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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

NPDES regulations at 40 CFR 122.48 require that all NPDES Orders specify monitoring and reporting requirements. CWC Sections 13267 and 13383 also authorize the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and State 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 Discharger monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 Code of Federal Regulations (CFR) Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the monthly and annual discharger monitoring reports.

II. MONITORING LOCATIONS

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

Discharge Point Name	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude when available)
---	M-INF	Untreated wastewater influent collected at the plant headworks
---	M-CCC	Effluent from the chlorine contact chamber prior to dechlorination for purposes of measuring chlorine residual
001	M-001	Treated wastewater downstream of the dechlorination facilities and before effluent contacts receiving water
Receiving Water	R-001	Eel River surface water upstream beyond influence of the discharge
Receiving Water	R-002	Eel River surface water at the point of discharge or other location approved by the Executive Officer

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location M-INF

1. The Discharger shall monitor influent to the facility Monitoring Location Name M-INF as follows.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow (Mean)	MGD	Continuous	Daily	Meter
BOD_5	mg/L	8 Hour Composite	Weekly	Standard Methods[1]
TSS	mg/L	8 Hour Composite	Weekly	Standard Methods

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

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location M-CCC

The Discharger shall monitor the discharge from the chorine contact chamber prior to dechlorination at Monitoring Location M-CCC as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Chlorine Residual	mg/L	Grab	Daily	Standard Methods

B. Monitoring Location M-001

1. The Discharger shall monitor treated wastewater at Monitoring Locations M-001 as follows.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow (Mean)	MGD	Continuous	Daily	Meter
BOD_5	mg/L	8 Hour Composite	Weekly	Standard Methods
TSS	mg/L	8 Hour Composite	Weekly	Standard Methods
pH	Standard Units	Grab	Weekly	Standard Methods
Settleable solids	ml/L	Grab	Weekly	Standard Methods
Chlorine Residual	mg/L	Grab	Daily	Standard Methods
Coliform Bacteria	MPN/100 ml	Grab	Weekly	Standard Methods
Copper	µg/L	8 Hour Composite	6x/Year[2]	Standard Methods
Cyanide	µg/L	8 Hour Composite	6x/Year[2]	Standard Methods
Dichlorobromomethane	µg/L	grab	6x/Year[2]	Standard Methods
Methyl tertiary butyl ether (MtBE)	µg/L	grab	6x/Year[2]	Standard Methods
Acute Toxicity	TUa	Grab	2x / Year	Requirements In Section V.A. Below
Chronic Toxicity	TUc	Grab	1x / Year	Requirements In Section V.B. Below
Priority Pollutants[3]	µg/L	Grab	1x / Order Term	Standard Methods

[2] An effort shall be made to space sampling frequency equally across the year. At a minimum 3 of the 6 required samples shall be collected during the winter discharge season. Sampling shall be increased to monthly after May 18, 2010.

[3] Those pollutants identified as Compound Nos. 1 – 126 by the California Toxics Rule at 40 CFR 131.38 (b) (1). Samples shall be collected during a dry weather period and on the same day as receiving water samples are collected for analysis of the priority pollutants. Analyses for the priority pollutants shall be conducted in accordance to methods established at 40 CFR 136, or if no method is specified for a pollutant at 40 CFR 136, in accordance to methods approved by the State Water Resources Control Board or the Regional Water Board.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity Control

1. Test Species and Methods

   a. During the first discharge season after adoption of this Order, the Discharger shall conduct 96-hour static renewal tests with an invertebrate, the water flea, Ceriodaphnia dubia, and a vertebrate, the rainbow trout, Oncorhychus mykiss, for at least two suites of tests. At least one test during the screening period shall be conducted when the effluent is unaffected by storm-related inflow into the WWTF. After this screening period, monitoring shall be conducted using the most sensitive species determined for the given flow regime. At least once every five years, the Discharger shall re-screen once with the two species listed above and continue to monitor monthly with the most sensitive species.

   b. 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 (U.S. EPA Report No. EPA-821-R-02-012, 5th edition or subsequent editions), or other methods approved by the Executive Officer, shall be used.

2. Definition of Toxicity Limits

   a. Acute toxicity is defined as the effluent concentration that would cause death in 50 percent of the test organisms (LC50). Where the LC50 is calculated, results shall be reported in TUa, where TUa = 100/LC50 (in percent effluent).

   b. Acute toxicity is significantly reduced survival at 100 percent effluent compared to a control, using a t-test. Where 100 percent effluent is used, results shall be reported as percent survival.

   c. If the result of any single acute toxicity test does not comply with the acute toxicity effluent limitation, the Discharger shall take two more samples, one within 14 days, and one within 21 days of receiving the sample results. If two of the three samples do not comply with the acute toxicity limitation, the Discharger shall initiate a Toxicity Reduction Evaluation (TRE) in accordance with Section V.C., below. If the two additional samples are in compliance with the acute toxicity requirement, then a TRE will not be required. If the discharge has ceased before the additional samples could be collected, the Discharger shall contact the Executive Officer within 21 days with a plan to demonstrate compliance with the acute toxicity effluent limitation.

B. Chronic Toxicity Control

1. Test Species and Methods

   a. The Discharger shall conduct short-term chronic toxicity tests with the water flea, Ceriodaphnia dubia (survival and reproduction test), the fathead minnow, Pimephales promelas (larval survival and growth test), and the green alga, Selanastrum capricornutum (growth test) for the first two suites of tests. At least one test during the screening period shall be conducted when the effluent is unaffected by storm-related inflow into the WWTF. After this screening period, monitoring shall be conducted using the most sensitive species. At least once every five years, the Discharger shall re-screen once with the three species listed above and continue to monitor with the most sensitive species.

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

2. In addition to results from acute toxicity tests, compliance with the Basin Plan narrative toxicity objective shall be demonstrated according to the following tiered requirements based on results from representative samples of the treated effluent:

   a. Routine monitoring;

   b. Accelerate monitoring after exceeding a three sample median value of 1.0 TUc or a single sample maximum of 2.0 TUc;

   c. Return to routine monitoring if accelerated monitoring does not exceed either "trigger" in "b";

   d. Initiate approved TRE workplan and continue accelerated monitoring if monitoring confirms consistent toxicity above either "trigger" in "b";

   e. Return to routine monitoring after appropriate elements of TRE workplan are implemented and toxicity drops below "trigger" levels in "b", or as directed by the Executive Officer.

3. Definition of Toxicity Limits

   a. Chronic toxicity measures both mortality and a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms.

   b. Results shall be reported in TUc, where TUc = 100/NOEC (in percent effluent). Results shall be reported for both mortality and the appropriate sublethal effect.

4. Quality Assurance

    a. A series of at least five dilutions and a control will be tested. The series shall consist of the following dilution series: 12.5, 25, 50, 75, and 100 percent effluent.

    b. 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).

    c. If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified by EPA-821-R-02-013, 4th or subsequent editions, then the Discharger must re-sample and re-test within 14 days or as soon as possible.

    d. Control and dilution water should be receiving water or laboratory water, as appropriate, as described in the manual. If the dilution water used is different from the culture water, a second control using culture water shall be used.

5. Accelerated Testing for Toxicity

    a. If the initial investigation indicates the source of toxicity (for instance, a temporary plant upset), then only one additional test is necessary. If chronic toxicity is detected in this test, then this Section shall apply.

    b. If chronic toxicity is detected, then the Discharger shall conduct two more tests, one test conducted approximately every two weeks, over a four–week period. Testing shall commence within two weeks of receipt of the sample results of the exceedance of the toxicity monitoring trigger.

    c. The Discharger may return to routine monitoring after appropriate elements of the TRE workplan are implemented and toxicity drops below trigger levels in B. 4. b, above, or as directed by the Executive Officer.

6. Reporting for Toxicity Tests

    a. Test results for chronic toxicity tests shall be reported according to EPA-821-R-02-013, 4th or subsequent editions, Chapter 10 (Report Preparation) and the Monitoring and Reporting Program and shall be attached to the self-monitoring report.

    b. The Discharger shall notify the Regional Water Board in writing within14 days after the receipt of test results exceeding an effluent limitation or trigger. The notification will describe actions the Discharger has taken or will take to investigate and correct the cause(s) of toxicity. It may also include a status report on any actions required by this Order, with a schedule for actions not yet

completed. If no actions have been taken, the reasons for such inaction shall be given.

C. Toxicity Reduction Evaluations (TREs)

1. The Discharger shall prepare and submit to the Regional Water Board Executive Officer a TRE workplan within 180 days of the effective date of this Order. This plan shall be reviewed and updated as necessary in order to remain current and applicable to the discharge and discharge facilities. The workplan shall describe the steps the Discharger intends to follow if toxicity is detected, and should include, at least the following items.

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

    b. A description of the facility's methods of maximizing in house treatment efficiency and good housekeeping practices.

    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).

2. 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 test observed to exceed either the acute or chronic toxicity parameter.

    b. The TRE shall be conducted in accordance with the Discharger's workplan.

    c. The TRE shall be in accordance with current technical guidance and reference material including, at a minimum, the EPA manual EPA/833B-99/002. The TRE shall be conducted as a tiered evaluation process, as summarized below:

        i. Tier 1 consists of basic data collection (routine and accelerated monitoring).

        ii. Tier 2 consists of the evaluation of treatment plant optimization including operational practices, and in-plant process chemicals.

        iii. Tier 3 consists of a toxicity identification evaluation (TIE).

        iv. Tier 4 consists of the evaluation of options for additional treatment processes.

        v. Tier 5 consists of the evaluation of options for modifications of in-plant treatment processes.

vi. Tier 6 consists of the implementation of selected toxicity control measures, and follow-up monitoring and confirmation of implementation success.

d. The TRE may end at any stage if, through monitoring results, it is determined that there is no longer consistent toxicity.

e. The Discharger may initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. As guidance, the Discharger shall use the EPA acute and chronic manuals, EPA/600/6-91/005F(Phase I), EPA/600/R-92/080(Phase II), and EPA-600/R-92/081 (Phase III).

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

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

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

VI. LAND DISCHARGE MONITORING REQUIREMENTS

This section of the standardized Order form is not currently applicable to the City of Rio Dell.

VII. RECLAMATION MONITORING REQUIREMENTS

This section of the standardized Order form is not currently applicable to the City of Rio Dell.

VIII. RECEIVING WATER MONITORING

For the purpose of calculating percent dilution in the receiving water, flow in the Eel River shall be measured daily during the wintertime discharge season at the Scotia gauging station.

A. Surface Water Monitoring Locations R-001

The Discharger shall monitor the Eel River concurrently with effluent monitoring at Monitoring Location R-001, upstream of influence of the discharge as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Hydrogen Ion	pH	grab	Monthly	Standard Methods
Temperature	ºF or °C	grab	Monthly	Standard Methods
Dissolved Oxygen	mg/L	grab	Monthly	Standard Methods
Specific Conductance	micromhos	grab	Monthly	Standard Methods
Total Dissolved Solids	mg/L	grab	Monthly	Standard Methods
Turbidity	mg/L	grab	Monthly	Standard Methods
Floatables/discoloraiton	---	visual	Monthly	---
Priority Pollutants [b]	µg/L	grab	1x / Order term	Standard Methods
Hardness ($CaCO_3$)	mg/L	grab	Concurrent with Priority Pollutant Sampling	Standard Methods

B. Surface Water Monitoring Locations R-002

The Discharger shall monitor the Eel River concurrently with effluent monitoring at Monitoring Location R-002, at the point of discharge as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Hydrogen Ion	pH	grab	Monthly	Standard Methods
Temperature	ºF or °C	grab	Monthly	Standard Methods
Dissolved Oxygen	mg/L	grab	Monthly	Standard Methods
Specific Conductance	micromhos	grab	Monthly	Standard Methods
Total Dissolved Solids	mg/L	grab	Monthly	Standard Methods
Turbidity	mg/L	grab	Monthly	Standard Methods
Floatables/discoloraiton	---	visual	Monthly	---

C. Ground Water Study

This section of the standardized Monitoring and Reporting Plan is not currently applicable to the City of Rio Dell.

IX. OTHER MONITORING REQUIREMENTS

This section of the standardized Monitoring and Reporting Plan is not currently applicable to the City of Rio Dell.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this Order, the State or Regional Water Board may notify the Discharger to electronically submit self-monitoring reports. Until such notification is given, the Discharger shall submit self-monitoring reports in accordance with the requirements described below.

2. The Discharger shall submit monthly Self Monitoring Reports including the results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this Order. Monthly reports shall be due on the 1st day of the second month following the end of each calendar month. Annual reports shall be due on February 1 following each calendar year.

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

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	June 16, 2006	All	First Day Of Second Calendar Month Following Month Of Sampling
1 / Day	June 16, 2006	(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
1 / Week	June 18, 2006	Sunday Through Saturday	First Day Of Second Calendar Month Following Month Of Sampling
1 / Month	July 1, 2006	1st Day Of Calendar Month Through Last Day Of Calendar Month	First Day Of Second Calendar Month Following Month Of Sampling
6x / Year	February 1, 2007	A Minimum OF Three Samples Shall Be Collected Between October 1 and May 15 Each Year, With Remaining Sample Frequency Spread Through the Year	First Day Of Second Calendar Month Following Month Of Sampling
1 / Semi-Annual Period	July 1, 2006	January 1 Through June 30 July 1 Through December 31	August 1 February 1
1 / Year	January 1, 2007	January 1 Through December 31	February 1
1 / Order Term	October 1, 2006	October 1 Through May 15	July 1, 2007

4. The Discharger shall report with each sample result the applicable Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136.

5. SMR Content and Format.

a. Monthly Reports. The purpose of the monthly report is to document treatment performance, effluent quality, and compliance with waste discharge requirements prescribed by Order No. R1-2006-0021. For each calendar month, an SMR shall be submitted to the Regional Water Board in accordance with the following:

   i. Letter of transmittal: Each SMR shall be submitted with a letter of transmittal. This letter shall include the following:

      - Identification of facility: Name, address, WDID number;
      - Date of report and monitoring period;
      - Identification of all violations of discharge prohibitions, effluent limitations or other discharge requirements found during the monitoring period;
      - Details of the violations: parameters, magnitude, test results, frequency, and dates;
      - The cause of the violation(s);
      - Discussion of corrective actions taken or planned to resolve violations and prevent recurrence, and dates or time of action implementation;
      - Authorized signature and certification statement.

   ii. Compliance Evaluation Summary: Each report shall include a compliance evaluation summary. The summary shall illustrate clearly the facility's compliance (or lack thereof) with all effluent limitations and other waste discharge requirements. During periods of no discharge, the reports shall certify "no discharge".

   iii. Results of Analyses and Observations.

      - Tabulations of all required analyses, including parameter, sample date and time, sample station, and test result.
      - If the Discharger monitors any pollutant more frequently than required by this Order, using test procedures approved under 40 CFR Part 136 or as specified in this Order, the results of this monitoring shall be included in the calculation and report of the data submitted in the Discharger's SMR.
      - Calculation of all effluent limitations that require averaging, taking of a median, or other calculation.

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

i. Both tabular and, where appropriate, graphical summaries of the monitoring data and disposal records from the previous year. If the Discharger monitors any pollutant more frequently than required by this Order, using test procedures approved under 40 CFR Part 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.

ii. Source control activities as required by Section VI.C.6.c.of Waste Discharge Requirements Order No. R1-2006-0021.

iii. Collection system activities as required by Section VI.C.6.a. of Waste Discharge Requirements Order No. R1-2006-0021.

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

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

   Regional Water Quality Control Board
   5550 Skylane Blvd., Suite A
   Santa Rosa, CA 95407

C. Discharge Monitoring Reports (DMRs)

1. As described in Section X.B.1 above, at any time during the term of this Order, the State or Regional Water Board may notify the discharger to electronically submit self-monitoring reports. Until such notification is given, the Discharger shall submit discharge monitoring reports (DMRs) in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharge shall submit the original DMR and one copy of the DMR to the address listed below:

   State Water Resources Control Board
   Discharge Monitoring Report Processing Center
   Post Office Box 671
   Sacramento, CA 95812

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

The Discharger shall submit an Annual Report regarding septage hauling activity as specified at section IV. D of the Order.

ATTACHMENT F – FACT SHEET – TABLE OF CONTENTS

ATTACHMENT F – FACT SHEET

This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

I. ORDER INFORMATION

The following table summarizes administrative information related to the facility.

WDID	1B83134OHUM
Discharger	City of Rio Dell
Name of Facility	Wastewater Treatment Plant
Facility Address	475 Hilltop Avenue
	Rio Dell, California 95562
	Humboldt County
Facility Contact, Title and Phone	Jim Hale, Public Works Director 707-764-3532
Authorized Person to Sign and Submit Reports	Lead Operator or Public Works Director
Mailing Address	675 Wildwood Avenue, Rio Dell, California 95428
Billing Address	Same as mailing address
Type of Facility	Wastewater collection and treatment facility (WWTF)
Major or Minor Facility	Major
Threat to Water Quality	2
Complexity	A
Pretreatment Program	NA
Reclamation Requirements	NA
Facility Permitted Flow	0.9 MGD
Facility Design Flow	0.9 MGD
Watershed	Scotia Hydrologic Sub area
Receiving Water	Eel River
Receiving Water Type	Inland Surface Water

A. The City of Rio Dell (the Discharger) is the owner and operator of a wastewater collection and treatment facility located in Rio Dell at 675 Hilltop Drive, Humboldt County, California.

B. The facility is permitted to discharge treated wastewater to the Eel River, waters of the United States, and is currently regulated by Order No. R1-2000-15, which was adopted on February 24, 2000. The terms of the existing Order were automatically continued in effect after the Order expiration date of February 24, 2005.

C. The Discharger filed a Report of Waste Discharge and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) Order on February 21, 2005.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment or Controls

The City of Rio Dell owns and operates a collection and treatment system, which serves approximately 1400 residential, commercial, and institutional users. The treatment system consists of a flow-metering flume, primary clarification, secondary treatment by rotating biological contactors, secondary clarification, and chlorination/dechlorination capability. Waste sludge is aerobically digested and dried on sludge drying beds before being land applied. Flow capacity is not a concern in dry summer months, but excessive infiltration and inflow (I/I) during the winter can cause partially treated wastewater to overflow the rotating batch reactors, flooding portions of the facility.

Wastewater is discharged from Discharge Point 001 to the Eel River, waters of the United States, between October 1 and May 15 of each year. During the summer (May 15 through September 30), when discharges to surface water are prohibited by the Basin Plan, treated wastewater is discharged to a percolation pond adjacent to the river. The percolation pond is seasonally constructed within the gravels of the active channel of the Eel River. Gravels in this area are minimal and shallow bedrock is encountered at less than 40 feet from the surface. Past testing and observations indicated that wastewater discharged to the percolation pond is indirectly entering the Eel River in violation of the summertime prohibition. The Discharger is actively pursuing a summertime disposal alternative.

B. Discharge Points and Receiving Waters

The City of Rio Dell is located within the Ferndale Hydrologic Subarea of the Lower Eel River Hydrologic Area within the Eel River Hydrologic Unit. The wastewater treatment facility is located adjacent to the Eel River.

The main tributaries to the Eel River are the Van Duzen River, Yager, Larabee, Bull and Salmon Creeks. The upper watershed is mountainous and vegetated by redwood, douglas fir interspersed with some hardwoods and meadows. Toward the coast, the river spreads out on a coastal plain where the Salt River joins it in the Eel River estuary. The Eel River is designated as a Critical Coastal Area.

The Eel River is also listed in the Federal Clean Water Act (CWA) section 303(d) list as impaired by sediment and temperature. The Eel River Watershed Management Area (WMA) encompasses roughly 3,684 square miles in highly erodible soils in the steep coastal mountains of the Region, supporting a variety of water uses including municipal and agricultural supply systems, salmonid fisheries, and recreation. The Eel River WMA is a prime recreational area boasting numerous state and private campgrounds along its length with both water contact and non-contact uses such as boating and swimming. The

Eel River is the third largest producer of salmon and steelhead in the State of California and supports a large recreational fishing industry. The erodible soils, steep terrain, and other contributing factors evoke a high level of concern for the anadromous fishery resource. Coho salmon, a native species of the Eel River watershed, were listed as endangered under the federal Endangered Species Act in 1997.

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

Effluent limitations contained in the existing Order No. R1-2000-15 for discharges from Discharge Point 001 and representative monitoring data from the term of the previous Order are presented below.

Order No. R1-2000-15 – Summary of Effluent Limitations

Constituent	Effluent Limitation			
	Units	Average Monthly	Average Weekly	Daily Maximum
BOD_5	mg/L	30	45	60
	lbs/day	250	375	500
TSS	mg/L	30	45	60
	lbs/day	250	375	500
Settleable Solids	ml/L	0.1	-	0.2
Total Coliform Bacteria	MPN/100mLs	23		230
pH	standard units	6.0 – 9.0		
Chlorine	A minimum chlorine residual of 1.5 mg/L shall be maintained at the end of the disinfection process.			
Chlorine	Treated wastewater discharged to the Eel River shall not contain detectable levels of chlorine.			
Removal Efficiency	The arithmetic mean of BOD_5 and TSS values by weight for effluent samples collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean of the values, by weight, for influent samples collected at approximately the same times during the same period (85 percent removal).			
Flow	The mean daily dry weather flow of waste shall not exceed 1 MGD averaged over a period of a calendar month.			
Acute Toxicity	The survival of test fish in 96-hour (static or continuous flow) bioassays in undiluted effluent samples shall equal or exceed 90 percent survival 67 percent of the time, and 70 percent survival 100 percent of the time.			
Storm Water	Storm water discharges shall be managed by implementation of a Storm Water Pollution Prevention Plan, which shall be updated as necessary to reflect changed conditions at the facility.			

D. Compliance Summary

1. Effluent limitations are contained in the existing Order for discharges from Discharge Point No. 001. Effluent limitations and representative monitoring data from the term of the previous Order are as follows:

Parameter (units)	Effluent Limitations		Monitoring Data (From August 2000 – To April 2006)		
	Average Monthly	Maximum Daily	Highest Average Monthly Result	Highest Daily Result	No. of Violations
BOD (20°C, 5-day) (mg/l)	30	---	33.8	---	4
BOD Removal Efficiency (%)	85	---	78[1]	---	9
Total Suspended Solids (TSS) (mg/l)	30	---	38	---	1
TSS Removal Efficiency (%)	85	---	51[1]	---	9
Total Coliform Organisms (MPN/100 ml)	23[2]	230	66	1600	8
Acute Toxicity (% survival)	---	70	---	55[3]	1

2. Due to actual and threatened discharges in violation of Waste Discharge Requirements Order No. R1-2000-15, on May 15, 2003, the Regional Water Board adopted Cease and Desist Order No. R1-2003-0046. The Discharger complied with time schedules and tasks A through D of Order No. R1-2003-0046. The Discharger also completed Task E of the Order, which required detailed analysis of the selected preferred disposal alternative, subsurface infiltration on the point bar south of the WWTF. The detailed analysis revealed that the point bar alternative would not meet Order No. R1-2000-0015 criteria for compliance with the summertime disposal prohibition. Testing results from the point bar pilot study showed that wastewater was discharging through the shallow gravel bar directly into the Eel River. A new schedule of tasks required revision of the Cease and Desist Order. Accordingly, the Board issued Cease and Desist Order R1-2005-34 on June 21, 2005 amending and replacing Order No. R1-2003-0046.

   a. The amended Order required implementation of the following tasks.

Requirement
By **September 30, 2005**, submit for Regional Water Board staff concurrence, a technical report including: (1) a description of the Permittee's potential alternatives for long-term effluent disposal, (2) the preliminary analysis of each alternative, including implementability and

[1] Results based on minimum allowable removal equal to 85%.
[2] Limit based on monthly median.
[3] The % survival of test fish in 96-hour bioassays in undiluted effluent samples

Requirement
estimated costs, (3) a proposal for a detailed analysis to evaluate the preferred alternative.
By **May 31, 2006**, submit a detailed analysis of the preferred long-term effluent disposal alternative developed from Task B(3) above. The report shall detail progress regarding land acquisition, permitting, financing, and construction of the preferred alternative.
By **February 1, 2007**; complete the California Environmental Quality Act (CEQA) process for the preferred alternative.
By **August 1, 2007**; acquire all necessary permits, including Waste Discharge Requirements from the Regional Water Board.
By **November 1, 2007**; secure funding for the long-term effluent disposal project. Provide the Regional Water Board with documentation regarding the funding source(s).

b. After June 21, 2005, with some exceptions, new residential, commercial, industrial, or governmental connections to the wastewater collection system are restricted to 40 equivalent dwelling units (18,000 gpd) until the City demonstrates that more connections will not result in additional violations of Waste Discharge Requirements.

c. In the event of failure to comply with the terms of Cease and Desist Order No. R1-2005-0034, the Executive Officer may seek judicial enforcement action or issue a Complaint for Administrative Civil Liability.

E. Planned Changes

At this time, planned changes are associated with Cease and Desist Order No. R1-2005-0034 compliance to implement an alternative summertime disposal option.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in the proposed Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order is issued pursuant to CWA Section 402 and implementing regulations adopted by the U.S. EPA and CWC Chapter 5.5, Division 7. It shall serve as an NPDES Order for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to CWC Article 4, Chapter 4 for discharges that are not subject to regulation under CWA Section 402.

B. California Environmental Quality Act (CEQA)

This action to adopt an NPDES Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with CWC Section 13389.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans:** The 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.

   a. Beneficial uses are designated for all waters in the North Coast Region. The waterbodies are separated into various categories. Wetlands and groundwater are described outside of the Coastal and Inland Waters categories, as they are unique waterbodies that require more detailed descriptions. In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. Beneficial uses applicable to the Eel River are as follows:

Discharge Point	Receiving Water	Beneficial Uses
001	**Eel River**	Existing: MUN – Municipal and Domestic Supply AGR – Agricultural Supply IND – Industrial Service Supply GWR – Groundwater Recharge FRSH – Freshwater Replenishment NAV – Navigation REC1 – Water Contact Recreation REC2 – Non-Contact Water Recreation COMM – Commercial and Sport Fishing COLD – Cold Freshwater Habitat WILD – Wildlife Habitat RARE – Preservation of Rare, Threatened, or Endangered Species

Discharge Point	Receiving Water	Beneficial Uses
		MIGR – Migration of Aquatic Organisms SPWN – Spawning, Reproduction, and/or Early Development AQUA – Aquaculture Potential: PRO – Industrial Process Supply POW – Hydropower Generation WARM – Warm Freshwater Habitat
	Groundwater	Existing: MUN – Municipal and Domestic Supply AGR – Agricultural Supply IND – Industrial Service Supply CUL – Native American Culture Potential: PRO – Industrial Process Supply AQUA – Aquaculture

b. The Basin Plan includes water quality objectives, implementation plans for point source and non-point source discharges, prohibitions, and statewide plans and policies.

c. The Basin Plan contains a narrative objective (standard) for toxicity that requires:

All 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. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassay of appropriate duration or other appropriate methods as specified by the Regional Water Board.

The survival of aquatic life in surface waters subjected to a waste discharge, or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge, or when necessary for other control water that is consistent with the requirements for "experimental water" as described in Standard Methods for the Examination of Water and Wastewater 18th Edition (1992). At a minimum, compliance with this objective as stated in the previous sentence shall be evaluated with a 96-hour bioassay.

Effluent limits based upon acute bioassays of effluent will be prescribed. Where appropriate, additional numerical receiving water objectives for specific toxicants will be established as sufficient data become available, and source control of toxic substances will be encouraged.

2. **Thermal Plan.** The State Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays*

and Estuaries of California (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters.

3. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on December 22, 1992 and amended it on May 4, 1995 and November 9, 1999. The CTR was adopted on May 18, 2000 and amended on February 13, 2001. These rules include water quality criteria for priority pollutants and are applicable to this discharge.

4. **State Implementation Policy.** On March 2, 2000, the State 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 applies to discharges of toxic pollutants into the inland surface waters, enclosed bays, and estuaries of California subject to regulation under the State's Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) and the federal Clean Water Act. The SIP establishes: (1) implementation provisions for priority pollutant criteria promulgated by the U.S. EPA through the NTR and the CTR, and for priority pollutant objectives established by the Regional Water Boards in their basin plans, (2) monitoring requirements for 2,3,7,8-TCDD equivalents; and (3) chronic toxicity control provisions. The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for through the NTR and to the priority pollutant objectives established by the Regional Water Boards in their basin plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by U.S. EPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP became effective on May 18, 2000. The SIP includes procedures for determining the need for and calculating WQBELs, and requires Dischargers to submit data sufficient to do so.

5. **Antidegradation Policy.** 40 CFR 131.12 requires that State water quality standards include an antidegradation policy consistent with the federal policy. The State Board established California's antidegradation policy in State Board Resolution 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution 68-16 requires that existing water quality is maintained unless degradation is justified based on specific findings. As discussed in detail in this Fact Sheet, the permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and State Board Resolution 68-16.

6. **Anti-Backsliding Requirements.** CWA Sections 402 (o) (2) and 303 (d) (4) of the CWA and 40 CFR 122.44 (l) prohibit backsliding in NPDES Orders; i.e., effluent limitations in a reissued Order must be as stringent as those in the previous Order, with some exceptions where limitations may be relaxed. Order No. R1-2006-0021 complies with all anti-backsliding requirements, as all effluent

limitations in this Order are at least as stringent as the effluent limitations in Order No. R1-2000-15.

7. **Monitoring and Reporting Requirements.** 40 CFR 122.48 requires that all NPDES Orders specify requirements for recording and reporting monitoring results. CWC Sections 13267 and 13383 authorize the Regional Water Boards to require technical and monitoring reports. The MRP establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in Attachment E.

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

The Lower Eel River Hydrologic Unit is listed as an impaired water body for sediment and temperature pursuant to Section 303(d) of the CWA. A Total Maximum Daily Load has not been established to address temperature or sediment loadings. An analysis of the WWTF discharge determined that it does not contain temperature or sediment at levels which will cause, have the reasonable potential to cause, or contribute to increases in temperature or sediment levels in the Eel River. This finding is based in part on monitoring results collected during the last permit cycle. This finding is based on the Facility's monitoring data, the 100:1 dilution rate the discharge receives in the river and the summer seasonal discharge prohibition.

E. Other Plans, Polices and Regulations

The Discharger has storm water discharges associated with industrial activities, category "ix" as defined in 40 CFR Section 122.26(b)(14). The Discharger described storm water discharges, appropriate pollution prevention practices and best management practices in a completed Notice of Intent dated March 28, 2005 and submitted it to the State Water Board pursuant to the Statewide General Permit Program.

1. The Discharger is currently covered under State Water Resources Control Board (State Water Board), Water Quality Order No. 97-03-DWQ, National Pollutant Discharge Elimination System (NPDES), General Permit No. CAS000001 (General Permit).

2. The Discharger has prepared a Storm Water Pollution Prevention Plan (SWPP Plan) and has implemented the provisions of the SWPP Plan. The SWPP Plan includes source identification, practices to reduce or eliminate pollutant discharge to storm water, an assessment of potential pollutant sources, a materials inventory, a preventive maintenance program, spill prevention and response procedures, general storm water management practices, employee training, record keeping, and elimination of nonstorm water discharges to the storm water system. It also includes a storm water monitoring plan to verify the effectiveness of the SWPP Plan.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source discharges 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: 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 numeric water quality objectives have not been established, three options exist to protect water quality: 1) 40 CFR §122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a); 2) proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information may be used; or 3) an indicator parameter may be established.

III. DISCHARGE PROHIBITIONS

A. Discharge Prohibitions

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

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

The State Water Board has stated that the only pollutants not covered by this prohibition are those which were "disclosed to the permitting authority and … can be reasonably contemplated." (In re the Petition of East Bay Municipal Utilities District et al., (SWRCB 2002) Order No. WQ 2002-0012, p. 24.) The case cited in that order by the State Water Board reasoned that the Discharger is liable for discharges "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, State Water Board authority provides that, to be permissible, the constituent discharged (1) must have

been disclosed by the Discharger and (2) can be reasonably contemplated by the Regional Water Board.

The Regional Water Board has the authority to determine whether the discharge of a constituent is "reasonably contemplated." The Piney Run case makes clear that the Discharger is liable for discharges "not within the reasonable contemplation of the permitting authority …, whether spills or otherwise …." (268 F.3d 255, 268 [italics added].) In other words, whether or not the Discharger reasonably contemplates the discharge of a constituent is not relevant. What matters is whether the Discharger disclosed the constituent to the Regional Water Board or whether the presence of the pollutant in the discharge can otherwise be reasonably contemplated by the Regional Water Board at the time of Order adoption.

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

   This prohibition is based on CWC Section 13050. It has been retained from Order No. R1-2000-15.

3. **Prohibition III. C. The discharge of sludge or digester supernatant is prohibited, except as authorized under section IV. E (Solids Disposal and Handling Requirements).**

   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 CCR. It has been retained from Order No. 96-9.

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

   This prohibition has been retained from Order No. 96-9 and is based on the Basin Plan to protect beneficial uses of the receiving water from unpermitted discharges, and the intent of CWC sections 13260 through 13264 relating to the discharge of waste to waters of the State without filing for and being issued a Order. This prohibition applies to, but is not limited to, sanitary sewer overflows, spills, and other unauthorized discharges of wastewater within the collection, treatment, reclamation, 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. **Prohibition III. E. The discharge of waste to land that is not owned by or subject to an agreement for use by the Discharger is prohibited.**

   This prohibition is retained from Order No. R1-2000-0015. Land used for the application of wastewater must be owned by the Discharger or be under the control of the Discharger by contract so that the Discharger maintains a means for ultimate disposal of treated wastewater.

6. **Prohibition III. F. The discharge of waste at any point except Discharge Point 001 – the constructed outfall to the Eel River, as described on page 1 of this Order, or as authorized by another State Board or Regional Water Board Order, is prohibited.**

   This prohibition is a general prohibition that allows the Discharger to discharge waste only in accordance with waste discharge requirements. It is based on Sections 301 and 402 of the federal CWA and CWC Section 13263.

7. **Prohibition III. G. The discharge of treated wastewater from the wastewater treatment facility to the Eel River or its tributaries is prohibited during the period May 15 through September 30 of each year.**

   This prohibition is required by the Basin Plan. The Basin Plan prohibits discharges to the Eel 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 Eel River during the period of the year when the Eel River and its tributaries experience the heaviest water-contact recreation use.

8. **Prohibition III H. During the period of October 1 through May 14 of each year, discharges of wastewater shall not exceed one percent of the flow of the Eel River. To comply with this flow prohibition, (1) the Discharger shall adjust the discharge rate of treated wastewater at least once daily to avoid exceeding, to the extent practicable, one percent of the most recent daily flow measurement of the eel River as measured at Scotia; and (2) the total volume of treated wastewater discharged in a calendar month shall not exceed, in any circumstances, exceed one percent of the total volume of the Eel River, as measured at Scotia, in the same calendar month.**

   During periods of discharge, the gage at Scotia shall be read at least once daily, and the discharge flow rate shall be set for no greater than one percent of the flow of the creek at the time of the daily reading. At the beginning of the discharge season, the first monthly flow comparisons shall be determined from the date when the discharge commenced to the end of the calendar month. At the end of the discharge season, the

final monthly flow volume shall be determined from the first day of the calendar month to the date when the discharge ended for the season

This prohibition is required by the Basin Plan (Chapter 4 Implementation Plans, North Coastal Basin Discharge Prohibition No. 3). The Basin Plan prohibits discharges to the Eel River and its tributaries when the waste discharge flow is greater than one percent of the receiving water's flow.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Regulations promulgated in 40 CFR Section 125.3 (a) (1) require technology-based effluent limitations for municipal dischargers to be placed in NPDES Orders based on Secondary Treatment Standards or Equivalent to Secondary Treatment Standards.

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

Based on this statutory requirement, USEPA developed secondary treatment regulations, which are specified in 40 CFR 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 biochemical oxygen demand (BOD_5), total suspended solids (TSS), and pH, as follows:

a. BOD and Suspended Solids

   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 percent.

b. pH

   i. 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, 1) for pH, temperature, radiation, or other pollutants which cannot appropriately be 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

i. The following table summarizes concentration-based effluent limitations derived from 40 CFR 133.102, that are retained from the previous Order.

Summary of Technology-Based Effluent Limitations from 40CFR 133.102

Parameter	Units	Effluent Limitation		
		Avg Monthly	Avg Weekly	Daily Max
BOD (5-day @ 20° C)	mg/L	30	45	60
TSS	mg/L	30	45	60
Percent Removal [a]	%	85	---	---
pH	Standard Units	6.0 – 9.0		

[a] Order No. R1-2006-0021 specifies that percent removal for BOD and TSS shall be determined from the 30-day average value of influent wastewater concentration in comparison to the 30-day average value of effluent concentration for the same constituent over the same time period.

ii. Technology-based effluent limitations for coliform bacteria for secondary effluent discharges to the percolation ponds, which have been retained from the previous Order, reflect standards adopted by the Department of Health Services for secondary treated recycled water in Title 22, Division 4, Chapter 3 of the California Code of Regulations.

Coliform Effluent Limitations

Parameter	Units	Effluent Limitations [a]	
		Weekly Median	Maximum
Total Coliform Bacteria	mpn /100 mL	23	230

[a] The number of total coliform bacteria shall not exceed 23 per 100 ml in more than one sample in any 30-day period. No sample shall exceed an MPN of 230 total coliform bacteria per 100 ml.

iii. **Settleable Solids**. High levels of settleable solids can have an adverse effect on aquatic habitat. Untreated or improperly treated wastewater can contain high amounts of settleable solids. The Eel River and its tributaries are 303(d) listed for sediment and settleable solids is one aspect of the sediment impairing the Eel River.

Monthly average and maximum daily effluent limitations for settleable solids of 0.1 and 0.2 ml/L have been retained from the previous Order. These limitations are a typical standard of performance for secondary treatment facilities and are included as a limitation based on the best professional judgment of Regional Water Board staff.

iv. **Chlorine Residual**. The requirement for a minimum chlorine residual of 1.5 mg/l at the end of the disinfection process is retained from the previous Order and is based on Regional Water Board staffs' best professional judgment for providing adequate disinfection.

v. **Mass Limits.** Mass effluent limitations for BOD and TSS are required under 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 limits for BOD and TSS have been adjusted to reflect the amended flow limitation of 0.9 MGD. Therefore, mass limitations in this revised permit are slightly more stringent than the previous Order. Mass-based effluent limitations are technology-based; thus, these limitations apply at the end of the treatment train.

vi. **Percent Removal**. The percent removal requirements are standard secondary treatment technology-based effluent limitations derived from federal requirements (40 CFR 133.102; definition in 133.101) and are retained from the previous Order.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

As specified in 40 CFR §122.44(d)(1)(i), Orders are required to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard. The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses for 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 water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

a. Beneficial Uses. Applicable beneficial uses excerpted from the Basin Plan are presented in the Findings of Order No. R1-2006-0022 and Section III.C.1.a. 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, including the Eel River.

c. State Implementation Policy (SIP), CTR and NTR.

Water quality criteria applicable to the discharge to the Eel River are included in the NTR and the CTR, which contain numeric criteria for most of the 126 priority pollutants, and indicates that such criteria will be developed for the remaining criteria at a future date.

Aquatic life freshwater and saltwater criteria are further 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 one-hour average numeric effluent limitation and the CCC is used to calculate a chronic or 4-day average numeric effluent limitation.

Human health criteria are further identified as "water and organisms" and "organisms only." The criteria from the "water and organisms" column of CTR were used for the preliminary reasonable potential analysis because the Basin Plan identifies that the receiving water, the Eel River is a source of municipal and domestic drinking water supply. The human health criteria are used to calculate human health effluent limitations.

The SIP includes procedures for determining the need for and calculating WQBELs and requires dischargers to submit data sufficient to do so. Results of the reasonable potential analysis, water quality criteria and effluent limitation are

presented in the following sections. A summary of the Reasonable Potential Analysis for all 126 priority pollutants is presented in Attachment F-1.

Applicable Water Quality Criteria and Objectives

CTR No.	Constituent	Lowest Applicable Criteria	CTR/NTR Water Quality Criteria		
			Freshwater		Human Health for Consumption of
			Acute	Chronic	Water and Organisms
		µg/L	µg/L	µg/L	µg/L
6	Copper [a]	10.9	16.6	10.9	1300
14	Cyanide	5.2	22	5.2	700
27	Dichlorobromomethane	0.56			0.56

3. Determining the Need for WQBELs

a. Non-Priority Pollutants

Order No. R1-2006-0004 contains a WQBEL for total chlorine residual prior to surface water discharge (Effluent Limitation IV.A.1.d). The Permit specifies that the discharge shall at no time show detectable chlorine residual. This effluent limitation is based on the Basin Plan narrative water quality objectives for toxicity and chemical constituents. This effluent limitation is included to ensure that a wastewater dechlorination step removes all detectable chlorine residual for the protection of aquatic beneficial uses of the receiving water. The Regional Water Board views any chlorinated discharge as having the potential to contribute to an exceedance of the Basin Plan's narrative toxicity objective – all waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in human, plant, animal, or aquatic life. The USEPA recommends a 4-day average (chronic) chlorine concentration of 0.01 mg/L for protection of fresh water aquatic life and a 1-hour (acute) concentration of 0.02 mg/L. [Quality Criteria for Water 1986 (The Gold Book), EPA 440/5-86-001 (May 1, 1986)]. These concentrations are, in effect, non-detectable concentrations by the common amperometric analytical method used for the measurement of chlorine; and therefore, the Regional Water Board has established an ND (not detected) level of chlorine as an effluent limitation for this discharge.

ii. Order No. R1-2006-0021 retains WQBELs for pH (6.5 – 8.5) from Order No. R1-2000-15. The WQBEL for pH is based on water quality-based objectives established by the Basin Plan.

iii. To establish effluent limitations for non-priority toxic pollutants, the Regional Board relies on the U.S. EPA Technical Support Document for Water Quality-Based Toxics Control (TSD) to determine the need for effluent limitations and the development of appropriate limitations as necessary. To determine the need for effluent limitations, the TSD accounts for effluent variability, as estimated by a coefficient of variation (CV = 0.6), and a limited set of data (here, n = 2) by projecting an estimated maximum effluent concentration.

(a) With CV = 0.6 and n = 2, to project an estimated 99th percentile concentration with 99 percent confidence, the highest observed effluent concentration of each pollutant is multiplied times the factor of 7.4 (TSD Table 3-1). If the estimated maximum effluent concentration is greater than the most stringent applicable water quality criterion, reasonable potential exists and effluent limitations are required.

(b) Based on analysis of effluent and receiving water samples, the Regional Board, using methods presented in the TSD, finds that that the discharge shows reasonable potential to cause or contribute to in-stream excursions above applicable water quality standards for the following non-CTR toxic pollutant: methyl-tert-butyl ether (MTBE).

The TSD requires the following steps to determine final effluent limitations for MTBE:

(i.) For each pollutant, a waste load allocation (WLA) is determined from the applicable water quality criterion. The WLA addresses variability in effluent quality and is expressed as a single level of receiving water quality necessary to provide protection against long term or chronic effects. The WLA is similar to the ECA under the SIP methodology; like the ECA, when no credit is provided for dilution, the WLA is set equal to the applicable water quality criterion (C).

(ii.)For MTBE, the WLA is based on human health criterion/objectives. Here, the AMEL is set equal to the WLA and the MDEL is calculated by multiplying the WLA times the ratio of the MDEL multiplier to the AMEL multiplier.

From Table 5-2 of the TSD, when CV = 0.6 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 1.8. Final WQBELs for MTBE are determined as follows.

	WLA (µg/L)	MDEL/AMEL Multiplier	AMEL (µg/L)	MDEL (µg/L)
MTBE	13	2.01	13	26

b. Priority Pollutants

The SIP Section 1.3 requires the Regional Water Board to use all available, valid, relevant, and representative receiving water and effluent data and information to conduct a reasonable potential analysis. Sufficient effluent and ambient data are available to conduct a complete RPA for the Facility. The Discharger collected two sets of priority pollutant data on December 4, 2002 and March 27, 2002.

Some freshwater water quality criteria for metals are hardness dependent; i.e., as hardness decreases, the toxicity of certain metals increases, and the applicable water quality criteria become correspondingly more stringent. For this reasonable potential analysis, Regional Water Board staff has used a receiving water hardness concentration of 120 mg/L $CaCO_3$, based on receiving water data submitted by the Discharger. The two samples collected December 4, 2002 and March 27, 2002 showed hardness concentrations between 120 and 130 mg/l in the Eel River, approximately 50 feet upstream of the Facility's discharge point. The use of the lowest receiving water hardness concentration provides the most protective approach for determining which parameters to require effluent limitations for, for the protection of aquatic life in the receiving stream.

To conduct the reasonable potential analysis, Regional Water Board staff identified the maximum observed effluent (MEC) and background (B) concentrations for each priority, toxic pollutant from receiving water and effluent data provided by the Discharger and compared this data to the most stringent applicable water quality criterion (C) for each pollutant 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 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.

Reasonable Potential Determination

The reasonable potential analysis demonstrated reasonable potential for discharges from Discharge Monitoring Point 001 to cause or contribute to exceedances of applicable water quality criteria for copper, cyanide, and dichlorobromomethane. 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 other 126 priority pollutants.

The following table summarizes the reasonable potential analysis for each priority pollutant that was reported in detectable concentrations in either the effluent or receiving water since March 2002. Attachment F-2 to this Order summarizes all of the Discharger's effluent and receiving water monitoring data for these same pollutants.

Summary of Reasonable Potential Analysis

CTR No.	Priority Pollutant	Lowest Applicable Water Quality Criteria(C)	Max Effluent Conc (MEC)	Maximum Detected Receiving Water Conc.(B)	RPA Result-Need Limit?	Reason	Recommendation
6	Copper	10.9	13	10	Yes	MEC>C	EL and monitoring needed
14	Cyanide	5.2	7	0.9	Yes	MEC>C	EL and monitoring needed
27	Dichlorobromomethane	0.56	0.9	0.46	Yes	MEC>C	EL and monitoring needed

Notes: EL – Effluent Limitation
UD – Undetermined: Effluent data and receiving water data are both non-detect.
DL – Detection Limit

Reasonable Potential Analysis: The following section summarizes additional details regarding the data used for the reasonable potential analysis for copper, cyanide, and dichlorobromomethane.

i. Copper

Effluent monitoring data submitted by the Discharger showed concentrations of total recoverable copper ranging from 6 µg/L to 13 µg/L, in two samples. One of the two effluent concentrations exceeded the lowest CTR criterion of 10.9 µg/L. This data demonstrates that there is reasonable potential for copper and effluent limitations are needed.

Two receiving water samples were collected for copper. Both receiving water samples collected contained 10 µg/L of copper.

ii. Cyanide

Effluent monitoring data submitted by the Discharger showed concentrations of cyanide ranging from 4 µg/L to 7 µg/L. Both samples exceed the lowest CTR criterion of 5.2 µg/L. Therefore, there is reasonable potential for cyanide and effluent limitations are needed.

The two receiving water samples showed concentrations at 0.6 µg/L and 0.9 µg/L for cyanide.

iii. Dichlorobromomethane

Dichlorobromomethane is a component of a group of chemicals, commonly known as trihalomethanes, which form during the disinfection process through the reaction of chlorine and organic and inorganic material. Trihalomethanes are considered human carcinogens.

The CTR criterion for dichlorobromomethane to protect human health (30-Day average) for drinking water sources (consumption of water and aquatic organisms) is 0.56 µg/L.

Effluent monitoring data submitted by the Discharger showed concentrations of dichlorobromomethane at 0.8 µg/L and 0.9 µg/L. Both of the reported concentrations exceed the CTR criterion of 0.56 µg/L for Dichlorobromomethane. This data demonstrates that there is reasonable potential for dichlorobromomethane and effluent limitations are needed.

The two receiving water samples showed concentrations at 0.2 µg/L and 0.46 µg/L for Dichlorobromomethane.

4. WQBEL Calculations

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

Since the water quality objectives for copper are hardness-dependent and the hardness in the Eel River varies, final effluent limitations for copper are determined using formulas that are based on the hardness of the receiving water at the time the discharge is sampled. The calculations for copper below use a hardness concentration of 120 mg/l to determine the copper effluent limitation for that single hardness value.

Step 1: For each water quality criterion/objective, an effluent concentration allowance (ECA) is calculated from the following equation to account for dilution and background levels of each pollutant.

ECA = C + D (C - B), where

C = the applicable water quality criterion (adjusted for receiving water hardness and expressed as total recoverable metal, if necessary)
D = the dilution credit
B = the background concentration

Because no credit is being allowed for dilution, D = 0, and therefore, ECA = C.

Step 2: For each ECA based on aquatic life criterion/objective (copper and cyanide), the long-term average discharge condition (LTA) is determined by multiplying the ECA times a factor (multiplier), which adjusts the ECA to account for effluent variability. The multiplier varies depending 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 value of the CV. When the data set contains less than 10 sample results (which is the case for the Discharger), or 80 percent or more of the data are 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, multipliers for calculating LTAs at the 99th percentile occurrence probability are 0.321 (acute multiplier) and 0.527 (chronic multiplier). LTAs are determined as follows.

Pollutant	ECA		ECA Multiplier		LTA (µg/L)	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Copper	16.6	10.9	0.321	0.527	5.3286	5.7443
Cyanide	22	5.2	0.321	0.527	7.062	2.7404

Step 3: WQBELs, including an average monthly effluent limitation (AMEL) and a maximum daily effluent limitation (MDEL) are calculated using the most limiting (the lowest) LTA. The LTA is multiplied times 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 is set equal to 0.6, 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 multiplier is 3.11 and the AMEL multiplier is 1.55. Final WQBELs for copper and cyanide are calculated as follows.

Pollutant	LTA	MDEL Multiplier	AMEL Multiplier	MDEL (µg/L)	AMEL (µg/L)
Copper	5.33	3.11	1.55	16.6	8.3
Cyanide	2.74	3.11	1.55	8.5	4.3

Step 4: When the most stringent water quality criterion/objective is a human health criterion/objective, the AMEL is set equal to the ECA, and the MDEL is calculated by multiplying the ECA times the ratio of the MDEL multiplier to the AMEL multiplier.

From Table 2 of the SIP, when CV = 0.6 and n = 4, the MDEL/AMEL Multiplier (for MDEL at the 99th percentile occurrence probability and AMEL at the 95th percentile occurrence probability) equals 2.01. Final WQBELs for dichlorobromomethane are determined as follows.

Pollutant	ECA	MDEL/AMEL Multiplier	AMEL (µg/L)	MDEL (µg/L)
Dichlorobromomethane	0.56	2.01	0.56	1.13

All WQBELs for Priority and Non-Priority Pollutants for the Facility are summarized in the table below.

Summary of Water Quality-based Effluent Limitations

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Chlorine Residual (to Eel River)	mg/L	No Detectable Levels using a minimum detection limit of 0.1 mg/l	
pH	pH Units	6.5-8.5	
Methyl tertiary butyl ether (MtBE)	µg/L	13	26

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Copper[a]	µg/L	8.3	16.6
Cyanide	µg/L	4.3	8.5
Dichlorobromomethane	µg/L	0.56	1.13

Notes:
[a] Final effluent limitations for copper are for total recoverable metal fraction and are determined using formulas that are based on the hardness of the receiving water at the time the discharge is sampled. .

5. Whole Effluent Toxicity (WET)

Effluent limits for whole effluent toxicity (WET), acute or chronic, protect the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the 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 toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and/or growth.

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental responses in aquatic organisms. Detrimental response includes but is 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. The existing Order contains acute toxicity limitations in accordance with the Basin Plan, which requires that average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests be at least 90 percent, with no single test having less than 70 percent survival.

In addition to the Basin Plan requirements, Section 4 of the SIP states that chronic toxicity effluent limitations are required in Orders for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters. Discharges from Discharge Point 001 may contribute to long-term toxic effects within the receiving water, however, no chronic toxicity data are available for this discharge. In accordance with the SIP, therefore, the Discharger will be required to conduct chronic toxicity testing in order to determine reasonable potential and establish WQBELs as necessary.

D. Final Effluent Limitations

Summary of Final Effluent Limitations Discharge Point 001

Final effluent limitations for Discharge Point 001 are summarized below in the table and bulleted text.

Parameter	Units	Effluent Limitation		
		Average Monthly	Average Weekly	Maximum Daily
Biological Oxygen Demand 5-day @ 20º C (BOD_5)	mg/L	30	45	60
	lbs/day	250	375	500
Total Suspended Solids (TSS)	mg/L	30	45	60
	lbs/day	250	375	500
% Removal[a]		85	--	--
Settleable Solids	ml/L	0.1	-	0.2
pH	standard units	6.5 – 85		
Total Coliform	MPN	23	--	230
Chlorine Residual	mg/L	---	---	< 0.1[b]
MtBE	µg/L	13	---	26
Copper	µg/L	8.3	---	16.6
Cyanide	µg/L	4.3	---	8.5
Dichlorobromomethane	µg/L	0.56	--	1.13

Notes:
[a] Applies to percent difference between influent and effluent concentrations of BOD and TSS respectively.
[b] Applies only during periods of direct discharge to the Eel River.

- There shall be no acute toxicity in the effluent when discharging to the Eel River, as measured at Monitoring Location M-001. The Discharger will be considered in compliance with this limitation when the survival of aquatic organisms in a 96-hour bioassay of undiluted waste complies with the following:

    i. Minimum for any one bioassay: 70 percent survival
    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 Monitoring and Reporting Program No. R1-2006-0021.

E. Interim Effluent Limitations and Compliance Schedules

The following interim effluent limitations are established in this Order, and are effective until May 18, 2010:

Constituent	Unit	Interim Limitations	
		AMEL	MDEL
Cyanide	µg/L	---	8.5
Copper	µg/L	---	27
Dichlorobromomethane	µg/L	---	1.13

The interim effluent limitations for cyanide and dichlorobromomethane are set as maximum daily effluent limitations and are based on the highest effluent concentrations of each pollutant detected in the Discharger's monitoring data. Interim copper limitations, set as maximum daily effluent limitations are based on a calculation of actual treatment plant performance derived from sampling and other data provided by the City of Rio Dell. Analysis used to develop the interim effluent limit for copper is included as Attachment G.

F. Land Discharge Specifications

This section of the standardized Order form is not applicable to the City of Rio Dell Wastewater Treatment Facility.

G. Reclamation Specifications

This section of the standardized Order form is not applicable to the City of Rio Dell Wastewater Treatment Facility.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

Receiving water limitations contained in this Order are derived from Chapter 3 of the Basin Plan. Several of the receiving water limitations were modified to more accurately reflect Basin Plan objectives for inland surface waters, enclosed bays, and estuaries contained in Chapter 3 of the Basin Plan. Narrative receiving water limitations that were modified include V.A.2. (pH), and V.A.11 (pesticides) and receiving water limitation V.A.14 (chemical constituents) was added. Narrative receiving water limitations for other water quality objectives identified in Chapter 3 of the Basin Plan remain unchanged from the existing Order and are included in the draft Order.

B. Groundwater

Groundwater limitations included in the proposed draft Order were derived from Water Quality Objectives for Groundwaters contained in Chapter 3 of the Basin Plan.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

40 CFR 122.48 requires all NPDES Orders to specify recording and reporting of monitoring results. CWC Sections 13267 and 13383 authorize the Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program, Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the Monitoring and Reporting Program for this facility.

A. Influent Monitoring

NPDES regulations at 40 CFR 133 define secondary treatment to include 85 percent removal of BOD_5 and TSS during treatment. Monitoring of influent for these pollutant parameters, in addition to effluent, is required to monitor compliance with this standard of performance.

Influent flow monitoring is required to monitor the water balance during treatment, and thereby, monitor seepage/percolation to ground water. The amount of hauled septage received by the treatment facility must also be recorded and reported to understand impacts which this waste stream may have on facility operation.

B. Effluent Monitoring

Order No. R1-2006-0021 requires the following effluent monitoring at Monitoring Location No. M-001.

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	gpd	calculated or metered	daily
BOD_5 [a]	mg/L	8 hour composite	monthly
TSS [a]	mg/L	8 hour composite	monthly
MtBE	µg/L	grab	6x / year[4]
Copper	µg/L	8 hour composite	6x / year[4]
Cyanide	µg/L	8 hour composite	6x / year[4]
Dichlorobromomethane	µg/L	grab	6x / year[4]
pH	standard units	grab	weekly
Settleable solids	ml/L	grab	weekly

[4] Frequency of sampling increases to monthly as of May 18, 2010.

Parameter	Units	Sample Type	Minimum Sampling Frequency
Chlorine	mg/L	grab	daily
Coliform Bacteria	mpn/100 ml	grab	weekly
Acute Toxicity	TUa	grab	2x / year
Chronic Toxicity	TUc	grab	1x / year
Priority Pollutants [b]	µg/L	grab	1x / Order term

Notes:

[a] Samples shall be monitored for these pollutants on the first day of a discharge event and monthly thereafter; however, no more than one sample of effluent shall be analyzed in any one month. Effluent samples for monitoring of BOD_5 and TSS shall be collected on the same day and as close to the same time as reasonable as influent samples collected for BOD_5 and TSS monitoring.

[b] Those pollutants identified as Compound Nos. 1 – 126 by the California Toxics Rule at 40 CFR 131.38 (b) (1). Samples shall be collected during a dry weather period and on the same day as receiving water samples are collected for analysis of the priority pollutants. Analyses for the priority pollutants shall be conducted in accordance to methods established at 40 CFR 136, or if no method is specified for a pollutant at 40 CFR 136, in accordance to methods approved by the State Water Resources Control Board or the Regional Water Board.

Monitoring for the following pollutants and pollutant parameters in effluent is required to determine compliance with effluent limitations established by Order No. R1-2006-0021: flow, BOD_5, TSS, settleable solids, pH, chlorine, coliform bacteria, and acute toxicity. Chronic toxicity monitoring is required to determine compliance with the Basin Plan's narrative water quality objective for toxicity; and priority pollutant monitoring is required one time during the Order term to determine compliance with water quality objectives for toxics established by the NTR, CTR, and the Basin Plan.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic 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 period of time 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 determine compliance with the Basin Plan's narrative water quality objective for toxicity.

D. Receiving Water Monitoring

Monitoring and Reporting Program Order R102006-0021 includes monitoring of the Eel River in order to monitor effluent impacts on receiving water quality. Compliance with receiving water limitations will be demonstrated by grab samples taken upstream and at the point of discharge in the Eel River when directly discharging to surface water.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which in accordance with 40 CFR §§122.41and 122.42, apply to all NPDES discharges and must be included in every NPDES Order, are provided in Attachment D to the Order. Effluent limitations, and toxic and pretreatment effluent standards established pursuant to Sections 208(b), 301, 302, 303(d), 304, 306, and 307 of the CWA and amendments thereto are applicable to the Discharger.

B. Special Provisions

1. Reopener Provisions

Provision VI.C.1 contains a reopener provision. The Regional Water Board may reopen the Order to modify Order conditions and requirements. Causes for modifications include demonstration that the Discharger is causing or significantly contributing to adverse impacts to water quality and/or beneficial uses of receiving waters; new interpretation of water quality objectives of the Basin Plan; or if effluent monitoring or other new information demonstrates reasonable potential for any pollutant or pollutant parameter with applicable water criteria established by the NTR, CTR, or Basin Plan.

2. Special Studies and Additional Monitoring Requirements

This section of the standardized Order form is not applicable to the City of Rio Dell Wastewater Treatment Facility.

3. Best Management Practices and Pollution Prevention

The Regional Water Board includes standard provisions in all NPDES Orders requiring development of a Pollutant Minimization Program when there is evidence that a toxic pollutant is present in effluent at a concentration greater than an applicable effluent limitation.

4. Compliance Schedules

Detection of cyanide, copper, dichlorobromomethane, and methyl tertiary butyl ether in samples collected during the last permit term indicated reasonable potential for excursions above water quality criteria in the receiving water, requiring establishment of new effluent limitations. During the term of Order R1-2006-0022, the discharger is required to collect additional monitoring data, evaluate WWTF processes, and determine appropriate measures to be taken to meet the newly established water quality effluent limitations no later than May 18, 2010.

5. Construction, Operation and Maintenance Specifications

40 CFR 122.41 (e) requires proper operation and maintenance of Permitted wastewater systems and related facilities to achieve compliance with Order conditions. An up-to-date operation and maintenance manual, as required by Provision VI.C.5.a.i. of the Order, is an integral part of a well-operated and maintained facility.

6. Special Provisions for Municipal Facilities (WWTFs Only)

The Regional Water Board includes standard provisions in all NPDES Orders for municipal wastewater treatment facilities regarding wastewater collection systems, sanitary sewer overflows, source control, sludge handling and disposal, operator certification, and adequate capacity. These provisions assure efficient and satisfactory operation of municipal wastewater collection and treatment systems.

a. **Wastewater Collection System**

i. Statewide General WDRs for Sanitary Sewer Systems

The Discharger is required to enroll under Statewide General WDRs for Sanitary Sewer Systems (State Water Board Order No. 2006-0003-DWQ) by November 2, 2006. Once enrolled, the Discharger will be required under terms of the General Order to develop and implement a Sewer System Management Plan.

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(l)(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

Order No. 2006-0003-DWQ includes a Reporting Program that requires the Discharger, beginning May 2, 2007, to report SSOs to an online SSO database administered through the California Integrated Water Quality System (CIWQS) and telefax reporting when the online SSO database is not available. The goal of these provisions is to ensure appropriate and timely response by the Discharger to sanitary sewer overflows to protect public health and water quality.

This Order also includes reporting provisions (Provision VI.C.6.(a)(ii) and Attachment D subsections 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.

The Order establishes oral reporting limits for SSOs. SSOs less than 100 gallons are not required to be reported orally, while SSOs greater than or equal to 100 gallons must be reported orally to the Regional Water Board. Inevitably, minor amounts of untreated or partially treated wastewater may escape during carefully executed routine operation and maintenance activities. This Order establishes a reasonable minimum volume threshold for oral notifications. It has been the experience of Regional Water Board staff that SSOs to land that are less than 100 gallons are not likely to have a material effect on the environment or public health. Larger volumes in excess of 100 gallons may indicate a lack of proper operation and maintenance and due care, and pose more of a threat to the environment or public health. All SSOs, regardless of volume, must be electronically reported pursuant to State Water Board Order No. 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.

b. **Sludge Requirements**

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, the State Water Board promulgated provisions of Title 27, Division 2, of the California Code of Regulations, and with the Water Quality Control Plan for Ocean Waters of California (California Ocean Plan). The Discharger has indicated that that all screenings, sludges, and solids removed from the liquid waste stream are currently disposed of at a municipal solid waste landfill in accordance with all applicable regulations.

c. **Operator Certification**

This provision requires the WWTF to be operated by supervisors and operators who are certified as required by Title 23, CCR, Section 3680.

d. **Adequate Capacity**

This provision requires the WWTF to be operated by supervisors and operators who are certified as required by Title 23, CCR, Section 3680.

7. **Stormwater**

This provision requires the Discharger to comply with the State's regulations relating to regulation of industrial stormwater activities.

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) Order for the City of Rio Dell 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 Discharger and interested agencies and persons of its intent to amend 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 publication in the Eureka Times-Standard on September 23, 2006 and through posting on the Regional Water Board's Internet site at http://www.waterboards.ca.gov/northcoast/agenda/pending.html beginning on the same date.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative amendments to the WDRs. Comments should 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 should be received at the Regional Water Board offices by 5:00 p.m. on October 23, 2006**.**

C. Public Hearing

The Regional Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location.

Date: May 17, 2006
Time: 09:00 am
Location: River Lodge Conference Center
1800 Riverwalk Drive, Fortuna

At the public hearing, the Regional Water Board heard testimony, pertinent to the discharge, WDRs, and Order. Based on the testimony at the May 17 hearing, amendments to the WDR's are proposed.

The Regional Water Board will hold a public hearing on the tentative changes to the WDRs during its regular Board meeting on the following date and time and at the following location.

Date: February 8, 2007
Time: 09:00 am
Location: Regional Water Board Hearing Room
5550 Skylane Boulevard, Suite A
Santa Rosa, CA 95403

Please be aware that dates and venues may change. Our web address is **http://www.waterboards.ca.gov/northcoast** where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The Report of Waste Discharge (RWD), 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 Order 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 Lisa Bernard at 707-576-2677 or lbernard@waterboards.ca.gov.