

North Coast Regional Water Quality Control Board

**ORDER NO. R1-2012-0048
NPDES NO. CA0022977
WDID NO. 1B840320SON**

WASTE DISCHARGE REQUIREMENTS

FOR THE

**CITY OF CLOVERDALE
CLOVERDALE WASTEWATER TREATMENT PLANT
SONOMA COUNTY**

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

Table 1. Discharger Information

Permittee	City of Cloverdale
Name of Facility	Cloverdale Wastewater Treatment Plant
Facility Address	700 Asti Road
	Cloverdale, CA 95425
	Sonoma County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge.	

The discharge by the City of Cloverdale to the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Locations

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Disinfected tertiary treated municipal wastewater	38° 47' 47" N	123° 0' 18" W	Russian River
002	Disinfected secondary treated municipal wastewater	--	--	Percolation ponds adjacent to the Russian River

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	June 7, 2012
This Order shall become effective on:	August 1, 2012
This Order shall expire on:	July 31, 2017
The Permittee 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:	November 1, 2016

IT IS HEREBY ORDERED, that this Order supersedes Order No. R1-2006-0004 and Monitoring and Reporting Program (MRP) No. R1-2006-0004 upon the effective date specified in Table 3. In order to meet the provisions contained in division 7 of the California Water Code (Water Code) (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Permittee shall comply with the requirements in this Order. This action in no way prevents the Regional Water Quality Control 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 Permittee shall comply with the analogous portions of Order No. R1-2006-0004 and MRP No. R1-2006-0004, which shall remain in effect for all purposes during the pendency of the stay.

I, Matthias St. John, 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 June 7, 2012.

Matthias St. John, Executive Officer

Table of Contents

I.	Facility Information	4
II.	Findings	4
III.	Discharge Prohibitions.....	6
IV.	Effluent Limitations And Discharge Specifications.....	7
	A. Effluent Limitations.....	7
	B. Land Discharge Specifications – Not Applicable.....	10
	C. Reclamation Specifications – Not Applicable.....	10
	D. Other Requirements.....	10
V.	Receiving Water Limitations	11
	A. Surface Water Limitation.....	11
	B. Groundwater Limitations	13
VI.	Provisions	14
	A. Standard Provisions.....	14
	B. Monitoring and Reporting Program (MRP) Requirements	14
	C. Special Provisions.....	14
VII.	Compliance Determination	25

List of Tables

Table 1.	Permittee Information.....	1
Table 2.	Discharge Location	1
Table 3.	Administrative Information	2
Table 4.	Facility Information.....	4
Table 5.	Effluent Limitations – Discharge Point 001 (Discharges to Russian River)	8
Table 6.	Effluent Limitations – Discharge Point 002 (Discharge to the Evaporation/Percolation Ponds)	9

List of Attachments

Attachment A – Definitions	A-1
Attachment B – Map of Cloverdale Wastewater Treatment Plant.....	B-1
Attachment C – Flow Schematic.....	C-1
Attachment D – Standard Provisions.....	D-1
Attachment E – Monitoring and Reporting Program No. R1-2012-0048.....	E-1
Attachment E1 Cloverdale Groundwater Monitoring Well Map.....	E-24
Attachment F – Fact Sheet.....	F-1

I. FACILITY INFORMATION

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

Table 4. Facility Information

Permittee	City of Cloverdale
Name of Facility	Cloverdale Wastewater Treatment Plant
Facility Address	700 Asti Road
	Cloverdale, CA 95425
	Sonoma County
Facility Contact, Title, and Phone	Craig Scott, City Engineer, (707) 894-1722 Jay Robinson, Wastewater Treatment Plant Operator, (707) 894-1719
Mailing Address	124 N. Cloverdale Blvd., Cloverdale, CA 95425
Type of Facility	Publicly Owned Treatment Works (POTW)
Facility Design Flow	1.0 million gallons per day (mgd) (average daily dry weather design flow ¹) 8.25 mgd (peak daily wet weather design flow ²)

II. FINDINGS

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

A. 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 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).

B. Basis and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information submitted as part of the Permittee’s application for permit renewal, monitoring data submitted during the term of the Permittee’s previous Order, and other available information. The Fact Sheet (Attachment F) contains Facility information and rationale for Order requirements. The

¹ Average daily dry weather design flow is defined as the average of daily inflows calculated during the lowest consecutive 30-day period each calendar year.

² Peak daily wet weather design flow is defined as the maximum volume of effluent that may be treated over a given 24-hour period.

Fact Sheet is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E are also incorporated into this Order.

C. Background. The City of Cloverdale (hereinafter the Permittee) is currently discharging pursuant to Order No. R1-2006-0004 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0022977. The Permittee submitted a Report of Waste Discharge (ROWD), dated December 30, 2010, and applied for a NPDES permit renewal to discharge up to an average dry weather flow of 1.0 mgd and a maximum wet weather flow of 8.25 mgd of treated wastewater from the Cloverdale Wastewater Treatment Plant, hereinafter Facility. A site visit was conducted on October 18, 2011 to observe operations and collect additional data to develop permit limitations and conditions. Additional information to complete the ROWD was submitted on November 14, 2011, November 23, 2011, and December 1, 2011. The application was deemed complete on December 1, 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 Permittee herein.

D. Facility Description. The Permittee owns wastewater collection, treatment, and disposal facilities that serve a population of approximately 8,600, including residential, commercial, and industrial customers in the City of Cloverdale. Additional background and Facility information is provided in the Fact Sheet (Attachment F). Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

E. Provisions and Requirements Implementing State Law. The provisions/requirements in subsections III.E, III.F, IV.A.2, IV.B, IV.C, V.B, VI.C.5.a, and VI.C.5.d of this Order, and sections VI, VII, VIII.B, X.D.2, X.D.3.g, and X.E 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.

F. Notification of Interested Parties. The Regional Water Board has notified the Permittee 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 the notification are provided in the Fact Sheet of this Order.

G. 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 Permittee 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 of this Order (Sludge Disposal and Handling Requirements).
- D.** The discharge 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 Permittee is prohibited, except for use for fire suppression as provided in title 22, sections 60307(a) and 60307(b) of the California Code of Regulations (CCR).
- G.** The discharge of waste at any point not described in section II.B of the Fact Sheet or authorized by a permit issued by the State Water Resources Control Board (State Water Board) or another Regional Water Board is prohibited.
- H.** The mean daily dry weather flow of waste in excess of 1.0 mgd as measured over a period of 30 consecutive days is prohibited.
- I.** The peak daily wet-weather influent flow through the treatment system in excess of 8.25 mgd is prohibited.
- J.** 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.
- K.** During the period from October 1 through May 14, discharges of treated wastewater to the Russian River and its tributaries shall not exceed one percent of the flow of the Russian River, as measured near Cloverdale at United States Geological Survey (USGS) Gage No. 11-4630.00. 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 the Russian River as measured near Cloverdale at USGS Gage No. 11-4630.00. 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 the Russian River as measured near Cloverdale at USGS Gage No. 11-4630.00 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.
- L. The direct discharge of wastewater effluent from the Facility to the Russian River is prohibited, unless the Permittee upgrades the Facility to include advanced wastewater treatment, in accordance with a Facility upgrade plan approved by the Executive Officer. Advanced wastewater treatment requirements for discharges to the Russian River are defined in Effluent Limitation IV.A.1.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations

1. **Final Effluent Limitations – Discharge Point 001 (Discharge to Russian River)**
 - a. The discharge of advanced treated wastewater, as defined by the numerical limitations below, shall maintain compliance with the following effluent limitations at Discharge Point 001, during periods of discharge to the Russian River, 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, of the CCR.

Table 5. Effluent Limitations – Discharge Point 001 (Discharges to Russian River)

Parameter	Units	Effluent Limitations				
		Average Monthly ³	Average Weekly ³	Maximum Daily ³	Instantaneous Minimum ³	Instantaneous Maximum ³
Biochemical Oxygen Demand 5-day @ 20°C (BOD ₅)	mg/L	10	15	--	--	--
	lbs/day ^{4,5} (dry-weather)	83	125	--	--	--
pH	standard units	--	--	--	6.5	8.5
Total Suspended Solids (TSS)	mg/L	10	15	--	--	--
	lbs/day ^{4,5} (dry-weather)	83	125	--	--	--
Chlorodibromomethane	µg/L	0.41	--	0.82	--	--
Copper, Total Recoverable	µg/L	10	--	20	--	--
Dichlorobromomethane	µg/L	0.56	--	1.1	--	--
Chlorine, Total Residual	mg/L	0.01	--	0.02	--	--

- b. Percent Removal.** The average monthly percent removal of BOD₅ 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 as measured at Monitoring Locations INF-001.
- c. Disinfection.** Disinfected effluent discharged at Discharge Point 001 shall not contain coliform bacteria in excess of the following concentrations:
- i. 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 analyses have been completed⁶.
 - ii. 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; and

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

⁴ Mass-based effluent limitations apply during periods of discharge to surface waters (Russian River). See section VII.H of this Order regarding compliance with mass-based effluent limitations.

⁵ Mass-based effluent limitations are based on the dry weather design flow of the Facility of 1.0 mgd.

⁶ See section VII.I of this Order regarding compliance with bacteriological limitations.

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

d. Acute Toxicity. There shall be no acute toxicity in treated wastewater discharged to the Russian River. The Permittee 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:

- i. Minimum for any one bioassay: 70 percent survival; and
- ii. 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).

2. Final Effluent Limitations – Discharge Point 002 (Discharge to the Evaporation/Percolation Ponds)

a. The Permittee 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 (Attachment E). The secondary treated wastewater shall be adequately oxidized and disinfected as defined in title 22, division 4, chapter 3, of the CCR.

Table 6. Effluent Limitations – Discharge Point 002 (Discharge to the Evaporation/Percolation Ponds)

Parameter	Units	Effluent Limitations				
		Average Monthly ³	Average Weekly ³	Maximum Daily ³	Instantaneous Minimum ³	Instantaneous Maximum ³
Biochemical Oxygen Demand 5-day @ 20°C (BOD ₅)	mg/L	30	45	60	--	--
pH	standard units	--	--	--	6.0	9.0
Total Suspended Solids (TSS)	mg/L	45	65	80	--	--

b. Percent Removal. The average monthly percent removal of BOD₅ 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 as measured at Monitoring Locations INF-001.

c. Disinfection. Disinfected effluent discharged at Discharge Point 002 shall not contain coliform bacteria in excess of the following concentrations:

- i. The median concentration shall not exceed an MPN of 23 per 100 mL, using the bacteriological results of the last 7 days for which analyses have been completed, and
- ii. The number of coliform bacteria shall not exceed an MPN of 240 per 100 mL in more than one sample in any 30-day period.

3. Interim Effluent Limitations – Not Applicable

This section is not applicable as the Permittee has not requested interim effluent limitations. In addition, interim effluent limitations for CTR constituents may no longer be included in NPDES permits after May 18, 2010.

B. Land Discharge Specifications – Not Applicable

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

C. Reclamation Specifications – Not Applicable

This section is not applicable to the Permittee as treated wastewater is not reclaimed.

D. Other Requirements

- 1. Disinfection Process Requirements for Chlorination System.** Treated effluent shall be disinfected in a manner that ensures effective pathogen reduction. A minimum chlorine residual of 1.5 mg/L shall be maintained at the end of the disinfection process.
- 2. Filtration Process Requirements for Tertiary Treatment System.** The filtered effluent shall not exceed any of the following turbidity specifications prior to discharge to the AWT disinfection unit:
 - a. 2 NTU, as a daily average;
 - b. 5 NTU, more than 5% of the time within a 24-hour period; nor
 - c. 10 NTU, at any time.

V. RECEIVING WATER LIMITATIONS

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are required to be addressed as part of this Order. However, receiving water conditions not in conformance with the receiving water limitations are not necessarily a violation of this order. Compliance with receiving water limitations shall be measured at monitoring locations described in the MRP (Attachment E). The Regional Water Board may require an investigation to determine cause and culpability prior to asserting a violation has occurred.

Discharges from the Facility shall not cause the following in the receiving waters:

A. Surface Water Limitation

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 more than 50 percent of the time, or below 7.5 mg/L more than 10 percent of the time 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 specific conductance of the receiving waters to increase above 250 micromhos⁷ more than 50 percent of the time, or above 320 micromhos more than 10 percent of the time. Compliance will be determined by evaluating the 50th percentile and 10th percentile of the monthly means of receiving water data each calendar year.
4. The discharge shall not cause the total dissolved solids concentration of the receiving waters to increase above 150 mg/L more than 50 percent of the time, or above 170 mg/L more than 10 percent of the time. Compliance will be determined by evaluating the 50th percentile and 10th percentile of the monthly means of receiving water data each calendar year.
5. The discharge shall not cause the turbidity of receiving waters to be increased more than 20 percent above naturally occurring background levels.

⁷ Measured at 77° F.

- 6.** The discharge shall not cause receiving waters to contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.
- 7.** 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.
- 8.** 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 that adversely affect beneficial uses.
- 9.** The discharge shall not cause coloration of receiving waters that causes nuisance or adversely affects beneficial uses.
- 10.** The discharge shall not cause bottom deposits in receiving waters to the extent that such deposits cause nuisance or adversely affect beneficial uses.
- 11.** 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.
- 12.** 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.
- 13.** The discharge shall not cause a measurable temperature change in the receiving water at any time.
- 14.** 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.
- 15.** 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 CCR.

16. 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.
17. 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.
18. 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 CCR.
19. 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

1. The collection, treatment, storage, and disposal 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 and reasonable best management practices, will not violate groundwater quality objectives or cause impacts to beneficial uses of groundwater.
2. The collection, treatment, storage, and disposal of treated wastewater shall not cause or contribute to levels of chemical constituents in groundwater that exceed the levels specified in title 22, division 4, chapter 15, article 4, section 64435 of the CCR or listed in Table 3-2 of the Basin Plan.
3. The collection, treatment, storage and disposal of the treated wastewater shall not cause or contribute to levels of radionuclides in groundwater in excess of the limits specified in title 22, division 4, chapter 15, article 5, section 64443 of the CCR.
4. The collection, treatment, storage, and disposal 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 Permittee shall comply with all Standard Provisions included in Attachment D of this Order.
2. **Regional Water Board Standard Provisions.** The Permittee shall comply with the following Regional Water Board standard provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:
 - 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 Permittee to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Permittee to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.
 - b. In the event the Permittee does not comply or will be unable to comply for any reason, with any prohibition, interim or final effluent limitation, land discharge 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 Permittee 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 Monitoring and Reporting Program.

B. Monitoring and Reporting Program (MRP) Requirements

The Permittee 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 total maximum daily load (TMDL) (see Fact Sheet section III.C) 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 Permittee, 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 Permittee'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. If the Permittee 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 monitoring requirements for ammonia, nitrate, and phosphorus. 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

- i. **Whole Effluent Toxicity.** In addition to a limitation for whole effluent acute toxicity, the MRP of this Order 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 is 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 trigger of 1.0 TU_c (where TU_c = 100/NOEC)⁸ is exceeded, the Permittee shall conduct accelerated monitoring as specified in section V. of the MRP.

Results of accelerated toxicity monitoring will indicate a need to conduct a Toxicity Reduction Evaluation (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 Permittee pursuant to section VI.C.2.a.ii of this Order, below.

- ii. **Toxicity Reduction Evaluations Workplan.** If not already submitted, the Permittee shall submit a TRE workplan to the Regional Water Board at least six months in advance of any discharge to the Russian River at Discharge Point 001. 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 Permittee shall notify the Regional Water Board of this review and submit any revision of the TRE workplan with each Report of Waste Discharge.

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

⁸ 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.

- 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).
- iii. 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.7 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 Permittee'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 Permittee shall notify the Regional Water Board of this determination.
 - e. The Permittee 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 Permittee 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 Permittee 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 Permittee's actions and efforts to identify and control or reduce sources of consistent toxicity.

3. Best Management Practices and Pollution Prevention

a. Pollutant Minimization Program (PMP)

The Permittee shall, as required by the 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:

- i.** A sample result is reported as DNQ and the effluent limitation is less than the RL; or
 - ii.** 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.
- b.** The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

 - i.** 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;
 - ii.** Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;
 - iii.** 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;

- iv. Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and
- v. An annual status report that shall be submitted as part of the Annual Facility 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 Permittee 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 Permittee 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 Permittee only when necessary to achieve compliance with the conditions of this Order.
- b. The Permittee shall maintain an updated Operation and Maintenance (O&M) Manual for the Facility. The Permittee 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.
 - i. 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.
 - ii. Detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation and equipment.
 - iii. Description of laboratory and quality assurance procedures.
 - iv. Process and equipment inspection and maintenance schedules.

- v. Description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the Permittee will be able to comply with requirements of this Order.
- vi. 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

i. 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 Permittees 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 Permittee 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, the Permittee's collection system is part of the treatment system that is subject to this Order. As such, pursuant to federal regulations at section 122.44, title 40 of the Code of Federal Regulations (40 CFR), the Permittee 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)).

ii. Spills and Sanitary Sewer Overflows

- (a) The Permittee 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 Permittee shall report orally⁹ 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 Monitoring and Reporting Program.

b. Source Control and Pretreatment Provisions

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

- i. 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.
- ii. If waste haulers are allowed to discharge to the Facility, establish a waste hauler permit system, to be reviewed by the Executive Officer, to regulate waste haulers discharging to the collection system or Facility.

iii. Industrial Waste Survey

- (a) The Permittee shall conduct an industrial waste survey (IWS) of all the industrial users (IUs) in the service area of the Facility to determine whether any IUs are subject to pretreatment standards specified in 40 CFR Part 403. The Permittee shall also perform a priority pollutant scan¹⁰ of the influent to the Facility. At a minimum, the IWS must identify the following for each industrial user and zero-discharging categorical industrial user: whether it qualifies as a significant user; the average and peak flow rates; the SIC code; any pretreatment being implemented by each industrial user; and whether or not the Permittee has issued a permit to any of the identified industrial users. The IWS and priority pollutant monitoring is required during the 12-month period that begins on July 1, 2013.

⁹ Oral reporting means direct contact with a Regional Water Board staff person. The oral report may be given in person or by telephone. After business hours, oral contact must be made by calling the California Emergency Management Agency at (800) 852-7550 or the Regional Water Board spill officer at (707) 576-2220.

¹⁰ The priority pollutant scan shall include CTR and title 22 pollutants. CTR pollutants are those pollutants identified in the California Toxics Rule at 40 CFR 131.38, and title 22 pollutants are those pollutants for which the California 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 as CTR and title 22 pollutants.

- (b) The results of the IWS and priority pollutant monitoring shall be submitted to the Regional Water Board in a written report no later than October 1, 2014. The written report shall include a certification report indicating whether the Facility receives pollutants from any IU that would require the Permittee to establish a pretreatment program in accordance with 40 CFR Part 403.
- (c) If, at any time, the Permittee becomes aware of an IU in the service area of the Facility that would require development of a pretreatment program pursuant to 40 CFR Part 403, then:
 - (1) The Permittee shall notify the Regional Water Board within 30 days after there are discharges that trigger the pretreatment requirements.
 - (2) The Permittee shall submit a revised Report of Waste Discharge and the pretreatment program for the Regional Water Board's review and approval as soon as possible but not more than 1 year after the Permittee's notification to the Regional Water Board of pretreatment requirements.
 - (3) The Permittee shall require all Categorical Industrial Users (CIUs) in the service area of the Facility to comply with the federal categorical pretreatment standards.
 - (4) The Permittee shall notify the CIU(s) of its discharge effluent limits. The limits must be as stringent as the pretreatment standards contained in the applicable federal category (40 CFR Part 400-699). The Permittee may develop more stringent, technology-based local limits if it can show cause.
 - (5) The Permittee shall notify the Regional Water Board if any CIU in the service area of the Facility violates its discharge effluent limits.
- iv.** 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.
- v.** Perform ongoing inspections and monitoring, as necessary, to ensure adequate source control.
- vi.** The Regional Water Board retains the right to take legal action against an industrial user and/or the Permittee where a user fails to meet the approved applicable federal, state, or local pretreatment standards.

vii. The Regional Water Board may amend this Order, at any time, to require the Permittee to develop and implement an industrial pretreatment program pursuant to the requirements of 40 CFR Part 403 if the Regional Water Board finds that the Facility receives pollutants from an IU that is subject to pretreatment standards, or if other circumstances so warrant.

c. Sludge Disposal and Handling Requirements

- i.** 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.
- ii.** 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.
- iii.** 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.
- iv.** 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 Permittee shall report the amount of sludge placed in a landfill and the landfill(s) which received the sludge or biosolids.
- v.** 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 Permittee within the North Coast Region shall comply with State Water Board Water Quality Order No. 2004-12-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.
- vi.** The Permittee 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.

- vii.** 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.
- viii.** 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.
- ix.** 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 any discharge of biosolids from the Facility, the Permittee shall comply with the following requirements:

i. Statewide General WDRs for Discharge of Biosolids to Land

If applicable, the Permittee 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 Permittee 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 Permittee shall submit a Notice of Intent to Comply in accordance with the enrollment requirements of Order No. 2004-0012-DWQ; or

- ii.** Alternatively, the Permittee may dispose of biosolids at another appropriately permitted facility.
- iii.** New sludge treatment and storage facilities must comply with the Water Code and CCR, title 27 requirements for the protection of water quality.

e. Operator Certification

Supervisors and operators of municipal wastewater treatment facilities 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 wastewater treatment facility operator, the State Water Board may approve use of a water treatment facility operator of appropriate grade certified by California Department of Public Health (CDPH) where water reclamation is involved.

f. Adequate Capacity

If the Facility or effluent disposal areas will reach capacity within 4 years, the Permittee 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 Permittee shall demonstrate that adequate steps are being taken to address the capacity problem. The Permittee 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 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.** For the control of storm water discharge from the site of the wastewater treatment Facility, if applicable, the Permittee shall seek authorization to discharge under and meet the requirements of the State Water Board's 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.

7. Compliance Schedules – Not Applicable

This section is not applicable to the Permittee.

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 Permittee 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 Permittee 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 Permittee 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 Permittee 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 Permittee will be considered out of compliance for that calendar month. The Permittee 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 Permittee 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 Permittee will be considered out of compliance for that calendar week. The Permittee 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 Permittee 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 Permittee 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 Permittee 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- and concentration-based effluent limitations for the same parameter shall be determined separately. Mass-based calculations shall use transfer flow rate and effluent concentration measured at EFF-001 (discharge to Russian River).

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

$$\text{lbs/day} = 8.34 * C_e * Q, \text{ where}$$

C_e = average of effluent concentrations collected during the calendar week (mg/L)

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:

$$\text{lbs/day} = 8.34 * C_e * Q, \text{ where}$$

C_e = 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 (Total Coliform)

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 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, this requirement shall apply to each weekly sample.

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-Kärber. 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:

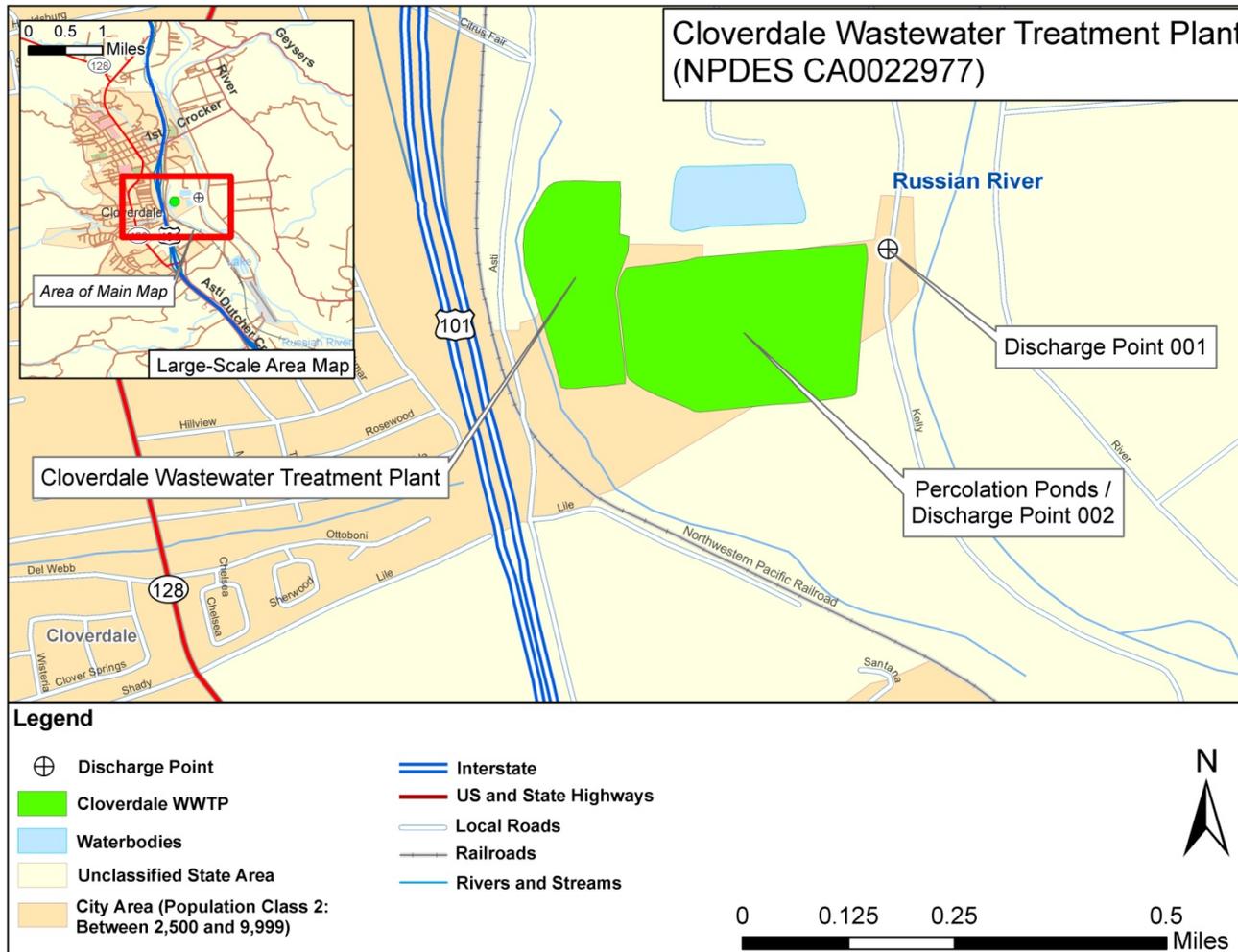
x is the observed value;

μ is the arithmetic mean of the observed values; and

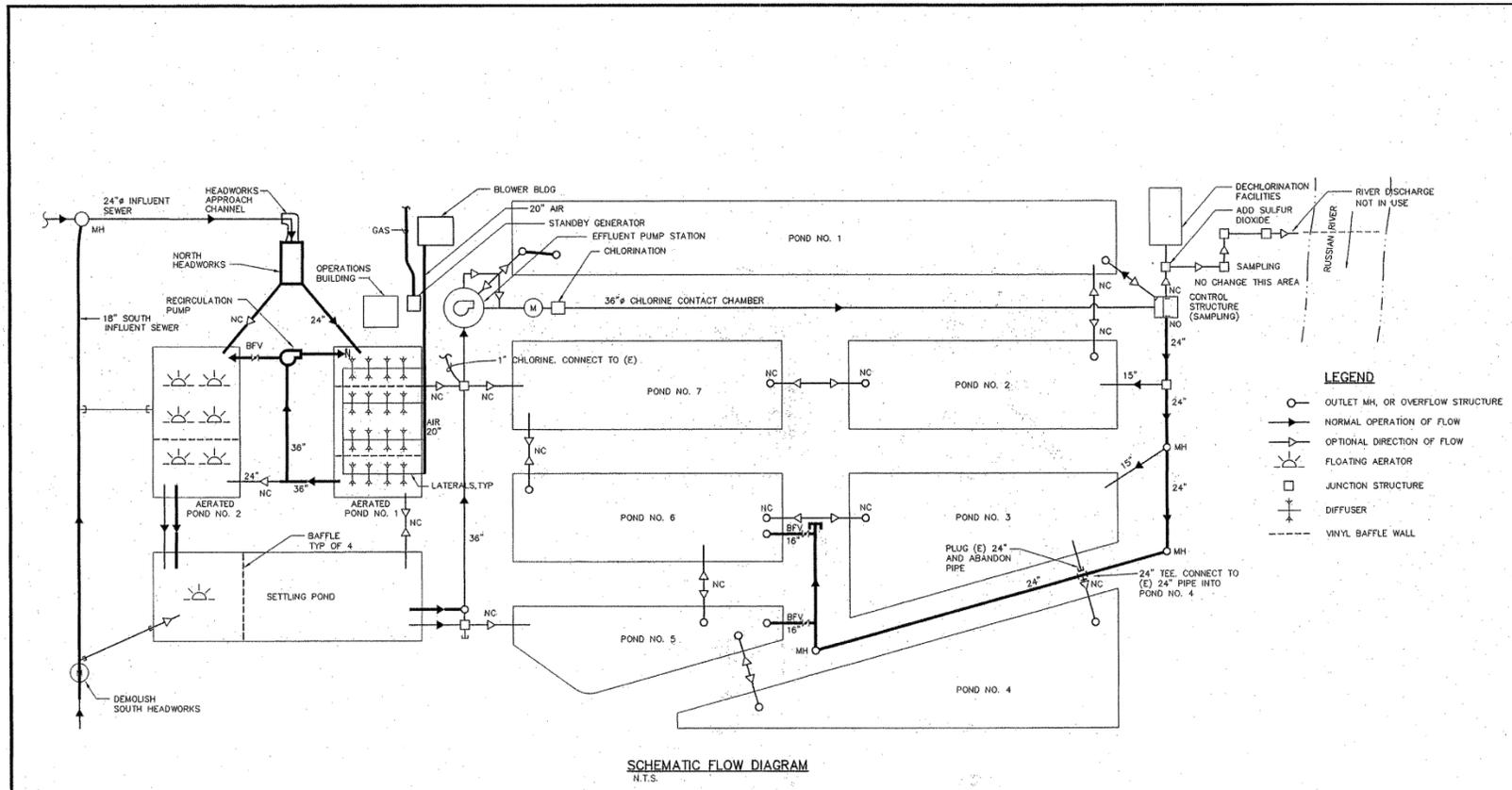
n is the number of samples.

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 – MAP OF CLOVERDALE WASTEWATER TREATMENT PLANT



ATTACHMENT C – FLOW SCHEMATIC



NO.	DATE	REVISIONS	BY	APPR.



DESIGNER	RK	CHKD	MS
DRAWN	R/J	SCALE	NONE
APPROVED		DATE	
APPROVED		DATE	

BAR IS ONE INCH ON ORIGINAL DRAWING.
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

WINZLER & KELLY
 CONSULTING ENGINEERS
 488 TELESON CIRCLE, SANTA ROSA, CA 95401 P.O. BOX 8778, SANTA ROSA, CA 95409
 TEL (707) 535-1010 FAX (707) 535-1022

CITY OF CLOVERDALE
 WASTEWATER TREATMENT PLANT
 PHASE I EXPANSION
 GENERAL
FLOW DIAGRAM

JOB NUMBER	95-2078-01
DRAWING	G-6
SHEET	6

ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Permittee 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 Permittee 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 Permittee 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 Permittee 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 Permittee 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 Permittee 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 Permittee 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 Permittee 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); Water Code, § 13383):

1. Enter upon the Permittee'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 Permittee 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 Permittee 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 Permittee 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 Permittee 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 Permittee 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 Permittee 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 Permittee. 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 Permittee 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 Permittee 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 Permittee 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 Permittee 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 Permittee 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 Permittee 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 Permittee wishes to continue an activity regulated by this Order after the expiration date of this Order, the Permittee 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 Permittee 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 Permittee'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 Permittee 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 Permittee (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 Permittee 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 Permittee 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); Water 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 Permittee 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 Permittee shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Permittee 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 Permittee 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 as defined in 40 CFR 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 not subject to effluent limitations in this Order. [40 CFR § 122.41(l)(1)(ii)]
3. The alteration or addition results in a significant change in the Permittee'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 Permittee 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 Permittee 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 Permittee 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 Permittee 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 Permittee 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 NO. R1-2012-0048

Table of Contents

I. General Monitoring Provisions.....E-2
 II. Monitoring LocationsE-3
 III. Influent Monitoring Requirements.....E-4
 A. Monitoring Location INF-001.....E-4
 IV. Effluent Monitoring RequirementsE-4
 A. Monitoring Location EFF-001.....E-4
 B. Monitoring Location EFF-002.....E-6
 V. Whole Effluent Toxicity Testing RequirementsE-8
 VI. Land Discharge Monitoring Requirements – Not applicable.....E-14
 VII. Reclamation Monitoring Requirements – Not Applicable.....E-14
 VIII. Receiving Water Monitoring Requirements – Surface Water and GroundwaterE-14
 A. Surface Water Monitoring Locations RSW-001 and RSW-002E-14
 B. GroundwaterE-15
 IX. Other Monitoring Requirements.....E-16
 A. Visual Monitoring of Discharge (EFF-001) and Receiving Water (RSW-002)E-16
 X. Reporting Requirements.....E-16
 A. General Monitoring and Reporting Requirements.....E-16
 B. Self-Monitoring Reports (SMRs)E-16
 C. Discharge Monitoring Reports (DMRs)E-19
 D. Other ReportsE-20
 E. Spills and Overflows Notification.....E-22

List of Tables

Table E-1. Test Methods and Minimum Levels for Priority PollutantsE-2
 Table E-2. Monitoring Station Locations.....E-3
 Table E-3. Influent Monitoring – Monitoring Location INF-001E-4
 Table E-4. Effluent Monitoring for Discharge to Russian River– Monitoring
 Location EFF-001E-4
 Table E-5. Effluent Monitoring for Discharges to Percolation Ponds – Monitoring
 Location EFF-002.E-6
 Table E-6. Surface Water Monitoring RequirementsE-14
 Table E-7. Receiving Water Monitoring Requirements.....E-15
 Table E-8. Groundwater Monitoring RequirementsE-15
 Table E-9. Monitoring Periods and Reporting Schedule.....E-17

Attachments

Attachment E-1E-24

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 Monitoring and Reporting Program (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 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 Permittee 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 Permittee 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 Permittee may use for compliance and reasonable potential monitoring to analyze priority pollutants with effluent limitations.

Table E-1. Test Methods and Minimum Levels for Priority Pollutants

CTR#	Constituent	Types of Analytical Methods Minimum Levels (µg/L)				
		Gas Chromatography (GC)	Gas Chromatography/ Mass Spectroscopy (GCMS)	Colorimetric	Inductively Coupled Plasma/ Mass Spectroscopy (ICPMS)	Stabilized Platform Graphite Furnace Atomic Absorption
6	Copper	---	---	---	0.5	2
23	Chlorodibromomethane	0.5	2	---	---	---
27	Dichlorobromomethane	0.5	2	---	---	---

II. MONITORING LOCATIONS

The Permittee 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 Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Untreated influent wastewater collected at the plant headworks at a representative point preceding primary treatment.
001	EFF-001	Chlorine contact chamber effluent weir OR at a representative point following full treatment and disinfection but prior to discharge to the Russian River.
002	EFF-002	Chlorine contact chamber effluent weir OR at a representative point following full treatment and disinfection but prior to discharge to the percolation ponds.
--	RSW-001	Upstream receiving water monitoring location in the Russian River, upstream of the outfall at a location that is not influenced by the discharge.
--	RSW-002	Downstream receiving water monitoring location in the Russian River immediately downstream of the outfall in the area influenced by the discharge.
--	GW-001 ¹	Groundwater monitoring well northeast of the percolation ponds
--	GW-007	Groundwater monitoring well southwest of the percolation ponds
--	GW-009	Groundwater monitoring well east of the percolation ponds
--	GW-010	Groundwater monitoring well east of the percolation ponds
--	GW-011	Groundwater monitoring well southeast of the percolation ponds
--	GW-012	Groundwater monitoring well southeast of the percolation ponds
--	GW-013	Groundwater monitoring well southeast of the percolation ponds
--	GW-014	Groundwater monitoring well southwest of the percolation ponds
--	GW-015	Groundwater monitoring well northwest of the percolation ponds
--	GW-016	Groundwater monitoring well northwest of the percolation ponds
	SS-1	Russian River monitoring location, upstream of any potential influence of the percolation ponds
	SS-2	Russian River monitoring location, immediately downstream of the percolation ponds

¹ Groundwater monitoring locations are identified in Attachment E-1

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

The Permittee 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	Weekly	Standard Methods ²
Total Suspended Solids	mg/L	24-hr composite	Weekly	Standard Methods
Influent Flow ³	mgd	Meter	Continuous	--

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

The Permittee shall monitor treated wastewater to be discharged to the Russian River at Monitoring Location EFF-001 as follows:

Table E-4. Effluent Monitoring for Discharge to Russian River– Monitoring Location EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Effluent Flow ³	mgd	Meter	Continuous	--
Discharge Dilution Rate	% of stream flow	Calculate	Daily	--
Biochemical Oxygen Demand (5-Day @ 20°C)	mg/L	24-hr composite	Weekly	Standard Methods ²
	lbs/day	Calculate		--
	Monthly % Removal	Calculate		---
Total Suspended Solids	mg/L	24-hr composite	Weekly	Standard Methods
	lbs/day	Calculate		--
	Monthly % Removal			
Total Coliform Bacteria	MPN/100 mL	Grab	Weekly	Standard Methods

² 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.

³ Each month, the Discharger shall report average daily and average monthly flows.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Chlorine, Total Residual ⁴	mg/L	Grab	Daily ⁵	Standard Methods
pH	standard units	Grab	Weekly	Standard Methods
Turbidity	NTU	Metered	Continuous	Standard Methods
Dissolved Oxygen	mg/L	Grab	Weekly	Standard Methods
Temperature	°C or °F	Grab	Weekly	Standard Methods
Hardness, Total (as CaCO ₃) ⁶	mg/L	Grab	Monthly	Standard Methods
Acute Toxicity ⁷	% Survival	24-hr composite	Monthly	See section V.A below
Chronic Toxicity ⁷	TUc	24-hr composite	Annually	See section V.B below
Chronic Toxicity (narrative)	Passed/Triggered ⁸			---
Copper, Total Recoverable ⁶	µg/L	Grab	Monthly	EPA Method 200 ⁹
Bromoform	µg/L	Grab	Monthly	Standard Methods ⁹
Chlorodibromomethane	µg/L	Grab	Monthly	EPA Method 624 ⁹
Chloroform	µg/L	Grab	Monthly	Standard Methods ⁹
Dichlorobromomethane	µg/L	Grab	Monthly	EPA Method 624 ⁹
Bis(2-Ethylhexyl)Phthalate	µg/L	Grab	Quarterly	Standard Methods ⁹
Nitrate Nitrogen, Total (as N)	mg/L	Grab	Weekly	Standard Methods
Ammonia Nitrogen, Total (as N) ¹⁰	mg/L	Grab	Weekly	Standard Methods

⁴ Chlorine residual monitoring at Monitoring Location EFF-001 shall demonstrate that there is a chlorine residual prior to dechlorination and that there is no detectable chlorine residual after dechlorination during periods of discharge to the Russian River. Samples collected to demonstrate complete dechlorination shall be collected at a point following disinfection and prior to discharge to the Russian River. All chlorine residual measurements shall be reported as total chlorine residual.

⁵ Report minimum daily chlorine residual.

⁶ Monitoring for effluent and receiving water hardness shall be conducted concurrently with effluent sampling for copper.

⁷ Whole effluent acute and chronic toxicity shall be monitored in accordance with the requirements of section V of this Monitoring and Reporting Program.

⁸ The Permittee 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 “triggered” in relation to the chronic toxicity trigger of 1 TUc (where TUc =100/NOEC). 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). “Triggered” shall be reported when chronic toxicity effluent results trigger accelerated testing by exceeding the chronic toxicity trigger of 1 TUc..

⁹ Analytical methods shall achieve the lowest minimum level (ML) specified in Appendix 4 of the SIP; and in accordance with Section 2.4.1 of the SIP, the Discharger shall report the Reporting Level (RL) and the Method Detection Limit (MDL) with each sample result.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Ammonia Nitrogen, Unionized (as N)	mg/L	--	Weekly	Calculation
Organic Nitrogen	mg/L	Grab	Weekly	Standard Methods
Phosphorus, Total (as P)	mg/L	Grab	Weekly	Standard Methods
Specific Conductance	µmhos/cm ¹¹	Grab	Monthly	Standard Methods
Total Dissolved Solids	mg/L	Grab	Monthly	Standard Methods

B. Monitoring Location EFF-002

The Permittee shall monitor treated wastewater to be discharged to the percolation ponds at Monitoring Location EFF-002 as follows:

Table E-5. Effluent Monitoring for Discharges to Percolation Ponds – Monitoring Location EFF-002

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Effluent Flow ³	mgd	Meter	Continuous	--
Biochemical Oxygen Demand (5-Day @ 20°C)	mg/L	24-hr composite	Weekly	Standard Methods ²
Total Suspended Solids	mg/L	24-hr composite	Weekly	Standard Methods
pH ¹²	standard units	Grab	Weekly	Standard Methods
Temperature ¹²	°C or °F	Grab	4X/Discharge Season ¹⁴	Standard Methods
Chlorine, Total Residual ¹³	mg/L	Grab	Daily	Standard Methods
Total Coliform Bacteria	MPN/100 mL	Grab	Weekly	Standard Methods
Hardness, Total (as CaCO ₃)	mg/L	Grab	4X/Discharge Season ¹⁴	Standard Methods

¹⁰ Monitoring for ammonia shall be concurrent with acute whole effluent toxicity monitoring (Section V.A. of this MRP). Effluent and receiving water temperature and pH shall be recorded at the time the ammonia sample is collected.

¹¹ Measured in micromhos/cm at 25°C

¹² Effluent and receiving water temperature and pH shall be recorded at the time that the effluent and receiving water ammonia samples are collected.

¹³ Chlorine residual monitoring at Monitoring Location EFF-002 shall demonstrate that a chlorine residual is present after chlorination. This monitoring shall occur continuously when transferring from the point of chlorine introduction to the percolation ponds.

¹⁴ Monitoring shall be conducted four times per discharge season in November, January, March, and May. Monitoring frequency may be reduced or eliminated if monitoring results demonstrate no reasonable potential.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Copper, Total Recoverable	µg/L	Grab	4X/Discharge Season ¹⁴	EPA Method 200 ⁹
Bromoform	µg/L	Grab	4X/Discharge Season ¹⁴	Standard Methods ⁹
Chlorodibromomethane	µg/L	Grab	4X/Discharge Season ¹⁴	EPA Method 624 ⁹
Chloroform	µg/L	Grab	4X/Discharge Season ¹⁴	Standard Methods ⁹
Dichlorobromomethane	µg/L	Grab	4X/Discharge Season ¹⁴	EPA Method 624 ⁹
Bis(2-Ethylhexyl)Phthalate	µg/L	Grab	4X/Discharge Season ¹⁴	Standard Methods ⁹
CTR Pollutants ¹⁵	µg/L	24-hr composite ¹⁶	1X/Permit Term	Standard Methods ⁹
Title 22 Pollutants ¹⁷	µg/L	24-hr composite	1X/Permit Term	Standard Methods
Nitrate Nitrogen, Total (as N)	mg/L	Grab	4X/Discharge Season ¹⁴	Standard Methods
Ammonia Nitrogen, Total (as N) ¹²	mg/L	Grab	4X/Discharge Season ¹⁴	Standard Methods
Ammonia Nitrogen, Unionized (as N)	mg/L	--	4X/Discharge Season ¹⁴	Calculation
Nitrite Nitrogen Total (as N)	mg/L	Grab	4X/Discharge Season ¹⁴	Standard Methods
Organic Nitrogen (as N)	mg/L	Grab	4X/Discharge Season ¹⁴	Standard Methods
Phosphorus, Total (as P)	mg/L	Grab	4X/Discharge Season ¹⁴	Standard Methods

¹⁵ CTR pollutants are those pollutants identified in the California Toxics Rule at 40 CFR 131.38.

¹⁶ 24-hour composite samples shall be collected for all constituents, except for those constituents that are volatile and or require grab sampling for other reasons (e.g., ultraclean sample collection methods required). The priority pollutant monitoring report shall document the sampling method used for each constituent and provide the justification for the use of grab sampling for specific constituents (e.g., volatile, ultraclean method required, etc.)

¹⁷ 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 CCR. 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.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity Testing

The Permittee shall conduct acute whole effluent toxicity testing (WET) to determine compliance with the effluent limitation for acute toxicity established by section IV.A.1 of the Order.

- 1. Test Frequency.** The Permittee shall conduct acute WET testing in accordance with the schedule established by this MRP while discharging at Discharge Point 001, as summarized in Table E-4, above.
- 2. Sample Type.** For 96-hour static renewal or 96-hour static non-renewal testing, the effluent samples shall be 24-hour composite samples collected at Monitoring Location EFF-001.
- 3. Test Species.** Test species for acute WET testing shall be the rainbow trout, *Oncorhynchus mykiss*. At least one time every 5 years, the Permittee shall conduct one suite of acute WET testing using an invertebrate, the water flea, *Ceriodaphnia dubia*, and a vertebrate, *Oncorhynchus mykiss*. After this screening period, monitoring shall be conducted monthly using the most sensitive species.
- 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 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.

- 5. Test Dilutions.** The acute toxicity test shall be conducted using 100 percent effluent collected at Monitoring Location EFF-001.
- 6. Test Failure.** If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Permittee shall re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.

- 7. 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 Permittee 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 Permittee shall initiate a Toxicity Reduction Evaluation (TRE) in accordance with section VI.C.2.a.ii 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 Permittee shall contact the Executive Officer within 21 days with a plan to demonstrate compliance with the effluent limitation.
- 8. Notification.** The Permittee 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 Permittee 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.
- 9. 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 Permittee is in compliance with effluent limitations, and other permit requirements.

B. Chronic Toxicity Testing

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

- 1. Test Frequency.** The Permittee shall conduct annual chronic WET testing in accordance with the schedule established by this MRP while discharging at Discharge Point 001, as summarized in Table E-4, above.
- 2. Sample Type.** Effluent samples from Monitoring Location EFF-001 shall be 24-hour composite samples. For toxicity tests 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, *Selenastrum capricornutum* (growth test). At least one time every 5 years, the Permittee shall conduct two suites of chronic WET testing using the three species listed above. After this screening period, monitoring shall be conducted annually using the most sensitive species.

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 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 Permittee shall re-sample and re-test as soon as possible, not to exceed 14 days following notification of test failure.
8. **Notification.** The Permittee 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 Permittee shall initiate accelerated monitoring. Accelerated monitoring shall consist of four additional effluent samples and dilution series (specified in number 5 above) – with one test for each test species showing toxicity results exceeding the toxicity trigger. Accelerated monitoring tests 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 Permittee shall contact the 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 Permittee 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 Permittee initiate a TRE.
- b.** If the source(s) of the toxicity is easily identified (i.e. temporary plant upset), the Permittee 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 Permittee 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 Permittee shall cease accelerated monitoring and, within thirty (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 thirty (30) days of completing the TRE Workplan implementation, the Permittee shall submit a report to the Regional Water Board including, at a minimum:
 - i.** Specific actions the Permittee took to investigate and identify the cause(s) of toxicity, including a TRE WET monitoring schedule;
 - ii.** Specific actions the Permittee took to mitigate the impact of the discharge and prevent the recurrence of toxicity;

- iii. Recommendations for further actions to mitigate continued toxicity, if needed;
and
- iv. 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 Permittee and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals and this Monitoring and Reporting Program. Chronic toxicity test results shall be submitted with the self-monitoring report.

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

- a. receipt and handling of the effluent sample that includes a tabular summary of initial water quality characteristics;
- b. the source and make-up of the lab control/diluent water used for the test;
- c. any manipulations done to lab control/diluent and effluent such as filtration, nutrient addition, etc.;
- d. identification of any reference toxicant testing performed;
- e. tabular summary of test results for control water and each effluent dilution and statistics summary to include calculation of NOEC, TU_c and IC_{25} ;
- f. identification of any anomalies or nuances in the test procedures or results; and
- g. summary and conclusions section.

Test results shall include, at a minimum, for each test:

- a. Sample date(s);
- b. Test initiation date;
- c. Test species;
- d. End point values for each dilution (e.g., number of young, growth rate, percent survival);
- e. NOEC value(s) in percent effluent;

- f. IC15, IC25, IC40, and IC50 values (or EC15, EC25...etc.) in percent effluent;
 - g. TUc values (100/NOEC);
 - h. Mean percent mortality (\pm s.d.) after 96 hours in 100 percent effluent (if applicable);
 - i. NOEC and LOEC values for reference toxicant test(s);
 - j. IC50 or EC50 value(s) for reference toxicant test(s);
 - k. Available water quality measurements for each test (e.g., pH, DO, temperature, conductivity, hardness, salinity, ammonia);
 - l. Statistical methods used to calculate endpoints;
 - m. The statistical output page, which includes the calculation of percent minimum significant difference (PMSD); and
 - n. Results of applicable reference toxicant data with the statistical output page identifying the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD and dates tested; the reference toxicant control charts for each endpoint, to 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 1000.0, 1002.0, and 1003.0 in the test methods manual titled *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA-821-R-02-013, 2002), with-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 10.2.8.2.1 through 10.2.8.2.5 of the test methods manual. Based on this review, only accepted effluent toxicity test results shall be reported.
- 3. Compliance Summary.** The results of the chronic toxicity testing shall be provided in the most recent monthly self-monitoring reports which 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 Permittee is in compliance with effluent limitations and other permit requirements.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

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

VII. RECLAMATION MONITORING REQUIREMENTS – NOT APPLICABLE

This section is not applicable to the Permittee as treated wastewater is not reclaimed.

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

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

1. The Permittee shall monitor upstream and downstream conditions in the Russian River at Monitoring Locations RSW-001 and RSW-002, respectively, during periods of discharge to the Russian River as follows:

Table E-6. Surface Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Stream Flow	mgd	Gage	Daily	--
Biochemical Oxygen Demand (5-Day @ 20°C)	mg/L	Grab	Monthly	Standard Methods ²
Total Suspended Solids	mg/L	Grab	Monthly	Standard Methods
Dissolved Oxygen	mg/L	Grab	Monthly	Standard Methods
pH ¹²	standard units	Grab	Monthly	Standard Methods
Turbidity	NTU	Grab	Monthly	Standard Methods
Temperature ¹²	°F or °C	Grab	Monthly	Standard Methods
Hardness, Total (as CaCO ₃) ⁶	mg/L	Grab	Monthly	Standard Methods
Copper, Total Recoverable ⁶	µg/L	Grab	Monthly	EPA Method 200 ⁹
Ammonia Nitrogen, Total (as N) ¹²	mg/L	Grab	Monthly	Standard Methods
Unionized Ammonia (as N)	mg/L	Calculation	Monthly	--
Nitrate Nitrogen, Total (as N)	mg/L	Grab	Monthly	Standard Methods
Phosphorus, Total (as P)	mg/L	Grab	Monthly	Standard Methods
CTR Pollutants ^{15,18}	µg/L	Grab	1X/Permit Term	Standard Methods ⁹

¹⁸ Monitoring shall occur only at Monitoring Location RSW-001.

- The Permittee shall monitor upstream and downstream conditions in the Russian River at Monitoring Locations SS-001 and SS-002, respectively, during periods of discharge to the percolation ponds as follows:

Table E-7. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH ¹²	standard units	Grab	Quarterly	Standard Methods ²
Nitrate Nitrogen, Total (as N)	mg/L	Grab	Quarterly	Standard Methods
Specific Conductance	µmhos/cm	Meter	Quarterly	Standard Methods
Chloride	mg/L	Grab	Quarterly	Standard Methods
Temperature ¹²	°F or °C	Grab	Quarterly	Standard Methods
Hardness, Total (as CaCO ₃) ⁶	mg/L	Grab	Quarterly	Standard Methods

B. Groundwater

- The Permittee shall monitor groundwater at Monitoring Locations GW-001, GW-007, GW-009, GW-010, GW-011, GW-012, GW-013, GW-014, GW-015, and GW-016, as follows:

Table E-8. Groundwater Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	standard units	Grab	Quarterly	Standard Methods ²
Nitrate Nitrogen, Total (as N)	mg/L	Grab	Quarterly	Standard Methods
Specific Conductance	µmhos/cm	Meter	Quarterly	Standard Methods
Chloride	mg/L	Grab	Quarterly	Standard Methods
Total Coliform Bacteria	MPN/100 mL	Grab	Quarterly	Standard Methods
Surveyed Groundwater Level	feet	--	Quarterly	--

- Within 60 days of the permit adoption date, the Permittee shall submit a Quality Assurance/Quality Control Plan for its groundwater monitoring program that addresses specific procedures to be followed to ensure that groundwater sampling data is reliable and defensible. The QA/QC plan shall be developed in accordance with acceptable QA/QC standards. The plan shall include a procedure for testing an additional sample anytime there are detections of monitored pollutants above a specific threshold.

IX. OTHER MONITORING REQUIREMENTS

A. Visual Monitoring of Discharge (EFF-001) 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 Permittee's monthly monitoring reports.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Permittee shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. **Schedules of Compliance.** The Permittee 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 Permittee shall describe the reasons for noncompliance and a specific date when compliance will be achieved. The Permittee 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 Permittee 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 Permittee 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., Permittee personnel or consultant) on how to prepare and submit eSMRs.
2. The Permittee shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Permittee 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 Permittee 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. All monitoring results reported shall be supported by the inclusion of the complete analytical report from the laboratory that conducted the analyses.
4. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-9. 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
Quarterly	October 1 following permit effective date	January 1-31, April 1-30, July 1-31, and October 1-31	First day of second calendar month following month of sampling
4X/Discharge Season	November 1 following permit effective date	November 1-30, January 1-31, March 1-31, May 1-14	First day of second calendar month following month of sampling
Annually	January 1 following (or on) permit effective date	January 1 through December 31	March 1, each year

5. **Reporting Protocols.** The Permittee shall report with each sample result the applicable ML, the RL and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136.

The Permittee 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.** Permittees 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 Permittee to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.
- 6.** The Permittee shall submit SMRs in accordance with the following requirements:
- a.** The Permittee 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 Permittee 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 Permittee shall electronically submit the data in a tabular format as an attachment. During periods of land discharge, the reports shall certify "land discharge".
 - b.** The Permittee 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 CIWQS Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). In the event that paper submittal of SMRs is required, the Discharge shall submit the SMR 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)

DMRs are required for facilities designated as major discharges.

- 1. As described in Section X.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the Permittee to electronically submit self-monitoring reports that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, major Permittees shall submit DMRs in accordance with the requirements described below. The Facility is currently designated as a major Permittee.
- 2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Permittee shall submit the original DMR and one copy of the DMR to the address listed below:

STANDARD MAIL	FEDEX/UPS/ OTHER PRIVATE CARRIERS
State Water Resources Control Board Division of Water Quality c/o Discharge Monitoring Report Processing Center Post Office Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15th Floor Sacramento, CA 95814

- 3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated or modified cannot be accepted.

D. Other Reports

1. The Permittee shall report the results of any special studies, acute and chronic toxicity testing, TRE/TIE, PMP, and Pollution Prevention Plan required by Special Provisions – VI.C.2 and VI.C.3 of this Order.
2. **Groundwater Monitoring Reports.** Groundwater monitoring data shall be maintained in a spreadsheet format that allows for analysis of the on-going data. The electronic spreadsheet shall be submitted with the groundwater monitoring reports.
3. **Annual Report.** The Permittee 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 Permittee monitors any pollutant more frequently than required by this Order, using test procedures approved under 40 CFR, section 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 wastewater treatment Facility for emergency and routine situations;
 - e. A statement certifying when the flow meter(s) and other 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 Permittee shall submit, as part of its annual report to the Regional Water Board, a description of the Permittee's activities within the sanitary sewer system over the previous 12 months. The report shall contain:

vii. A summary of public outreach activities to educate industrial, commercial, and residential users about the importance of preventing discharges of industrial and toxic wastes to the wastewater treatment plant.

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

i. Annual sludge production, in dry tons and percent solids

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

iii. Methods of final disposal of sludge:

(a) For any portion of sludge discharged to a sanitary landfill, the Permittee 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 Permittee 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 Permittee 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.

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 Permittee shall notify the California Emergency Management

Agency (CalEMA), the local health officer or directors of environmental health with jurisdiction over affected water bodies or land areas, and the Regional Water Board.¹⁹

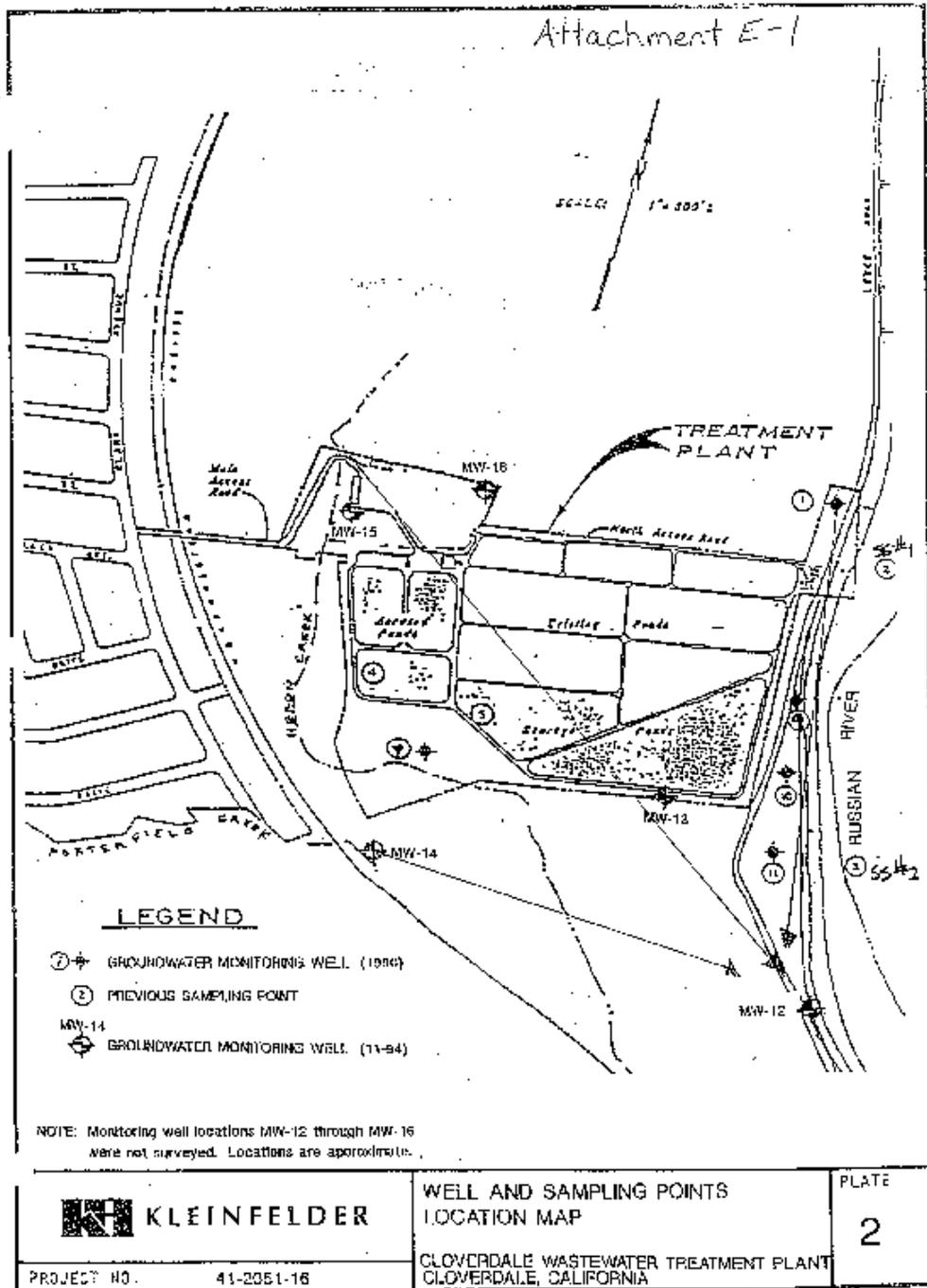
Information to be provided verbally to the Regional Water Board includes:

- i. Name and contact information of caller;
 - ii. Date, time and location of spill occurrence;
 - iii. Estimates of spill volume, rate of flow, and spill duration;
 - iv. Surface water bodies impacted, if any;
 - v. Cause of spill;
 - vi. Cleanup actions taken or repairs made; and
 - vii. Responding agencies.
- b. As soon as possible, but not later than **twenty-four (24) hours** after becoming aware of a discharge, the Permittee shall submit to the Regional Water Board a certification that the California Emergency Management Agency 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 Permittee shall submit a written report to the Regional Water Board office. The report must include all available details related to the cause of the spill and corrective action taken or planned to be taken, as well as copies of reports submitted to other agencies.
- i. Information provided in the verbal notification;
 - ii. Other agencies notified by telephone;
 - iii. Detailed description of cleanup actions and repairs taken; and
 - iv. Description of actions that will be taken to minimize or prevent future spills.
- d. In the cover letter of the monthly monitoring report, the Permittee 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.

¹⁹ The contact number for spill reporting for the California Emergency Management Agency 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 Cal EMA will satisfy the 2 hour notification requirement for the Regional Water Board.

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:
 - a. As soon as possible, but not later than **twenty-four (24) hours** after becoming aware of the discharge, the Permittee 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 Permittee shall include a written description of the spill event.

ATTACHMENT E-1 - Cloverdale Groundwater Monitoring Well Locations



ATTACHMENT F – FACT SHEET

Table of Contents

I.	Permit Information	F-3
II.	Facility Description	F-5
	A. Description of Wastewater and Biosolids Treatment or Controls	F-5
	B. Discharge Points and Receiving Waters.....	F-6
	C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data	F-7
	D. Compliance Summary.....	F-9
	E. Planned Changes	F-10
III.	Applicable Plans, Policies, and Regulations.....	F-10
	A. California Environmental Quality Act (CEQA).....	F-11
	B. State and Federal Regulations, Policies, and Plans	F-11
	C. Impaired Water Bodies on CWA 303(d) List	F-15
	D. Other Plans, Policies and Regulations.....	F-16
IV.	Rationale For Effluent Limitations and Discharge Specifications.....	F-17
	A. Discharge Prohibitions	F-17
	B. Technology-Based Effluent Limitations.....	F-21
	C. Water Quality-Based Effluent Limitations (WQBELs).....	F-25
	D. Final Effluent Limitations.....	F-46
	E. Interim Effluent Limitations.....	F-48
	F. Land Discharge Specifications.....	F-48
	G. Reclamation Specifications.....	F-48
	H. Other Requirements.....	F-48
V.	Rationale for Receiving Water Limitations.....	F-49
	A. Surface Water	F-49
	B. Groundwater	F-49
VI.	Rationale for Monitoring and Reporting Requirements.....	F-50
	A. Influent Monitoring	F-51
	B. Effluent Monitoring.....	F-51
	C. Whole Effluent Toxicity Testing Requirements	F-53
	D. Land Discharge Monitoring Requirements.....	F-53
	E. Reclamation Monitoring Requirements	F-53
	F. Receiving Water Monitoring.....	F-53
	G. Other Monitoring Requirements.....	F-55
VII.	Rationale for Provisions.....	F-55
	A. Standard Provisions.....	F-55
	B. Special Provisions.....	F-56
VIII.	Public Participation	F-61
	A. Notification of Interested Parties	F-62
	B. Written Comments	F-62
	C. Public Hearing	F-62

D. Waste Discharge Requirements Petitions.....	F-63
E. Information and Copying.....	F-63
F. Register of Interested Persons	F-63
G. Additional Information	F-63

List of Tables

Table F-1. Facility Information.....	F-3
Table F-2. Historic Effluent Limitations and Monitoring Data – Discharge Point 001	F-7
Table F-3. Historic Effluent Limitations and Monitoring Data – Discharge Point 002	F-9
Table F-4. Basin Plan Beneficial Uses.....	F-12
Table F-5. Summary of Reasonable Potential Analysis Results	F-35
Table F-6. Determination of Long Term Averages	F-40
Table F-7. Determination of Final WQBELs Based on Aquatic Life Criteria.....	F-41
Table F-8. Determination Final WQBELs Based on Human Health Criteria.....	F-41
Table F-9. Summary of Water Quality-based Effluent Limitations.....	F-41

ATTACHMENT F – FACT SHEET

As described in section II.B of the Order, the Regional Water Board incorporates this Fact Sheet as findings of the Regional Water Board supporting the issuance 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 Permittees 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 Permittee. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Permittee.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Cloverdale Wastewater Treatment Facility (hereinafter Facility).

Table F-1. Facility Information

WDID	1B84032OSON
Permittee	City of Cloverdale
Name of Facility	Cloverdale Wastewater Treatment Plant
Facility Address	700 Asti Road
	Cloverdale, CA 95425
	Sonoma County
Facility Contact, Title and Phone	Craig Scott, Public Works Director/City Engineer, (707) 894-1722 Jay Robinson, Wastewater Treatment Plant Operator, (707) 894-1719
Authorized Person to Sign and Submit Reports	Jay Robinson, (707) 894-1719
Mailing Address	124 N. Cloverdale Blvd., Cloverdale, CA 95425
Billing Address	Same as Mailing Address
Type of Facility	Publicly Owned Treatment Works (POTW)
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	No
Reclamation Requirements	No
Facility Design and Permitted Flows¹	1.0 mgd (average dry weather design flow ²) 8.25 mgd (peak daily wet weather design flow ³)

¹ See Prohibitions III.H and III.I for details regarding permitted flows.

² Average daily dry-weather design flow is defined as the average of daily inflows calculated during the lowest consecutive 30-day period each calendar year.

³ Peak daily wet weather design flow is defined as the maximum volume of effluent that may be treated over a given 24-hour period.

Watershed	Middle Russian River Hydrologic Unit, Geyersville Hydrologic Subarea
Receiving Water	Russian River
Receiving Water Type	Inland surface water

A. The City of Cloverdale (hereinafter Permittee) is the owner and operator of the Cloverdale Wastewater Treatment Plant (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 Permittee herein.

B. The Facility discharges disinfected, secondary wastewater to percolation/evaporation ponds (Discharge Point 002) adjacent to the Russian River, a water of the United States, and is currently regulated by Order No. R1-2006-0004 and National Pollutant Elimination Permit (NPDES) No. CA0022977 adopted on June 29, 2006 and expired on June 29, 2011. The Facility also has a discharge outfall to the Russian River. The Facility has sufficient percolation capacity for disposal of its treated wastewater year-round and there has been no need to utilize the discharge outfall to the Russian River. In addition, since the Facility does not currently include advanced wastewater treatment, direct discharges to the Russian River via its discharge outfall (Discharge Point 001) are currently prohibited. The Permittee is also regulated by Monitoring and Reporting Program (MRP) No. R1-2006-0004, which was adopted on June 29, 2006. 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.

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 Permittee must file a petition with the State Water Resources Control Board (State Water Board), Division of Water Rights, and receive approval for such a change. The State Water Board retains the jurisdictional authority to enforce such requirements under Water Code section 1211.

C. The Permittee filed a Report of Waste Discharge and submitted an application for renewal of its WDRs and NPDES permit on December 30, 2010. A site visit was conducted on October 18, 2011 to observe operations and collect additional data to develop permit limitations and conditions. Supplemental information was submitted on November 14, 2011, November 23, 2011, and December 1, 2011. The permit application was deemed complete on December 1, 2011.

II. FACILITY DESCRIPTION

The Permittee owns a wastewater collection, treatment, and disposal Facility and provides sewerage service to a population of approximately 8,600, including residential, commercial, and industrial customers in the City of Cloverdale. Commercial/industrial dischargers include several restaurants, three wineries, a brewery, MGM brakes, and a groundwater remediation treatment system.

A. Description of Wastewater and Biosolids Treatment or Controls

1. Collection System

Cloverdale's wastewater collection system includes a lift station in a low section of the City at Shahan Drive and North Cloverdale Boulevard, which serves approximately 50 homes. The lift station uses two 3-horsepower pumps on a float system to pump approximately 10,000 gallons per day (gpd) under peak conditions. Otherwise, flow is by gravity to the wastewater treatment Facility. Influent flows from two sewer lines join at a manhole at the northwestern corner of the Facility. Wastewater is received from approximately 3,000 connections, primarily residential, serving a population of approximately 8,600 people and commercial/industrial dischargers. The Facility has a wastewater control ordinance and has issued industrial wastewater discharge permits to each of its industrial users.

Infiltration and inflow (I/I) was historically a problem for the Facility, resulting in significantly greater influent flows during storm events. The City completed a smoke and video testing study for I/I in 1997 and developed a program to correct the I/I problem. The Permittee cleans its sewer system every 5 years and preventively cleans sewers with a history of problems on an as needed basis. The northern portion of the city was inspected using closed-circuit television (CCTV) in 1998 and the Permittee is preparing to inspect the southern portion of the city when funding is available. The Permittee inspects the condition of its gravity sewers on an 8-year cycle. The Permittee made significant upgrades to the older parts of the collection system by sealing and grouting 101 manholes in 2005 and 2006 and by replacing 8,900 feet of sewer main, over 2000 feet of sewer laterals, and 47 aging manholes between 2007 and 2009; and it appears that the City has reduced I/I to the Facility through this work. The observed average dry weather flow (ADWF) the Facility treated in 2011 was 0.3 mgd and the maximum flow observed at the Facility in 2010 was 3.0 mgd. The highest wet weather flows during the last 10 years occurred in late December 2005 when sustained rainfall resulted in a maximum influent flow of 5.6 mgd. Although the Russian River reached flood stage during this time, the Permittee's Facility operated with minimal problems.

2. Wastewater Treatment

Influent flow is measured at the headworks with a Parshall Flume equipped with an ultrasonic flow meter. The ultrasonic flow meter is connected to a computer for continuous recording of inflows. The headworks has bar screens on both influent channels and Spiral Kleen units that keep fecal matter in suspension so that it does not get deposited into the screenings dumpster.

The Facility is designed to provide secondary treatment for an ADWF of 1.0 mgd and a PWWF of 8.25 mgd. The current treatment system consists of a 2.8 million gallon primary aeration pond equipped with a Parkson Biolac extended aeration system, a secondary aeration pond equipped with six aerators, and a settling/polishing pond. Retention time in primary aeration is from 3 to 6 days. Each pond contains baffles to improve flow and minimize the potential for short-circuiting. Sludge is retained in the aerated ponds and removed as needed. The ponds were last dredged 17 years ago when the Facility was upgraded.

The treated wastewater is chlorinated prior to disposal. Chlorine contact occurs in a 1200-foot long, 36-inch diameter underground pipeline.

The Facility has the ability to dechlorinate its disinfected effluent in the event of a discharge to the Russian River. The Facility does not currently have advanced wastewater treatment facilities and is not authorized to discharge to the Russian River unless the Facility is upgraded to advanced wastewater treatment.

B. Discharge Points and Receiving Waters

1. The collection, treatment, and disposal facilities are located in the Geyserville Hydrologic Subarea of the Middle Russian River Hydrologic Area in portions of section T11N, R11W, MDB&M. A map of the area is shown in Attachment B to this Order.
2. The existing Facility does not currently include advanced wastewater treatment and thus, is not currently authorized to discharge directly to the Russian River. Discharge Prohibition III.L of this Order prohibits the discharge of wastewater to the Russian River, unless the Permittee upgrades the Facility to include advanced wastewater treatment. The Order includes effluent limitations for discharges to the Russian River at Discharge Point 001 in the event that the Permittee upgrades its Facility during the term of this Order. If advanced treatment capabilities are developed at the Facility, wastewater may be discharged via an outfall pipe at Discharge Point 001 to the Russian River, a water of the United States at a point latitude 38° 47' 47" N and longitude 123° 0' 18" W during the allowed discharge period from October 1 to May 14. The rate of discharge is governed by flow conditions in the Russian River monitored near Cloverdale at United States

Geological Survey (USGS) Gage No. 11-4630.00 and is limited to one percent of the flow of Russian River.

- The primary means of wastewater disposal is via seven evaporation/percolation ponds, with a combined capacity of 35 million gallons, located on the west bank of the Russian River. The Facility discharges to the percolation ponds year-round and typically utilizes one or two of these percolation ponds at any time.

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

- Effluent limitations contained in Order No. R1-2006-0004 for discharges from Discharge Point 001 (Monitoring Location EFF-001) are as follows. No discharges at Discharge Point 001 occurred during the term of Order No. R1-2006-0004.

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

Parameter	Units	Effluent Limitations		
		Average Monthly ⁴	Average Weekly ⁵	Maximum Daily ⁶
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	10	15	--
	lbs/day ^{7,8}	83	125	--
	% Removal	85	--	--
Total Suspended Solids	mg/L	10	15	--
	lbs/day ^{7,8}	83	125	--
	% Removal	85	--	--
pH	standard units	--	--	6.5 – 8.5
Turbidity	NTU	2	--	5 ⁹
Total Coliform Organisms	MPN/100 mL	23 ¹⁰	2.2 ¹¹	240 ¹²

⁴ The arithmetic mean of all samples collected in a calendar month.
⁵ The arithmetic mean of all samples collected in a calendar week, Sunday to Saturday.
⁶ The maximum result of all samples collected in a calendar day.
⁷ The mass discharge (lbs/day) is obtained from the following calculation of any calendar day, week or month:

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

in which N is the number of samples analyzed in any calendar day, week, or month. Q_i and C_i are the flow rate (mgd) and the constituent concentration (mg/L), respectively, which are associated with each of the N grab samples, which may be taken in any calendar day, week, or month. 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.

⁸ Mass based effluent limitations are based on the Facility average dry-weather flow of 1.0 mgd.
⁹ Not to be exceeded more than 5 percent of the time, nor 10 NTU at any time.

Parameter	Units	Effluent Limitations		
		Average Monthly ⁴	Average Weekly ⁵	Maximum Daily ⁶
Total Chlorine	mg/L	--	--	ND ¹³
Chlorine Residual	mg/L	--	--	1.5 ¹⁴
Settleable Solids	ml/L	--	--	¹⁵
Acute Toxicity	% Survival	--	--	¹⁶
Cyanide	µg/L	--	--	17 ¹⁷
		4.3 ¹⁸	--	8.5 ¹⁸
Copper	µg/L	--	--	13 ¹⁷
		^{18,19}	--	^{18,19}
Carbon Tetrachloride	µg/L	--	--	1.1 ¹⁷
		0.25 ¹⁸	--	0.50 ¹⁸
Mercury	µg/L	0.050 ¹⁸	--	0.100 ¹⁸
Dichlorobromomethane	µg/L	0.98 ¹⁷	--	1.1 ²⁰
		0.56 ¹⁸	--	1.1 ²⁰

2. Effluent limitations contained in Order No. R1-2006-0004 for discharges from Discharge Point 002 (Monitoring Location EFF-002) and representative monitoring data from the term of Order No. R1-2006-0004 are as follows:

-
- ¹⁰ 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.
 - ¹¹ 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.
 - ¹² No sample shall exceed an MPN of 240 per 100 milliliters.
 - ¹³ The effluent shall not contain detectable levels of total chlorine using an analytical method or chlorine analyzer with a minimum detection level of 0.1 mg/L.
 - ¹⁴ A minimum chlorine residual of 1.5 mg/L shall be maintained at the end of the disinfection process.
 - ¹⁵ Effluent shall not contain any measurable settleable solids.
 - ¹⁶ 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.
 - ¹⁷ Interim effluent limitations effective until May 18, 2010.
 - ¹⁸ Final effluent limitations effective on May 18, 2010.
 - ¹⁹ Attachment E-1 to Order No. R1-2006-0004 provides calculated AMEL and MDEL values for a range of hardness values.
 - ²⁰ The final maximum daily effluent limitation for dichlorobromomethane was effective July 29, 2006.

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

Parameter	Units	Effluent Limitations			Monitoring Data (From July 2006 to March 2011)	
		Average Monthly ⁴	Average Weekly ⁵	Maximum Daily ⁶	Reported Value of Most Significant Violation	Number of Violations (avg monthly/ avg wkly/ max daily)
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	30	45	60	--	No violations
	% Removal	85	--	--	--	No violations
Total Suspended Solids	mg/L	50	65	80	---/84/84	0/2/1
	% Removal	85	--	--	83	2
Total Coliform Organisms	MPN/100 mL	240 ²¹	23 ²²	---	1600/1600/---	10/12/---
pH	standard units	--	--	6.0 – 9.0	--	No violations

D. Compliance Summary

1. Violations Summary

During the term of Order No. R1-2006-0004, the Permittee had several violations of effluent limitations at Discharge Point 002. Coliform violations have been the most common and have occurred occasionally during periods of heavy rainfall, indicating that there may be insufficient contact time in the chlorine contact chamber during periods of sustained high flows and also during periods when the weather warms up, perhaps in relation to the biological process in the treatment ponds turning over. During the term of the previous permit, the Permittee began cleaning the chlorine contact chamber more frequently and coliform violations have become less frequent. The Facility also had five suspended solids violations with three of those occurring between September and October 2007.

2. Enforcement Action Summary

No formal enforcement actions were taken against the Permittee during the term of Order No. R1-2006-0004. Two staff level enforcement letters that were sent to the Permittee following a staff review of the Permittee’s violations are summarized below.

²¹ The number of coliform bacteria shall not exceed an MPN of 240 per 100 milliliters in more than one sample in any 30-day period.

²² The median concentration shall not exceed a MPN of 23 per 100 milliliters, using bacteriological results of the last 7 days for which analyses have been completed.

- a. **July 20, 2009 letter with subject line: Resolution of Coliform Violations at the Cloverdale Wastewater Treatment Facility (Staff Level Enforcement letter).** This letter addressed a pattern of effluent coliform exceedances that resulted in 56 violations over a 7.5 year period (January 19, 2000 through August 31, 2007) and 8 additional violations related to BOD₅ and total suspended solids. The letter acknowledged measures taken by the Permittee that markedly improved Facility performance including increasing chlorine dosage in the contact chamber, increasing aeration in the treatment ponds, increasing detention time in the treatment ponds by raising weir levels, changing the frequency and method of cleaning the underground chlorine contact chamber, and modifying sampling techniques and procedures.
- b. **April 1, 2010 letter with subject line: Resolution of Coliform Violations at the Cloverdale Wastewater Treatment Facility (Staff Level Enforcement letter).** This letter recognized that there were two coliform violations during the review period of April 2009 through February 2010. Both violations occurred in January 2010 during a period of heavy rainfall that resulted in high flows into the Facility. The letter acknowledged the Permittee's efforts to make repairs to its collection system to reduce infiltration and inflow that causes high influent flows during wet weather periods.

Both letters concluded that discretionary penalties were not necessary because the violations occurred during periods of discharge to the percolation ponds and due to the Permittee's response to correct problems that lead to violations and the resultant improvement in Facility performance.

E. Planned Changes

The Permittee is in the process of identifying improvements to the Facility and identifying alternative methods to dispose of treated effluent. The proposed improvements include installation of tertiary treatment facilities and a recycled water distribution system throughout the middle and southern portions of the city. The Permittee prepared a Preliminary Design Report that indicated upgrading to tertiary treatment would cost approximately \$31 to \$33 million and installation of a recycled water distribution system would cost approximately \$10 to 11 million. Due to the significant costs associated with these upgrades, the Permittee is re-evaluating the level of improvements necessary to comply with the requirements of this 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. California Environmental Quality Act (CEQA)

Under California Water Code (Water Code) section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA (commencing with section 21100) of division 13 of the Public Resources Code. Accordingly, this exemption from CEQA applies to the Regional Water Board's action to adopt those portions of the Order that regulate NPDES discharges.

This action also involves the re-issuance of waste discharge requirements for an existing Facility that discharges treated wastewater to land through the use of percolation ponds for disposal. The Regional Water Board's action in approving those parts of the Order that regulate WDR-related discharges is also exempt from CEQA as an existing Facility for which no expansion of design flow is being permitted at the time of the lead agency's determination pursuant to title 14, California Code of Regulations (CCR), section 15301.

B. 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 the Russian River and area groundwater within the Geyserville Hydrologic Area of the Middle Russian River Hydrologic Unit are:

Table F-4. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Geyserville Hydrologic Subarea of the Middle Russian River Hydrologic Unit	<p><u>Existing:</u></p> <ul style="list-style-type: none"> • 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) <p><u>Potential:</u></p> <ul style="list-style-type: none"> • Industrial Process Supply (PRO) • Hydropower Generation (POW) • Shellfish Harvesting (SHELL) • Aquaculture (AQUA)
002	Groundwater	<p><u>Existing</u></p> <ul style="list-style-type: none"> • Municipal and Domestic Supply (MUN) • Agricultural Supply (AGR) • Industrial Service Supply (IND) • Native American Culture (CUL) <p><u>Potential:</u></p> <ul style="list-style-type: none"> • Industrial Process Supply (PRO) • Aquaculture (AQUA)

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.

- 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 federal 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. Compliance Schedules and Interim Requirements.** In general, an NPDES permit must include final effluent limitations that are consistent with CWA section 301 and with section 122.44, title 40 of the Code of Federal Regulations (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. The Regional Water Board, however, is not required to include a compliance schedule, but may adopt a Cease and Desist Order pursuant to Water Code section 13301 or a Time Schedule Order pursuant to Water Code section 13300 where it finds that the discharger is violating or threatening to violate the permit. The Regional Water Board will consider the merits of each case in determining whether it is appropriate to include a compliance schedule in a permit, and, consistent with the Compliance Schedule Policy, should consider the feasibility of achieving compliance, and must impose a schedule that is as short as possible to achieve compliance with the effluent limit based on the objective or criteria.

The Compliance Schedule Policy and the SIP do not allow compliance schedules for priority pollutants beyond May 18, 2010, except for new or more stringent priority pollutant criteria adopted by USEPA after December 17, 2008.

Where a compliance schedule for a final effluent limitation exceeds 1 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. This Order does not include compliance schedules or interim effluent limitations.

- 5. 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.
- 6. Antidegradation Policy.** 40 CFR 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 is deemed to incorporate 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 40 CFR 131.12 and State Water Board Resolution No. 68-16. As discussed in detail in section IV.D.2 of this Fact Sheet, the permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution No. 68-16.
- 7. Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 122.44(l) restrict 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. Effluent limitations contained in this Order are at least as stringent as in the previous Order.
- 8. Endangered Species Act.** This Order does not authorize an 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 Permittee is responsible for meeting all requirements of the applicable Endangered Species Act.

C. 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 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 loads (TMDL) 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 2008-2010 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. 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.

Aspects of the sediment impairing the Russian River include settleable solids, suspended solids, and turbidity. The impact of settleable solids results 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.

An analysis of the Permittee's monitoring data determined that the discharge does not contain sediment (e.g., settleable solids, suspended solids, and turbidity) at levels which will cause, have the reasonable potential to cause, or contribute to increases in sediment levels in the Russian River. This finding is based in part on the facts that the Permittee does not currently discharge directly to the Russian River, and if, and when the Permittee does discharge directly to the Russian River the Permittee would need to implement advanced wastewater treatment, which removes all settleable solids and reduces total suspended solids and turbidity to negligible levels. The summer discharge

prohibition and the one-percent flow limitation for winter discharge also support the conclusion that the Permittee does not have the reasonable potential to cause, or contribute to increases in sediment levels in the Russian River.

The 303(d) listing for the Middle Russian River lists sources of elevated temperature as flow regulation/modification, habitat modifications, nonpoint sources, and removal of riparian vegetation. The critical time period for temperature is in the summer, which is also the time period when point source discharges from the Facility are prohibited. Therefore, compliance with the summer discharge prohibition will ensure that the discharge does not contribute to the impairment of the Russian River.

D. 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 Permittee 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 regulates storm water discharges from wastewater treatment facilities with design flows greater than 1.0 mgd unless all storm water is captured and treated and/or disposed of within the facility's NPDES permitted process wastewater or if storm water is disposed of to evaporation ponds, percolation ponds, or combined sewer systems. Storm water from the operations building and parking lot discharges to a surface drainage that is tributary to the Russian River. All other storm water flows are captured by the aeration ponds and percolation ponds. Although the Facility has a design flow of 1.0 mgd, coverage under the General Storm Water Permit is not required due to the fact that storm water flow in the process areas is captured.
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 Permittee to obtain coverage under Order No. 2004-0012-DWQ prior to any removal of biosolids from the Facility that will be land disposed on property owned or controlled by the Permittee.

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 40 CFR 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR 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 where a reasonable potential to exceed those criteria exist.

A. Discharge Prohibitions

- 1. Discharge Prohibition III.A.** The discharge of any waste not disclosed by the Permittee 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 Permittee, or are not reasonably anticipated to be present in the discharge but have not been disclosed by the Permittee. 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 Permittee 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 Permittee and (2) can be reasonably contemplated by the Regional Water Board.

Whether or not the Permittee reasonably contemplates the discharge of a constituent is not relevant. What matters is whether the Permittee 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. R1-2006-0004.

- 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 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 is retained from Order No. 2006-0004 and 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 2006-003-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 Permittee is prohibited, except for use for fire suppression as provided in title 22, sections 60307 (a) and (b) of the CCR.

This prohibition is retained from Order No. R1-2006-0004. Land used for the application of wastewater must be owned by the Permittee or be under the control of the Permittee by contract so that the Permittee maintains a means for ultimate disposal of treated wastewater.

- 7. Discharge Prohibition III.G.** The discharge of waste at any point not described in section II.B of this Fact Sheet 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 Permittee 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 mean daily dry weather flow of waste in excess of 1.0 mgd as measured over a period of 30 consecutive days is prohibited.

This prohibition is retained from the previous Order and is based on the dry weather treatment capacity of the Facility.

- 9. Discharge Prohibition III.I.** The peak daily wet-weather influent flow through the treatment system in excess of 8.25 mgd is prohibited.

This prohibition is new and is based on the current daily peak sustained wet-weather capacity of the treatment system of 8.25 mgd. Exceedance of this capacity on a daily basis may result in effluent violations and/or the need to by-pass untreated effluent blended with treated effluent, which is prohibited.

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

This prohibition 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 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.

11. Discharge Prohibition III.K. During the period from October 1 through May 14, discharges of treated wastewater to the Russian River and its tributaries shall not exceed one percent of the flow of the Russian River, as measured near Cloverdale at USGS Gage No. 11-4630.00.

This prohibition is retained from the previous Order and is required by the Basin Plan (Chapter 4 Implementation Plans, 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 will be determined. This prohibition, set forth in Prohibition III.K 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 Permittee makes a reasonable effort to adjust the discharge of treated wastewater to one percent of the most recent daily flow measurement of the Russian River as measured near Cloverdale at USGS Gage No. 11-4630.00. However, Prohibition III.K. recognizes that there may be conditions when a comparison to the daily flow in the Russian River gives a closer approximation of the flow conditions in the Russian River at the time of discharge. This modification provides day-to-day operational flexibility for the Permittee while retaining the intent of the prohibition.

12. Discharge Prohibition III.L. The direct discharge of wastewater effluent from the Facility to the Russian River is prohibited, unless the Permittee upgrades the Facility to include advanced wastewater treatment, in accordance with an upgrade plan approved by the Executive Officer. AWT requirements for discharges to the Russian River are defined in Effluent Limitation IV.A.1.

This prohibition is retained from the previous Order and implements the Basin Plan waste discharge prohibition that requires the discharge of municipal waste to surface waters to be 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 during the period of October 1 through May 14.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at 40 CFR 122.44, 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 40 CFR Part 133 and Best Professional Judgment (BPJ) in accordance with 40 CFR 125.3.

Regulations promulgated in 40 CFR 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) of the CWA). Section 301(b)(1)(B) of the CWA 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 40 CFR 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 BOD₅, TSS, and pH, as follows:

a. BOD₅ and TSS

- i. The 30-day average shall not exceed 30 mg/L.
- ii. The 7-day average shall not exceed 45 mg/L.
- iii. The 30-day average percent removal shall not be less than 85%.

b. 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, 40 CFR 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.

2. Applicable Technology-Based Effluent Limitations

a. Discharge Point 001

The effluent limitations in this Order for BOD₅, TSS, and pH exceed the technology-based requirements for secondary treatment set forth in 40 CFR 133.102. pH effluent limitations 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.

- i. **BOD₅ and TSS.** For the purpose of applying advanced wastewater treatment requirements on the discharge to the Russian River, effluent limitations for BOD₅ and TSS are established at 10 mg/L as a monthly average and 15 mg/L as a weekly average, which are technically 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 monthly average percent removal shall not be less than 85 percent. These effluent limitations are retained from Order No. R1-2006-0004.
- ii. **pH.** The secondary treatment regulations at 40 CFR Part 133 require that pH be maintained between 6.0 and 9.0 standard units. Note that a more stringent effluent limitation range of 6.5 – 8.5 for pH required to meet the water quality objective for hydrogen ion concentration (pH) in the Russian River is contained in the Basin Plan, Table 3-1.
- iii. **Turbidity.** The proposed turbidity requirements are based on the definition of filtered wastewater found in title 22 section 60301.320 of the CCR. 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 regardless of whether the final use is water recycling or discharge to surface water. The point of compliance for the turbidity requirements is a point following the effluent filters and before discharge to the disinfection system. The proposed limitation specifies that the turbidity of the filtered wastewater not exceed an average of 2 NTU within a 24-hour period, 5 NTU more than 5 percent of the time within a 24-hour period, and 10 NTU at any time. This performance standard is consistent with the title 22 definition of filtered wastewater.

- iv. **Mass-Based Effluent Limitations.** Mass-based effluent limitations for BOD₅ 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; and for this permit are based on the Facility's design dry-weather capacity of 1.0 mgd.
- v. **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. R1-2006-0004. These effluent limitations reflect standards for tertiary treated effluent in the Basin Plan (Section 4, Implementation Plans) and utilize the definition of tertiary treated recycled water adopted by the California Department of Public Health (CDPH) in title 22 of the CCR.

b. Discharge Point 002

- i. **BOD₅ and TSS.** Federal regulations at 40 CFR Part 133, establish the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for BOD₅ and TSS. Section 133.102 establishes the minimum level of effluent quality that must be attained by secondary treatment for BOD₅ and TSS, but allows for some exceptions as provided for in sections 133.103 and 133.105. The secondary treatment effluent limitations are up to 30 mg/L (30-day average) and 45 mg/L (7-day average). Section 133.105 allows alternative limitations for facilities using trickling filters and waste stabilization ponds that meet the requirements for "equivalent to secondary treatment." These "equivalent to secondary treatment" limitations are up to 45 mg/L (30-day average) and up to 65 mg/L (7-day average) for BOD₅ and TSS. Section 133.103(c) allows for less stringent TSS limitations for POTWs that use waste stabilization ponds as the principal process for secondary treatment and whose operation and maintenance data indicate

that the TSS values specified in the equivalent-to-secondary regulations cannot be achieved.

Section 133.101(g) prescribes the conditions under which a POTW is eligible for consideration for equivalent-to-secondary limitations as follows:

- (a) The principal treatment process must be either a trickling filter or waste stabilization pond;
- (b) The effluent quality consistently achieved, despite proper operations and maintenance, is in excess of 30 mg/L BOD₅ and TSS; and
- (c) Water quality is not adversely affected by the discharge.

The Permittee uses waste stabilization ponds and can consistently comply with the equivalent to secondary 30-day average and 7-day average requirements for TSS. Therefore, this Order includes effluent limitations for TSS consistent with equivalent to secondary treatment requirements established in section 133.103. The monthly average effluent limitation for TSS of 45 mg/L is slightly more stringent than the TSS effluent limitation of 50 mg/L in Order No. R1-2006-0004 because Facility performance during the last five years demonstrates that the Facility can achieve the equivalent to secondary limit of 45 mg/L. This Order includes effluent limitations for BOD₅ consistent with secondary effluent limitations established in section 133.102 because the POTW performance demonstrates that it is capable of meeting the most stringent secondary effluent limitations for BOD₅. Daily maximum effluent limitations for BOD₅ and TSS of 60 mg/L and 80 mg/L, respectively are also included in the Order to ensure that the treatment works are not organically overloaded and operate in accordance with design capabilities. In addition, section 133.102, in describing the minimum level of effluent quality attainable by secondary treatment, states that the monthly average percent removal shall not be less than 85 percent. This Order contains a limitation requiring an average of 85 percent removal of BOD₅ and TSS over each calendar month.

- ii. **pH.** The secondary treatment regulations at 40 CFR Part 133 require that pH be maintained between 6.0 and 9.0 standard units. This Order includes effluent limitations for pH consistent with the secondary treatment requirements established in 40 CFR Part 133.
- iii. **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 secondary 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. R1-2006-0004. These effluent limitations reflect standards for secondary treated recycled water as adopted by the CDPH in title 22 of the CCR.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and 40 CFR 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 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 this Fact Sheet.

40 CFR 122.44(d)(1)(i) requires 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 of copper, cyanide, dichlorobromomethane, and chlorodibromomethane. Insufficient data is available to determine whether or not there is reasonable potential for ammonia. The monitoring and reporting program establishes weekly monitoring during periods of discharge to the percolation ponds and to surface waters to develop a sufficient data base to determine reasonable potential. Since the Permittee has not discharged to surface waters since 1986, ammonia data will likely be collected during periods of discharge to the percolation ponds. Bis (2-ethylhexyl) phthalate was detected above the most stringent water quality objective two times, but may be present as a result of contamination from plastic sampling equipment as discussed further in section IV.C.3.c of this Fact Sheet.

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 40 CFR 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 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 CCR 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, and for the calculation of effluent limitations for copper.

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, the Russian River, has the beneficial use designation of municipal and domestic supply. Effluent limitations were derived for two constituents with human health-based criteria: dichlorobromomethane and chlorodibromomethane.

The SIP, which is described in section III.B.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 the Russian River.

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

- i. **pH.** The effluent limitation for pH of 6.5 to 8.5 is retained from Order No. R1-2006-0004 and applies to discharges to the Russian River. 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.
- ii. **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. R1-2006-0004 required that there be no detectable level of total chlorine in the effluent to the Russian River 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.

- iii. **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. Information regarding nitrification and denitrification performance at the Facility is limited. As discussed in the following two paragraphs, effluent monitoring for nutrients is included in the MRP which will be used to collect information used to evaluate the potential for Discharges from the Facility to interfere with the beneficial uses of the receiving waters or to cause aquatic toxicity.

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 CCR, 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 the Russian River. Monitoring results from March 2010 and March 2011 showed concentrations of 0.33 mg/L as N and 1.8 mg/L as N, respectively. Because nitrate levels in effluent have not been measured at concentrations greater than 10 mg/L as N, the Regional Water Board concludes that discharges from the Facility do not have a reasonable potential to cause or contribute to exceedances of applicable water quality criteria for the receiving water.

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) to interpret the Basin Plan’s narrative objective for toxicity. USEPA has recommended acute and chronic 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.

Effluent monitoring data for ammonia is limited to one sample from March 2011 with a concentration of 4.5 mg/L as N. Receiving water data for ammonia is not available. Additionally, receiving water data for pH and temperature is not available to determine the appropriate criteria. Therefore, the monitoring and reporting program of this Order requires the Permittee to collect effluent and receiving water monitoring data to determine if the discharge from this Facility poses reasonable potential to cause or contribute to exceedances of applicable water quality objectives for ammonia in the receiving water (the Russian River).

- iv. **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. The RPA for Order No. R1-2006-0004 was conducted based on priority pollutant sampling on August 13, 2002, April 28, 2003, August 27, 2003, March 18, 2004, and March 24, 2005. During the term of Order No. R1-2006-0004, additional priority pollutant sampling was conducted on December 8, 2010 and April 1, 2011. Due to the limited data set available during the term of Order No. R1-2006-0004, the RPA for this Order was conducted using priority pollutant data collected between August 2002 and April 2011, but giving more weight to the more recent data.

Hardness

The California Toxics Rule and the National Toxics Rule 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 CaCO₃), 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. WQ-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:

$$\text{CTR Criterion} = \text{WER} \times (e^{m[\ln(H)]+b}) \quad (\text{Equation 1})$$

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. Copper is the only concave-downward metal that exhibits reasonable potential. The water quality criteria for copper was calculated for this Order using Equation 1 and a reported effluent hardness of 149 mg/L as CaCO₃, based on a single sample collected in December 2010. Although effluent hardness data is limited, the available hardness value was collected during wet

weather and likely represents an effluent hardness that is on the low end of the range for this Facility, thus it would be expected to be protective of the receiving water under all flow conditions. Additionally, the Permittee will not be allowed to discharge directly to the Russian River at Discharge Point 001 until the Facility is upgraded to provide advanced wastewater treatment, and until then, this Order requires additional effluent hardness monitoring for discharges to the percolation ponds to characterize the effluent. The additional effluent hardness monitoring will be used to revise the water quality criteria for the hardness-based metals to reflect the actual observed effluent hardness prior to a direct discharge to the Russian River at Discharge Point 001.

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 is protective of aquatic life in all areas of the receiving water affected by the discharge, under all discharge and receiving water flow (see Equation 2, below).

To be consistent with this methodology, the reasonable worst-case upstream receiving water hardness, the lowest observed effluent hardness, and assuming no receiving water assimilative capacity for metals (i.e., ambient background metals concentrations are at their respective CTR criterion), was used in Equation 4 for determining whether reasonable potential exists for the Concave Upward hardness-based metals. Equation 2 is not used in place of the CTR equation (Equation 1). Rather, Equation 2, which is derived using the CTR equation, is used as a direct approach for calculating the ECA. The CTR equation has been used to evaluate the receiving water downstream of the discharge at all discharge and flow conditions to ensure the ECA is protective.

$$ECA_n = \left(\frac{m(H_e - H_{rw}) \left(e^{m \ln(H_{rw}) + b} \right)}{H_{rw}} \right) + e^{m \ln(H_{rw}) + b} \quad (\text{Equation 2})$$

Where:

- m, b = criterion specific constants (from CTR)
- H_e = lowest observed effluent hardness
- H_{rw} = reasonable worst-case upstream receiving water hardness

The lowest effluent hardness is 149 mg/L, while the upstream receiving water hardness ranged from 67 mg/L to 127 mg/L as CaCO₃. In this case, the

reasonable worst-case upstream receiving water hardness to use in Equation 2 to calculate the ECA is 67 µg/L. Using the procedures discussed above to calculate the ECA for all Concave Up Metals will result in WQBELs that are protective under all potential effluent/receiving water flow conditions (high flow to low flow) and under all known hardness conditions.

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 Permittee, 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.

c. Reasonable Potential Determination

The RPA demonstrated reasonable potential for discharges from the Facility to cause or contribute to exceedances of applicable water quality criteria for copper, cyanide, dichlorobromomethane, and chlorodibromomethane. Reasonable potential could not be determined for all pollutants, as there are not applicable water quality criteria for all pollutants. The RPA determined that there is either no reasonable potential or there was insufficient information to conclude affirmative reasonable potential for the remainder of the 126 priority pollutants.

The following table summarizes the RPA for each priority pollutant that was reported in detectable concentrations in the effluent or the receiving water (detected values are indicated in bold type). The MECs, most stringent water quality objectives/water quality criteria (WQO/WQCs), and background concentrations (B) used in the RPA are presented, along with the RPA results (Yes or No and which trigger) for each toxic pollutant analyzed. No other

pollutants with applicable, numeric water quality criteria from the NTR, CTR, and the Basin Plan were measured above detectable concentrations during the monitoring events conducted by the Permittee. Attachment F-1 to this Order summarizes the RPA for all 126 priority pollutants.

Table F-5. Summary of Reasonable Potential Analysis Results

CTR #	Priority Pollutants	C or Most Stringent WQO/WQC (µg/L)	MEC or Minimum DL (µg/L) ²³	B or Minimum DL (µg/L) ²³	RPA Results ²⁴
1	Antimony	6	<1.0	2.4	No
2	Arsenic	50	0.38 DNQ	4.6	No
3	Beryllium	4	<0.30	0.23	No
4	Cadmium ²⁵	3.4	0.24	0.32	No
5a	Chromium III ²⁵	149	1.5	62	No
6	Copper ²⁶	13	18	20	Yes (Trigger 1)
7	Lead ²⁶	4.9	1.0 DNQ	4.1	No
8	Mercury	0.050	0.027	0.052	No ²⁸
9	Nickel ²⁸	73	5.4 DNQ	94	No ³⁰
10	Selenium	5	0.58	0.80	No
11	Silver ²⁶	6.3	<3.0	2.7	No
13	Zinc ²⁵	168	53	55	No
14	Cyanide	5.2	17	<2.0	No ²⁸
15	Asbestos (MFL)	7	<0.021	20	No
20	Bromoform	4.3	<0.50	8.4	No

²³ The Maximum Effluent Concentration (MEC) or maximum background concentration (B) is the actual detected concentration unless it is preceded by “<”, in which case the value shown is the minimum detection level as the analytical result was reported as not detected (ND).

²⁴ RPA Results:
 = Yes, if MEC > WQO/WQC, or B > WQO/WQC and MEC is detected;
 = No, if MEC and B are < WQO/WQC or all effluent data are undetected;
 = Undetermined (Ud).

²⁵ Water Quality Criteria for cadmium (chronic), copper, chromium III, nickel, and zinc are based on the lowest detected effluent hardness concentration of 149 mg/L and has been converted to total recoverable metal fraction using conversion factors in the CTR and a default water effect ratio of 1.

²⁶ Water Quality Criteria for the hardness-based metals lead and silver are based on the lowest detected effluent hardness of 149 mg/L and the reasonable worst-case receiving water hardness concentration of 67 mg/L and have been converted to total recoverable metal fraction using the conversion factors in the CTR.

²⁷ The maximum upstream receiving water concentration was observed in April 2003. All subsequent upstream receiving water concentrations have been below the applicable criteria.

²⁸ The MEC was observed in August 2003, a month when the Discharger would not be allowed to discharge. Cyanide was not detected at levels that exceed the most stringent water quality objective in the remaining six samples, including two subsequent samples collected in December 2010 and April 2011.

CTR #	Priority Pollutants	C or Most Stringent WQO/WQC (µg/L)	MEC or Minimum DL (µg/L) ²³	B or Minimum DL (µg/L) ²³	RPA Results ²⁴
21	Carbon Tetrachloride	0.25	1.1	<0.50	No ²⁹
23	Chlorodibromomethane	0.41	2.2	0.46	Yes (Trigger 1)
24	Chloroethane	---	0.76	<0.50	Ud (No Criteria)
26	Chloroform	---	13	<0.50	Ud (No Criteria)
27	Dichlorobromomethane	0.56	12	<0.50	Yes (Trigger 1)
35	Methyl Chloride	---	0.99	<0.50	Ud (No Criteria)
36	Methylene Chloride	4.7	1.4	<0.50	No
39	Toluene	150	13	<0.30	No
68	Bis (2-Ethylhexyl)Phthalate	1.8	4.2 DNQ	<0.83	Ud (See below)
81	Di-n-Butyl Phthalate	2,700	3.8	<0.91	No
--	Ammonia (as N)	³⁰	4,500	---	Ud (No Criteria)
--	Nitrate (as N)	10,000	1,800	---	No

During the term of the previous permit, the Permittee sampled its effluent to the percolation ponds for priority pollutants during both the allowed discharge season and non-discharge season. The RPA is based on samples collected during both the allowed discharge season and non-discharge season due to the limited amount of data available, except where noted in the pollutant-specific discussion below.

Additional details regarding several constituents are included in the following paragraphs. The constituents discussed are those for which reasonable potential was found or for which a revised determination of no reasonable potential was made.

Copper. The CTR chronic criterion for protection of aquatic life is 13 µg/L. Effluent monitoring data submitted by the Permittee showed concentrations of total recoverable copper ranging from <2 µg/L to 18 µg/L in seven samples. The maximum observed upstream receiving water concentration for copper was 20 µg/L, based on six samples. A determination of reasonable potential has been made based on the MEC of 18 µg/L exceeding the most stringent water quality objective of 13 µg/L. Three of the effluent samples would have exceeded final effluent limitations for copper.

²⁹ The MEC was observed in March 2005. Carbon tetrachloride was not detected above the reporting level of 0.5 µg/L in the remaining six samples, including two subsequent samples collected in December 2010 and April 2011.

³⁰ Receiving water pH and temperature data are not available to determine appropriate water quality criteria for ammonia.

Lead. The CTR chronic criterion for protection of aquatic life for lead is 4.9 µg/L. Effluent monitoring data submitted by the Permittee showed concentrations of total recoverable lead ranging from 0.84 µg/L to <2 µg/L in six samples. Receiving monitoring data showed concentrations ranging from <0.60 µg/L to 4.1 µg/L, based on six samples. A determination of no reasonable potential has been made based on the MEC of 0.84 µg/L being less than the most stringent water quality objective of 4.9 µg/L.

Mercury. The CTR criterion for protection of human health for consumption of water and organisms is 0.050 µg/L. Effluent monitoring data submitted by the Permittee showed concentrations of mercury ranging from <0.2 µg/L to 0.0265 µg/L in eight samples. Receiving water monitoring data showed concentrations ranging from 0.0014 µg/L to 0.0523 µg/L. The maximum upstream receiving water concentration of 0.0523 µg/L was observed in April 2003. However, in the remaining six receiving water samples, mercury was not detected at concentrations exceeding the CTR criterion, including a subsequent sample collected in December 2010 at a concentration of 0.00226 µg/L. Based on updated receiving water monitoring data that was not available at the time Order No. R1-2006-0004 was adopted indicating that the discharge does not have reasonable potential to cause or contribute to an exceedance of the CTR criterion, this Order does not retain effluent limitations for mercury.

Nickel. The CTR chronic criterion for protection of aquatic life is 73 µg/L. Effluent monitoring data submitted by the Permittee showed concentrations of nickel ranging from <2 µg/L to 5.4 µg/L in seven samples. Each of the detected effluent samples were below the applicable reporting level of 10.0 µg/L and the applicable CTR criterion. Receiving water monitoring data showed concentrations ranging from <10 µg/L to 94 µg/L. The maximum upstream receiving water concentration of 94 µg/L was observed in April 2003. However, in the remaining five receiving water samples, nickel was not detected at concentrations exceeding the CTR criterion, including a subsequent sample collected in December 2010 at an estimated (i.e., j-flagged) concentration of 3.2 µg/L. Consistent with Order No. R1-2006-0004, a determination of no reasonable potential has been made because nickel was not detected in the effluent above the reporting level or the applicable CTR criterion.

Cyanide. The CTR chronic criterion for protection of aquatic life is 5.2 µg/L. Effluent monitoring data submitted by the Permittee showed concentrations of cyanide ranging from <2 µg/L to 17 µg/L in seven samples. Cyanide was detected in the effluent in August 2002 at a concentration of 17 µg/L, which was greater than the most stringent water quality objective of 5.2 µg/L. However, in the remaining six samples, cyanide was not detected at concentrations exceeding the CTR criterion. Cyanide was not detected in the upstream

receiving water, based on six samples. Based on updated effluent monitoring data that was not available at the time Order No. R1-2006-0049 was adopted indicating that the discharge does not have reasonable potential to cause or contribute to an exceedance of the CTR criterion, this Order does not retain effluent limitations for cyanide.

Dichlorobromomethane. Dichlorobromomethane (DCBM) is a component of a group of chemicals, commonly known as THMs, which are formed during the disinfection process for drinking water and wastewater treatment through the reaction of chlorine and organic and inorganic material. Other THMs include chloroform, bromoform, and chlorodibromomethane (CDBM). THMs are human carcinogens. The CTR criterion for protection of human health for consumption of water and organisms for DCBM is 0.56 µg/L.

Effluent monitoring data submitted by the Permittee showed concentrations of DCBM ranging from 0.23 µg/L to 12 µg/L in seven samples. Six samples exceeded the most stringent water quality objective of 0.56 µg/L. Higher effluent concentrations of 12 µg/L and 1.8 µg/L were observed during August 2002 and August 2004, during the non-discharge season; however, DCBM was also detected above the CTR criterion in three of four samples collected during the discharge season with a maximum of 4 µg/L in December 2010. DCBM was not detected in the upstream receiving water, based on six samples. A determination of reasonable potential has been made based on the MEC of 12 µg/L exceeding the most stringent water quality objective of 0.56 µg/L. Seven of the effluent samples would have exceeded the final effluent limitation for DCBM.

Chlorodibromomethane. CDBM is another THM. The CTR criterion for protection of human health for consumption of water and organisms for CDBM is 0.41 µg/L.

Effluent monitoring data submitted by the Permittee showed concentrations of CDBM ranging from <0.5 µg/L to 2.2 µg/L in six samples. Two samples exceeded the most stringent water quality objective of 0.41 µg/L. One of the detected samples, collected in August 2002, was collected during the summer season when discharges to the Russian River are prohibited. The Permittee has documented that it uses higher doses of chlorine during the hot summer months when algae in the treatment ponds adds to the chlorine demand. Therefore, the August 2002 sample result is not representative of effluent during the discharge season. The MEC of 2.2 µg/L was collected in December 2010, and is therefore a representative sample of the effluent during the discharge season. A determination of reasonable potential has been made based on the maximum effluent concentration of 2.2 µg/L exceeding the most stringent water quality objective of 0.41 µg/L. One of the effluent samples would have exceeded the final effluent limitations for CDBM.

Bis(2-Ethylhexyl) Phthalate. The CTR criterion for protection of human health for consumption of water and organisms for bis(2-ethylhexyl) phthalate is 1.8 µg/L. Effluent monitoring data submitted by the Permittee showed concentrations of bis(2-ethylhexyl) phthalate ranging from <0.83 µg/L to 4.2 µg/L in seven samples. Two samples collected in August 2004 and March 2005 contained concentrations of bis(2-ethylhexyl) phthalate at 3.4 µg/L and 4.2 µg/L, respectively. These concentrations are below the reporting level of 5 µg/L, but greater than the applicable CTR criterion of 1.8 µg/L. Monitoring data collected since the March 2005 detection in December 2010 and March 2011 were both non-detect with a minimum detection limit of 0.83 µg/L and a reporting level of 5 µg/L. Bis(2-ethylhexyl) phthalate was not detected in the upstream receiving water, based on seven samples. Sample contamination can result in detection of bis(2-ethylhexyl) phthalate where the parameter may not be present in concentrations to exceed water quality objectives. In order to determine if there is in fact reasonable potential, additional monitoring using a more sensitive reporting level is being required along with a reopener if sample results determine that reasonable potential does exist.

Carbon Tetrachloride. The CTR criterion for protection of human health for consumption of water and organisms for carbon tetrachloride is 0.25 µg/L. Effluent monitoring data submitted by the Permittee showed concentrations of carbon tetrachloride ranging from <0.5 µg/L to 1.1 µg/L in seven samples. Carbon tetrachloride was detected in the effluent in March 2005 at a concentration of 1.1 µg/L, which was greater than the reporting level of 0.5 µg/L. However, in the remaining six effluent samples, carbon tetrachloride was not detected above the reporting level of 0.5 µg/L, including two subsequent samples collected in December 2010 and April 2011. Carbon tetrachloride was not detected in the upstream receiving water, based on six samples. Based on updated effluent monitoring data that was not available at the time Order No. R1-2006-0004 was adopted indicating that the discharge does not have reasonable potential to cause or contribute to an exceedance of the CTR criterion, this Order does not retain effluent limitations for carbon tetrachloride.

4. WQBEL Calculations

Final WQBELs for copper, DCBM, and CDBM have been determined using the methods described in Section 1.4 of the SIP.

Step 1: For each priority pollutant that demonstrate reasonable potential, identify the applicable water quality criterion/objectives for the pollutant(s), and adjust the criterion or objective, if applicable. This step is described in sections IV.C.3.b and IV.C.3.c, above.

Step 2: 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:

$$ECA = C + D (C - B), \text{ where}$$

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 3: For each ECA based on an aquatic life criterion/objective (i.e., copper and 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 copper are shown in the table below. The LTAs are determined as follows.

Table F-6. Determination of Long Term Averages

Pollutant	ECA		ECA Multiplier		LTA (µg/L)	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Copper	20	13	0.32	0.53	6.4	6.9

Step 4: 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 CV for each of the pollutants is set equal to 0.60, respectively, and 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. From Table 2 of the SIP, the MDEL multipliers and the AMEL multipliers were

determined as shown in the table below. Final WQBELs for copper are determined as follows.

Table F-7. Determination of Final WQBELs Based on Aquatic Life Criteria

Pollutant	LTA (µg/L)	MDEL Multiplier	AMEL Multiplier	MDEL (µg/L)	AMEL (µg/L)
Copper	6.4	3.11	1.55	20	10

All effluent limitations were calculated using a default water effects ratio of 1.0 and default dissolved-to-total metal translators to convert water quality objectives from dissolved to total recoverable.

Step 5: When the most stringent water quality criterion/objective is a human health criterion/objective (as for CDBM and DCBM), the AMEL is set equal to the ECA. The CV for each of the pollutants was set equal to 0.60 and number of samples per month was set equal to four. From Table 2 of the SIP, when CV = 0.60 and n = 4, the MDEL multiplier at the 99th percentile occurrence probability equals 3.11, and the AMEL multiplier at the 95th percentile occurrence probability equals 1.55. The MDEL for protection of human health is calculated by multiplying the ECA by the ratio of the MDEL multiplier to the AMEL multiplier and the AMEL's equivalent to the ECA. Final WQBELs were determined as follows.

Table F-8. Determination of Final WQBELs Based on Human Health Criteria

Pollutant	Units	ECA	MDEL/AMEL	MDEL	AMEL
Chlorodibromomethane	µg/L	0.41	2.0	0.82	0.41
Dichlorobromomethane	µg/L	0.56	2.0	1.1	0.56

A summary of WQBELs established by the Order at Discharge Point 001 is given in the table below. The effluent limitation for pH is based on the Basin Plan water quality objective for pH.

**Summary of Water Quality-based Effluent Limitations
 Discharge Point 001**

Table F-9. Summary of Water Quality-based Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Chlorine, Total Residual	mg/L	0.01	--	0.02	--	--
Copper, Total Recoverable	µg/L	10	--	20	--	--
Chlorodibromomethane	µg/L	0.41	--	0.82	--	--
Dichlorobromomethane	µg/L	0.56	--	1.1	--	--

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	standard units	--	--	--	6.5	8.5

5. Whole Effluent Toxicity (WET)

Effluent limitations for whole effluent acute toxicity and monitoring triggers for 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 Permittee to conduct WET testing for acute and chronic toxicity, as specified in the MRP (Attachment E, section V).

a. Acute Aquatic Toxicity

Consistent with Order No. R1-2006-0004, 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 Permittee tests its effluent for acute toxicity using the rainbow trout, *Oncorhynchus mykiss*. During the term of the

previous Order, the Permittee did not discharge at Discharge Point 001 and did not conduct any acute toxicity testing.

b. 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 Permittee 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 during periods of discharge at Discharge Point 001 to demonstrate compliance with the narrative toxicity objective.

During the term of the previous Order, the Permittee did not discharge at Discharge Point 001, thus did not conduct any chronic toxicity testing. 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 a petition for State Water Board review 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 2003-012, *"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-2003-012 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 Permittee is required to conduct chronic WET testing at Discharge Point 001, as specified in the Monitoring and Reporting Program (Attachment E, section V) whenever there is a discharge. Furthermore, Special Provision VI.C.2.a of this Order requires the Permittee 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 Permittee is required to initiate a Toxicity Reduction Evaluation (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 Permittee 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.g of the MRP requires TUC to be calculated as 100/NOEC for purposes of determining if the Permittee'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 (TU_c) demonstrate that the discharge is in violation of the narrative toxicity water quality objective. Section VI.C.2.a.ii of the Order requires the Permittee to submit a TRE workplan for Executive Officer approval, at least six months in advance of any plans to discharge at Discharge Point 001. If any future accelerated sampling of the discharge demonstrates a pattern of toxicity exceeding the chronic toxicity trigger, the permit requires the Permittee to initiate a Toxicity Reduction Evaluation (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.ii requires the Permittee to maintain the TRE Work Plan to ensure the Permittee 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.

c. 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 unionized 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 (CO₂) 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. Unionized 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 unionized 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

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. All effluent limitations, standards, and conditions contained in this Order are at least as (or more) stringent as the effluent limitations in Order No. R1-2006-0004, except for cyanide, carbon tetrachloride, mercury, and settleable solids.

The previous permit contained effluent limitations for cyanide which were based on the CTR criteria for the protection of aquatic life and effluent limitations for carbon tetrachloride and mercury which were based on the CTR criteria for the protection of human health. As described further in section IV.C.3.c of this Fact Sheet, updated effluent and receiving water data that was not available at the time Order No. R1-2006-0004 was adopted indicates that the discharge does not have reasonable potential to cause or contribute to an exceedance of the applicable CTR criteria for cyanide, carbon tetrachloride and mercury. The previous permit also contained an effluent limitation for settleable solids requiring that effluent discharged to the Russian River shall not contain any measurable settleable solids and monitoring requirements for settleable solids for the Permittee to demonstrate compliance with the settleable solids effluent limitation. Settleable solids were not detected in the effluent based on daily monitoring during the term of Order No. R1-2006-0004. The updated monitoring data for 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 cyanide, carbon tetrachloride, mercury, and settleable solids are not included in the proposed Order and anti-backsliding requirements are satisfied.

With respect to discharges of chlorine residual from Discharge Point 001, new effluent limitations are established in this Order. In the previous Order, the effluent limitation was expressed as no detectable levels of chlorine residual in the discharge, using a method detection limit of 0.1 mg/L. The new limitations are expressed as an average monthly limitation of 0.01 mg/L and a maximum daily limitation of 0.02 mg/L. The new limitations established in the Order are numerically lower than the minimum detection limit for the final effluent limitation of the previous permit that required no detectable level of chlorine in the effluent at the point of discharge. Although no longer expressed as “non-detect”, the newly established effluent limitations are effectively more stringent limitations because the discharge is required to achieve an effluent concentration of chlorine residual that is numerically

lower than was required by the previous permit. Thus, anti-backsliding requirements are satisfied for chlorine residual.

2. Satisfaction of Antidegradation Policy

- a. Surface Water.** 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.
- b. Groundwater.** The beneficial uses of the underlying ground water are municipal and domestic supply, industrial service supply, industrial process supply, agricultural supply, and aquaculture, and Native American cultural uses. Groundwater limitations are required to protect the beneficial uses of the underlying groundwater.

State Water Board Resolution No. 68-16, requires, in part, that whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality water will be maintained until it is demonstrated to the state that any changes will be consistent with the maximum benefit to the people of the state, will not unreasonably affect beneficial uses of such water, and will not result in water quality less than prescribed in the policies.

3. 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 (BOD₅), total suspended solids (TSS), pH, and the minimum percent removal for BOD₅ and TSS. This Order's technology-based pollutant restrictions for Discharge Point 002 implement the minimum applicable federal technology-based requirements, including effluent limitations for BOD₅ based on secondary treatment and effluent limitations for TSS based on equivalent to secondary treatment, as discussed further in section IV.B.2.b of this Fact Sheet. In addition, this Order contains effluent limitations for BOD₅ and TSS, pH, and total coliform bacteria that apply to Discharge Point 001 that are more stringent than the minimum, federal technology-based requirements and 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 40 CFR 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 40 CFR 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 40 CFR 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.

E. Interim Effluent Limitations

This section is not applicable to the Permittee since the Order does not contain interim effluent limitations.

F. Land Discharge Specifications

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

G. Reclamation Specifications

This section is not applicable to the Permittee as treated wastewater is not reclaimed.

H. Other Requirements

- 1. Disinfection Process Requirements for Chlorination System.** This Order requires the Permittee to maintain a minimum chlorine residual of 1.5 mg/L at the end of the disinfection process to ensure the disinfection process achieves adequate pathogen reduction.

- 2. Filtration Process Requirements for Advanced Wastewater Treatment.** The turbidity requirements in section IV.D.2 of the Order are in accordance with the definition of tertiary treatment in 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 filtration and before discharge to the chlorine disinfection system. This requirement shall apply if and when the Permittee determines the need to discharge to the Russian River or to develop a reclamation system.

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, native american culture, and aquaculture.
- 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 title 22, chapter 15, division 4, article 4, section 64435 (Tables 2 and 3), and section 64444.5 (Table 5) of the CCR, and listed in Table 3-2 of the Basin Plan.

5. The Permittee has conducted groundwater monitoring in a network of 10 groundwater monitoring wells since 1997. An analysis was conducted using monitoring data collected between January 1997 and July 2011 at upgradient monitoring well MW-15 and downgradient wells MW-9 and MW-13 to determine if discharges to groundwater are causing exceedances of applicable water quality objectives. Wells MW-9 and MW-13 were selected for the analysis because these wells are most immediately downgradient of the disposal ponds and are likely to indicate any groundwater impacts from the Facility. Well MW-15 was selected as the background well because it is upgradient of the Facility and the available data was more amenable to quick analysis than was the historical data from Well MW-16.

Although the analysis indicates that electrical conductivity concentrations at downgradient Well MW-13 are greater than upgradient concentrations and chloride concentrations at both downgradient wells are greater than upgradient concentrations, electrical conductivity and chloride concentrations in both the upgradient and downgradient wells do not exceed the applicable MCLs.

For nitrate, the number of non-detects in the data make the statistical analysis more complicated; however, based on average concentrations and comparisons of data between the upgradient and downgradient wells from discrete monitoring events, it appears that downgradient nitrate concentrations are generally higher than concentrations detected at the upgradient well and may exceed the MCL of 10 mg/L (as nitrogen). In order to make more certain determinations regarding the potential for discharges to the percolation ponds to cause exceedances of applicable water quality objectives in the groundwater, this Order retains groundwater limitations and a requirement for groundwater monitoring from Order No. R1-2006-0004. As discussed further in section VI.F.2 of this Fact Sheet, the groundwater monitoring frequency is reduced to quarterly, but includes additional quality assurance/quality control (QA/QC) procedures to improve the interpretability of the data. The MRP requires that the QA/QC plan include protocol for testing of an additional sample anytime there are detections of the monitored pollutants above specific thresholds, to improve the interpretability of the groundwater data.

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), establishes monitoring and reporting requirements to implement federal and state requirements. This Monitoring and Reporting Program is provided in Attachment E of this permit. 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, BOD₅, and TSS are retained from the previous permit, Order No. R1-2006-0004, and are necessary to determine compliance with the Order's 85 percent removal requirement for these parameters.

Order No. R1-2006-0004 required weekly influent monitoring for settleable solids. Based on monitoring demonstrating that settleable solids have not been detected in the effluent, this Order discontinues influent monitoring requirements for settleable solids.

B. Effluent Monitoring

Effluent monitoring requirements are necessary to determine compliance with prohibitions and/or effluent limitations established by the Order. Monitoring at Monitoring Locations EFF-001 and EFF-002 is necessary to demonstrate compliance with technology-based effluent limitations, demonstrate compliance with WQBELs, and demonstrate whether or not the discharge poses reasonable potential for a pollutant to exceed any numeric or narrative water quality objectives.

Effluent monitoring requirements for Discharge Point 001 at Monitoring Location EFF-001 (discharges to the Russian River) are similar to monitoring requirements in the previous Order. Changes in the effluent monitoring requirements for Discharge Point 001 at Monitoring Location EFF-001 are as follows:

1. A new requirement for effluent hardness monitoring has been added to the MRP due to the fact that the effluent limitations in this Order are based on effluent hardness in accordance with the findings of the 2006 Study described in section VI.C.3.b of this Fact Sheet.

Monitoring of effluent and receiving water hardness must coincide with compliance monitoring for the hardness-dependent metal, copper.

2. Order No. R1-2006-0004 established effluent limitations and monitoring for settleable solids, cyanide, mercury and carbon tetrachloride. Based on updated monitoring data, these constituents do not exhibit reasonable potential to cause or contribute to an exceedance of applicable water quality objectives and effluent limitations have not been retained. Therefore, this Order does not retain effluent monitoring requirements for settleable solids, cyanide, mercury, and carbon tetrachloride.
3. Order No. R1-2006-0004 established monitoring requirements for lead based on the need to obtain additional monitoring data to complete a reasonable potential analysis. Based on this updated monitoring data, lead does not exhibit reasonable potential to cause or contribute to an exceedance of the water quality objectives for lead. Therefore, this Order does not retain monitoring requirements for lead.

4. Effluent monitoring for CTR priority pollutants have been removed from this Monitoring Point and moved to Discharge Monitoring Point 002. Although the Permittee does not discharge at Discharge Point 001 it is important to obtain CTR priority pollutant data at least one time each permit term in order to assess reasonable potential in the event that the Permittee has a need to discharge to the Russian River.

Most effluent monitoring requirements for Discharge Point 002 at Monitoring Location EFF-002 (effluent discharge to percolation ponds) are retained from the previous permit. The Permittee currently discharges exclusively to the percolation ponds, as the Permittee has sufficient percolation pond capacity to handle its effluent disposal year-round and direct discharges to the Russian River are prohibited until the Facility is upgraded to provide advanced wastewater treatment. In order to provide sufficient data for an RPA and establish protective effluent limitations for discharges to the Russian River, when they commence, this Order requires additional monitoring to characterize the effluent to the percolation ponds during the discharge season as follows:

1. A new requirement for effluent hardness monitoring has been established due to the fact that the effluent limitations in this Order are based on effluent hardness in accordance with the findings of the 2006 Study described in section VI.C.3.b of this Fact Sheet.
2. This Order includes effluent limitations for copper, chlorodibromomethane, and dichlorobromomethane. In order to further characterize the effluent for these pollutants, this Order requires monitoring four times per discharge season. These requirements are established at EFF-002 because the Permittee has not discharged at EFF-001 for some time, yet sufficient data is needed to determine reasonable potential. Effluent monitoring at Monitoring Location EFF-002 will not be used to determine compliance with effluent limitations for these constituents at Discharge Point 001.
3. Additional information is necessary to characterize the effluent and conduct the RPA for bromoform, chloroform, and bis(2-ethylhexyl) phthalate. Therefore, this Order requires monitoring four times per discharge season for these constituents.
4. Requirements to monitor nitrate, total ammonia, and total phosphorus in the effluent monthly have been established, because nitrogen and phosphorus containing compounds are a common component of domestic wastewaters. Monitoring data will be used to ensure that nitrogen is not being converted to nitrate at concentrations that may exceed the CDPH drinking water objective for nitrate. In addition, nitrogen compounds can have a directly toxic (e.g., unionized ammonia) or a detrimental biostimulatory effect on receiving waters. The Regional Water Board is including such monitoring requirements in the discharge permits of POTWs in the North Coast Region to evaluate the need for effluent limitations for these pollutants.

5. Monitoring requirements for temperature have been established to collect information to properly adjust the pH- and temperature-dependent criteria for ammonia.
6. Monitoring for the title 22 pollutants once during the permit term has been established to provide characterization of the 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 CCR. 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.
7. In accordance with Section 1.3 of the SIP, periodic monitoring is required for CTR priority pollutants for which criteria or objectives apply and for which no effluent limitations have been established. Consistent with Order No. R1-2006-0004, CTR monitoring is required once during the permit term.

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 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 Permittee as treated wastewater is not discharged to or applied to land for the purpose of disposal.

E. Reclamation Monitoring Requirements

This section is not applicable to the Permittee as treated wastewater is not reclaimed.

F. Receiving Water Monitoring

1. Surface Water

Receiving water monitoring requirements for dissolved oxygen, pH, turbidity, temperature, hardness, nutrients, BOD₅, TSS, copper, and stream flow are retained from Order No. R1-2006-0004.

The following changes have been made to the receiving water monitoring requirements:

- a. Because the Permittee did not discharge directly to the Russian River during the term of Order No. R1-2006-0004 and receiving water monitoring was only required during periods of discharge, limited receiving water data is available. Therefore, in order to provide sufficient data to correctly adjust water quality criteria for an RPA, this Order establishes monitoring for pH, temperature, and hardness four times per discharge season when discharging to the percolation ponds.
- b. Order No. R1-2006-0004 established monthly receiving water monitoring for lead, carbon tetrachloride, dichlorobromomethane, and bis(2-ethylhexyl) phthalate. These constituents have not been detected in the upstream receiving water in concentrations exceeding applicable water quality objectives. Therefore, receiving water monitoring requirements for lead, carbon tetrachloride, dichlorobromomethane, and bis(2-ethylhexyl) phthalate are not retained in this Order.
- c. Water quality criteria for CTR priority pollutants are applicable to the Russian River, and therefore characterization of background conditions is necessary to assess impacts of the discharge. In addition, reasonable potential analyses, conducted in accordance with procedures established by the SIP, require characterization of background levels of the toxic pollutants.

2. Groundwater

Order No. R1-2006-0004 required groundwater monitoring six times per year for chloride, total coliform organisms, nitrate, pH, and electrical conductivity in order to evaluate the potential for effluent disposed in the percolation/evaporation ponds to cause or contribute to an exceedance of groundwater objectives. The groundwater monitoring network includes 10 groundwater monitoring wells, including wells located upgradient and downgradient of the ponds. Historical groundwater monitoring data has been collected since 1997, which provides a robust dataset for determining the impacts of the Facility on the underlying groundwater. Therefore, the monitoring frequency for chloride, total coliform bacteria, nitrate, pH, and specific conductance has been reduced to quarterly monitoring. Monitoring on a less frequent basis will ensure that the sequence of measurements taken at a given well are independent of each other (i.e., that multiple samples are not taken from the same pocket of slow-moving groundwater). In addition, the groundwater monitoring program includes an explicit requirement for the Permittee to develop a written quality assurance/quality control plan for its groundwater monitoring program.

G. Other Monitoring Requirements

Monitoring requirements for the disinfection process and the filtration process are established in this Order to demonstrate that the disinfection process is providing effective chlorination and that the filtration process is performing in accordance with requirements established at title 22, division 4, chapter 3 of the CCR.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

1. Federal Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Permittee must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Permittee. The rationale for the special provisions contained in the Order is provided in section VII.B, below.

40 CFR 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. 40 CFR 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 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 Permittee 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 Permittee to notify Regional Water Board staff, orally and in writing, in the event that the Permittee does not comply or will be unable to comply with any Order requirement. This provision requires the Permittee to make direct contact with a Regional Water Board staff person.

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:
 - i. 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.
 - ii. 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 Permittee 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 Permittee 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 Permittee provide new information and justification for applying a water effects ratio 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 nitrate and monitoring requirements for the effluent and receiving water for nutrients (i.e., ammonia, nitrate, and phosphorus). 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 Permittee.

2. Special Studies and Additional Monitoring Requirements

- a. Toxicity Reduction Requirements (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 Permittee to maintain an up-to-date TRE Work Plan for approval by the Executive Officer, to ensure the Permittee 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.

3. Best Management Practices and Pollution Prevention

- a. Pollutant Minimization Plan.** 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

- a.** Provision VI.C.4 is included in this Order because 40 CFR 122.41(e) 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)

- i. **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 Permittee'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 of the Order. The Permittee must comply with both the General Order and this Order. The Permittee 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 Permittee 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.

- ii. **Sanitary Sewer Overflows.** This Order includes provisions (Provision VI.C.5.(a)(ii), 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 Permittee 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 Permittee to SSOs to protect public health and water quality.

b. Source Control Program (Special Provision VI.C.5.b). Commercial/industrial dischargers to the Facility include restaurants, three wineries, a brewery, MGM brakes, and a groundwater remediation treatment system. The Permittee has a water control ordinance to permit industrial discharges to the system. During the term of Order No. R1-2006-0004, a pattern of increasing pH was observed in winter 2010-2011, with a peak of 8.9. The specific cause of the pH increase was unknown, but the Permittee hypothesized that the increasing pH may be due to the discharge from the brewery. Additionally, the Permittee noted during an October 18, 2011 site visit that discharges from the brewery have occasionally resulted in sewer main backups. The Permittee issued an industrial waste permit to the brewery that requires them to conduct routine monitoring on an annual basis; limits for peak daily and peak hourly flow, BOD5, TSS, total Kjeldahl nitrogen, and pH; filtration of all wastewater; maintenance of a yeast recycling program; and maintenance of a mixing and surge tank. Pursuant to Special Provision VI.C.5.b.i, the Permittee shall 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, particularly the brewery if it is determined to be interfering with the proper operation of the Facility.

40 CFR 403.8(a) requires POTWs with a total design flow greater than 5 mgd and receiving pollutants which pass through or interfere with the operation of the POTW to establish a POTW Pretreatment Program. The Regional Water Board may also require that a POTW with a design flow of 5 mgd or less develop a POTW Pretreatment Program if the nature or volume of the industrial influent, treatment process upsets, violations of POTW effluent limitations, contamination of municipal sludge, or other circumstances warrant in order to prevent interference or pass through. The Permittee reports that there are no known industrial wastes subject to regulation under the NPDES Pretreatment Program being discharged to the Facility and the average dry weather design flow of the Facility is less than 5 mgd; therefore, the Order does not require the Permittee to develop a pretreatment program that conforms to federal regulations. However, in order to prevent interference with the POTW or pass through of pollutants to the receiving water, the Order requires the Permittee to conduct an industrial waste survey to identify all non-domestic facilities in the service area that might discharge pollutants that could pass through or interfere with the operation or performance of the Facility and to monitor the influent for priority pollutants. If the results of the industrial waste survey or influent monitoring indicate that a pretreatment program is necessary, pursuant to 40 CFR 403.8(3), the Regional Water Board may reopen this permit to require the Permittee to develop a pretreatment program.

Water Code section 13263.3(d)(1) allows the Regional Water Board to require a discharger to complete and implement a pollution prevention plan if pollution

prevention is necessary to achieve a water quality objective, to include, pursuant to Water Code section 13263.3(d)(3), an analysis of the methods that could be used to prevent the discharge of the pollutants into the POTW. These methods can include application of local limits to industrial or commercial dischargers, pollution prevention techniques, public education and outreach, or other innovative and alternative approaches to reduce discharges of pollutants to the POTW. The analysis also shall identify sources, or potential sources, not within the ability or authority of the POTW to control, such as pollutants in the potable water supply, airborne pollutants, pharmaceuticals, or pesticides, and estimate the magnitude of those sources, to the extent feasible. This Order includes requirements for the Permittee to implement a source identification and reduction program.

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:

- i. Water and sewer billing records
- ii. Applications for sewer service
- iii. Local telephone directories
- iv. Chamber of Commerce and local business directories
- v. Business license records
- vi. POTW and wastewater collection personnel and field observations
- vii. Business associations
- viii. The internet
- ix. Industrial and non-residential sewer use permit records

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. Sludge is retained and reduced in volume in the aeration and settling ponds and removed for off-site disposal as necessary to maintain the operating efficiency of the ponds. In February 2012, the Permittee communicated to Regional Water Board staff via email that it plans to dredge part of the sludge from the settling pond in the near future and recognizes the need to perform additional sludge dredging during the term of this Order. The

Permittee has indicated that all screenings, sludges, and solids removed from the liquid waste stream are currently disposed of off-site at a permitted point of disposal (typically a municipal solid waste landfill) in accordance with all applicable regulations and permit requirements. See Fact Sheet section II.A for more detail.

- d. Statewide General WDRs for Discharge of Biosolids to Land (Special Provision VI.C.5.d).** This provision requires the Permittee 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 Permittee 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, section 3680 of the CCR.
- f. Adequate Capacity (Special Provision VI.C.5.f).** The goal of this provision is to ensure appropriate and timely planning by the Permittee to ensure adequate capacity for the protection of public health and water quality.

6. Other Special Provisions

- a. Storm Water (Special Provision VI.C.6.a).** As described in the Order, the Permittee is currently not required to enroll under 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 because all storm water within the Facility's NPDES permitted process areas are captured by the aeration and percolation ponds and only storm water from the operations building and parking lot discharges to a surface drainage that is tributary to the Russian River.

7. Compliance Schedules (Special Provision VI.C.7)

This section is not applicable to the Permittee.

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, North Coast Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve

as a National Pollutant Discharge Elimination System (NPDES) permit for the City of Cloverdale Wastewater Treatment Facility. 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 Permittee 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 March 17, 2012.

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 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 **April 13, 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: **June 7, 2012**
Time: **9:00 a.m.** or as announced in the Regional Water Board's agenda
Location: Willow Creek Community Services District
Kimtu Cookhouse/Lodge
135 Willow Road
Willow Creek, 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 person affected by this action of the Regional Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with Water Code section 13320 and title 23, section 2050 of the CCR. The petition must be received by the State Water Board within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request. In addition to filing a petition with the State Water Board, any person affected by this Order may request the Regional Water Board to reconsider the Order. To be timely, such request must be made within 30 days of the date of this Order. Note that even if reconsideration by the Regional water Board is sought, filing a petition with the State Water Board within the 30-day period is necessary to preserve the petitioner's legal rights. If the Permittee chooses to request reconsideration of this Order or file a petition with the State Water Board, the Permittee must comply with the Order while the request for reconsideration and/or petition is being considered. 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 Report of Waste Discharge (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

**City of Cloverdale Wastewater Treatment Facility
 RPA
 January 2012**

CTR No.	Constituent	Units	Qualifier	MEC	Qualifier	B	C	CMC	CCC	Water & Org	Org. Only	MCL	Reasonable Potential
1	Antimony	µg/L	<	1.0		2.4	6	---	---	14	4,300	6	No
2	Arsenic	µg/L		0.38		4.6	50	340	150	---	---	50	No
3	Beryllium	µg/L	<	0.30		0.23	4	---	---	---	---	4.0	No
4	Cadmium	µg/L		0.24		0.32	3.4	6.9	3.4	---	---	5.0	No
5a	Chromium (III)	µg/L		1.5		62	287	2,407	287	---	---	---	No
5b	Chromium (VI)	µg/L	<	5.0	<	5.0	11	16	11	---	---	50	No
6	Copper	µg/L		18		20	13	20	13	1,300	---	---	Yes
7	Lead	µg/L		1.0		4.1	4.9	124	4.9	---	---	---	No
8	Mercury	µg/L		0.0265		0.05230	0.05	---	---	0.050	0.051	2.0	No
9	Nickel	µg/L		5.4		94	73	657	73	610	4,600	100	No
10	Selenium	µg/L		0.58		0.80	5	---	5	---	---	50	No
11	Silver	µg/L	<	3.0		2.7	6.3	6.3	---	---	---	---	No
12	Thallium	µg/L		0.37		0.36	1.7	---	---	1.7	6.3	2	No
13	Zinc	µg/L		53		55	168	168	168	---	---	---	No
14	Cyanide	µg/L	<	17	<	2.0	5.2	22	5.2	700	220,000	150	Yes
15	Asbestos	MFL	<	0.021		20.128	7	---	---	7	---	7	No
16	2,3,7,8 TCDD	µg/L	<	5.36E-07	<	5.20E-07	1.3E-08	---	---	1.3E-08	1.4E-08	3.0E-05	No
17	Acrolein	µg/L	<	2.0	<	2.0	320	---	---	320	780	---	No
18	Acrylonitrile	µg/L	<	2.0	<	2.0	0.059	---	---	0.059	0.66	---	No
19	Benzene	µg/L	<	0.30	<	0.30	1	---	---	1.2	71	1	No
20	Bromoform	µg/L	<	0.50		8.4	4.3	---	---	4.3	360	---	No
21	Carbon Tetrachloride	µg/L	<	1.1	<	0.50	0.25	---	---	0.25	4.4	0.5	No
22	Chlorobenzene	µg/L	<	0.50	<	0.50	70	---	---	680	21,000	70	No
23	Chlorodibromomethane	µg/L		2.2		0.46	0.41	---	---	0.41	34	---	Yes
24	Chloroethane	µg/L		0.76	<	0.50	No Criteria	---	---	---	---	---	No
25	2-Chloroethylvinyl ether	µg/L	<	1.0	<	1.0	No Criteria	---	---	---	---	---	No
26	Chloroform	µg/L	<	13	<	0.50	No Criteria	---	---	---	---	---	No
27	Dichlorobromomethane	µg/L		12	<	0.50	0.56	---	---	0.56	46	---	Yes
28	1,1-Dichloroethane	µg/L	<	0.50	<	0.50	5	---	---	---	---	5	No
29	1,2-Dichloroethane	µg/L	<	0.50	<	0.50	0.38	---	---	0.38	99	0.5	No
30	1,1-Dichloroethylene	µg/L	<	0.50	<	0.50	0.057	---	---	0.057	3.2	6	No
31	1,2-Dichloropropane	µg/L	<	0.50	<	0.50	0.52	---	---	0.52	39	5	No
32	1,3-Dichloropropylene	µg/L	<	0.50	<	0.50	0.5	---	---	10	1,700	0.5	No
33	Ethylbenzene	µg/L	<	0.50	<	0.50	300	---	---	3,100	29,000	300	No
34	Methyl Bromide	µg/L	<	0.50	<	0.50	48	---	---	48	4,000	---	No
35	Methyl Chloride	µg/L		0.99	<	0.50	No Criteria	---	---	---	---	---	No
36	Methylene Chloride	µg/L	<	1.4	<	0.50	4.7	---	---	4.7	1,600	5	No
37	1,1,2,2-Tetrachloroethane	µg/L	<	0.50	<	0.50	0.17	---	---	0.17	11	1	No

CTR No.	Constituent	Units	Qualifier	MEC	Qualifier	B	C	CMC	CCC	Water & Org	Org-Only	MCL	Reasonable Potential
38	Tetrachloroethylene	µg/L	<	0.50	<	0.50	0.8	---	---	0.8	8.85	5	No
39	Toluene	µg/L	<	13	<	0.30	150	---	---	6800	200,000	150	No
40	1,2-Trans-Dichloroethylene	µg/L	<	0.5	<	0.50	10	---	---	700	140,000	10	No
41	1,1,1-Trichloroethane	µg/L	<	0.5	<	0.50	200	---	---	---	---	200	No
42	1,1,2-Trichloroethane	µg/L	<	0.5	<	0.50	0.6	---	---	0.6	42	5	No
43	Trichloroethylene	µg/L	<	0.5	<	0.50	2.7	---	---	2.7	81	5	No
44	Vinyl Chloride	µg/L	<	0.5	<	0.50	0.5	---	---	2	525	0.5	No
45	2-Chlorophenol	µg/L	<	0.66	<	0.66	120	---	---	120	400	---	No
46	2,4-Dichlorophenol	µg/L	<	0.66	<	0.66	93	---	---	93	790	---	No
47	2,4-Dimethylphenol	µg/L	<	1.2	<	1.2	540	---	---	540	2,300	---	No
48	2-Methyl- 4,6-Dinitrophenol	µg/L	<	0.75	<	0.75	13.4	---	---	13.4	765	---	No
49	2,4-Dinitrophenol	µg/L	<	1.3	<	1.3	70	---	---	70	14,000	---	No
50	2-Nitrophenol	µg/L	<	0.9	<	0.9	No Criteria	---	---	---	---	---	No
51	4-Nitrophenol	µg/L	<	0.99	<	0.99	No Criteria	---	---	---	---	---	No
52	3-Methyl 4-Chlorophenol	µg/L	<	0.58	<	0.58	No Criteria	---	---	---	---	---	No
53	Pentachlorophenol	µg/L	<	0.2	<	1.4	0.28	3.2	2.4	0.28	8.2	1	No
54	Phenol	µg/L	<	0.46	<	0.46	21000	---	---	21000	4,600,000	---	No
55	2,4,6-Trichlorophenol	µg/L	<	0.74	<	0.74	2.1	---	---	2.1	6.5	---	No
56	Acenaphthene	µg/L	<	0.57	<	0.57	1200	---	---	1200	2,700	---	No
57	Acenaphthylene	µg/L	<	0.48	<	0.48	No Criteria	---	---	---	---	---	No
58	Anthracene	µg/L	<	0.39	<	0.39	9600	---	---	9600	110,000	---	No
59	Benzidine	µg/L	<	3.4	<	3.4	0.00012	---	---	0.00012	0.00054	---	No
60	Benzo(a)Anthracene	µg/L	<	0.39	<	0.39	0.0044	---	---	0.0044	0.049	---	No
61	Benzo(a)Pyrene	µg/L	<	0.50	<	0.50	0.0044	---	---	0.0044	0.049	0.2	No
62	Benzo(b)Fluoranthene	µg/L	<	0.64	<	0.64	0.0044	---	---	0.0044	0.049	---	No
63	Benzo(ghi)Perylene	µg/L	<	0.93	<	0.93	No Criteria	---	---	---	---	---	No
64	Benzo(k)Fluoranthene	µg/L	<	0.34	<	0.34	0.0044	---	---	0.0044	0.049	---	No
65	Bis(2-Chloroethoxy)Methane	µg/L	<	0.81	<	0.81	No Criteria	---	---	---	---	---	No
66	Bis(2-Chloroethyl)Ether	µg/L	<	0.14	<	0.14	0.031	---	---	0.031	1.4	---	No
67	Bis(2-Chloroisopropyl)Ether	µg/L	<	0.41	<	0.41	1400	---	---	1400	170,000	---	No
68	Bis(2-Ethylhexyl)Phthalate	µg/L	<	4.2	<	0.83	1.8	---	---	1.8	5.9	4	No
69	4-Bromophenyl Phenyl Ether	µg/L	<	0.43	<	0.43	No Criteria	---	---	---	---	---	No
70	Butylbenzyl Phthalate	µg/L	<	0.64	<	0.64	3000	---	---	3000	5,200	---	No
71	2-Chloronaphthalene	µg/L	<	0.57	<	0.57	1700	---	---	1700	4,300	---	No
72	4-Chlorophenyl Phenyl Ether	µg/L	<	0.93	<	0.93	No Criteria	---	---	---	---	---	No
73	Chrysene	µg/L	<	0.76	<	0.76	0.0044	---	---	0.0044	0.049	---	No
74	Dibenzo(a,h)Anthracene	µg/L	<	0.83	<	0.83	0.0044	---	---	0.0044	0.049	---	No
75	1,2-Dichlorobenzene	µg/L	<	0.50	<	0.50	600	---	---	2700	17,000	600	No
76	1,3-Dichlorobenzene	µg/L	<	0.50	<	0.50	400	---	---	400	2,600	---	No
77	1,4-Dichlorobenzene	µg/L	<	0.50	<	0.50	5	---	---	400	2,600	5	No
78	3,3 Dichlorobenzidine	µg/L	<	2.0	<	2.0	0.04	---	---	0.04	0.770	---	No
79	Diethyl Phthalate	µg/L	<	0.86	<	0.86	23000	---	---	23000	120,000	---	No
80	Dimethyl Phthalate	µg/L	<	0.68	<	0.68	313000	---	---	313000	2,900,000	---	No

CTR No.	Constituent	Units	Qualifier	MEC	Qualifier	B	C	CMC	CCC	Water & Org	Org-Only	MCL	Reasonable Potential
81	Di-n-Butyl Phthalate	µg/L	<	3.8	<	0.91	2700	---	---	2700	12,000	---	No
82	2,4-Dinitrotoluene	µg/L	<	0.68	<	0.68	0.11	---	---	0.11	9.1	---	No
83	2,6-Dinitrotoluene	µg/L	<	0.54	<	0.54	No Criteria	---	---	---	---	---	No
84	Di-n-Octyl Phthalate	µg/L	<	0.65	<	0.65	No Criteria	---	---	---	---	---	No
85	1,2-Diphenylhydrazine	µg/L	<	0.33	<	0.33	0.04	---	---	0.04	0.54	---	No
86	Fluoranthene	µg/L	<	0.76	<	0.76	300	---	---	300	370	---	No
87	Fluorene	µg/L	<	0.81	<	0.81	1300	---	---	1300	14,000	---	No
88	Hexachlorobenzene	µg/L	<	0.50	<	0.89	0.00075	---	---	0.00075	0.00077	1	No
89	Hexachlorobutadiene	µg/L	<	0.84	<	0.84	0.44	---	---	0.44	50	---	No
90	Hexachlorocyclopentadiene	µg/L	<	0.45	<	0.45	50	---	---	240	17,000	50	No
91	Hexachloroethane	µg/L	<	0.58	<	0.58	1.9	---	---	1.9	8.9	---	No
92	Indeno(1,2,3-cd)Pyrene	µg/L	<	0.63	<	0.63	0.0044	---	---	0.0044	0.049	---	No
93	Isophorone	µg/L	<	0.81	<	0.81	8.4	---	---	8.4	600	---	No
94	Naphthalene	µg/L	<	0.66	<	0.66	No Criteria	---	---	---	---	---	No
95	Nitrobenzene	µg/L	<	0.74	<	0.74	17	---	---	17	1,900	---	No
96	N-Nitrosodimethylamine	µg/L	<	1.10	<	1.1	0.00069	---	---	0.00069	8.1	---	No
97	N-Nitrosodi-n-Propylamine	µg/L	<	0.85	<	0.85	0.005	---	---	0.005	1.4	---	No
98	N-Nitrosodiphenylamine	µg/L	<	0.90	<	0.90	5	---	---	5	16	---	No
99	Phenanthrene	µg/L	<	0.65	<	0.65	No Criteria	---	---	---	---	---	No
100	Pyrene	µg/L	<	0.45	<	0.45	960	---	---	960	11,000	---	No
101	1,2,4-Trichlorobenzene	µg/L	<	0.50	<	0.59	5	---	---	---	---	5	No
102	Aldrin	µg/L	<	0.0040	<	0.0040	0.00013	3	---	0.00013	0.0014	---	No
103	alpha-BHC	µg/L	<	0.0020	<	0.0020	0.0039	---	---	0.0039	0.013	---	No
104	beta-BHC	µg/L	<	0.0020	<	0.0020	0.014	---	---	0.014	0.046	---	No
105	gamma-BHC	µg/L	<	0.0020	<	0.0020	0.019	0.95	---	0.019	0.063	0.2	No
106	delta-BHC	µg/L	<	0.0010	<	0.0010	No Criteria	---	---	---	---	---	No
107	Chlordane	µg/L	<	0.035	<	0.035	0.00057	2.4	0.0043	0.00057	0.00059	0.1	No
108	4,4'-DDT	µg/L	<	0.0050	<	0.0050	0.00059	1.1	0.001	0.00059	0.00059	---	No
109	4,4'-DDE	µg/L	<	0.0030	<	0.0030	0.00059	---	---	0.00059	0.00059	---	No
110	4,4'-DDD	µg/L	<	0.0020	<	0.0020	0.00083	---	---	0.00083	0.00084	---	No
111	Dieldrin	µg/L	<	0.0020	<	0.0020	0.00014	0.24	0.056	0.00014	0.00014	---	No
112	alpha-Endosulfan	µg/L	<	0.0030	<	0.0030	0.056	0.22	0.056	110	240	---	No
113	beta-Endosulfan	µg/L	<	0.0020	<	0.0020	0.056	0.22	0.056	110	240	---	No
114	Endosulfan Sulfate	µg/L	<	0.0020	<	0.0020	110	---	---	110	240	---	No
115	Endrin	µg/L	<	0.0030	<	0.0030	0.036	0.086	0.036	0.76	0.81	2	No
116	Endrin Aldehyde	µg/L	<	0.0020	<	0.0020	0.76	---	---	0.76	0.81	---	No
117	Heptachlor	µg/L	<	0.0020	<	0.0020	0.00021	0.52	0.0038	0.00021	0.00021	0.01	No
118	Heptachlor Epoxide	µg/L	<	0.0020	<	0.0020	0.0001	0.52	0.0038	0.0001	0.00011	0.01	No
119-125	PCBs sum	µg/L	<	0.020	<	0.020	0.00017	---	0.014	0.00017	0.00017	0.5	No
126	Toxaphene	µg/L	<	0.45	<	0.45	0.0002	0.73	0.0002	0.00073	0.00075	3	No
	Ammonia Nitrogen, Total (as N)	µg/L		4500			No Criteria	---	---	---	---	---	No
	Nitrate Nitrogen, Total (as N)	µg/L		1800			10000	---	---	---	---	10000	No