for compliance with receiving water limitations for dissolved oxygen.

E. Other Plans, Policies and Regulations

1. On May 2, 2006, the State Water Board adopted State Water Board Order No. 2006-0003-DWQ (Statewide General WDRs for Sanitary Sewer Systems) and on February 20, 2008 adopted Order No. WQ 2008-0002-EXEC (Adopting Amended Monitoring and Reporting Requirements for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems). Order No. 2006-0003-DWQ requires that all public agencies that currently own or operate sanitary sewer systems apply for coverage under the General WDRs. The deadline for dischargers to apply for coverage was November 2, 2006. The Discharger applied for coverage and is subject to the requirements of Order Nos. 2006-0003-DWQ and WQ 2008-0002 and any future revisions thereto for operation of its wastewater collection system.

2. The State Water Board Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001 (Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities) requires facilities to obtain coverage if the design flow of the facility is greater than or equal to 1.0 mgd. The discharge from this Facility is less than 1 mgd, therefore, coverage under the General Storm Water Permit is not required for this Facility. However, section VI.C.6.a of the Order includes storm water requirements and section VII.B.6.a of this Fact Sheet contains additional discussion regarding these storm water requirements.

3. On July 22, 2004, the State Water Board adopted State Water Board Order No. 2004-0012-DWQ (General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities). The Order requires the Discharger

to obtain coverage under Order No. 2004-0012-DWQ prior to any removal of biosolids from the Facility that will be land applied as soil amendment.

4. On February 3, 2009, the State Water Board adopted the Recycled Water Policy (State Water Board Resolution No. 2009-0011) for the purpose of increasing the use of recycled water from municipal wastewater sources in a manner that implements State and federal water quality laws. The Recycled Water Policy became effective on May 14, 2009. The Recycled Water Policy provides direction to the regional water boards regarding the appropriate criteria to be used in issuing permits for recycled water projects and describes permitting criteria intended to streamline, and provide consistency for, the permitting of the vast majority of recycled water projects. Pertinent provisions and requirements of the policy have been incorporated into this Order to address conditions specific to the Discharger's plan to implement water recycling.

   The Recycled Water Policy recognizes the fact that some groundwater basins in the State contain salts and nutrients that exceed or threaten to exceed water quality objectives in the applicable Basin Plans, and that not all Basin Plans include adequate implementation procedures for achieving or ensuring compliance with the water quality objectives for salt or nutrients. The Recycled Water Policy further recognizes that these conditions can be caused by natural soils/conditions, discharges of waste, irrigation using surface water, groundwater or recycled water, and water supply augmentation using surface or recycled water, and that regulation of recycled water alone will not address these conditions. It is the intent of the Recycled Water Policy that salts and nutrients from all sources be managed on a basin-wide or watershed-wide basis in a manner that ensures attainment of water quality objectives and protection of beneficial uses. The Recycled Water Policy finds that the appropriate way to address salt and nutrient issues is through the development of regional or subregional salt and nutrient management plans rather than through imposing requirements solely on individual recycled water projects.

   This Order is consistent with the requirements of the Recycled Water Policy. The Regional Water Board is developing a plan to address salt and nutrient management. This Order may be reopened to incorporate provisions consistent with any salt and nutrient management plan(s) adopted by the Regional Water Board. This Order allows for increased use of recycled water consistent with the mandate established in the Recycled Water Policy to increase the use of recycled water in California. The Recycled Water Policy currently requires monitoring for chemicals of emerging concern (CEC) annually and for priority pollutants twice annually. The Recycled Water Policy is being revised to remove monitoring requirements for CECs based on recommendations of the CEC advisory panel that was appointed to review this issue, thus the MRP does not include monitoring requirements for CECs. The monitoring requirement for priority pollutants is addressed through CTR priority pollutant monitoring that is required of the Discharger pursuant to the SIP. The

Discharger monitors for all CTR priority pollutants one time during each permit term and monitors more than twice per year for all CTR priority pollutants that exhibit reasonable potential.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: section 122.44(a) requires that permits include applicable technology-based limitations and standards; and section 122.44(d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

A. Discharge Prohibitions

1. **Discharge Prohibition III.A.** The discharge of any waste not disclosed by the Discharger or not within the reasonable contemplation of the Regional Water Board is prohibited.

   This prohibition is based on the Basin Plan, the previous Order, and State Water Board Order WQO No. 2002-0012 regarding the petition of WDRs Order No. 01-072 for the East Bay Municipal Utility District and Bay Area Clean Water Agencies. In State Water Board Order No. WQO 2002-0012, the State Water Board found that this prohibition is acceptable in orders, but should be interpreted to apply only to constituents that are either not disclosed by the Discharger, or are not reasonably anticipated to be present in the discharge but have not been disclosed by the Discharger. It specifically does not apply to constituents in the discharge that do not have "reasonable potential" to exceed water quality objectives.

   The State Water Board has stated that the only pollutants not covered by this prohibition are those which were "*disclosed to the permitting authority and … can be reasonably contemplated*." [In re the Petition of East Bay Municipal Utilities District et al., (State Water Board, 2002) Order No. WQO 2002-0012, p. 24] In that Order, the State Water Board cited a case which held the Discharger is liable for the discharge of pollutants "*not within the reasonable contemplation of the permitting authority ….whether spills or otherwise…*" [*Piney Run Preservation Assn. v. County Commissioners of Carroll County, Maryland* (4th Cir. 2001) 268 F. 3d 255, 268.] Thus the State Water Board authority provides that, to be permissible, the constituent discharged (1) must have been disclosed by the Discharger and (2) can be reasonably contemplated by the Regional Water Board.

Whether or not the Discharger reasonably contemplates the discharge of a constituent is not relevant. What matters is whether the Discharger disclosed the constituent to the Regional Water Board or whether the presence of the pollutant in the discharge can otherwise be reasonably contemplated by the Regional Water Board at the time of Order adoption.

2. **Discharge Prohibition III.B.** Creation of pollution, contamination, or nuisance, as defined by Section 13050 of the Water Code is prohibited.

   This prohibition is based on section 13050 of the Water Code, and has been retained from Order No. R1-2004-0038.

3. **Discharge Prohibition III.C.** The discharge of sludge or digester supernatant is prohibited, except as authorized under section VI.C.5.c. (Sludge Disposal and Handling Requirements, section VI.C.5.c of the Order.)

   This prohibition is based on restrictions on the disposal of sewage sludge found in federal regulations [40 CFR Part 503 (Biosolids), Part 527 and Part 258] and title 27 of the California Code of Regulations (CCR). It has been retained from the previous Order.

4. **Discharge Prohibition III.D.** The discharge or reclamation use of untreated or partially treated waste from anywhere within the collection, treatment, or disposal systems is prohibited, except as provided for in Attachment D, Standard Provisions (Bypass).

   This prohibition has been retained from the previous Order and is based on the Basin Plan to protect beneficial uses of the receiving water from unpermitted discharges, and the intent of the Water Code sections 13260 through 13264 relating to the discharge of waste to waters of the State without filing for and being issued an Order. This prohibition applies to spills not related to sanitary sewer overflows (SSOs) and other unauthorized discharges of wastewater within the collection, treatment, and disposal facilities. The discharge of untreated or partially treated wastewater from the collection, treatment, or disposal facility represents an unauthorized bypass pursuant to 40 CFR 122.41(m) or an unauthorized discharge which poses a threat to human health and/or aquatic life, and therefore is explicitly prohibited by this Order.

5. **Discharge Prohibition III.E.** Any SSO that results in a discharge of untreated or partially treated wastewater to (a) waters of the State, (b) groundwater, or (c) land that creates pollution, contamination, or nuisance, as defined in Water Code section 13050(m) is prohibited.

This prohibition applies to spills related to SSOs and is based on State standards, including section 13050 of the Water Code and the Basin Plan. This prohibition is consistent with the State's antidegradation policy as specified in State Water Board Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality of Water in California) in that the prohibition imposes conditions to prevent impacts to water quality, the degradation of water quality, negative effects on receiving water beneficial uses, and lessening of water quality beyond that prescribed in State Water Board or Regional Water Board plans and policies.

This prohibition is stricter than the prohibitions stated in State Water Board Order 2006-0003-DWQ (Statewide General Waste Discharge Requirements for Sanitary Sewer Systems). Order No. 2006-0003-DWQ prohibits SSOs that result in the discharge of untreated or partially treated wastewater to waters of the United States and SSOs that cause a nuisance, compared to Prohibition III.E of this Order, which prohibits SSO discharges that create nuisance or pollution to waters of the State, groundwater, and land for a more complete protection of human health. The rationale for this prohibition is because of the prevalence of high groundwater in the North Coast Region, and this Region's reliance on groundwater as a drinking water source.

6. **Discharge Prohibition III.F.** The discharge of waste to land that is not owned or under agreement to use by the Discharger is prohibited, except for use for fire suppression as provided in title 22, sections 60307 (a) and (b) of the California Code of Regulations.

   This prohibition is retained from Order No. R1-2004-0038. Land used for the application of wastewater must be owned by the Discharger or be under the control of the Discharger by contract so that the Discharger maintains a means for ultimate disposal of treated wastewater.

7. **Discharge Prohibition III.G.** The discharge of waste at any point not described in Finding II.B or authorized by a permit issued by the State Water Board or another Regional Water Board is prohibited.

   This prohibition is a general prohibition that allows the Discharger to discharge waste only in accordance with WDRs. It is based on sections 301 and 402 of the federal CWA and section 13263 of the Water Code.

8. **Discharge Prohibition III.H.** The discharge of wastewater effluent from the Facility to the Russian River or its tributaries is prohibited during the period of May 15 through September 30 of each year.

   This prohibition is retained from the previous Order, and is required by the Basin Plan. The Basin Plan prohibits discharges to the Russian River and its tributaries

during the period of May 15 through September 30 (Chapter 4, North Coastal Basin Discharge Prohibition No. 3). The original intent of this prohibition was to prevent the contribution of wastewater to the baseline flow of the Russian River during the period of the year when the Russian River and its tributaries experience the heaviest water-contact recreation use.

9. **Discharge Prohibition III.I.** The mean daily dry-weather influent flow of waste in excess of 0.14 mgd measured over a period of 30 consecutive days is prohibited. The maximum daily wet-weather flow of waste in excess of 0.58 mgd is prohibited.

   The first part of this prohibition is retained from the previous permit and is based on the dry-weather design flow of the Facility. The second part is new and is based on the wet-weather hydraulic design of the tertiary treatment facility.

10. **Discharge Prohibition III.J.** During the period from October 1 through May 14, discharges of treated wastewater shall not exceed 1 percent of the flow of Atascadero Creek.

    This prohibition is required by the Basin Plan (Chapter 4, North Coastal Basin Discharge Prohibition No. 4). The Basin Plan prohibits discharges to the Russian River and its tributaries when the waste discharge flow is greater than one percent of the receiving water's flow.

    Basin Plan Prohibition No. 4 does not specify how compliance with the one-percent flow requirement should be determined. Section III.J of this Order specifies that the discharge may comply with the 1 percent requirement as a monthly average for the surface water discharge season, provided the Discharger makes a reasonable effort to adjust the discharge of treated wastewater to one percent of the most recent daily flow measurement of Atascadero Creek, as measured at the Green Valley Road Bridge. This modification provides day-to-day operational flexibility for the Discharger while retaining the intent of the prohibition.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations, require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at Part 133 and Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3

Regulations promulgated in section 125.3(a)(1) require technology-based effluent limitations for municipal Dischargers to be placed in NPDES permits based on Secondary Treatment Standards or Equivalent to Secondary Treatment Standards.

The Federal Water Pollution Control Act Amendments of 1972 (PL 92-500) established the minimum performance requirements for POTWs [defined in section 304(d)(1)]. Section 301(b)(1)(B) of that Act requires that such treatment works must, as a minimum, meet effluent limitations based on secondary treatment as defined by the USEPA Administrator.

Based on this statutory requirement, USEPA developed secondary treatment regulations, which are specified in Part 133. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of BOD_5, TSS, and pH, as follows:

2. **BOD_5 and TSS**

   a. The 30-day average shall not exceed 30 mg/L.

   b. The 7-day average shall not exceed 45 mg/L.

   c. The 30-day average percent removal shall not be less than 85%.

3. **pH**

   The pH shall be maintained within the limits of 6.0 to 9.0.

   The effluent limitation for pH required to meet the water quality objective for hydrogen ion concentration (pH) is contained in the Basin Plan, Table 3-1.

   In addition, section 122.45(f) requires the establishment of mass-based effluent limitations for all pollutants limited in Orders, except for 1) pH, temperature, radiation, or other pollutants which cannot be appropriately expressed by mass, and 2) when applicable standards and limitations are expressed in terms of other units of measure.

4. **Applicable Technology-Based Effluent Limitations**

   The final effluent limitations in this Order for BOD_5, TSS, and pH exceed the technology-based requirements for secondary treatment set forth in section 133.102. Effluent limitations for pH have been established that also meet the water quality-based requirements set forth in the Basin Plan.

In addition to the minimum, federal technology-based requirements, the Basin Plan requires that discharges of municipal waste "shall be of advanced treated wastewater in accordance with effluent limitations contained in NPDES permits for each affected discharger, and shall meet a median coliform level of 2.2 MPN/100 mL" for discharges to the Russian River and its tributaries during October 1 through May 14. This requirement leaves discretion to the Regional Water Board to define advanced wastewater treatment by the implementation of effluent limitations in individual permits.

a. **BOD_5 and TSS.** For the purpose of applying advanced wastewater treatment requirements on the discharge to Atascadero Creek, final effluent limitations for BOD_5 and TSS are established at 10 mg/L as a monthly average and 15 mg/L as a weekly average, which are technologically achievable based on the capability of a tertiary treatment system. In addition, 40 CFR 133.102, in describing the minimum level of effluent quality attainable by secondary treatment, states that the 30-day average percent removal shall not be less than 85 percent. These effluent limitations are retained from Order No. R1-2004-0038.

   The Discharger submitted an Infeasibility Report on November 17, 2012 requesting additional time to June 1, 2014 to complete its tertiary upgrade project and come into compliance with final tertiary effluent limitations for BOD_5 and TSS in accordance with a compliance schedule contained in a CDO. The current CDO is Order No. R1-0015. The permit and CDO establish interim effluent limitations based on secondary standards for BOD_5 and TSS.

b. **Mass-Based Effluent Limitations.** Mass-based effluent limitations for BOD_5 and TSS are required pursuant to 40 CFR 122.45(f) for the purpose of assuring that dilution is not used as a method of achieving the concentration limitations in the permit. Mass-based effluent limitations established in the Order are technology-based. This Order eliminates the floating limitations based on wet-weather design flow because such limitations did not meet the requirements of 40 CFR 122.45(f).

   Interim mass-based effluent limitations for BOD_5 and TSS established in the Order are more stringent than the previous Order because they are being established based on Facility performance during the term of the previous Order.

   Final mass-based effluent limitations for BOD_5 and TSS have been established for the tertiary treatment plant based on the average daily design flow of the tertiary filters of 0.397 mgd and are more stringent than the mass-based effluent limitations that were based on average dry-weather design flow in Order No. R1-2004-0038. These mass-based limitations could be further modified during the term of this Order if the tertiary process results in significant improvement in treatment performance.

c. **Total Coliform Bacteria.** Even though effluent limits for coliform bacteria are not set out in the federal regulations for secondary treatment, they are included here in the section on technology-based effluent limits because they reflect technology standards for tertiary treatment. Coliform bacteria are a pollutant of concern in all wastewaters of domestic origin, and therefore, the Order retains the effluent limitations for total coliform bacteria from Order No. R1-2004-0038. These effluent limitations reflect standards for tertiary treated recycled water in the Basin Plan (Section 4, Implementation Plans) and as adopted by the California Department of Public Health (CDPH) in title 22 of the California Code of Regulations. Upon completion of the tertiary upgrade project, recycled water from this Facility will meet the highest title 22 treatment and disinfection standards and will be suitable for the broad range of recycled water uses identified in title 22, including urban land uses.

This Order establishes the following final technology-based effluent limitations applicable to Discharge Point 001.

Table F-6. Summary of Technology-based Effluent Limitations – Discharge Point 001 (Discharge to On-Site Storage Pond)

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	10	15	--	--	--
	lbs/day[62]	33	50	--	--	--
	% Removal	85	--	--	--	--
Total Suspended Solids	mg/L	10	15	--	--	--
	lbs/day[58]	33	50	--	--	--
	% Removal	85	--	--	--	--
Total Coliform Bacteria	MPN/100 mL	--	2.2[63]	23/240[64]	--	--

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. This Order contains

[62] Mass-based limitations are based on the dry-weather design flow of the Facility of 0.14 MGD.

[63] Expressed as a 7-day median.

[64] The number of coliform bacteria must not exceed an MPN of 23 per 100 mL in more than one sample in any 30-day period. No sample shall exceed an MPN of 240 total coliform bacteria per 100 mL.

requirements, expressed as technology equivalence requirements that are necessary to meet applicable water quality standards. The rationale for these requirements, which consist of advanced wastewater treatment, is discussed in section IV.B.2 of the Fact Sheet. In addition, this Order contains additional requirements to meet applicable water quality standards. The rationale for these requirements is discussed in section IV.C.3 of this Fact Sheet.

Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. A reasonable potential analysis (RPA) demonstrated reasonable potential for discharges from the Facility to cause or contribute to exceedances for ammonia, cyanide, and dichlorobromomethane.

Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other State plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

a. **Beneficial Uses.** Beneficial use designations for receiving waters for discharges from the Facility are presented in Finding II.H of the Order and section III.C.1 of this Fact Sheet.

b. **Basin Plan Water Quality Objectives.** In addition to the specific water quality objectives indicated above, the Basin Plan contains narrative objectives for color, tastes and odors, floating material, suspended material, settleable material, oil and grease, biostimulatory substances, sediment, turbidity, pH, dissolved oxygen, bacteria, temperature, toxicity, pesticides, chemical constituents, and radioactivity that apply to inland surface waters, enclosed bays, and estuaries, and includes the Russian River and its tributaries. For waters designated for use as domestic or municipal supply (MUN), the Basin Plan establishes as applicable water quality criteria the Maximum Contaminant Levels (MCLs) established by CDPH for the protection of public water supplies at title 22 of the California Code

of Regulations section 64431 (Inorganic Chemicals) and section 64444 (Organic Chemicals).

c. **SIP, CTR and NTR.** Water quality criteria and objectives applicable to this receiving water are established by the California Toxics Rule (CTR), established by the USEPA at 40 CFR 131.38; and the National Toxics Rule (NTR), established by the USEPA at 40 CFR 131.36. Criteria for most of the 126 priority pollutants are contained within the CTR and the NTR.

d. Aquatic life freshwater and saltwater criteria are identified as criterion maximum concentrations (CMC) and criterion continuous concentrations (CCC). The CTR defines the CMC as the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time without deleterious effects and the CCC as the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects. The CMC is used to calculate an acute or 1-hour average numeric effluent limitation and the CCC is used to calculate a chronic or 4-day average numeric effluent limitation. Aquatic life freshwater criteria were used for the RPA for cyanide.

   Human health criteria are further identified as "water and organisms" and "organisms only." "Water and organism" criteria are designed to address risks to human health from multiple exposure pathways. The criteria from the "water and organisms" column of CTR were used for the RPA because the Basin Plan identifies that the receiving water, Atascadero Creek, has the MUN beneficial use designation. Human health criteria were used for the RPA for dichlorobromomethane.

   The SIP, which is described in Finding II.J of the Order and section III.C.3 of this Fact Sheet, includes procedures for determining the need for, and the calculation of, WQBELs and requires dischargers to submit data sufficient to do so.

   At title 22, Division 4, Chapter 15 of the CCR, CDPH has established MCLs for certain pollutants for the protection of drinking water. Chapter 3 of the Basin Plan establishes these MCLs as water quality objectives applicable to receiving waters with the beneficial use designation of municipal and domestic supply.

   Attachment F-1 includes a summary of RPA results for all priority toxic pollutants and ammonia, nitrate, and phosphorus, with water quality criteria/objectives that are applicable to Atascadero Creek.

3. **Determining the Need for WQBELs**

   NPDES regulations at 40 CFR 122.44 (d) require effluent limitations to control all pollutants which are or may be discharged at a level which will cause, have the

reasonable potential to cause, or contribute to an excursion above any State water quality standard.

a. **Non-Priority Pollutants**

(1) **pH.** The effluent limitation for pH of 6.5 to 8.5 is retained from Order No. R1-2004-0038 and applies to discharges to Atascadero Creek. This limitation is based on the water quality objective for all surface waters of the North Coast Region established in Chapter 3 of the Basin Plan. Federal technology-based requirements prescribed in 40 CFR 133 are not sufficient to meet these Basin Plan water quality standards.

(2) **Chlorine Residual.** The Basin Plan establishes a narrative water quality objective for toxicity, stating that "[a]*ll waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life."* The Regional Water Board considers any chlorinated discharge as having the reasonable potential to cause or contribute to exceedances of this water quality objective for toxicity, and therefore, the Order establishes effluent limitations for chlorine. USEPA has established the following criteria for chlorine-produced oxidants for protection of freshwater aquatic life. [*Quality Criteria for Water 1986* (The Gold Book, 1986, EPA 440/5/-86-001)]

Chronic Criterion	Acute Criterion
0.011 mg/L	0.019 mg/L

Order No. R1-2004-0038 required that there be no detectable level of total chlorine in the effluent to Atascadero Creek using an analytical method or chlorine analyzer with a minimum detection level of 0.1 mg/L. This Order revises effluent limitations for chlorine residual to be consistent with the water quality criteria, which are below current analytical detection limits. The water quality criteria recommended by USEPA have been translated to average monthly and maximum daily effluent limitations for total chlorine residual. The new chlorine residual effluent limitations established in this Order are numerically lower than the minimum detection limit for the final effluent limitation in the previous Order that required no detectable level of chlorine in effluent at the point of discharge at a detection limit of 0.1 mg/L. The Discharger shall employ a method sensitive to and accurate at the permitted level of 0.1 mg/L, until the time when the pasteurization disinfection system is installed and fully implemented, when, upon approval by the CDPH and Regional Water Board, chlorine monitoring may be discontinued.

(3) **Ammonia and Nitrate.** Untreated domestic wastewater contains ammonia. Nitrification is a biological process that converts ammonia to nitrite and

nitrate. Denitrification is a process that converts nitrate to nitrogen gas, which is then released to the atmosphere. Wastewater treatment facilities commonly use nitrification to remove ammonia from the waste stream and denitrification to remove nitrate from the waste stream. Inadequate or incomplete nitrification may result in the discharge of ammonia to the receiving water and inadequate or incomplete denitrification may result in the discharge of nitrate to the receiving water. The Facility achieves varying levels of nitrification and denitrification throughout the year. To overcome an accumulation of nitrite in colder weather, the Facility cycles effluent from the settling pond back to the headworks, and idles the two aerators in Aeration Pond 2 in order to achieve some nitrification.

(a) **Nitrate.** Nitrate is known to cause adverse health effects in humans. For waters designated as domestic or municipal supply, the Basin Plan (Chapter 3) adopts the MCLs, established by CDPH for the protection of public water supplies at title 22 of the California Code of Regulations, sections 64431 (Inorganic Chemicals) and 64444 (Organic Chemicals), as applicable water quality criteria. The MCL for nitrate (10 mg/L as N) is therefore applicable as a water quality criterion for Atascadero Creek. Effluent data for nitrate collected by the Discharger from October 2004 through April 2011 showed that the maximum effluent concentration for nitrate during the discharge season was 5.3 mg/L. The discharge does not demonstrate reasonable potential for nitrate, but the Discharger is required to continue monitoring for nitrate in the effluent to ensure the Discharger continues to maintain nitrogen control.

(b) **Ammonia.** Ammonia is known to cause toxicity to aquatic organisms in surface waters. The Basin Plan establishes a narrative water quality objective for toxicity, stating that "[a]*ll waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life.*" Discharges of toxic concentrations of ammonia would violate the Basin Plan narrative toxicity objective. Due to concerns regarding ammonia toxicity, the Regional Water Board relies on USEPA's recommended water quality criteria for ammonia in fresh water from the *1999 Update of Ambient Water Quality Criteria for Ammonia*, EPA-822-R-99-014 (1999) (ammonia criteria document) to interpret the Basin Plan's narrative objective for toxicity. USEPA has recommended acute and chronic ammonia water quality criteria for the protection of aquatic life, which are dependent on receiving water pH and the presence/absence of salmonids (acute criteria), and pH, temperature, and the presence/absence of early life stages of fish (chronic criteria). EPA found that as pH increased, both the acute and chronic toxicity of ammonia increased. Salmonids were more sensitive to acute toxicity effects than

other species. However, while the acute toxicity of ammonia was not influenced by temperature, it was found that invertebrates and young fish experienced increasing chronic toxicity effects with increasing temperature.

Since Atascadero Creek and the streams that it is tributary to (Green Valley Creek and the Russian River) are salmonid streams, only the formulas and tables summarizing calculations from these formulas are presented in the discussion below.

The thirty-day average concentration of total ammonia (in mg/L N in effluent) shall not exceed the continuous concentration criteria (CCC or chronic criterion), applied here as the AMEL, calculated using the following equation:

When fish early life stages are present:

(a) $CCC = ((0.0577/(1 + 10^{7.688-pH})) + (2.487/(1 + 10^{pH-7.688})) \times MIN (2.85, 1.45 \cdot 10^{0.028 \cdot (25-T)})$

Calculated chronic criteria are summarized in Table F-7, below.

Table F-7. USEPA Acute (30-day average) Criteria for Ammonia

Continuous Concentration Criteria for Fish Early Life Stages Present, 30-day average (mg N/L)											
pH	Temperature, °C										
	0	14	15	16	18	20	22	24	26	28	30
6.5	6.67	6.67	6.46	6.06	5.33	4.68	4.12	3.62	3.18	2.80	2.46
6.6	6.57	6.57	6.36	5.97	5.25	4.61	4.05	3.56	3.13	2.75	2.42
6.7	6.44	6.44	6.25	5.86	5.15	4.52	3.98	3.50	3.07	2.70	2.37
6.8	6.29	6.29	6.10	5.72	5.03	4.42	3.89	3.42	3.00	2.64	2.32
6.9	6.12	6.12	5.93	5.56	4.89	4.30	3.78	3.32	2.92	2.57	2.25
7.0	5.91	5.91	5.73	5.37	4.72	4.15	3.65	3.21	2.82	2.48	2.18
7.1	5.67	5.67	5.49	5.15	4.53	3.98	3.50	3.08	2.70	2.38	2.09
7.2	5.39	5.39	5.22	4.90	4.31	3.78	3.33	2.92	2.57	2.26	1.99
7.3	5.08	5.08	4.92	4.61	4.06	3.57	3.13	2.76	2.42	2.13	1.87
7.4	4.73	4.73	4.59	4.30	3.78	3.32	2.92	2.57	2.26	1.98	1.74
7.5	4.36	4.36	4.23	3.97	3.49	3.06	2.69	2.37	2.08	1.83	1.61
7.6	3.98	3.98	3.85	3.61	3.18	2.79	2.45	2.16	1.90	1.67	1.47
7.7	3.58	3.58	3.47	3.25	2.86	2.51	2.21	1.94	1.71	1.50	1.32
7.8	3.18	3.18	3.09	2.89	2.54	2.23	1.96	1.73	1.52	1.33	1.17
7.9	2.80	2.80	2.71	2.54	2.24	1.96	1.73	1.52	1.33	1.17	1.03
8.0	2.43	2.43	2.36	2.21	1.94	1.71	1.50	1.32	1.16	1.02	0.90
8.1	2.10	2.10	2.03	1.91	1.68	1.47	1.29	1.14	1.00	0.88	0.77
8.2	1.79	1.79	1.74	1.63	1.43	1.26	1.11	0.97	0.86	0.75	0.66
8.3	1.52	1.52	1.48	1.39	1.22	1.07	0.94	0.83	0.73	0.64	0.56
8.4	1.29	1.29	1.25	1.17	1.03	0.91	0.80	0.70	0.62	0.54	0.48
8.5	1.09	1.09	1.06	0.99	0.87	0.76	0.67	0.59	0.52	0.46	0.40
8.6	0.92	0.92	0.89	0.84	0.73	0.65	0.57	0.50	0.44	0.39	0.34
8.7	0.78	0.78	0.75	0.71	0.62	0.55	0.48	0.42	0.37	0.33	0.29
8.8	0.66	0.66	0.64	0.60	0.53	0.46	0.41	0.36	0.32	0.28	0.24
8.9	0.56	0.56	0.55	0.51	0.45	0.40	0.35	0.31	0.27	0.24	0.21
9.0	0.49	0.49	0.47	0.44	0.39	0.34	0.30	0.26	0.23	0.20	0.18

For example, receiving water conditions of a pH of 7.8, a temperature of 18 °C, and fish early life stages present would have a chronic ammonia effluent limitation of 2.54 mg/L.

The one-hour average concentration of total ammonia nitrogen (in mg/L N) where salmonid fish are present shall not exceed the continuous maximum concentration (CMC or acute criterion), applied here as the MDEL, as calculated using the following equations:

(b) Where salmonid fish are present:

$$CMC = (0.275/(1 + 10^{7.204-pH})) + (39.0/(1 + 10^{pH-7.204}))$$

Calculated acute criteria are summarized in Table F-8, below.

Table F-8. USEPA Chronic (1-hour average) Criteria for Ammonia

Criteria Maximum Concentration, 1-hour average, (mg N/L)	
pH	**Salmonids Present**
6.5	32.6
6.6	31.3
6.7	29.8
6.8	28.0
6.9	26.2
7.0	24.1
7.1	21.9
7.2	19.7
7.3	17.5
7.4	15.3
7.5	13.3
7.6	11.4
7.7	9.6
7.8	8.1
7.9	6.8
8.0	5.6
8.1	4.6
8.2	3.8
8.3	3.1
8.4	2.6
8.5	2.1
8.6	1.8
8.7	1.5
8.8	1.2
8.9	1.0
9.0	0.9

For example, receiving water conditions with a pH of 7.8 and the presence of salmonid fish would have an acute limitation for ammonia of 8.1 mg/L.

Total Ammonia Reasonable Potential Analysis

In conditions documented in the receiving water for discharges from the Facility (maximum downstream pH=7.7, maximum downstream temperature=19.2°C) and the known presence of early life stages of fish in Atascadero Creek, to which the effluent storage pond discharges, USEPA's recommended chronic and acute criteria for the protection of aquatic life from ammonia toxicity are 2.6 mg/L and 9.6 mg/L total ammonia, respectively, expressed as N. The Discharger monitored the discharge to Atascadero Creek 25 times between December 2005 and April 2011. The monitoring data shows a range of ammonia concentrations between 0.2 and 12 mg/L and an average total ammonia

concentration of 5 mg/L. The maximum concentration of 12 mg/L occurred on February 9, 2011.

Because ammonia has been measured in the effluent at concentrations greater than USEPA's recommended water quality criteria for fresh waters, the Regional Water Board concludes that discharges from the Facility have a reasonable potential to cause or contribute to exceedances of the Basin Plan's applicable narrative water quality criterion for toxicity. The Order therefore establishes final effluent limitations for ammonia for the protection of aquatic life. USEPA requires discrete final effluent limitations rather than floating limits (limits determined based on the receiving water pH and temperature at the time of the sampling event) for total ammonia therefore, discrete effluent limitations for ammonia are included in the Order.

Based on a review of the existing data, two sets of seasonal water quality-based final ammonia effluent limitations have been established, using 14°C as the break point based on the behavior of ammonia in response to temperature as demonstrated by USEPA's acute ammonia table which is included as Table F-7, above. Final acute effluent limitations are established using Formula 1 and Table F-7 and final chronic effluent limitations were established using Formula 2 and Table F-8 (above).

(1) One set of limits will apply during the discharge months when receiving water temperatures are cooler (e.g., less than or equal to 14°C). The Discharger's data shows that receiving water temperatures were consistently less than 14°C during the months November through March. The Discharger's data shows that receiving water temperatures ranged from 6.6°C to 13°C in 22 measurements collected during the months of November through March. The average receiving water temperature in the 22 measurements was 10.8°C and the median was 11°C. Based on a maximum receiving water temperature of 13°C and a maximum receiving water pH of 7.6 during these months, a final acute limit (AMEL) of 4.0 mg/L and a final chronic limit (MDEL) of 11 mg/L have been established in the Order. The final effluent limits would be the same even if a maximum temperature of 14°C were used to set the limits (see Table F-7, below).

(2) A second set of limits will apply during the discharge months when the potential for higher temperatures (e.g., greater than 14°C) increases the toxicity of ammonia. The Discharger's data shows that receiving water temperatures ranged from 9.8°C to 19.2°C in the seven measurements collected during the months of October, April

and May. The average receiving water temperature in the seven measurements was 14.2°C and the median was 13.9°C. Based on a maximum receiving water temperature of 19.2°C and a maximum receiving water pH of 7.7 during these months, a final acute effluent limitation (AMEL) of 2.6 mg/L and a final chronic effluent limitation (MDEL) of 9.6 mg/L have been established in the permit.

(3) In addition, the Order establishes interim effluent limitations and a compliance schedule for achieving final effluent limitations for ammonia in response to the Discharger's submittal of an Infeasibility Report on November 17, 2011 that demonstrates that the Discharger is unable to immediately achieve final ammonia effluent limitations. The detailed discussion regarding the Infeasibility Report, and establishment of interim effluent limitations and a compliance schedule for ammonia is in section IV.E. of this Fact Sheet.

(4) **Phosphorus.** The Basin Plan contains a narrative water quality objective for biostimulatory substances that states "[w]*aters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses*." The Regional Water Board is increasingly concerned about the biostimulatory properties of discharges to surface waters in the North Coast Region. Nutrients, such as phosphorus and nitrogen containing compounds, in treated wastewater stimulate biological growth, thereby depleting dissolved oxygen and advancing eutrophication of receiving waters. At present, for interpretation of the Basin Plan's narrative water quality objective for biostimulatory substances, USEPA has established recommended water quality criteria for nutrients in Nutrient Criteria Documents for Lakes and Rivers and Nutrient Criteria Documents for Rivers and Streams. USEPA has defined 14 "ecoregions" and further categorized surface waters as lakes and reservoirs or rivers and streams for purposes of defining applicable numeric water quality criteria for nutrients. The State and Regional Water Boards continue to examine other methods of interpreting the Basin Plan's narrative water quality objective for biostimulatory substances. When the Boards determine that USEPA's recommended criteria are appropriate for implementing the Basin Plan objectives, or when a more appropriate and meaningful method is established, the need for limiting nutrients in relation to biostimulatory properties, including phosphorus and nitrogen-containing compounds, in all discharges in the Region will be reassessed. In the meantime, the RPA for nutrients in relation to biostimulatory properties, performed for development of this Order, is inconclusive. The Order establishes monitoring requirements for phosphorus and nitrogen containing compounds in discharges from the Facility to allow a determination of "reasonable potential" at such time as the State and Regional Water Boards

select an appropriate method for interpretation of the Basin Plan's narrative objective.

b. **Priority Pollutants**

The SIP establishes procedures to implement water quality criteria from the NTR and CTR and for priority, toxic pollutant objectives established in the Basin Plan. The implementation procedures of the SIP include methods to determine reasonable potential (for pollutants to cause or contribute to excursions above State water quality standards) and to establish numeric effluent limitations, if necessary, for those pollutants showing reasonable potential.

Section 1.3 of the SIP requires the Regional Water Board to use all available, valid, relevant, and representative receiving water and effluent data and information to conduct an RPA. For this RPA, the Regional Water Board has used effluent and receiving water monitoring data generated during monitoring from the term of the previous permit (October 2004 through March 2011). Priority pollutant monitoring occurred in June 2009 at the effluent storage pond. This data is assumed to be representative of discharges to Atascadero Creek.

Hardness

The CTR and the NTR contain water quality criteria for seven metals that vary as a function of hardness, the lower the hardness, the lower the water quality criteria. The hardness-dependent metal criteria include cadmium, copper, chromium III, lead, nickel, silver, and zinc.

Effluent limitations for the discharge must be set to protect the beneficial uses of the receiving water for all discharge conditions. Effluent limitations must be set using a reasonable worst-case condition in order to protect beneficial uses for all discharge conditions. The SIP does not address how to determine hardness for application to the equations for the protection of aquatic life when using hardness-dependent metals criteria. It simply states, in Section 1.2, that the criteria shall be properly adjusted for hardness using the hardness of the receiving water. The CTR requires that, for waters with a hardness of 400 mg/L (as $CaCO_3$), or less, the actual ambient hardness of the surface water must be used. It further requires that the hardness values used must be consistent with the design discharge conditions for design flows and mixing zones (See 40 CFR 131.38(c)(4)(i)). The CTR does not define whether the term "ambient", as applied in the regulations, necessarily requires the consideration of the upstream as opposed to downstream hardness conditions.

State Water Board Order No. WQO-2008-0008 (City of Davis) further interpreted the SIP by stating "…*the regional water boards have considerable discretion in*

the selection of hardness. Regardless of which method is used for determining hardness, the selection must be protective of water quality criteria, given the flow conditions under which a particular hardness exists….Regardless of the hardness used, the resulting limits must always be protective of water quality under all flow conditions."

The point in the receiving water affected by the discharge is downstream of the discharge. As the effluent mixes with the receiving water, the hardness of the receiving water can change. Therefore, where reliable, representative data are available, it is appropriate to use the ambient hardness downstream of the discharge that is a mixture of the effluent and receiving water for the determination of the CTR hardness-dependent metals criteria.

A 2006 Study (Emerick, R.W.; Booroum, Y.; & Pedri, J.E., 2006. *California and National Toxics Rule Implementation and Development of Protective Hardness Based Metal Effluent Limitations*, WEFTEC, Chicago, Ill.) demonstrates that using the lowest recorded receiving water hardness for establishing water quality criteria is not always protective of the receiving water under various mixing conditions (e.g., when the effluent hardness is less than the receiving water hardness).

The 2006 study evaluated the relationships between hardness and the CTR metals criterion that is calculated using the CTR metals equation. The equation describing the total recoverable regulatory criterion, as established in the CTR, is as follows:

CTR Criterion = WER x ($e^{m[\ln(H)]+b}$) (Equation 1)

Where:

WER = water effect ratio
H = Hardness
B = metal- and criterion-specific constant
M = metal- and criterion-specific constant

In accordance with the CTR, the default value for the WER is 1. A discharger-specific WER study must be conducted in order to use a WER value other than 1. The constants "m" and "b" are specific to both the metal under consideration, and the type of total recoverable criterion (i.e., acute or chronic). The metal-specific values for these constants are provided in the CTR at paragraph (b)(2), Table 1.

The relationship between hardness and the resulting criterion in Equation 1 can exhibit either a downward –facing (i.e., concave downward) or an upward-facing

(i.e., concave upward) curve depending on the values of the criterion-specific constants. The curve shapes for acute and chronic criteria for the metals are as follows:

Concave Downward Metals: acute and chronic chromium (III), copper, nickel, and zinc; and chronic cadmium.

For those contaminants where the regulatory criteria exhibit a concave downward relationship as a function of hardness, any mixture of receiving water that is compliant with water quality objectives for that metal and effluent that is compliant with water quality objectives for that metal will always result in a mixture that is compliant with water quality objectives and use of the lowest recorded effluent hardness for establishment of water quality objectives is fully protective of all beneficial uses regardless of whether the effluent or receiving water hardness is higher. Use of the lowest recorded effluent hardness is also protective under all possible mixing conditions between the effluent and the receiving water (i.e., from high dilution to no dilution).

Because this Order requires compliance with effluent limitations at the end of the discharge pipe, effluent hardness is an appropriate and protective hardness to use in adjusting the water quality criteria for the concave downward metals. The reasonable worst-case ambient hardness can be estimated by using the lowest effluent hardness. The reasonable potential analysis for concave-downward metals was conducted using the lowest effluent hardness concentration of 130 mg/L measured by the Discharger during the period of October 2005 through April 2011.

Concave Upward Metals: cadmium (acute), lead, and silver (acute).

For Concave Upward Metals, the 2006 Study demonstrates that due to a different relationship between hardness and the metals criteria, the effluent and upstream receiving water can be in compliance with the CTR criteria, but the resulting mixture may be out of compliance. The 2006 Study provides a mathematical approach to calculate the final effluent limitations for Concave Upward Metals that are based on the lowest of receiving water and effluent hardness.

For this RPA, a hardness concentration of 38 mg/L (as $CaCO_3$) was used, reflecting the lowest receiving water hardness measured by the Discharger during the period of October 2004 through April 2011. During that time period, upstream and downstream receiving water hardness were sampled during periods of discharge to Atascadero Creek (October through May) a total of 31 times. Upstream receiving water hardness ranged from 38 mg/L to 175 mg/L, with an average concentration of 88 mg/L (as $CaCO_3$). Downstream receiving

water hardness ranged from 38 mg/L to 150 mg/L, with an average concentration of 89 mg/L (as CaCO3).

Reasonable Potential Analysis for Priority Pollutants

To conduct the RPA, Regional Water Board staff identified the maximum effluent concentration (MEC) and maximum background (B) concentration for each priority, toxic pollutant from effluent and receiving water data provided by the Discharger, and compared this information to the most stringent applicable water quality criterion (C) for each pollutant with applicable water quality criteria from the NTR, CTR, and the Basin Plan. Section 1.3 of the SIP establishes three triggers for a finding of reasonable potential.

Trigger 1. If the MEC is greater than C, there is reasonable potential, and an effluent limitation is required.

Trigger 2. If B is greater than C, and the pollutant is detected in effluent (MEC > ND), there is reasonable potential, and an effluent limitation is required.

Trigger 3. After a review of other available and relevant information, a permit writer may decide that a WQBEL is required. Such additional information may include, but is not limited to: the facility type, the discharge type, solids loading analyses, lack of dilution, history of compliance problems, potential toxic impact of the discharge, fish tissue residue data, water quality and beneficial uses of the receiving water, CWA 303 (d) listing for the pollutant, and the presence of endangered or threatened species or their critical habitat.

(1) **Reasonable Potential Determination**

The RPA for discharges from the Facility demonstrated reasonable potential to cause or contribute to exceedances of applicable water quality criteria for cyanide and dichlorobromomethane.

The CTR includes criteria for 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD), however, there are numerous dioxin congeners which exhibit toxic effects similar to 2,3,7,8-TCDD. The SIP includes toxic equivalency factors (TEFs) which express the relative toxicities of each of the congeners, and are used to calculate the TCDD equivalent toxicity. The Discharger did not collect data for the TCDD congeners, but will be required to during the permit term for future evaluation of reasonable potential for TCDD equivalents.

The following table summarizes the RPA for each priority, toxic pollutant that has been measured at detectable concentrations in effluent samples collected in June 2009 for most priority pollutants; from October 2004 through April 2011 for copper, lead, zinc, dichlorobromomethane, chloroform, nitrate and

cyanide; and from October 2005 through March 2010 for ammonia. No other pollutants with applicable, numeric water quality criteria from the NTR, CTR, and the Basin Plan (which includes the title 22 MCLs for protection of drinking water supplies) were measured above non-detect (ND) concentrations.

Table F-9. Summary of Reasonable Potential Analysis Results

Pollutant	C (µg/L)	MEC (µg/L)	B (µg/L)	RPA Result
Arsenic	50 – human health criterion from the Basin Plan (title 22 MCL)	1.6	N/A	No
Copper	11.7 – chronic, freshwater aquatic life criteria from the CTR, using effluent hardness	11	N/A	No
Lead	0.9 – chronic, freshwater aquatic life criterion from the CTR, using lowest receiving water hardness	<0.25	N/A	No
Mercury	0.050 – human health criterion from the CTR for consumption of water and organisms	0.0019	N/A	No
Nickel	65 – chronic, freshwater aquatic life criterion from the CTR, using lowest effluent hardness	6.3	N/A	No
Zinc	150 – acute and chronic, freshwater aquatic life criteria from the CTR, using lowest effluent hardness	49	17	No
Cyanide	5.2 – chronic, freshwater criterion from the CTR	5.4	3	**Yes** (Trigger 1)
Chloroform	No Criteria	6.9	N/A	Undetermined
Dichlorobromomethane	0.56 – human health criterion from the CTR for consumption of water and organisms	1.0	N/A	**Yes** (Trigger 1)
Total Ammonia (as mg N/L)	2.6 – chronic aquatic life criterion from the EPA National Recommended Water Quality Criteria for Non-priority Pollutants[65]	12	N/A	**Yes** (Trigger 1)
Nitrate (as N)	10,000 – human health criterion from the Basin Plan (title 22 MCL)	5300	N/A	No

N/A = Not Available

(2) **WQBEL Calculations for CTR Constituents with Reasonable Potential**

Final WQBELs for cyanide and dichlorobromomethane have been determined using the methods described in Section 1.4 of the SIP.

[65] Criteria for ammonia calculated using a receiving water pH of 7.7, a temperature of 19.2° C, and assumption of the presence of salmonids. The temperature and pH data represent the maximum pH and temperature data collected by the Discharger in the downstream receiving water during the previous permit term.

Step 1: To calculate the effluent limits, an effluent concentration allowance (ECA) is calculated for each pollutant found to have reasonable potential using the following equation, which takes into account dilution and background concentrations:

ECA = C + D (C – B), where

C = the applicable water quality criterion (adjusted for receiving water hardness and expressed as the total recoverable metal, if necessary)

D = the dilution credit (here D = 0, as the discharge does not qualify for a dilution credit)

B = the background concentration

Because no credit for dilution is being allowed, D=0, and the ECA is equal to the applicable criterion (ECA = C).

Step 2: For each ECA based on an aquatic life criterion/objective (as for cyanide), the long term average discharge condition (LTA) is determined by multiplying the ECA by a factor (multiplier), which adjusts the ECA to account for effluent variability. The multiplier depends on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the values of the CV. When the data set contains less than 10 sample results, or when 80 percent or more of the data set is reported as non-detect (ND), the CV is set equal to 0.6. Derivation of the multipliers is presented in section 1.4 of the SIP.

From Table 1 of the SIP, the acute and chronic ECA multipliers for calculating LTAs at the 99th percentile occurrence probability for cyanide are shown in the table below. The LTAs are determined as follows:

Table F-10. Determination of Long Term Averages

Pollutant	CV	ECA		ECA Multiplier		LTA (µg/L)	
		Acute	Chronic	Acute	Chronic	Acute	Chronic
Cyanide	0.78	22	5.2	0.26	0.45	5.6	2.3

Step 3: WQBELs, including an average monthly effluent limitation (AMEL) and a maximum daily effluent limitation (MDEL) are calculated using the most limiting (lowest) LTA. The LTA is multiplied by a factor that accounts for averaging periods and exceedance frequencies of the effluent limitations, and for the AMEL, the effluent monitoring frequency. Here, the sampling frequency is set equal to 4 (n = 4). The 99th percentile occurrence probability

was used to determine the MDEL multiplier and a 95th percentile occurrence probability was used to determine the AMEL multiplier. Table 2 of the SIP presents the MDEL and AMEL multipliers as a function of CV. Final WQBELs for cyanide are determined as follows:

Table F-11. Determination of Final WQBELs Based on Aquatic Life Criteria

Pollutant	LTA (µg/L)	MDEL Multiplier	AMEL Multiplier	MDEL (µg/L)	AMEL (µg/L)
Cyanide	2.3	3.9	1.7	9.1	4.0

Step 4: When the most stringent water quality criterion/objective is a human health criterion/objective (as for dichlorobromomethane), the AMEL is set equal to the ECA. The MDEL for protection of human health is calculated by multiplying the ECA by the ratio of the MDEL multiplier to the AMEL multiplier. Final WQBELs for dichlorobromomethane are determined as follows.

Table F-12. Determination of Final WQBELs Based on Human Health Criteria

Pollutant	ECA (µg/L)	MDEL/AMEL Multiplier	MDEL (µg/L)	AMEL (µg/L)
Dichlorobromomethane	0.56	3.8/1.7 = 2.2	1.2	0.56

A summary of WQBELs established by the Order for discharges at Discharge Point 002 is given in the table below. The effluent limitation for pH is based on the Basin Plan water quality objective for pH.

Summary of Final Water Quality-based Effluent Limitations
Discharge Point 002

Table F-13. Summary of Water Quality-based Effluent Limitations

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
pH		6.5 – 8.5	
Total Residual Chlorine	mg/L	0.01	0.02
Cyanide	µg/L	4.0	9.1
Dichlorobromomethane	µg/L	0.56	1.2
Total Ammonia (November through April)	mg/L	4.0	11
Total Ammonia (October, April, and May)	mg/L	2.6	9.6

c. **Whole Effluent Toxicity (WET)**

Effluent limitations for whole effluent, acute and chronic toxicity, protect the receiving water from the aggregate effect of a mixture of pollutants that may be present in effluent. There are two types of WET tests – acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic test is conducted over a longer period of time and may measure mortality, reproduction, and/or growth.

WET requirements are derived from the CWA and the Basin Plan. The Basin Plan establishes a narrative water quality objective for toxicity that states "*All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, or aquatic life*." Detrimental responses may include, but are not limited to, decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota. For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct WET testing for acute and chronic toxicity, as specified in the MRP (Attachment E, section V).

(1) **Acute Aquatic Toxicity**

Consistent with Order No. R1-2004-0038, this Order includes an effluent limitation for acute toxicity in accordance with the Basin Plan, which requires that the average survival of test organisms in undiluted effluent for any three consecutive 96-hour bioassay tests be at least 90 percent, with no single test having less than 70 percent survival.

The Order also implements federal guidelines (Regions 9 and 10 Guidelines for Implementing Whole Effluent Toxicity Testing Programs) by requiring dischargers to conduct acute toxicity tests on a fish species and on an invertebrate to determine the most sensitive species. According to the USEPA manual, *Methods for Estimating the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/600/4-90/-27F), the acceptable vertebrate species for the acute toxicity test are the fathead minnow, *Pimephales promelas* and the rainbow trout, *Oncorhynchus mykiss*. The acceptable invertebrate species for the acute toxicity test are the water flea (*Ceriodaphnia dubia)*, *Daphnia magna*, and *D. pulex*. The Discharger tests its effluent for acute toxicity using the rainbow trout, *Oncorhynchus mykiss*. During the term of the previous Order, the Discharger consistently maintained compliance with the acute toxicity limitation, with a minimum percent survival of 100 percent.

(2) **Chronic Aquatic Toxicity**

The SIP requires the use of short-term chronic toxicity tests to determine compliance with the narrative toxicity objectives for aquatic life in the Basin Plan. The SIP requires that the Discharger demonstrate the presence or absence of chronic toxicity using tests on the fathead minnow, *Pimephales promelas*, the water flea, *Ceriodaphnia dubia*, and the freshwater alga, *Selenastrum capricornutum*. Attachment E of this Order requires annual chronic WET monitoring to demonstrate compliance with the narrative toxicity objective.

Nine out of 15 of the Discharger's chronic toxicity tests revealed chronic toxicity. Each time that chronic toxicity was detected, the Discharger conducted additional chronic toxicity tests as required by the accelerated monitoring requirements in section J.27 of the previous Order (section V. of the monitoring and reporting program of this Order). After the *Ceriodaphnia* test for 3/29/05 was invalidated due to biological interference (*Epistylis* infection), the test was re-run on 4/13/05. The EPA method requires filtration of sample using a 60 um net which did not filter out the *Epistylis*. The re-run was concurrently performed two ways: a. filtration of sample using the approved 60 um net and b. filtration of sample with a 0.45 um filter. Method a (the typical method) produced 9.5 TUc (100/IC25) for the reproduction endpoint with the presence of an *Epistylis* infection. Method b prevented the *Epistylis* infection and produced <1.0 TUc (100/IC25) for the reproduction endpoint. A note in the 3/30/07 lab report stated "that the untreated samples resulted in <1.0 TUc while the treated samples resulted in chronic toxicity. A note in the 4/9/07 analytical laboratory report stated that after the sample produced a significant decrease in reproduction in the *Ceriodaphnia* test, carbon treatment of the same sample improved *Ceriodaphnia* reproductive toxicity but did not eliminate it. Regional Water Board staff will work with the Discharger during the term of this permit to resolve any remaining questions regarding the causes of the reported chronic toxicities. The Discharger's chronic toxicity testing results are summarized below.

Table F-14. Whole Effluent Chronic Toxicity Monitoring Results

Date	*Selenastrum capricornutum*				*Ceriodaphnia dubia*				*Pimaphales promelas*			
	Growth				Survival		Reproduction		Survival		Growth	
	IC25	TUc	NOEC	TUc	NOEC	TUc	NOEC	TUc	NOEC	TUc	NOEC	TUc
2/15/05	33.9	2.9	<12.5	>8	100	<1	100	<1	100	<1	100	<1
3/29/05	69.3	1.4	50	2.0	Tests invalidated – biological interference				100	<1	100	<1
4/13/05	>100	<1	100	<1	100	<1	100	<1	---	---	---	---
5/3/05	11.1	9	<12.5	>8	---	---	---	---	---	---	---	---
11/30/05	52.9	1.9	25	4	---	---	---	---	---	---	---	---
1/10/06	43.7	2.3	25	4	---	---	---	---	---	---	---	---

Date	*Selenastrum capricornutum*				*Ceriodaphnia dubia*				*Pimaphales promelas*			
	Growth				Survival		Reproduction		Survival		Growth	
	IC25	TUc	NOEC	TUc	NOEC	TUc	NOEC	TUc	NOEC	TUc	NOEC	TUc
2/14/06	100	<1	100	1	---	---	---	---	---	---	---	---
3/21/06	100	<1	100	1	---	---	---	---	---	---	---	---
9/20/06	16.2	6.2	<12.5	>8	---	---	---	---	---	---	---	---
10/4/06	100	<1	100	1	---	---	---	---	---	---	---	---
3/30/07	30.1	3.3	<25	>4	<25	>4	<25	>4	100	<1	100	<1
11/28/07	59.9	1.7	25	4	---	---	---	---	---	---	---	---
3/9/09	97.4	1.3	75	1.3	---	---	---	---	---	---	---	---
4/7/09	---	---	---	---	100	<1	25	4	---	---	---	---
3/23/10	---	---	---	---	100	<1	100	<1	---	---	---	---
11/30/10	---	---	---	---	100	<1	100	<1	---	---	---	---

Chronic toxicity effluent limitations have not been included in the Order for consistency with the SIP, which implements narrative toxicity objectives in Basin Plans and specifies use of a numeric trigger for accelerated monitoring and implementation of a Toxicity Reduction Evaluation (TRE) in the event that persistent toxicity is detected. The SIP contains implementation gaps regarding the appropriate form and implementation of chronic toxicity limits. This has resulted in the petitioning of a NPDES permit in the Los Angeles Region that contained numeric chronic toxicity effluent limitations. To address the petition, the State Water Board adopted WQO 2003-0012 directing its staff to revise the toxicity control provisions in the SIP. The State Water Board states the following in WQO 2003-0012, "*In reviewing this petition and receiving comments from numerous interested persons on the propriety of including numeric effluent limitations for chronic toxicity in NPDES permits for publicly-owned treatment works, that discharge to inland waters, we have determined that this issue should be considered in a regulatory setting, in order to allow for full public discussion and deliberation. We intend to modify the SIP to specifically address the issue. We anticipate that review will occur within the next year. We therefore decline to make a determination here regarding the propriety of the final numeric effluent limitations for chronic toxicity contained in these permits.*" The process to revise the SIP is underway. Proposed changes include clarifying the appropriate form of effluent toxicity limits in NPDES permits and general expansion and standardization of toxicity control implementation related to the NPDES permitting process. Since the toxicity control provisions in the SIP are under revision, it is infeasible to develop numeric effluent limitations for chronic toxicity at this time. The SIP revision may require a permit modification to incorporate new statewide toxicity criteria established by the upcoming SIP revision.

However, the State Water Board found in WQO 2003-0012 that while it is not appropriate to include final numeric effluent limitations for chronic toxicity in

NPDES permits for POTWs, permits must contain a narrative effluent limitation, numeric benchmarks for triggering accelerated monitoring, rigorous Toxicity Reduction Evaluation (TRE)/Toxicity Identification Evaluation (TIE) conditions, and a reopener to establish numeric effluent limitations for either chronic toxicity or the chemical(s) causing toxicity. This Order includes a reopener that allows the Regional Water Board to reopen the permit and include a numeric chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE.

To ensure compliance with the narrative effluent limitation and the Basin Plan's narrative toxicity objective, the Discharger is required to conduct chronic WET testing, as specified in the Monitoring and Reporting Program (Attachment E, section V). Furthermore, Special Provision IV.C.2.a of this Order requires the Discharger to investigate the causes of, and identify and implement corrective actions to reduce or eliminate effluent toxicity. If the discharge demonstrates a pattern of toxicity exceeding the numeric toxicity monitoring trigger, the Discharger is required to initiate a TRE in accordance with an approved TRE workplan. The numeric toxicity monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to perform accelerated chronic toxicity monitoring, as well as the threshold to initiate a TRE if a pattern of effluent toxicity has been demonstrated.

Section V.B.9 of the MRP defines the chronic toxicity monitoring trigger as 1 TUc and section V.C.1.b.(7) of the MRP requires TUc to be calculated as 100/NOEC for purposes of determining if the Discharger's effluent exceeds the chronic toxicity monitoring trigger. Although the federal requirements may provide for flexibility in determining how to calculate TUc for compliance purposes (e.g., 100/NOEC, 100/IC25, 100/EC25), USEPA Region 9 recommends that effluent limitations and triggers be based on the no observed effect concentration (NOEC) when the permit language and chronic toxicity testing methods incorporate important safeguards that improve the reliability of the NOEC. These safeguards include the use of a dilution series (testing of a series of effluent concentrations) to verify and quantify a dose-response relationship and a requirement to evaluate specific performance criteria in order to determine the sensitivity of each chronic toxicity test. The goal is to demonstrate that each test is sensitive enough to determine whether or not the effluent is toxic or not.

The use of 100/IC25 or 100/EC25 as methods for calculating chronic toxicity are point estimates that automatically allow for a 25 percent effect before calling an effluent toxic. The Basin Plan has a narrative objective for toxicity that requires that "*all waters be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological*

responses in human, plant, animal, or aquatic life." Allowance of a possible 25 percent effect would not meet the Basin Plan's narrative toxicity requirement. In addition, California has historically used the NOEC to regulate chronic toxicity for ocean discharges, thus it is fitting that the same method be used to regulate chronic toxicity in inland surface water discharges.

Because no dilution has been granted for the chronic condition, chronic toxicity testing results exceeding 1.0 chronic toxicity unit (TUc) demonstrate that the discharge is in violation of the narrative toxicity water quality objective. This is changed from the requirements of the previous permit. The previous permit required accelerated monitoring if a single sample of 2 TUc or a three-sample median of 1 TUc were exceeded. The trigger was changed in this permit to reflect there is no consideration of dilution.

If accelerated sampling of the discharge demonstrates a pattern of toxicity exceeding the chronic toxicity trigger, the Discharger is required to initiate a TRE, in accordance with an approved TRE work plan to determine whether the discharge is contributing chronic toxicity to the receiving water. Special Provision VI.C.2.a.(2) requires the Discharger to maintain the TRE Work Plan to ensure the Discharger has a plan to immediately move forward with the initial tiers of a TRE, in the event effluent toxicity is encountered in the future. The provision also includes a numeric toxicity monitoring trigger and requirements for accelerated monitoring, as well as requirements for TRE initiation if a pattern of toxicity is demonstrated. The Discharger submitted its Toxicity Reduction Evaluation Workplan for Graton Community Services District on December 2, 2005. Chronic WET limitations will be established if monitoring results demonstrate that discharges from the Facility are causing or contributing to chronic toxicity in the receiving water.

(3) **Ammonia-related Toxicity**

The chronic toxicity test shall be conducted without modifications to eliminate ammonia toxicity. Ammonia toxicity in water is due mostly to its un-ionized fraction which is primarily a function of the temperature and the pH of the water being tested. As the pH and temperature increase so does the toxicity of a given concentration of ammonia. In static WET tests, the pH in the test concentrations often increases (drifts) due to the loss of carbon dioxide (CO_2) from the test concentrations as the test chambers are incubated over the test period. This upward drift results in pH values in the test concentrations that often exceed those pH values that could reasonably be expected to be found in the effluent or in the mixing zone under ambient conditions. Un-ionized ammonia toxicity caused by pH drift is considered to be an artifact of test conditions and is not a true measure of the ammonia toxicity likely to occur as

the discharge enters the receiving waters. In order to reduce the occurrence of artifactual un-ionized ammonia toxicity, it may be necessary to control the pH in toxicity tests, provided the control of pH is done in a manner that has the least influence on the test water chemistry and on the toxicity of other pH sensitive materials such as some heavy metals, sulfide and cyanide. This Order authorizes the use of pH control procedures where the procedures are consistent with USEPA methods and do not significantly alter the test water chemistry so as to mask other sources of toxicity.

D. Final Effluent Limitations

1. Satisfaction of Anti-Backsliding Requirements

All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order, except for the effluent limitations for copper, lead, zinc, and chloroform plus dichlorobromomethane.

The previous permit contained floating effluent limitations for copper, lead, and zinc that were based on the CTR criteria for the protection of aquatic life. As explained previously in section IV.C.5 of this Fact Sheet, the RPA conducted for this Order used the lowest effluent hardness for copper and zinc and the lowest receiving water hardness for lead and considered data collected during the period of October 2005 and April 2011 whenever the Discharger was discharging to receiving waters. The RPA conducted for this Order found no reasonable potential for copper, lead, and zinc. The lack of reasonable potential for copper, lead, and zinc constitutes new information, which permits the removal of effluent limitations consistent with CWA section 402(o)(2)(B). As a result of the RPA, effluent limitations for copper, lead, and zinc are not included in the proposed Order, and anti-backsliding requirements are satisfied.

The previous permit contained effluent limitations for chloroform plus dichlorobromomethane which were based on the title 22 MCL for total trihalomethanes of human health, which was 100 µg/L at the time of permit adoption. The title 22 MCL for total trihalomethane has since become more stringent, and is 80 µg/L. The MEC for the sum of chloroform and dichlorobromomethane was 7.45 µg/L, based on 38 samples collected between October 2004 and April 2011. The lack of reasonable potential for chloroform plus dichlorobromomethane constitutes new information, which permits the removal of effluent limitations consistent with CWA section 402(o)(2)(B). As a result of the RPA, effluent limitations for chloroform plus dichlorobromomethane are not retained in the proposed Order and anti-backsliding requirements are satisfied.

The Order establishes more stringent limitations for total residual chlorine and dichlorobromomethane. Limitations for chlorine reflect the USEPA recommended

criteria, and are more stringent than the minimum detection limit required to demonstrate a non-detect concentration of chlorine required by the previous permit. New limitations are established for cyanide and for total ammonia because the RPA demonstrated that the discharge has reasonable potential to exceed applicable water quality standards for these parameters. The new effluent limitation for temperature is applicable to discharges to the storage ponds.

2. Satisfaction of Antidegradation Policy

This Order is consistent with applicable federal and State antidegradation policies, as it does not authorize the discharge of increased concentrations of pollutants or increased volumes of treated wastewater beyond that which was permitted to discharge in accordance with the previous Order.

Removal of the effluent limitations for copper, lead, zinc, and chloroform plus dichlorobromomethane is also consistent with antidegradation policies. The Discharger's effluent data indicate that these parameters are not present in the discharge at concentrations that will exceed water quality standards or cause degradation of the receiving water.

The discharge of recycled water to land at or below hydraulic agronomic rates and where proper irrigation system design and BMPs are implemented is not expected to result in degradation to surface water because the potential for irrigation runoff will be prevented or minimized.

The discharge of recycled water may result in minor degradation of groundwater, primarily due to salts and nitrogen, but is not expected to result in the exceedance of applicable water quality objectives. Degradation of groundwater by constituents in recycled water may be permitted where it has been demonstrated that any change will be consistent with the maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water, and will not result in water quality less than that prescribed in the Basin Plan. In addition, it must be demonstrated that the discharges to high quality waters meet waste discharge requirements that result in the best practicable treatment or control of the discharge necessary to avoid pollution or nuisance and assure that the highest water quality consistent with the maximum benefit to the people of the State is maintained.

Degradation of groundwater from constituents in recycled water after effective source control, treatment, and control may be determined consistent with maximum benefit to the people of the State, provided that the terms of the Basin Plan and Recycled Water Policy are met. Whether the degradation of groundwater consistent with the Basin Plan and Recycled Water Policy requirements is consistent with the maximum benefit to the people of the State is based on consideration of the four factors that are discussed in the following paragraphs (a. through d.):

a. Past, present, and probable beneficial uses of the receiving water (as specified in the Basin Plan) have been considered. This Order establishes terms and conditions of discharge to ensure that the discharge does not unreasonably affect present and anticipated beneficial uses of groundwater and surface water. These terms and conditions include:

   (1) Recycled water will be treated to achieve disinfected, tertiary level recycled water, upon completion of the tertiary upgrade project;

   (2) Recycled water will be applied at agronomic rates reflecting the hydraulic and nutrient requirements of the use area;

   (3) The Discharger is responsible for ensuring that recycled water meets the quality standards and associated waste discharge requirements of this Order;

   (4) The Discharger must identify and require implementation of BMPs to prevent and minimize the potential for surface runoff of irrigation water;

   (5) The Discharger must with comply with groundwater limitations in section V.B of this Order; and

   (6) Discharges to surface waters, other than those authorized in this Order, are prohibited.

b. Economic and social costs, tangible and intangible, of the recycled water usage compared to the benefits have been considered as follows:

   (1) The use of recycled water for irrigation could potentially result in degradation of groundwater or risks to public health if the recycled water is mismanaged. These environmental/social risks are offset by the high quality of treatment provided and the Discharger's commitment to implementing BMPs to ensure protection of groundwater and public health.

   (2) The use of recycled water reduces the potential diversion of water from Atascadero Creek, thus reducing the potential for dewatering these creeks.

   (3) The use of recycled water reduces the diversion of groundwater for irrigation uses, thus reducing the potential for dewatering groundwater and protecting this resource for needed domestic supply, and

   (4) The use of recycled water provides a sustainable and drought-resistant source of irrigation water for agricultural and urban uses and conserves potable water.

c. Environmental aspects of the recycled water usage have been considered as follows:

(1) The potential for groundwater degradation (not exceeding water quality objectives) or runoff to surface waters is offset by the high quality of treatment provided and the Discharger's commitment to irrigation at hydraulic and nutrient agronomic rates and implementation of BMPs to ensure protection of groundwater and to minimize the potential for surface runoff.

d. Implementation of feasible alternative treatment or control methods have been considered as follows:

Degradation of groundwater will not result in water quality less than that prescribed in the Basin Plan because this Order requires the Discharger to implement, and ensure that recycled water users implement, the following treatment and control measures necessary to avoid pollution or nuisance and maintain the highest water quality consistent with the maximum benefit to the people of the State:

(1) Upon completion of the tertiary upgrade project, implement treatment and use standards necessary to produce disinfected tertiary recycled water, and implement applicable title 22 requirements;

(2) Apply recycled water at nutrient and hydraulic agronomic rates (whichever is the limiting rate);

(3) Identify and implement best management practices to minimize the potential for irrigation runoff and for percolation of recycled water to groundwater;

(4) Develop, maintain, and implement an Operation and Maintenance/Irrigation Management Plan; and

(5) Employ trained personnel.

The preceding analysis demonstrates that there is sufficient reason to allow for the potential of limited groundwater degradation, provided the terms of the Basin Plan, the Recycled Water Policy, and this Order are met.

Recycled water requirements in Attachment G require the Discharger to implement management measures and BMPs that ensure that all irrigation occurs in a manner that is protective of groundwater and surface water quality. A key component of the water reclamation requirements in Attachment G is the requirement for the Discharger to submit programmatic and site-specific technical reports prior to commencement of reclamation activities at any new recycled water use sites and to provide this required technical information for existing recycled water use sites

during the term of this Order. The programmatic technical report must contain sufficient information to demonstrate that recycled water will be applied at hydraulic and nutrient agronomic rates and that BMPs will be implemented to ensure that recycled water is not over-applied and does not discharge to surface waters or cause degradation of groundwater.

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The terms of this Order meet the minimum federal technology-based effluent limitations for secondary treatment, and in addition include additional requirements, expressed as technology equivalence requirements, for BOD_5, TSS, pH, and total coliform bacteria that are necessary to achieve tertiary treatment of wastewater, consistent with the Basin Plan's requirements that discharges of municipal wastewater into the Russian River and its tributaries be of advanced treated water. Restrictions on these pollutants are discussed in section IV.B in this Fact Sheet.

WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to section 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the SIP, which was approved by USEPA on May 18, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to section 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order (specifically the addition of the beneficial uses Water Quality Enhancement (WQE), Flood Peak Attenuation/Flood Water Storage (FLD), Wetland Habitat (WET), Native American Culture (CUL), and Subsistence Fishing (FISH)) and the General Objective regarding antidegradation) were approved by USEPA on, March 4, 2005, and are applicable water quality standards pursuant to section 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

In addition, the Regional Water Board has considered the factors in Water Code section 13263, including the provisions of Water Code section 13241, in establishing these requirements. Factors set forth in section 13241 must be evaluated for requirements that go beyond what is required by the Clean Water Act.

Water Code section 13263 requires that waste discharge requirements *"implement any relevant water quality control plans that have been adopted and take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance and the provisions of section 13241."* These requirements, however, only apply to those portions of the permit that exceed the requirements of the federal CWA, and not to those requirements that are necessary to meet the technology-based effluent limitations or the WQBELs necessary to protect water quality objectives for surface waters set out in the Basin Plan. (City of Burbank v. State Water Resources Control Board, 35 Cal. 4th 613, 627.) In this Order, those requirements that exceed the requirements of the federal CWA are those that solely apply to the land discharge. Nonetheless, the Regional Water Board has attempted to include permit terms that allow for compliance with all applicable federal and state requirements in the most cost effective manner possible.

The Regional Water Board considered the factors set forth in section 13263 and 13241 throughout various portions of the permit, including the Fact Sheet, which contains background information and rationale for the requirements set forth in the permit. Section II.H of the Order and Section III.C of this Fact Sheet, identifies the beneficial uses identified in the Basin Plan. Section IV of this Fact Sheet sets forth the rationale for the effluent limits, particularly the beneficial uses to be protected and water quality objectives required for that purpose. All effluent limitations established for surface water discharges are required by the CWA, Basin Plan or CTR-SIP.

The Regional Water Board considered other factors set forth in sections 13263 and 13241 for the effluent limits on reclamation as follows:

a. After considering upgrades to the Facility performed by the Discharger, along with other waste discharges in the watershed, the Regional Water Board concluded that coordinated control of other discharges would not eliminate the need for the requirements on this discharge, particularly given the continued growth in the region and the past, present and probable future uses of the receiving waters and the environmental characteristics, including water quality, of the Guerneville hydrologic subarea of the Russian River.

b. After considering the need to develop and use recycled water as mandated by the Water Code and the Recycled Water Policy, the Regional Water Board approved the Discharger's request to be a master water recycler and established recycled water requirements and provisions that allow the Discharger to tap into the potential for increased reclamation opportunities.

c. The need to prevent nuisance was addressed through the inclusion of discharge prohibitions to protect against nuisance caused by the discharge or use for

reclamation of untreated or partially treated waste from anywhere within the collection, treatment or disposal system or from sanitary sewer overflows.

Monitoring and reporting requirements are established to assess compliance with effluent limitations and receiving water limitations. Monitoring frequencies are established based on threat to water quality and are consistent with monitoring frequencies required of other dischargers in the North Coast Region.

The Discharger has submitted evidence regarding the cost of compliance and its effect on the development of housing within the region. The Discharger's requests for additional time to construct the tertiary upgrade project are based on the facts that funding for this project is limited and the area served by the Facility is a small community with a financial hardship, as demonstrated by the June 30, 2009, Graton Community Services District Median Income Survey conducted by the Rural Community Assistance Corporation on behalf of Graton CSD.

The Graton Community Services District raised its annual sewer charges in 2011 to $1499.40 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 at 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.

Regional Water Board staff considered the Discharger's economic status in establishing new permit requirements and carefully considered cost and need for additional monitoring requirements. Although new permit requirements for reclamation and surface water discharges have been added to the proposed permit that were not in the prior permit, Regional Water Board staff carefully considered priority and timing of new requirements. New requirements related to surface water discharges are discussed in the following paragraphs while new requirements related to reclamation are discussed in section IV.G Reclamation Specifications.

Monitoring frequencies for many constituents were retained at the same level as the previous permit, while other monitoring requirements from Monitoring and Reporting Program No. R1-2004-0038 were eliminated such as effluent monitoring requirements for copper, lead, and zinc, and receiving water monitoring for biochemical oxygen demand and zinc. Monitoring requirements were only increased where necessary.

Summary of Final Effluent Limitations
Discharge Points 001, 002, 003, and 004

Table F-15. Summary of Final Effluent Limitations – Discharge Point 001

Parameter	Units	Effluent Limitations					Basis[66]
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	10	15	--	--	--	AWT
	lbs/day	33	50	--	--	--	
	% Removal	85	--	--	--	--	CFR
Total Suspended Solids	mg/L	10	15	--	--	--	AWT
	lbs/day	33	50	--	--	--	
	% Removal	85	--	--	--	--	CFR
Total Coliform Bacteria	MPN/100 mL	--	2.2[62]	23/240[63]	--	--	AWT

Table F-16. Summary of Final Effluent Limitations – Discharge Point 002

Parameter	Units	Effluent Limitations					Basis[66]
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
pH	standard units	--	--	--	6.5	8.5	BP
Cyanide, Total (as CN)	µg/L	4.0	--	9.1	--	--	CTR
Dichlorobromomethane	µg/L	0.56	--	1.2	--	--	CTR
Chlorine, Total Residual	mg/L	0.01	--	0.02	--	--	AL
Ammonia, Total as N (November through March)	mg/L	4.0	--	11	--	--	BP

[66] AWT – Based on the technical capability of an advanced wastewater treatment facility.

CFR – Based on secondary treatment regulations contained in 40 CFR Part 133.

BP – Basin Plan

CTR – Based on water quality criteria contained in the California Toxics Rule and applied as specified in the SIP.

AL – Based on the *Quality Criteria for Water 1986* (The Gold Book, 1986, EPA 440/5/-86-001) for protection of freshwater aquatic life.

CFR – Based on secondary treatment regulations contained in 40 CFR Part 133.

Parameter	Units	Effluent Limitations					Basis[66]
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Ammonia, Total as N (October, April, and May)	mg/L	2.6		9.6			
Acute Toxicity	% Survival	--	--	[67]	--	--	BP

Table F-17. Summary of Final Effluent Limitations – Discharge Points 003 and 004

Parameter	Units	Effluent Limitations					Basis[66]
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
pH	standard units	--	--	--	6.0	9.0	AWT
Settleable Solids	mL/L	0.1	--	0.2	--	--	AWT

The permit also includes other requirements for discharges from the facility for filtration and for pasteurization disinfection that reflect the title 22 requirements for disinfected tertiary wastewater.

E. Interim Effluent Limitations

1. **Compliance Schedule Policy.** In general, an NPDES permit must include final effluent limitations that are consistent with CWA section 301 and with 40 CFR 122.44(d). There are exceptions to this general rule. The State Water Board's *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits* (Compliance Schedule Policy), which was adopted on April 15, 2008 (State Water Board Resolution No. 2008-0025), and became effective on August 27, 2008, allows compliance schedules for new, revised, or newly interpreted water quality objectives or criteria, or in accordance with a TMDL. All compliance schedules must be as short as possible, and may not exceed 10 years from the effective date of the adoption, revision, or new interpretation of the applicable water quality objective or criterion, unless a TMDL allows a longer schedule.

[67] There shall be no acute toxicity in treated wastewater discharged to Atascadero Creek. The Discharger will be considered compliant with this limitation when the survival of aquatic organisms in a 96-hour bioassay of undiluted effluent complies with the following:
1) Minimum for any one bioassay: 70 percent survival; and
2) Median for any three or more consecutive bioassays: at least 90 percent survival.
Compliance with these effluent limitations shall be determined in accordance with section V.A of the Monitoring and Reporting Program (Attachment E).

Where a compliance schedule for a final effluent limitation exceeds one year, the Order must include interim numeric limitations for that constituent or parameter, interim milestones and compliance reporting within 14 days after each interim milestone. The permit may also include interim requirements to control the pollutant, such as pollutant minimization and source control measures.

2. **Infeasibility Report.** The Discharger submitted an Infeasibility Report on November 17, 2011 that includes a request for interim effluent limitations and compliance schedules for chlorine residual and ammonia and continuation of interim effluent limitations for BOD_5 and TSS. The Infeasibility Report stated that it is infeasible for the Discharger to immediately comply with final effluent limitations for BOD_5, TSS, total residual chlorine, and ammonia.

   Regional Water Board staff reviewed the Infeasibility Report and found that it meets the requirements of the Compliance Schedule Policy and supports the granting of interim effluent limitations for BOD_5, TSS, total residual chlorine and total ammonia and the inclusion of a compliance schedule for ammonia in the NPDES permit. Interim limitations for all four constituents are included in the Order as well as the CDO to be adopted with this Order. The Order contains a compliance schedule for total ammonia, while the compliance schedules for BOD_5, TSS, and total residual chlorine are included in the CDO only because compliance with these three constituents is directly related to completion of the Discharger's tertiary upgrade project which has been addressed under a CDO since December 2008 (see section II.D.2.c of this Fact Sheet for further discussion).

   The Infeasibility Report includes information to document compliance with the requirements of the State Water Board Compliance Schedule Policy for inclusion of a compliance schedule for ammonia in the Order as follows:

   a. A description of the Discharger's efforts to quantify ammonia concentrations in its discharge and the sources of ammonia.

      In August 2005, the Discharger initiated efforts to monitor ammonia throughout its wastewater treatment system in order to document ammonia concentrations and to utilize that information for process control.

   b. Data demonstrating current Facility performance to compare against proposed permit limits for ammonia.

      The Discharger's effluent ammonia data demonstrates that the Discharger would have violated the proposed final ammonia effluent limitations 13 out of the 25 times that it discharged between December 2005 and April 2011. Based on the fact that the data demonstrates that the discharge cannot currently comply with the proposed final effluent limitations, the Discharger requested interim effluent

limitations and a compliance schedule to provide time for the Discharger to make additional process changes to achieve compliance.

c. Pollutant minimization efforts that the Discharger has taken to reduce ammonia concentrations in its waste stream.

   Based upon the knowledge that the Discharger gained from its ammonia sampling efforts, the Discharger modified treatment processes to reduce nitrogen in its waste stream. The Discharger's efforts included adding lime at the headworks, recirculation of nitrified settling pond effluent to the primary treatment pond, adding denitrifying bacteria to influent at the headworks, and implementation of breakpoint chlorination in the effluent prior to transfer to storage. The current pollutant minimization efforts have helped the Discharger to achieve ammonia concentrations that would comply with the final ammonia effluent limitations just under half of the time.

d. The highest discharge quality that can reasonably be achieved until full compliance is attained.

   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, the Order establishes an interim effluent limitation of 12 mg/L, as requested by the Discharger.

e. A proposed schedule for additional or future source control measures, pollutant minimization or waste treatment.

   The Discharger proposes to continue its efforts to improve ammonia reduction by improving on its current efforts (described in c. above) and by implementing a duckweed removal program to remove a natural source that could produce ammonia in storage. The compliance schedule in the Order requires the Discharger to complete this effort by May 1, 2012. If the Discharger does not demonstrate full compliance with final ammonia effluent limitations by October 1, 2013, the proposed compliance schedule provides the Discharger until the end of the permit term (April 30, 2017) to implement other control strategies that may include treatment plant upgrades to achieve full compliance with final ammonia effluent limitations.

f. A demonstration that the proposed schedule is as short as practicable.

   The Discharger intends to begin efforts to improve ammonia reduction immediately and needs at least a full discharge season to complete the modifications and demonstrate system performance. If the Discharger's process modifications are not sufficient to achieve ammonia reduction, then the

Discharger is dependent on completion of its tertiary upgrade project to determine if the tertiary upgrade improves compliance with ammonia effluent limitations.

3. **Interim Effluent Limitations.**

The Order includes interim effluent limitations for BOD_5 and TSS that consist of a monthly average of 30 mg/L and a weekly average of 45 mg/L based on technology-based effluent limitations for secondary treatment. These interim effluent limitations are applicable for the duration of operation of the existing Facility as well as during the initial 60 day start-up period after activation of the upgraded Facility. A compliance schedule for BOD_5 and TSS is included in a CDO. The current CDO is Order No. R1-2012-0015.

The Order also includes interim effluent limitations for total residual chlorine that are based on effluent limitations contained in the previous Order No. R1-2004-0038. A compliance schedule for total residual chlorine is also included in the CDO.

Interim effluent limitations have been established for total ammonia. The interim effluent limitation of 12 mg/L for total ammonia, established in section IV.A.3.b. of the Order, is effective no longer than through 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 April 2011.

F. Land Discharge Specifications

This section is not applicable to the Discharger as treated wastewater is not discharged to or applied to land for the purpose of disposal. The Discharger reclaims treated wastewater; thus, the Discharger has Reclamation Specifications rather than Land Discharge Specifications.

G. Reclamation Specifications

The Discharger has a reclamation system that is operated from May 15 through September 30 and other times during the year when weather allows (e.g., dry fall, winter and spring periods). Currently, the Discharger irrigates agricultural parcels. Upon completion of the tertiary upgrade project, the Discharger intends to expand its reclamation system to include urban irrigation.

1. **Scope and Authority**

Section 13263 of the Water Code requires the Regional Water Board to prescribe requirements for proposed discharges, existing discharges, or material change in an existing discharge based upon the conditions of the disposal area or receiving waters upon or into which the discharge is made or proposed. The prescribed

requirements shall implement any relevant water quality control plans that have been adopted, and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Water Code section 13241. In prescribing requirements, the Regional Water Board is not obligated to authorize the full waste assimilation capacities of the receiving water.

Here, the Regional Water Board considered all of these factors when developing the waste discharge requirements for the reclamation discharge. Limitations for BOD_5, TSS, and pH were scientifically derived to implement water quality objectives that protect beneficial uses. Both beneficial uses and the water quality objectives have been approved pursuant to State law, and then submitted to and approved by USEPA. In addition, discharge prohibitions were included to prohibit the reclamation use of untreated or partially treated waste, in order to prevent nuisance. In addition, the Regional Water Board considered the factors set forth in Water Code section 13241, including the consideration of past, present, and probable future beneficial uses of the receiving water, which the Regional Water Board anticipates to be the same as set forth in the Basin Plan. The Regional Water Board considered the environmental characteristics, including water quality of the Russian River-Guerneville Hydrologic Subarea of the Russian River Hydrologic Unit, the coordinated control of all factors which affect water quality in the area, and the need to develop and use recycled water, which this Order supports.

The Discharger has addressed the implications of increased monitoring and technical report requirements as discussed in detail in last four paragraphs of Fact Sheet section IV.D.3. As stated in section IV.D.3, Regional Water Board staff considered Graton's economic situation in establishing new permit requirements and carefully considered the cost and need for additional monitoring requirements. New requirements were added only as necessary.

New technical report requirements, including VI.C.2.b (Technical Report(s) Regarding Existing Recycled Water Use Sites) and IV.C.2.c (Storage Pond Technical Report) are needed to assess compliance with new requirements that recycled water be applied at agronomic rates. The Order gives the Discharger most of the permit term to complete the technical report for existing recycled water use sites and the Storage Pond Technical Report only requires the gathering of existing information, postponing potential requirements for exploratory groundwater monitoring or corrective action to a future permit term. Effluent monitoring requirements were retained for nutrients and added for salts due to the need to assess nitrogen and salt application rates for recycled water. The monitoring and reporting program allows for a potential reduction of some of these monitoring requirements if monitoring demonstrates no reasonable potential.

2. **Applicable Beneficial Uses and Water Quality Criteria and Objectives**

   a. **Beneficial Uses.** Beneficial use designations for groundwater established in the Basin Plan include MUN, IND, PRO, AGR, and FRSH.

   b. **Basin Plan Water Quality Objectives.** The Basin Plan contains narrative objectives for tastes and odors, bacteria, radioactivity, and chemical constituents (including those chemicals that adversely affect agricultural water supply) that apply to groundwater.

   c. **Determining the Need for WQBELs and Technology-Based Limits for Reclamation**

      The following reclamation specifications apply to effluent discharges to all authorized reclamation sites at Discharge Point 003, with compliance determined at EFF-001 for BOD_5 and TSS, and at REC-001 for pH.

      (1) BOD_5 and TSS. This Order establishes discharge specifications for BOD_5 and TSS based on technology-based effluent limitations. Final discharge specifications consist of a monthly average of 10 mg/L and a weekly average of 15 mg/L. These levels are technically achievable based on the capability of the proposed tertiary treatment system. These limits are included in the Order to ensure that discharges to the reclamation system receive proper treatment.

      (2) Coliform Bacteria. This Order establishes reclamation specifications for coliform bacteria that reflect standards for tertiary treated recycled water adopted by the CDPH in title 22 of the California Code of Regulations and are included to ensure that recycled water quality is protective of human health. Recycled water from this Facility meets title 22 treatment and disinfection standards and is suitable for the broad range of recycled water uses identified in title 22.

      (3) pH. The Order establishes a reclamation discharge specification for pH of 6.0 to 9.0 based on technology-based effluent limitations required by USEPA pursuant to 40 CFR Part 133. These pH limits are included in the Order to ensure that pH levels are appropriate for protection of groundwater when discharging to reclamation sites.

      (4) Chemical Constituents. The Basin Plan requires that waters designated for use as MUN shall not contain concentrations of chemical constituents in excess of the limits specified in CCR, title 22, Chapter 15, Division 4, Article 4, Section 64435 (Tables 2 and 3), and Section 64444.5 (Table 5), and listed in Table 3-2 of the Basin Plan. Monitoring and Reporting Program No. R1-2004-0038 did not require such monitoring. The MRP requires the Discharger to monitor for constituents listed in the CCR, title 22, division 4, chapter 15, sections 64431

(inorganic chemicals) and 64444 (organic chemicals) during the term of this Order in order to determine whether any of these constituents are present in the treated disinfected recycled water.

3. **WQBEL Calculations for Reclamation**

   This section does not apply to the reclamation aspect of this Facility. All of the reclamation specifications are based on the technical capabilities of a wastewater treatment system and levels required by the Basin Plan and title 22. Thus, no WQBEL calculations were needed.

4. **Final Reclamation Specifications**

Table F-18. Summary of Final Reclamation Specifications

Parameter	Units	Discharge Specifications			
		Average Monthly	Average Weekly	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	10	15	--	--
Total Suspended Solids	mg/L	10	15	--	--
pH	standard units	--	--	6.0	9.0
Total Coliform Bacteria	MPN/100 mL	23/240[62]	2.2[63]	--	--

5. **Water Reclamation Requirements and Provisions – Attachment G**

   Attachment G of this Order contains Water Reclamation Findings, Requirements and Provisions to ensure that recycled water is used in a manner that is protective of groundwater and surface water quality. Comprehensive plans are still needed to clearly identify the technical details regarding hydraulic and nutrient agronomic rates and to specify the BMPs that will be implemented to ensure that recycled water will not be over-applied or used in a manner that causes discharges to surface waters or degradation of groundwater. Attachment G includes requirements for the Discharger to submit these technical details prior to commencement of reclamation activities at proposed use sites. For existing reuse sites, Provision VI.C.2.b of this Order requires the Discharger to submit a workplan identifying a time schedule for submittal of this information. Attachment G also includes public notice requirements for programmatic technical reports submitted by the Discharger. The water reclamation requirements of this Order (including Attachment G) are consistent with the requirements of title 22 of the CCR and the State Water Board Recycled Water Policy adopted by State Water Board Resolution No. 2009-0011 on February 3, 2009 and approved on May 14, 2009 and State Water Board Order No. 2009-0006-WQ (General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water), adopted by the State Water Board on July 7, 2009.

A key to reducing the potential for spills is for the Discharger to establish appropriate BMPs to protect against the possibility of recycled water spills. Thus Water Reclamation Technical Report Requirement D.2 require the Discharger to recognize the possibility of runoff from recycled water use areas and describe measures, including BMPs that the Discharger will implement to minimize the possibility of runoff.

The water reclamation requirements of this Order (including Attachment G and section VII of the MRP) include requirements for dual-plumbed systems, including requirements for cross-connection prevention. The Regional Water Board recognizes that at the time of adoption of this Order, the Discharger has not identified any dual-plumbed recycled water uses, however, the language that relates to dual-plumbed systems is included in this Order to provide for the possibility of the Discharger adding such uses, in the event that the Discharger identifies any potential dual-plumbed uses during the term of this Order and completes necessary CEQA documentation, title 22 engineering report, and other Order requirements.

H. Other Requirements

The Order contains additional specifications that apply to the Facility regardless of the disposal method (surface water discharge, land disposal, or reclamation), including:

1. **Turbidity.** Section IV.D.1.c.(2) of the Order specifies that the turbidity of the filtered wastewater not exceed an average of 2 NTU during any 24-hour period; 5 NTU more than 5 percent of the time within a 24-hour period, and 10 NTU at any time, and is based on the definition of filtered wastewater found in title 22 section 60301.320 of the California Code of Regulations. The title 22 definition is used as a reasonable performance standard to ensure adequate removal of turbidity upstream of disinfection facilities. Properly designed and operated effluent filters will meet this standard. The point of compliance for the turbidity requirements is a point following the microfilters.

2. **Disinfection Process Requirements**

   a. **Chlorine Disinfection System.** Chlorine disinfection process requirements and diversion of inadequately disinfected effluent are established in section IV.D.2.a of the Order. These requirements are necessary to ensure inadequately disinfected effluent is not discharge to surface waters or to the reclamation system. The chlorine disinfection system requirements are applicable until the time when the pasteurization disinfection system is installed and implemented, and upon Regional Water Board Executive Officer approval to cease these requirements.

The permit also includes disinfection CT requirements that apply in the event that the Discharger is still using chlorine disinfection at the time it is ready to add recycled water use sites that require tertiary effluent pursuant to title 22.

b. **Pasteurization Disinfection System.** Pasteurization disinfection process requirements are established in section IV.D.2.b of the Order. The Discharger intends to replace the chlorine disinfection system with the pasteurization disinfection system during the term of the permit. The requirements are based on the requirements set forth by the CDPH's July 25, 2007 technology approval letter for pasteurization disinfection for title 22 disinfection requirements. These requirements shall become applicable upon the installation and implementation of the pasteurization disinfection system and Regional Water Board Executive Officer and CDPH approval that the pasteurization disinfection system meets all requirements established in the Order.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

CWA section 303(a-c) requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The Regional Water Board adopted water quality criteria as water quality objectives in the Basin Plan. The Basin Plan states that "[t]*he numerical and narrative water quality objectives define the least stringent standards that the Regional* [Water] *Board will apply to regional waters in order to protect the beneficial uses*." The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This Order contains Receiving Surface Water Limitations based on the Basin Plan numerical and narrative water quality objectives for biostimulatory substances, bacteria, chemical constituents, color, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, and turbidity.

B. Groundwater

1. The beneficial uses of the underlying ground water are municipal and domestic supply, industrial service supply, industrial process supply, agricultural supply, and freshwater replenishment to surface waters.

2. Groundwater limitations are required to protect the beneficial uses of the underlying groundwater.

3. Discharges from the Facility shall not cause exceedance of applicable water quality objectives or create adverse impacts to beneficial uses of groundwater.

4. The Basin Plan requires that waters designated for use as MUN shall not contain concentrations of chemical constituents in excess of the limits specified in California

Code of Regulations, title 22, Chapter 15, Division 4, Article 4, Section 64435 (Tables 2 and 3), and Section 64444.5 (Table 5), and listed in Table 3-2 of the Basin Plan. Monitoring and Reporting Program No. R1-2004-0038 did not require groundwater monitoring. Discharges to the treated effluent storage pond and authorized reclamation sites are not expected to cause exceedances of applicable water quality objectives in the groundwater and specific groundwater limitations and monitoring for these parameters are not required by this Order.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this Facility.

A. Influent Monitoring

Influent monitoring requirements for flow, BOD_5, TSS, and settleable solids are retained from the previous permit, Order No. R1-2004-0038 and are necessary to determine compliance with the Order's 85 percent removal requirement for these parameters. The sample type for BOD_5 and TSS has been changed from 8-hour to 24-hour composite to provide a complete representation of the daily flow into the facility.

B. Effluent Monitoring

Effluent monitoring requirements are necessary to determine compliance with Prohibitions Effluent Limitations, and Other Requirements established by the Order. Monitoring at Monitoring Location EFF-001 is necessary to demonstrate compliance with technology-based effluent limitations and monitoring at Monitoring Location EFF-002 is necessary to demonstrate compliance with WQBELs, and to determine whether or not the discharge poses reasonable potential for a pollutant to exceed any numeric or narrative water quality objectives.

The permit allows interim compliance monitoring for BODs and TSS at Discharge Point 002 (Discharge from Effluent storage ponds to Atascadero Creek) because monitoring has demonstrated that additional treatment for BODs and TSS occurs in the effluent storage ponds due to long detention times, the use of aeration and the use of Aquamarine Shadow to reduce algal growth.

Most effluent monitoring requirements for Discharge Point 001 at Monitoring Location EFF-001 (effluent discharge to on-site storage pond) are retained from the previous

permit. Changes in effluent monitoring requirements prior to discharge to the storage pond are as follows:

1. A new Monitoring Location, INT-001 has been established at a point following the filters and prior to the disinfection system. Monitoring requirements for turbidity have been established at this new monitoring location. Title 22 requirements for turbidity apply at the end of the filtration process.

2. A new Monitoring Location, INT-002 has been established for monitoring the temperatures associated with the pasteurization disinfection system to assess compliance with CDPH requirements related to temperature and contact time.

3. A new requirement to monitor temperature at EFF-001 is necessary to demonstrate that temperatures are being adequately cooled following the pasteurization disinfection system so that storage pond effluent equilibrates in relation to ambient air temperatures prior to discharge to surface waters.

4. Monitoring requirements at EFF-001 for chlorine residual will be eliminated upon completion of the pasteurization disinfection system assuming that chlorine use ceases.

Effluent monitoring requirements for Discharge Point 002 at Monitoring Location EFF-002 (discharges from the on-site storage pond to Atascadero Creek) are similar to monitoring requirements in the previous Order. Changes in the effluent monitoring requirements for Discharge Point 002 at Monitoring Location EFF-002 are as follows:

1. Monitoring for hardness in the effluent is required as a means of knowing if effluent hardness ever drops which could trigger the need to re-evaluate the reasonable potential analysis for concave-downward metals such as copper and zinc.

2. Monitoring for total suspended solids and settleable solids is to assess whether discharges from the pond contain suspended solids and/or settleable solids at concentrations that could affect sediment loads or adversely affect beneficial uses of the receiving water. This monitoring may be reduced or eliminated if monitoring during the term of the permit demonstrates that there are no impacts from these two pollutants.

3. Monitoring for ammonia is required for determination of compliance with effluent limitations for ammonia. Monitoring for phosphorus is required for future reasonable potential determinations.

4. Monitoring for TCDD congeners is required by the SIP. The Discharger has not collected data for the TCDD congeners, but will be required to during the permit term for future evaluation of reasonable potential for TCDD equivalents.

5. Monitoring for the dilution provided by the receiving water for discharges to Atascadero Creek is based on the prohibition contained in the permit against discharges that exceed 1 percent of the receiving water flow during the permitted wet weather discharge season.

6. The monitoring frequencies for temperature and dissolved oxygen at EFF-002 have been increased from monthly to daily in order to collect additional data to assess the potential for temperature and dissolved oxygen impacts to Atascadero Creek. Increased temperature monitoring is necessary to demonstrate that the pasteurization disinfection system is not causing an increase in the temperature of the effluent discharged to surface waters.

7. Routine monitoring for copper, lead, zinc, and chloroform is no longer required because there is no longer reasonable potential for discharges to exceed the applicable criterion for trihalomethanes.

8. Monitoring for title 22 pollutants once during the permit term has been established to provide characterization of treated wastewater that is discharged from the treatment facility and to assess the need for additional effluent limitations. The title 22 pollutants are those toxic pollutants for which CDPH has established MCLs at title 22, Division 4, Chapter 15 of the California Code of Regulations. For receiving waters designated as municipal and domestic supply in the North Coast Region, the Basin Plan has established the title 22 MCLs as applicable water quality criteria.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) limitations and monitoring requirements are retained from the previous Order and are included in the Order to protect the receiving water quality from the aggregate effect of a mixture of pollutants in the effluent. Acute toxicity testing measures mortality in 100 percent effluent over a short test period and chronic toxicity testing is conducted over a longer time period and may measure mortality, reproduction, and/or growth. This Order includes effluent limitations and monitoring requirements for acute toxicity, as well as monitoring and reporting requirements for chronic toxicity to assess compliance with the Basin Plan's narrative water quality objective for toxicity.

D. Land Discharge Monitoring Requirements

This section is not applicable to the Discharger as treated wastewater is not discharged to or applied to land for the purpose of disposal. The Discharger reclaims treated wastewater; thus, the Discharger has Reclamation Monitoring Requirements rather than Land Discharge Monitoring Requirements.

E. Reclamation Monitoring Requirements

This Order requires that the Discharger comply with applicable state and local requirements regarding the production and use of reclaimed wastewater. Thus, reclamation specifications for total coliform bacteria have been established at Monitoring Location EFF-001 based on standards for tertiary treated recycled water adopted by CDPH at title 22 of the California Code of Regulations. Likewise, reclamation specifications for BOD_5, TSS, and pH have been established at Monitoring Location EFF-001 based on the technical capability of the current secondary and proposed advanced wastewater treatment system to ensure that discharges to authorized reclamation sites receive proper treatment.

The Discharger is also required to monitor continuously for flow and report the average and maximum daily flow rate, report the number of days that treated wastewater is used for reclamation at all authorized sites, and report the average and maximum daily flow rate to authorized reclamation sites, and report the monthly volume and nitrogen application rate for each use site. These requirements apply immediately for any new reclamation site and upon completion of agronomic rate studies for existing reclamation sites.

The Order includes several new reclamation monitoring requirements including:

1. Monthly monitoring for nitrate nitrite, ammonia, organic nitrogen, which is required to determine the total nitrogen concentration of the effluent in order to ensure application of recycled water at nutrient agronomic rates.

2. Monthly monitoring for total dissolved solids (TDS), chloride, boron, and sodium to determine whether any of these constituents are present in the effluent at concentrations that may exceed water quality objectives for these constituents. TDS is a direct measure of salinity, which can affect underlying groundwater quality as it relates to drinking water and agricultural supply beneficial uses. Secondary MCLs for taste and odor in drinking water have been established by CDPH for TDS (500 mg/L), chloride (250 mg/L) and sodium (60 mg/L). An agricultural water quality limit of 0.7 mg/L has been established for boron. The MRP allows for reduction of monitoring frequency or elimination of the monitoring requirement if monitoring data collected over time demonstrates that any constituent is present in concentrations that could not cause an exceedance of water quality objectives.

3. Visual monitoring of recycled water use sites. During inspections, the Discharger is required to make observations of the recycled water use sites to ensure that recycled water requirements are being met. The purpose of the visual monitoring is to identify any indicators, such as surface runoff, ponding, broken sprinkler heads, sprinklers operating when the ground is saturated, that could result in a violation of permit conditions and to implement any needed corrective measures.

F. Receiving Water Monitoring

1. Surface Water

Receiving water monitoring requirements for TSS, dissolved oxygen, pH, turbidity, temperature, hardness, nitrate, cyanide, and flow are retained from Order No. R1-2004-0038.

The following changes have been made to the receiving water monitoring requirements:

a. Routine monitoring for zinc is no longer required because the reasonable potential analysis demonstrated that there is no reasonable potential for zinc.

b. Routine monitoring for BOD_5 is no longer required because an analysis of receiving water data for BOD_5 collected during the term of Order No. R1-2004-0038 demonstrated that there was little to no BOD_5 in the receiving water. Monitoring requirements were retained for TSS because monitoring data collected during the term of Order No. 2004-0038 showed increases in TSS concentrations in the receiving water downstream of the Discharger's outfall pipe. Continued receiving water TSS monitoring in combination with monitoring of TSS in the effluent discharge will provide data necessary to assess whether the effluent discharge is the cause of TSS increases in the downstream receiving water.

c. Monitoring requirements for total ammonia and total phosphorus are required to characterize the assimilative capacity of the receiving water for these nutrients, to determine the impact of the discharge on the receiving water with respect to these parameters, and to generate background data for these constituents for future reasonable potential analyses.

d. Visual monitoring requirements for the upstream monitoring location are not retained. Visual monitoring at the downstream location is retained to determine if the discharge is impacting the receiving water.

2. Groundwater

This Order does not require groundwater monitoring. Groundwater monitoring may be established in the future, if necessary, to assess impacts of reclamation.

3. Other Monitoring Requirements

Monitoring requirements for the disinfection process and for the filtration process are established in this Order to determine compliance with requirements for recycled

wastewater systems, established at California Code of Regulations title 22, Division 4, Chapter 3.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

1. Federal Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Section 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with section 123.25, this Order omits federal conditions that address enforcement authority specified in sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

2. Regional Water Board Standard Provisions

In addition to the Federal Standard Provisions (Attachment D), the Discharger shall comply with the Regional Water Board Standard Provisions provided in Standard Provisions VI.A.2.

a. Order Provision VI.A.2.a identifies the State's enforcement authority under the Water Code, which is more stringent than the enforcement authority specified in the federal regulations [e.g., 40 CFR sections 122.41(j)(5) and (k)(2)].

b. Order Provision VI.A.2.b requires the Discharger to notify Regional Water Board staff, orally and in writing, in the event that the Discharger does not comply or will be unable to comply with any Order requirement. This provision requires the Discharger to make direct contact with a Regional Water Board staff person.

c. Order Provision VI.A.2.c requires the Discharger to file a petition with, and receive approval from, the State Water Board Division of Water Rights prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse. This requirement is mandated by Water Code section 1211.

B. Special Provisions

1. Reopener Provisions

a. **Standard Revisions (Special Provision VI.C.1.a).** Conditions that necessitate a major modification of a permit are described in 40 CFR 122.62, which include the following:

(1) When standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision. Therefore, if revisions of applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such revised standards.

(2) When new information that was not available at the time of permit issuance would have justified different permit conditions at the time of issuance.

b. **Reasonable Potential (Special Provision VI.C.1.b).** This provision allows the Regional Water Board to modify, or revoke and reissue, this Order if present or future investigations demonstrate that the Discharger governed by this Permit is causing or contributing to excursions above any applicable priority pollutant criterion or objective, or adversely impacting water quality and/or the beneficial uses of receiving waters.

c. **Whole Effluent Toxicity (Special Provision VI.C.1.c).** This Order requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity through a TRE. This Order may be reopened to include a numeric chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened to include a numeric chronic toxicity limitation based on that objective.

d. **303(d)-Listed Pollutants (Special Provision VI.C.1.d).** This provision allows the Regional Water Board to reopen this Order to modify existing effluent limitations or add effluent limitations for pollutants that are the subject of any future TMDL action.

e. **Water Effects Ratios (WERs) and Metal Translators (Special Provision VI.C.1.e).** This provision allows the Regional Water Board to reopen this Order if future studies undertaken by the Discharger provide new information and justification for applying a WER or metal translator to a water quality objective for one or more priority pollutants.

f. **Nutrients (Special Provision VI.C.1.f).** This Order establishes effluent limitations for total ammonia and monitoring requirements for the effluent at EFF-002 and receiving water for ammonia, nitrate, and phosphorus, and at REC-001 for ammonia, nitrate, nitrite, and organic nitrogen. This provision allows the Regional Water Board to reopen this Order if future monitoring data indicates the need for effluent limitations or more stringent effluent limitations for any of these parameters.

g. **Salt and Nutrient Management Plans (Special Provision VI.C.1.g)**. This provision allows the Regional Water Board to reopen this Order if it adopts a regional or subregional salt and nutrient management plan that is applicable to the Discharger.

2. **Special Studies and Additional Monitoring Requirements**

a. **Toxicity Reduction Evaluations (Special Provision VI.C.2.a).** The SIP requires the use of short-term chronic toxicity tests to determine compliance with the narrative toxicity objectives for aquatic life in the Basin Plan. Attachment E of this Order requires chronic toxicity monitoring for demonstration of compliance with the narrative toxicity objective.

In addition to WET monitoring, this provision requires the Discharger to maintain an up-to-date TRE Work Plan for approval by the Regional Water Board Executive Officer, to ensure the Discharger has a plan to immediately move forward with the initial tiers of a TRE, in the event effluent toxicity is encountered in the future. The TRE is initiated by evidence of a pattern of toxicity demonstrated through the additional effluent monitoring obtained as a result of an accelerated monitoring program.

b. **Technical Report(s) Regarding Existing Recycled Water Use Sites (Special Provision VI.C.2.b).** Technical information is needed to assess existing recycled water use sites to determine whether or not recycled water is being applied at nutrient and hydraulic agronomic rates. The Discharger must provide a workplan and time schedule for providing this assessment and to achieve compliance with technical report requirements in Attachment G. The workplan must also contain a task to submit a corrective action plan to address any recycled water use that is found to exceed agronomic rates or to be resulting in runoff of recycled water to surface waters. Examples of how compliance could be achieved include adjusting application rates at the use site to ensure that agronomic rates are met and implementing appropriate BMPs to minimize the potential for runoff; recognizing the site as a land disposal site with appropriate groundwater monitoring and possible permit modification to include any needed land discharge specifications; or in the case of frost protection uses, establishing an authorized discharge point upon demonstration that all appropriate measures

(e.g., sheet flow through vegetated buffers, no use of fertilizers or other agricultural chemicals, etc.) are implemented to protect water quality.

c. **Storage Pond Technical Report** (Special Provision VI.C.2.c) requires the Discharger to submit existing technical information to assist in determining whether the storage ponds are adequately designed to minimize the potential for recycled water to cause adverse impacts to areal groundwater and beneficial uses thereof. The Discharger will eventually need to demonstrate that storage of treated wastewater is protective of groundwater quality. In addition, groundwater monitoring may be required in the future if it is determined that recycled water is being applied at greater than hydraulic or nutrient agronomic rates.

3. **Best Management Practices and Pollution Prevention**

a. **Pollutant Minimization Plan.** Special Provision VI.C.3.a is included in this Order as required by section 2.4.5 of the SIP. The Regional Water Board includes standard provisions in all NPDES permits requiring development of a Pollutant Minimization Program when there is evidence that a toxic pollutant is present in the effluent at a concentration greater than an applicable effluent limitation.

4. **Construction, Operation, and Maintenance Specifications (Special Provision VI.C.4)**

Section 122.41(e) of 40 CFR requires proper operation and maintenance of permitted wastewater systems and related facilities to achieve compliance with permit conditions. An up-to-date operation and maintenance manual, as required by Provision VI.C.4.b of the Order, is an integral part of a well-operated and maintained facility.

5. **Special Provisions for Municipal Facilities (POTWs Only)**

a. **Wastewater Collection Systems (Special Provision VI.C.5.a)**

(1) **Statewide General WDRs for Sanitary Sewer Systems.** The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ (General Order) on May 2, 2006. The General Order requires public agencies that own or operate sanitary sewer systems with greater than 1 mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans (SSMPs) and report all SSOs, among other requirements and prohibitions.

Furthermore, the General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary

sewer overflows. Inasmuch that the Discharger's collection system is part of the system that is subject to this Order, certain standard provisions are applicable as specified in Provisions VI.A.2.b and VI.C.5.a of the Order. The Discharger must comply with both the General Order and this Order. The Discharger and public agencies that are discharging wastewater into the facility were required to obtain enrollment for regulation under the General Order by December 1, 2006. The Discharger has enrolled under the General Order as required.

All NPDES permits for POTWs currently include federally required standard conditions to mitigate discharges (40 CFR 122.41(d)), to report non-compliance (40 CFR 122.41(1)(6) and (7)), and to properly operate and maintain facilities (40 CFR 122.41(e)). This provision is consistent with these federal requirements.

(2) **Sanitary Sewer Overflows.** This Order includes provisions (Provision VI.C.5.(a)(2), and Attachment D subsection I.C., I.D, V.E, and V.H.) to ensure adequate and timely notifications are made to the Regional Water Board and appropriate local, state, and federal authorities in case of sewage spills. In addition, as an Enrollee under General Order No. 2006-0003-DWQ, the Discharger is required to report SSOs to an online SSO database administered through the California Integrated Water Quality System (CIWQS) and via telefax when the online SSO database is not available. Detailed notification and reporting requirements for SSOs and sewage spills are specified in Attachment E subsection E (Monitoring and Reporting Program). The goal of these provisions is to ensure appropriate and timely response by the Discharger to SSOs to protect public health and water quality.

b. **Source Control Program (Special Provision VI.C.5.b).**

Because the average dry-weather design flow of the facility is less than 5.0 mgd, the Order does not require the Discharger to develop a pretreatment program that conforms to federal regulations. The Order includes requirements for the Discharger to implement a source identification and reduction program, however. The Discharger's source identification and reduction program will need to address only those pollutants that continue to be detected at levels that trigger reasonable potential.

A key component of an effective source control program is the identification and location of possible industrial users within the POTW's wastewater collection system. This information is typically obtained by the POTW through industrial waste surveys. The following types of resources can be consulted in compiling a master list of industrial users:

(1) Water and sewer billing records
(2) Applications for sewer service
(3) Local telephone directories
(4) Chamber of Commerce and local business directories
(5) Business license records
(6) POTW and wastewater collection personnel and field observations
(7) Business associations
(8) The Internet

In addition, the Regional Water Board recognizes that some form of source control is prudent to ensure the efficient operation of the Facility, the safety of Facility staff, and to ensure that pollutants do not pass through the treatment facility to impair the beneficial uses of the receiving water.

c. **Sludge Disposal and Handling Requirements (Special Provision VI.C.5.c).**

The disposal or reuse of wastewater treatment screenings, sludges, or other solids removed from the liquid waste stream is regulated by 40 CFR Parts 257, 258, 501, and 503, and the State Water Board promulgated provisions of title 27, California Code of Regulations.

d. **Statewide General WDRs for Discharge of Biosolids to Land (Special Provision VI.C.5.d).**

This provision requires the Discharger to comply with the State's regulations relating to the discharge of biosolids to the land. The discharge of biosolids through land application is not regulated under this Order. Instead, the Discharger is required to obtain coverage under the State Water Board Order No. 2004-0012-DWQ, General Waste Discharge Requirements for the Discharge of Biosolids to Land as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities (General Order). Coverage under the General Order, as opposed to coverage under this NPDES permit or individual WDRs, implements a consistent statewide approach to regulating this waste discharge.

e. **Operator Certification (Special Provision VI.C.5.e).**

This provision requires the Facility to be operated by supervisors and operators who are certified as required by title 23, California Code of Regulations, section 3680.

f. **Adequate Capacity (Special Provision VI.C.5.f).**

The goal of this provision is to ensure appropriate and timely planning by the Discharger to ensure adequate capacity for the protection of public health and water quality.

6. **Other Special Provisions (Special Provision VI.C.6)**

a. **Storm Water Best Management Practices (BMPs).** This Facility has a storm water drainage system that collects storm water at the base of the berms surrounding the treatment ponds and discharges that storm water to surface waters. The Statewide General Storm Water Permit (State Water Board Order No. 97-03-DWQ) does not require facilities less than 1 mgd to obtain coverage, however, BMPs must be implemented to ensure that storm water run-on does not comingle with pollutants at the Facility prior to discharge. Due to the potential for pollutant discharges to surface waters via the Discharger's storm water collection system, Order section VI.C.6.a (Storm Water) requires the Discharger to prepare and submit a Storm Water Pollution Prevention Plan (SWPPP) and monitoring plan to ensure that BMPs are implemented to prevent pollutants at the Facility from comingling with storm water.

7. **Compliance Schedules(Special Provision VI.C.7)**

This Order contains a compliance schedule for the Discharger to achieve compliance with effluent limitations for total ammonia. The Order includes a time schedule for the Discharger to achieve compliance with final total ammonia effluent limitations by April 30, 2017.

VIII. PUBLIC PARTICIPATION

The Regional Water Board is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit and a Master Reclamation Permit for the Graton Community Services District Wastewater Treatment Plant. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the following posting on the Regional Water Board's Internet site at:

http://www.waterboards.ca.gov/northcoast/public_notices/public_hearings/npdes_permits_and_wdrs.shtml and through publication in the Press Democrat on **December 31, 2011.**

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person or by mail to the Regional Water Board Executive Office at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on January 31, 2012.

C. Public Hearing

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date:	March 15, 2012
Time:	9:00 a.m.
Location:	River Lodge Conference Center 1800 Riverwalk Drive Fortuna, California

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our Web address is http://www.waterboards.ca.gov/northcoast where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The ROWD, related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (707) 576-2220.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Cathleen Goodwin at Cgoodwin@waterboards.ca.gov or (707) 576-2687.

ATTACHMENT F-1

ATTACHMENT F-1
Graton CSD Reasonable Potential Analysis
November 2011

CTR No.	Constituent	Units	Qualifier	MEC	Qualifier	B	C	CMC	CCC	Water & Org	Org. Only	MCL	Reasonable Potential
1	Antimony	µg/L	<	0.5	<	1.2	6	---	---	14	4,300	6	No
2	Arsenic	µg/L		1.6		2.2	50	340	150			50	No
3	Beryllium	µg/L	<	0.5	<	0.1	4	---	---	---	---	4.0	No
4	Cadmium	µg/L	<	0.25	<	0.2	1.2	1.5	1.2	---	---	5.0	No
5a	Chromium (III)	µg/L	<	0.5		1.2	257	2153	257	---	---	---	No
5b	Chromium (VI) or total Cr	µg/L	<	0.2	<	5	11	16	11	---	---	50	No
6	Copper	µg/L		11	<	1.000	11.7	18	11.7	1300	---	---	No
7	Lead	µg/L	<	0.25			0.9	24	0.9	---	---	---	No
8	Mercury	µg/L		0.0019		0.00872	0.05	---	---	0.050	0.051	2.0	No
9	Nickel	µg/L		6.3		27	65	586	65	610	4,600	100	No
10	Selenium	µg/L	<	0.5	<	0.51	5	20	5	---	---	50	No
11	Silver	µg/L	<	0.19	<	1.6	0.8	0.8	---	---	---	---	No
12	Thallium	µg/L	<	0.5	<	0.36	1.7	---	---	1.7	6.3	2	No
13	Zinc	µg/L		53		27	150	150	150	---	---		No
14	Cyanide	µg/L		5.4		20	5.2	22	5.20	700	220,000	150	Yes
15	Asbestos	µg/L	<	0.2	<	0.207	7	---	---	7	---	7	No
16	2,3,7,8-TCDD (Dioxin)	µg/L	<	5.0E-06		---	1.3E-08	---	---	1.3E-08	1.4E-08	3.0E-05	No
17	Acrolein	µg/L	<	5	<	0.36	320	---	---	320	780	---	No
18	Acrylonitrile	µg/L	<	0.05	<	0.14	0.059	---	---	0.059	0.66	---	No
19	Benzene	µg/L	<	0.5	<	0.08	1	---	---	1.2	71	1	No
20	Bromoform	µg/L	<	0.5	<	0.099	4.3	---	---	4.3	360	---	No
21	Carbon Tetrachloride	µg/L	<	0.5	<	0.19	0.25	---	---	0.25	4.4	0.5	No
22	Chlorobenzene	µg/L	<	0.5	<	0.075	70	---	---	680	21,000	70	No
23	Chlorodibromomethane	µg/L	<	0.5	<	0.11	0.401	---	---	0.401	34	---	No
24	Chloroethane	µg/L	<	0.5	<	0.29	No Criteria	---	---	---	---	---	No
25	2-Chloroethylvinyl Ether	µg/L	<	1		---	No Criteria	---	---	---	---	---	No
26	Chloroform	µg/L		6.9	<	0.84	No Criteria	---	---	---	---	---	No
27	Dichlorobromomethane	µg/L		1	<	0.1	0.56	---	---	0.56	46	---	Yes
28	1,1-Dichloroethane	µg/L	<	0.5	<	0.14	5	---	---	---	---	5	No
29	1,2-Dichloroethane	µg/L	<	0.5	<	0.21	0.38	---	---	0.38	99	0.5	No
30	1,1-Dichloroethylene	µg/L	<	0.05	<	0.19	0.057	---	---	0.057	3.2	6	No
31	1,2-Dichloropropane	µg/L	<	0.5	<	0.13	0.52	---	---	0.52	39	5	No
32	1,3-Dichloropropylene	µg/L	<	0.5	<	0.12	0.5	---	---	10	1,700	0.5	No
33	Ethylbenzene	µg/L	<	0.5	<	0.11	300	---	---	3100	29,000	300	No
34	Methyl Bromide	µg/L	<	0.5	<	0.2	48	---	---	48	4,000	---	No

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November 2011

CTR No.	Constituent	Units	Qualifier	MEC	Qualifier	B	C	CMC	CCC	Water & Org	Org. Only	MCL	Reasonable Potential
35	Methyl Chloride	µg/L	<	0.5	<	0.14	No Criteria	---	---	---	---	---	No
36	Methylene Chloride	µg/L	<	0.5	<	0.16	4.7	---	---	4.7	1,600	5	No
37	1,1,2,2-Tetrachloroethane	µg/L	<	0.1	<	0.057	0.17	---	---	0.17	11	1	No
38	Tetrachloroethylene	µg/L	<	0.5	<	0.21	0.8	---	---	0.8	8.85	5	No
39	Toluene	µg/L	<	0.5	<	0.11	150	---	---	6800	200,000	150	No
40	1,2-Trans-Dichloroethylene	µg/L	<	0.5	<	0.16	10	---	---	700	140,000	10	No
41	1,1,1-Trichloroethane	µg/L	<	0.5	<	0.13	200	---	---	---	---	200	No
42	1,1,2-Trichloroethane	µg/L	<	0.5	<	0.12	0.6	---	---	0.6	42	5	No
43	Trichloroethylene	µg/L	<	0.5	<	0.13	2.7	---	---	2.7	81	5	No
44	Vinyl Chloride	µg/L	<	0.5	<	0.17	0.5	---	---	2	525	0.5	No
45	Chlorophenol	µg/L	<	1	<	10	120	---	---	120	400	---	No
46	2,4-Dichlorophenol	µg/L	<	1	<	10	93	---	---	93	790	---	No
47	2,4-Dimethylphenol	µg/L	<	1	<	4	540	---	---	540	2,300	---	No
48	2-Methyl-4,6-Dinitrophenol	µg/L	<	5	<	10	13	---	---	13.4	765	---	No
49	2,4-Dinitrophenol	µg/L	<	5	<	10	70	---	---	70	14,000	---	No
50	2-Nitrophenol	µg/L	<	5	<	20	No Criteria	---	---	---	---	---	No
51	4-Nitrophenol	µg/L	<	5	<	20	No Criteria	---	---	---	---	---	No
52	3-Methyl-4-Chlorophenol	µg/L	<	1	<	2	No Criteria	---	---	---	---	---	No
53	Pentachlorophenol	µg/L	<	0.01	<	10	0.28	6	4	0.28	8.2	1	No
54	Phenol	µg/L	<	1	<	2	21000	---	---	21000	4,600,000	---	No
55	2,4,6-Trichlorophenol	µg/L	<	1	<	20	2.1	---	---	2.1	6.5	---	No
56	Acenaphthene	µg/L	<	1	<	2	1200	---	---	1200	2,700	---	No
57	Acenephthylene	µg/L	<	1	<	20	No Criteria	---	---	---	---	---	No
58	Anthracene	µg/L	<	1	<	20	9600	---	---	9600	110,000	---	No
59	Benzidine	µg/L	<	0.1	<	10	0.00012	---	---	0.00012	0.00054	---	No
60	Benzo(a)Anthracene	µg/L	<	0.002	<	20	0.0044	---	---	0.0044	0.049	---	No
61	Benzo(a)Pyrene	µg/L	<	0.002	<	20	0.0044	---	---	0.0044	0.049	0.2	No
62	Benzo(b)Fluoranthene	µg/L	<	0.002	<	20	0.0044	---	---	0.0044	0.049	---	No
63	Benzo(ghi)Perylene	µg/L	<	1	<	10	No Criteria	---	---	---	---	---	No
64	Benzo(k)Fluoranthene	µg/L	<	0.002	<	20	0.0044	---	---	0.0044	0.049	---	No
65	Bis(2-Chloroethoxy)Methane	µg/L	<	0.002	<	10	No Criteria	---	---	---	---	---	No
66	Bis(2-Chloroethyl)Ether	µg/L	<	0.02	<	2	0.031	---	---	0.031	1.4	---	No
67	Bis(2-Chloroisopropyl)Ether	µg/L	<	1	<	4	1400	---	---	1400	170,000	---	No
68	Bis(2-Ethylhexyl)Phthalate	µg/L	<	5	<	10	1.8	---	---	1.8	5.9	4	No
69	4-Bromophenyl Phenyl Ether	µg/L	<	1	<	10	No Criteria	---	---	---	---	---	No

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CTR No.	Constituent	Units	Qualifier	MEC	Qualifier	B	C	CMC	CCC	Water & Org	Org. Only	MCL	Reasonable Potential
70	Butylbenzyl Phthalate	µg/L	<	1	<	20	3000	---	---	3000	5,200	---	No
71	2-Chloronaphthalene	µg/L	<	1	<	20	1700	---	---	1700	4,300	---	No
72	4-Chlorophenyl Phenyl Ether	µg/L	<	1	<	10	No Criteria	---	---	---	---	---	No
73	Chrysene	µg/L	<	0.002	<	20	0.0044	---	---	0.0044	0.049	---	No
74	Dibenzo(a,h)Anthracene	µg/L	<	0.002	<	20	0.0044	---	---	0.0044	0.049	---	No
75	1,2-Dichlorobenzene	µg/L	<	0.5	<	0.11	600	---	---	2700	17,000	600	No
76	1,3-Dichlorobenzene	µg/L	<	0.5	<	0.11	400	---	---	400	2,600	---	No
77	1,4-Dichlorobenzene	µg/L	<	0.5	<	0.081	5	---	---	400	2,600	5	No
78	3,3'-Dichlorobenzidine	µg/L	<	0.04	<	10	0.04	---	---	0.04	0.770	---	No
79	Diethyl Phthalate	µg/L	<	1	<	4	23000	---	---	23000	120,000	---	No
80	Dimethyl Phthalate	µg/L	<	1	<	4	313000	---	---	313000	2,900,000	---	No
81	Di-n-Butyl Phthalate	µg/L	<	10	<	20	2700	---	---	2700	12,000	---	No
82	2,4-Dinitrotoluene	µg/L	<	0.02	<	10	0.11	---	---	0.11	9.1	---	No
83	2,6-Dinitrotoluene	µg/L	<	0.02	<	100	No Criteria	---	---	---	---	---	No
84	Di-n-Octyl Phthalate	µg/L	<	1	<	20	No Criteria	---	---	---	---	---	No
85	1,2-Diphenylhydrazine	µg/L	<	0.004	<	2	0.04	---	---	0.04	0.54	---	No
86	Fluoranthene	µg/L	<	1	<	2	300	---	---	300	370	---	No
87	Fluorene	µg/L	<	1	<	20	1300	---	---	1300	14,000	---	No
88	Hexachlorobenzene	µg/L	<	0.5	<	2	0.00075	---	---	0.00075	0.00077	1	No
89	Hexachlorobutadiene	µg/L	<	0.5	<	2	0.44	---	---	0.44	50	---	No
90	Hexachlorocyclopentadiene	µg/L	<	1	<	10	50	---	---	240	17,000	50	No
91	Hexachloroethane	µg/L	<	0.5	<	2	1.9	---	---	1.9	8.9	---	No
92	Indeno(1,2,3-cd) Pyrene	µg/L	<	0.002	<	20	0.0044	---	---	0.0044	0.049	---	No
93	Isophorone	µg/L	<	1	<	2	8.4	---	---	8.4	600	---	No
94	naphthalene	µg/L	<	0.5	<	2	No Criteria	---	---	---	---	---	No
95	Nitrobenzene	µg/L	<	1	<	2	17	---	---	17	1,900	---	No
96	N-Nitrosodimethylamine	µg/L	<	0.5	<	10	0.00069	---	---	0.00069	8.1	---	No
97	N-Nitrosodi-n-Propylamine	µg/L	<	0.05	<	10	0.005	---	---	0.005	1.4	---	No
98	N-Nitrosodiphenylamine	µg/L	<	1	<	2	5	---	---	5	16	---	No
99	Phenanthrene	µg/L	<	1	<	10	No Criteria	---	---	---	---	---	No
100	Pyrene	µg/L	<	1	<	20	960	---	---	960	11,000	---	No
101	1,2,4-Trichlorobenzene	µg/L	<	0.5	<	10	5	---	---	---	---	5	No
102	Aldrin	µg/L	<	0.002	<	0.0038	0.00013	3	---	0.00013	0.00014	---	No
103	alpha-BHC	µg/L	<	0.002	<	0.0043	0.0039	---	---	0.0039	0.013	---	No
104	beta-BHC	µg/L	<	0.005	<	0.0027	0.014	---	---	0.014	0.046	---	No

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CTR No.	Constituent	Units	Qualifier	MEC	Qualifier	B	C	CMC	CCC	Water & Org	Org. Only	MCL	Reasonable Potential
105	gamma-BHC	µg/L	<	0.02	<	0.0041	0.019	0.95	---	0.019	0.063	0.2	No
106	delta-BHC	µg/L	<	0.005	<	0.0021	No Criteria	---	---	---	---	---	No
107	Chlordane	µg/L	<	0.002	<	0.035	0.00057	2.4	0.0043	0.00057	0.00059	0.1	No
108	4,4-DDT	µg/L	<	0.0004	<	0.0045	0.00059	1.1	0.001	0.00059	0.00059	---	No
109	4,4-DDE	µg/L	<	0.0004	<	0.0033	0.00059	---	---	0.00059	0.00059	---	No
110	4,4-DDD	µg/L	<	0.0004	<	0.0048	0.00083	---	---	0.00083	0.00084	---	No
111	Dieldrin	µg/L	<	0.0002	<	0.0033	0.00014	0.24	0.056	0.00014	0.00014	---	No
112	alpha-Endosulfan	µg/L	<	0.02	<	0.0042	0.056	0.22	0.056	110	240	---	No
113	beta-Endosulfan	µg/L	<	0.01	<	0.0033	0.056	0.22	0.056	110	240	---	No
114	Endosulfan Sulfate	µg/L	<	0.05	<	0.007	110	---	---	110	240	---	No
115	Endrin	µg/L	<	0.01	<	0.0047	0.036	0.086	0.036	0.76	0.81	2	No
116	Endrin Aldehyde	µg/L	<	0.05	<	0.0095	0.76	---	---	0.76	0.81	---	No
117	Heptachlor	µg/L	<	0.0002	<	0.003	0.00021	0.52	0.0038	0.00021	0.00021	0.01	No
118	Heptchlor Epoxide	µg/L	<	0.0002	<	0.003	0.0001	0.52	0.0038	0.0001	0.00011	0.01	No
119-125	PCBs sum (2)	µg/L	<	0.01	<	0.19	0.00017	---	0.014	0.00017	0.00017	0.5	No
126	Toxaphene	µg/L	<	0.01	<	0.21	0.0002	0.73	0.0002	0.00073	0.00075	3	No
	Total Ammonia	mg/L		7.9		---	2.58	11.4	2.58	---	---	---	Yes
	Nitrate (as N)	mg/L		5.7		---	10	---	---	---	---	10	No
	Phosphate (as P)	mg/L		---		---	No Criteria	---	---	---	---	---	No

ATTACHMENT G – WATER RECLAMATION REQUIREMENTS AND PROVISIONS

The Discharger's reclamation system currently includes agricultural irrigation use sites. The Discharger intends to expand the reclamation system to include urban irrigation use sites upon completion of its tertiary upgrade project.

The Water Reclamation Findings, Requirements, and Provisions in sections A, B and C apply to both urban and agricultural use sites, unless specifically identified as applying to just urban [Urban] or just agriculture [Ag]. The Water Reclamation Technical Report(s) identified in section D must be submitted prior to delivery of recycled water to any future recycled water use site. Provision VI.C.2.b of the Order requires the Discharger to submit a workplan identifying a plan and time schedule to submit the technical information required by section D to the Regional Water Board for existing recycled water use sites.

A. Water Reclamation Findings

1. In 1977, the State Water Board adopted Resolution No. 77-1, titled "Policy with Respect to Water Reclamation in California" (Resolution No. 77-1). Resolution No. 77-1, in part, encourages the use of recycled water in the state.

2. On February 3, 2009, the State Water Board adopted Resolution No. 2009-0011, titled "Adoption of a Policy for the Water Quality Control of Recycled Water" (Recycled Water Policy) (Resolution No. 2009-0011). The goal of Resolution No. 2009-0011 is to increase the use of recycled water from municipal wastewater sources that meets the definition in California Water Code (Water Code) section 13050(n). In accordance with the Recycled Water Policy, activities involving recycled water use that could impact high quality waters are required to implement best practicable treatment or control of the discharge necessary to ensure that pollution or nuisance will not occur, and the highest water quality consistent with the maximum benefit to the people of the state will be maintained.

3. **Streamlined Permitting**

   a. **Eligibility**

      The irrigation elements of the Discharger's proposed reclamation project may meet the criteria for streamlined permitting (Paragraph 7(c) of the Recycled Water Policy) for the following reasons:

      i. The reclamation project complies with title 22 regulations identified in Finding 4, below.

ii. With the exception of frost protection uses, the proposed irrigation uses will not exceed agronomic rates and will not occur when soils are saturated. An operations and management plan will be developed describing how appropriate irrigation amounts and rates will be applied and may include, but not be limited to, proper design and maintenance of irrigation systems, accurate monitoring of the amount of water delivered, developing water budgets for use areas, providing supervisor training, and installing smart controllers. An operations and management plan may be developed to cover multiple sites.

iii. A salt and nutrient management plan has not been prepared for the groundwater basin underlying the recycled water use areas. Order section VI.C.1.g states that the Order may be reopened to incorporate provisions consistent with any salt and nutrient management plan(s) adopted by the Regional Water Board.

iv. The Discharger will communicate to users the nutrient levels in the recycled water so that users can appropriately evaluate fertilizer needs.

b. **Streamlined Permitting Requirements**

According to Paragraph 7(b)(4) of the Recycled Water Policy, irrigation projects that qualify for streamlined permitting are not required to conduct project-specific receiving water and groundwater monitoring unless otherwise required by an applicable salt and nutrient management plan. This Order requires the Discharger to comply with any future salt and nutrient management plan adopted by the Regional Water Board. Until a salt and nutrient management plan is adopted, groundwater monitoring could be required as needed for development of the salt and nutrient management plan or if necessary to assess impacts of effluent disposal to the reclamation system.

4. The California Department of Public Health (CDPH) (formerly California Department of Health Services or DHS) has established statewide reclamation criteria in Chapter 3, Division 4, title 22, CCR, sections 60301 through 60355 (hereinafter title 22) for the use of recycled water for irrigation, impoundments, cooling water, and other purposes. The CDPH has also established Guidelines for Use of Reclaimed Water. This Order (Order No. R1-2012-0016, including Attachment G) implements the title 22 recycled water criteria.

5. In 1996, the State Water Board and CDPH set forth principles, procedures, and agreements to which the agencies committed themselves, relative to the use of recycled water in California, in a document titled Memorandum of Agreement between the Department of Health Services and the State Water Resources Control Board on the Use of Reclaimed Water (MOA). This Order is consistent with the MOA.

6. This Order implements Water Code section 13523.1 , which authorizes issuance of a Master Reclamation Permit to suppliers or distributors, or both, of recycled water in lieu of issuing individual water reclamation requirements to each recycled water user.

7. The Discharger is required to develop and keep updated, an Engineering Report for the use of recycled water pursuant to sections 60313(d), 60314, and 60323 of title 22, as required by Water Reclamation Provision D.2 of this Attachment.

8. This Order requires the Discharger to minimize the potential for surface runoff of recycled water, but recognizes that even with diligent implementation of BMPs, incidental runoff events may occur on occasion. Incidental runoff is defined as unintended small amounts (volume) of runoff from recycled water use areas where agronomic rates and appropriate best management practices are being implemented. Examples of incidental runoff include unintended, minimal over-spray from sprinklers that escapes the recycled water use area or accidental breakage of a sprinkler head on a properly maintained irrigation system. Water leaving a recycled water use area is not considered incidental if it is part of the facility design, if it is due to excessive application, if it is due to intentional overflow or application, or if it is due to negligence. Incidental runoff events are typically infrequent, low volume, accidental, not due to a pattern of neglect or lack of oversight, and are promptly addressed.

   The Regional Water Board recognizes that such minor violations are unavoidable and present a low risk to water quality. All runoff incidents, including incidental runoff, shall be summarized in the Discharger's quarterly recycled water monitoring report. Enforcement action shall be considered for runoff that is not incidental, inadequate response by the Discharger to incidental runoff incidents, repeated runoff incidents that were within the Discharger's control, where incidental runoff directly causes violations of water quality objectives, incidents that create a condition of pollution or nuisance, and discharges that reach surface water in violation of Discharge Prohibitions in section III of the Order and/or Water Reclamation Requirements in Attachment G, section B.2 or B.5.

9. This Order authorizes the Discharger to reuse treated municipal wastewater that complies with effluent limitations contained in section IV of the Order for uses that have been addressed in an approved title 22 Engineering Report and for which recycled water user agreements have been negotiated.

10. Effluent Limitations included in this Order will assure compliance with requirements contained in title 22 and the CDPH (DHS)/State Water Board MOA.

11. The Discharger must demonstrate that the storage and use of recycled water complies with applicable state regulations and the Basin Plan.

12. The Regional Water Board consulted with CDPH, the Sonoma County Health Department, and the Marin Sonoma Mosquito and Vector Control District and considered any recommendations regarding public health aspects for this use of recycled water.

B. Water Reclamation Requirements

1. The use of recycled water shall not result in unreasonable waste of water. Recycled water shall not be applied at greater than hydraulic agronomic rates.

2. The use of recycled water shall not create a condition of pollution or nuisance as defined in Water Code section 13050(m).

3. All recycled water provided pursuant to this Order shall be treated and managed in conformance with all applicable provisions of the Recycled Water Policy.

4. Best management practices that are protective of groundwater and surface water quality and human health shall be developed and implemented to achieve an efficient irrigation system. At a minimum, the Discharger shall implement the required BMPs identified in Water Reclamation Requirement B.11 and implement other BMPs as appropriate.

5. The Discharger shall be responsible for ensuring that recycled water meets the quality standards of section IV.C of the Order and that all users of recycled water comply with the terms and conditions of this Order and with any rules, ordinances, or regulations adopted by the Discharger.

6. The Discharger shall discontinue delivery of recycled water during any period in which there is reason to believe that the requirements for use as specified in this Order or the requirements of CDPH or USEPA are not being met. The delivery of recycled water shall not resume until all conditions have been corrected.

7. The Discharger shall notify recycled water users if recycled water that does not meet the recycled water quality requirements of this Order is released into the reclamation system.

8. The Discharger shall identify a site User Supervisor (per Title 22, section 7586) for each of the recycled water use sites and maintain daytime and emergency contact telephone numbers for the site User Supervisor. 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 properly.

9. The Discharger shall require each 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.

10. Application of recycled water to use areas shall not exceed the nitrogen or hydraulic loading reasonably necessary to satisfy the nitrogen or water uptake needs of the use area considering plant, soil, climate, and nutrient demand (i.e., generally accepted agronomic rates).

    a. Hydraulic loading to any individual recycled water use site shall be at reasonable agronomic rates designed to minimize percolation of wastewater constituents below the evaporative and root zone.

    b. The seasonal nutritive loading of use areas, including the nutritive value of organic and chemical fertilizers and of the recycled water, shall not exceed the nutritive demand of the landscape or vegetation receiving the recycled water. The Discharger must communicate to recycled water users the nutrient levels in the recycled water at least monthly during the irrigation season so that the recycled water users can appropriately evaluate fertilizer needs prior to application of fertilizers. If the Discharger demonstrates that the recycled water nutrient concentrations are low and consistent from month to month, then the Discharger may reduce the frequency of notifications upon approval by the Regional Water Board Executive Officer.

11. Recycled water shall not be applied on water-saturated or frozen ground or during periods of precipitation such that runoff is induced.

12. Recycled water shall not be allowed to escape the recycled use area(s) in the form of surface runoff. [CCR title 22, section 60310(e)] However, incidental runoff of recycled water, such as unintended, minimal over-spray from sprinklers that escapes the recycled water use area, or accidental breakage of a sprinkler head on a properly maintained irrigation system, is not a violation of this Order. Practices and strategies to prevent the occurrence of runoff shall include, where appropriate, but not be limited to:

    a. All new recycled water use sites shall include a 100-foot setback to all surface waters or provide written documentation of appropriate best management practices

that will be implemented in order to prevent or minimize the potential for runoff discharging to surface water;

b. Urban recycled water use sites shall maintain appropriate setbacks to the street gutter and other inlets to the storm drain system based on site conditions or implement alternative means to prevent the discharge of runoff to surface waters. [Urban]

c. Implementation of an Operations and Maintenance Plan that provides for detection of leaks (for example, from sprinkler heads), and correction within 72 hours of learning of the runoff, or prior to the release of 1,000 gallons, whichever comes first.

d. Proper design and aim of sprinkler heads;

e. Proper design and operation of the irrigation system;

f. Refraining from application during precipitation events;

g. Application of recycled water at an agronomic rate that does not exceed the water or nutrient demand of the crop or vegetation being irrigated;

h. Use of repeat start times and multiple water days to increase irrigation efficiency and reduce runoff potential;

i. Maintenance of recycled water infrastructure (pipelines, pumps, etc.) to prevent and minimize breakage and leaks; and

j. Adequate protection of all recycled water reservoirs and ponds against overflow, structural damage, or a reduction in efficiency resulting from a 25-year, 24-hour storm or flood event or greater, and notification of the Regional Water Board Executive Officer, if a discharge occurs.

13. Use areas that are spray irrigated and allow public access shall be irrigated during periods of minimal use. Consideration shall be given to allow maximum drying time prior to subsequent public use. [Urban]

14. Direct or windblown spray, mist, or runoff from irrigation areas shall not enter dwellings, designated outdoor eating areas, or food handling facilities, roadways, or any other area where the public would be accidentally exposed to recycled water. [CCR title 22, section 60310(e)(3)]

15. Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff. [CCR title 22, section 60310(e)(3)] [Urban]

16. All recycled water equipment, pumps, piping, valves, and outlets shall be appropriately marked to differentiate them from potable facilities.

17. The Discharger shall implement the requirements of the California Health and Safety Code (CHSC), section 116815 regarding the installation of purple pipe. CHSC section 116815 requires that "all pipes installed above or below the ground, on or after June 1, 1993, that are designed to carry recycled water, shall be colored purple or distinctively wrapped with purple tape." Section 116815 also contains exemptions that apply to municipal facilities that have established a labeling or marking system for recycled water used on their premises and for water delivered for agricultural use. The Discharger shall document compliance with this requirement on an annual basis in its annual monitoring report. The Discharger shall continue to implement the requirements of CHSC section 116815 during the term of this Order. [Urban]

18. 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 precautios shall be taken to avoid any cross-connections to the recycled water system. [CCR title 22, section 60310(I)] [Urban]

19. Cross-connections shall not occur between any recycled water system and any separate system conveying potable water. [22 CCR, section 60310(h)] Supplementing recycled water with potable water shall not be allowed except through air gap separation [CCR title 22, section 30615].

20. Disinfected secondary recycled water shall not be irrigated within 100 feet, and disinfected tertiary recycled water shall not be irrigated within 50 feet, of any domestic water supply well or domestic water supply surface intake, unless the technical requirements specified in CCR title 22, section 60310(a) have been met and approved by CDPH.

21. The use of recycled water shall not cause degradation of any water supply.

22. Areas irrigated with recycled water shall be managed to prevent ponding and conditions conducive to the proliferation of mosquitoes and other disease vectors, and to avoid creation of a public nuisance or health hazard. Irrigation water shall infiltrate completely within a 24-hour period.

23. All areas where recycled water is used that are accessible to the public shall be posted with signs that are visible to the public, in a size no less than 4 inches high by 8 inches wide that include the following wording: 'RECYCLED WATER – DO NOT DRINK'. [CCR title 22, section 60310(g)] Each sign shall display an international symbol similar to that shown in CCR title 22, Figure 60310-A. These warning signs

shall be posted at least every 500 feet with a minimum of a sign at each corner and access road. CDPH may accept alternative signage and wording, or an educational program, provided that applicant demonstrates to CDPH that the alternative approach will assure an equivalent degree of public notification.

24. DHS (now CDPH) Guidance Memo No. 2003-02: Guidance Criteria for the Separation of Water Mains and Non-Potable Pipelines provides guidance for the separation of new potable water mains and recycled water pipelines which shall be implemented as follows: [Urban]

    a. There shall be at least a four-foot horizontal separation between all pipelines transporting recycled water and those transporting disinfected tertiary recycled water and new potable water mains.

    b. There shall be at least a one-foot vertical separation at crossings between all pipelines transporting recycled water and potable water mains, with the potable water main above the recycled water pipeline, unless approved by the CDPH.

    c. All portions of the recycled water pipeline that cross under a potable water main shall be enclosed in a continuous sleeve.

    d. Recycled water pipelines shall not be installed in the same trench as new water mains.

    e. Where site conditions make it impossible to comply with the above conditions, any variation shall be approved by CDPH and comply with alternative construction criteria for separation between sanitary sewers and potable water mains as described in the CDPH document titled “Criteria for Separation of Water Mains and Sanitary Sewers”, treating the recycled water line as if a sanitary sewer.

25. A minimum freeboard, consistent with pond design, but not less than two feet, shall be maintained under normal operating conditions in any reservoir or pond containing recycled water. When extraordinary operating conditions necessitate a freeboard of less than two feet, the Discharger will document the variance in the monthly self-monitoring report. The report will include an explanation of the circumstances under which the variance is required, the estimated minimum freeboard during the extraordinary period, and any permit violations occurring as a result of the variance.

26. The use of recycled water for dust suppression shall only occur during periods of dry weather, shall be limited to periods of short duration, and shall be limited to areas under the control of the Discharger.

27. The Discharger shall comply with any salt and nutrient management plan that is adopted by the Regional Water Board in the future.

C. Water Reclamation Provisions

1. The Discharger shall manage recycled water, and shall develop, establish and enforce administrative procedures, engineering standards, rules, ordinances and/or regulations governing the design and construction of recycled water systems and use facilities and the use of recycled water in accordance with the criteria established in CCR title 22 and this Order. The Discharger shall develop user agreements requiring user compliance with CCR title 22 and this Order. Water reclamation engineering standards, rules, ordinances and/or regulations shall be approved by the Regional Water Board Executive Officer and CDPH.

   Upon approval of the Discharger's procedures, engineering standards, rules, ordinances, and/or regulations, the Discharger may authorize specific additional water reclamation projects, on a case-by-case basis, in accordance with the approved program and agreements and in accordance with the technical report requirements of this attachment (Attachment G).

2. The Discharger shall submit revised and/or additional engineering report(s) to the Regional Water Board and CDPH, prior to initiating any recycled water use (e.g., new industrial use, recreational surface impoundments, water cooling, new dual-plumbed system, etc.) not addressed in any previously submitted CCR title 22 engineering report(s). The Discharger shall also submit any approval letters prepared by CDPH to the Regional Water Board Executive Officer. Engineering report(s) shall be prepared by a properly qualified engineer registered in California and experienced in the field of wastewater treatment, and shall contain (1) a description of the design of the reclamation system; (2) a contingency plan which will assure that no untreated or inadequately treated wastewater will be delivered to the use areas; and (3) a cross-connection control program (title 17 of the CCR) where a dual-plumbed system is used. Engineering reports shall clearly indicate the means for compliance with CCR title 22 regulations and this Order.

3. The Discharger shall conduct periodic inspections of the recycled water use areas, facilities, and operations to monitor and assure compliance with the conditions of this Order. The Discharger shall take whatever actions are necessary, including termination of delivery of recycled water, to correct any user violations. Where dual-plumbed systems are utilized, the Discharger shall, upon prior notification to the user, conduct regular inspections to assure cross-connections are not made with potable water systems and CDPH approved backflow prevention devices are installed and operable.

4. The Discharger shall be responsible for ensuring that recycled water meets the quality standards of this Order and for the operation and maintenance of transport facilities and associated appurtenances. The Discharger shall hold the recycled water users responsible for the application and use of recycled water on their designated areas

and associated operations and maintenance in accordance with all applicable CCR title 22 requirements and this Order. All persons involved in the operation and/or maintenance of the recycled water system shall attend training regarding the safe and efficient operation of recycled water use facilities.

5. The Discharger shall notify the Regional Water Board Executive Officer in anticipation of reclaiming water at a new location, prior to commencement of reclamation activities at the new location and submit all information required in section D of this Attachment. Recycled water shall not be applied at any new site until approved by the Regional Water Board Executive Officer.

6. If, in the opinion of the Regional Water Board Executive Officer, recycled water use at proposed new locations cannot be adequately regulated under the Master Reclamation Permit, a Report of Waste Discharge may be requested and individual Water Reclamation Requirements may be adopted.

7. Prior to the initial operation of any dual-plumbed recycled water system, and annually thereafter, the Discharger shall ensure that the dual-plumbed system within each facility and use area is inspected for possible cross connections with the potable water system. The recycled water system shall also be tested for possible cross connections at least once every four years. The testing shall be conducted in accordance with the method described in the Engineering Report. The inspections and the testing shall be performed by a cross connection control specialist certified by the California-Nevada section of the American Water Works Association or an organization with equivalent certification requirements. A written report documenting the result of the inspection or testing for the prior year shall be submitted to CDPH and the Regional Water Board by March 1 of each year. [CCR title 22, section 60316] [Urban]

8. If the Discharger delivers recycled water to any dual-plumbed recycled water system(s), the Discharger shall notify CDPH and the Regional Water Board of any incidents of backflow from the dual-plumbed recycled water system into the potable water system within 24 hours of the discovery of the incident. [Urban]

9. If the Discharger delivers recycled water to any dual-plumbed recycled water system(s), any backflow prevention device installed to protect the public water system serving the dual-plumbed recycled water system shall be inspected and maintained in accordance with section 7605 of title 17, CCR. [Urban]

D. Water Reclamation Technical Report Requirements

1. General Technical Report Requirements

a. Programmatic and Site-Specific Technical Reports and Public Notice Requirements

(1) The Discharger shall submit for Regional Water Board Executive Officer review and approval, a programmatic technical report(s) that provides operation and management details of how agronomic rates will be achieved and best management practices to protect surface and groundwater quality will be required. Details regarding programmatic technical report requirements are further described below in section D.2.

The water reclamation technical report(s) must be submitted prior to delivery of recycled water to any future recycled water use site. Provision VI.C.2.b of the Order requires the Discharger to submit a workplan to the Regional Water Board Executive Officer, identifying a plan and time schedule to submit technical information for existing recycled water use sites.

These technical reports shall be prepared by a California registered or certified professional(s) with demonstrated expertise in irrigation management, hydrogeology and pollution investigation and prevention (e.g., engineer, geologist, hydrogeologist, hydrologist, etc.)[68]

The Discharger may opt to combine the required programmatic and site-specific information (see Water Reclamation Technical Report Requirement D.1.a.iii, below) into a single report, in which case the entire document is subject to the public notice requirements identified in Water Reclamation Technical Report Requirement D.1.a.i, below.

(2) After preliminary review for completeness and adequacy for water quality protection, each programmatic technical report shall be subject to a 30-day public comment period. Because proposed recycled water use sites must be addressed in a certified CEQA document, which includes a process for public comment, the Regional Water Board will limit public comments on the proposed management practices and hydraulic and nutrient agronomic rates proposed by the Discharger that are related to protection of surface water and groundwater quality and beneficial uses thereof. The Regional Water Board Executive Officer will place a public notice on the Regional Water Board's website. At the

[68] All technical reports must contain a statement of the qualifications of the responsible registered professional(s) and bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional for the work.

end of the 30-day public notice period, the Regional Water Board Executive Officer shall provide written notification to the Discharger within 30 days either providing authorization of the recycled water use or identifying any substantial water quality concerns for which the Discharger must provide additional information.

(3) The Discharger shall submit site-specific information and technical reports that provide specific details for each use site prior to reclaiming water at the new location, pursuant to sections C.5 and D.2 of Attachment G. The site-specific reports shall demonstrate that the operation and management of each site is consistent with the approved programmatic technical report. The Regional Water Board Executive Officer shall provide written notification to the Discharger within 30 days of receipt of each site-specific report. If the Executive Officer does not notify the Discharger within 30 days of receipt of the site-specific report, the Discharger may proceed with the use.

b. **Training Program Programmatic Technical Report**

The Discharger shall submit a programmatic technical report that identifies a training program that includes periodic education for individuals that will manage any portion of the recycled water system[69]. This programmatic technical report is not subject to the public notice requirements identified in Water Reclamation Requirement D.1.a.ii, above. At a minimum, the Training Program Technical Report shall include the following elements:

(1) A training program that covers the following elements:

(a) The safe and efficient operation and maintenance of recycled water use facilities, including proper installation, operation and maintenance of irrigation systems;

(b) Prevention of runoff from recycled water use sites;

(c) Matching irrigation rates to the water requirements of the landscape, and not applying recycled water when the soil is saturated;

(d) Means of ensuring that recycled water and other supplemental nutrients (including fertilizers) are used appropriately. This should include a plan to train recycled water users how to take reasonable steps to prevent the over-application of nutrients, including training in how to calculate the need for

[69] Training shall be provided for all persons involved in the operation and/or maintenance of the recycled water system including, but not limited to the Discharger's employees and irrigation managers and other employees that work for the owner of the recycled water use site(s).

supplemental nutrient application based on knowledge of the nutrient content of the District's recycled water;

(e) Review of applicable reclamation requirements and general responsibilities to ensure compliance with this Master Reclamation Permit;

(f) Review of BMPs identified as necessary to prevent potential hazards to public health and to protect the environment and how to properly implement those BMPs; and

(g) Prevention of cross-connections with potable water systems.

(2) Identification of a means to verify that recycled water use supervisors have attended training regarding the safe and efficient operations, maintenance and management of recycled water use facilities.

2. **Other Technical Report Requirements**

Where unique, site-specific conditions exist, such as where recycled water is proposed to be used for irrigation over high transmissivity soils and over a shallow (5 feet or less) high quality groundwater aquifer, additional requirements may be required, including a special study to determine the appropriateness of recycled water use and development of appropriate best management practices and operations plans to ensure that recycled water is applied in a manner that is protective of groundwater. The special study may include groundwater monitoring, and development of a detailed water balance and/or a salt and nutrient management plan.

3. **Approved Recycled Water Use Sites**

a. Recycled water shall only be used on areas that have been evaluated in compliance with the California Environmental Quality Act (CEQA). Future CEQA documents must evaluate the potential environmental impacts of recycled water use on a proposed use site and identify mitigation measures for the protection of water quality to be implemented. Mitigation measures and BMPs must be clearly identified in programmatic and/or site-specific technical reports described in Water Reclamation Technical Report Requirements D.2 and D.3, below.

b. Attachment G-1 to this Order provides a list of existing recycled water use sites.

c. Attachment G-1 will be updated by the Regional Water Board Executive Officer to include new use sites if and when the Discharger submits the required CEQA and technical information for proposed new use sites and receives approval from the Regional Water Board Executive Officer.

4. **Programmatic and Site-Specific Technical Report Requirements**

The Discharger shall submit a programmatic and site-specific technical report or technical reports that clearly demonstrate that recycled water will be applied at hydraulic and nutrient agronomic rates and that recycled water use will not result in a discharge to surface waters or cause adverse impacts to groundwater. If regional technical report templates are developed in the future for specific uses, such regional technical report templates may be utilized provided that the templates are reasonably applicable to the Discharger's recycled water use sites. The technical report(s) shall contain the following information:

a. Basic site information including site location, acreage involved, County Assessor Parcel number(s), name of property owner and/or user, estimated volume of recycled water to be used.

b. An Operations and Management Plan (O&M Plan). The O&M Plan may apply to multiple sites with similar characteristics such as crop, hydrogeology, and terrain, if it contains a sufficient level of detail to characterize each site and identify the practices that will be implemented to ensure that the use of recycled water occurs at appropriate hydraulic and nutrient agronomic rates and that management practices are incorporated to ensure irrigation efficiency and to minimize the potential for surface water runoff or percolation of nutrients, salts, or other constituents to groundwater. The O&M Plan shall contain the following elements:

3. An Operations Plan. A detailed operations plan for the use areas including methods and procedures for implementation of regulations regarding recycled water use and maintenance of equipment and emergency backup systems to maintain compliance with the conditions of this Order and CDPH requirements (i.e., identification of BMPs implemented to achieve and maintain compliance).

    a. An Irrigation Management Plan. The Irrigation Management Plan shall include measures to ensure that the use of recycled water occurs at an appropriate hydraulic and nutrient agronomic rate and employs practices to ensure irrigation efficiency. The Irrigation Management Plan shall be applicable for the recycled water use site(s) served and shall account for the following:

        (1) Soil characteristics (e.g., soil type, nutrient content, transmissivity, etc.);

        (2) Depth to groundwater;

    b. Recycled water characteristics (e.g., nutrients, including nitrogen and phosphorus content, specific ion toxicity, including chloride, boron, sodium, bicarbonate and other parameters)

c. General requirements of major plant species being irrigated (e.g., seasonal water demand, climate, nutrient requirements);

(1) Climatic conditions (e.g., precipitation, evapotranspiration rate, wind);

(2) Other supplemental nutrient additions (e.g., chemical fertilizers) generally used within the use area; and

d. The Irrigation Management Plan shall include:

(1) Calculation of the amount of recycled water that can be agronomically applied to the use site (considering the factors identified above) and clear demonstration that the application of recycled water at the proposed volume, rate, and timing will not allow the discharge of recycled water to groundwater or surface water, nor cause degradation of groundwater that exceeds water quality objectives or impacts beneficial uses;

(2) A set of reasonably practicable measures to ensure compliance with the agronomic rate requirement, which may include the development of water budgets for the recycled water use site(s), tiered rate structures, the use of smart controllers, or other appropriate measures. The plan may include a menu of BMPs that may be selected from for individual use sites. The description of the recycled water management facilities and best management practices shall demonstrate that recycled water will not be over-applied nor result in a discharge to surface waters or cause adverse impacts to ground water quality. Additional BMPs are identified in section B.11 of this attachment (Attachment G).

(3) The Irrigation Management Plan shall also recognize the possibility of runoff from recycled water use areas and describe measures, including BMPs the Discharger will implement to minimize this possibility of runoff.

(4) A plan for appropriate use of fertilizers that takes into account the nutrient levels in the recycled water. The Discharger shall monitor and communicate to the recycled water users the nutrient levels in the recycled water and how to calculate the amount of supplemental nutrients that may be applied.

(5) Identification of the position(s) responsible for management of each recycled water use site (e.g., Recycled Water Use Supervisor) and a description of Recycled Water Use Supervisor responsibilities and training. See Water Reclamation Technical Report Requirement D.1.b, above.

ATTACHMENT G-1: APPROVED RECYCLED WATER USE SITES

The recycled water use sites identified in the table below and on the attached map are conditionally approved recycled water use sites. The Discharger must submit technical reports to demonstrate that recycled water is applied in a manner that is protective of water quality in compliance with Provision V.C.2.b and Attachment G for approval by the Regional Water Board Executive Officer. The environmental impacts at these recycled water use sites were addressed in the following certified environmental documents (certification date in parentheses): September 1993 Forestville and Graton Wastewater Treatment Facilities Improvement Project Environmental Impact Report (December 14, 1993).

Owner	APN	Total Site Acreage	Irrigated Acreage	Type of Use/ Irrigation Types	Minimum Obligation (AF/Yr)
Daniel Goetz	084-150-032	6.37	5	Berries/Drip	5
Sebastopol Berry Farm – Antonio & Celia Vigil	084-170-024	3.0	3	Berries/Drip	10
River Road Vineyards – Gary Mills	084-160-003	12.1	10	Vineyard/Drip Frost Protection/Spray	1.5
Howard Graham Vineyards	084-150-048	12.5	9.5	Vineyard/Drip Frost Protection/Spray	5
Kendall Jackson Vineyards – Jennifer & Laura Jackson Trust	084-140-020	90	50	Vineyard/Drip Frost Protection/Spray (7 MG reservoir)	8.5
John K. and Ann G. Rogers	084-140-013	4.47	1	Vineyard/Drip Frost Protection/Spray	2