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Edmund G. Brown, Jr.  
Governor

**ORDER NO. R1-2012-0015  
NPDES NO. CA0006017  
WDID NO. 1B83104OHUM**

**WASTE DISCHARGE REQUIREMENTS  
FOR THE SCOTIA COMMUNITY SERVICES DISTRICT  
WASTEWATER TREATMENT FACILITY  
AND EEL RIVER POWER, LLC  
STEAM ELECTRIC POWER PLANT  
HUMBOLDT COUNTY**

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

**Table 1. Discharger Information**

<b>Discharger</b>	Scotia Community Services District (CSD) Eel River Power, LLC
<b>Name of Facility</b>	Scotia CSD Wastewater Treatment Facility (WWTF) Eel River Power, LLC, Steam Electric Power Plant
<b>Facility Address</b>	WWTF – Williams Street, Scotia, CA 95565
	Power Plant – 151 Main Street, Scotia, CA 95565
	Humboldt County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge.	

The discharge by the Scotia CSD and Eel River Power, LLC from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

**Table 2. Discharge Location**

<b>Discharge Point</b>	<b>Effluent Description</b>	<b>Discharge Point Latitude</b>	<b>Discharge Point Longitude</b>	<b>Receiving Water</b>	<b>Responsible Discharger</b>
003	Storage pond overflow	40° 28' 45" N	124° 6' 27" W	Eel River	Scotia CSD and Eel River Power, LLC
012	Treated municipal wastewater	40° 29' 7" N	124° 6' 9" W	Eel River	Scotia CSD
013	Multimedia filters back flush water	40° 28' 52.6" N	124° 6' 14" W	Eel River	Eel River Power, LLC
014 (A)	Cooling water blow-down tower A	40° 28' 51" N	124° 6' 14" W	Eel River	Eel River Power, LLC
014 (B)	Cooling water blow-down tower B	40° 28' 50" N	124° 6' 14" W	Eel River	Eel River Power, LLC
015	Boiler blow-down	40° 28' 52.8" N	124° 6' 14" W	Eel River	Eel River Power, LLC
016	Once-through cooling water	40° 28' 40" N	124° 6' 21" W	Eel River	Eel River Power, LLC
017	Rock/wood separator water	40° 28' 51" N	124° 6' 18" W	Eel River	Eel River Power, LLC

**Table 3. Administrative Information**

This Order was adopted by the Regional Water Board on:	<b>April 26, 2012</b>
This Order shall become effective on:	<b>July 1, 2012</b>
This Order shall expire on:	<b>June 30, 2017</b>
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations no later than 180 days in advance of the Order expiration date.	

IT IS HEREBY ORDERED, that Order No. R1-2006-0020 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (Water Code) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, Catherine Kuhlman, Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on April 26, 2012.

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Catherine Kuhlman, Executive Officer

## Table of Contents

I.	Facility Information .....	6
II.	Findings.....	6
III.	Discharge Prohibitions .....	14
IV.	Effluent Limitations .....	15
	A. Final Effluent Limitations .....	15
	B. Interim Effluent Limitations .....	21
	C. Land Discharge Specifications .....	21
	D. Reclamation Specifications .....	22
	E. Other Requirements .....	22
V.	Receiving Water Limitations.....	22
	A. Surface Water Limitations .....	22
	B. Groundwater Limitations.....	24
VI.	Provisions.....	24
	A. Standard Provisions .....	24
	B. Monitoring and Reporting Program Requirements .....	25
	C. Special Provisions .....	26
	1. Reopener Provision .....	26
	2. Special Studies, Technical Reports and Additional Monitoring Requirements .....	27
	3. Best Management Practices and Pollution Prevention .....	29
	4. Construction, Operation and Maintenance Specifications .....	30
	5. Special Provisions for Municipal Facilities (POTWs Only).....	31
	6. Other Special Provisions .....	35
	7. Compliance Schedules.....	35
VII.	Compliance Determination.....	36

## List of Tables

Table 1.	Discharger Information.....	1
Table 2.	Discharge Location .....	2
Table 3.	Administrative Information.....	3
Table 4.	Facility Information.....	6
Table 5.	Basin Plan Beneficial Uses .....	9
Table 6a.	Effluent Limitations – Discharge Point 003.....	16
Table 6b.	Effluent Limitations – Discharge Point 012.....	17
Table 6c.	Effluent Limitations – Discharge Point 013.....	18
Table 6d.	Effluent Limitations – Discharge Point 014(A/B).....	19
Table 6e.	Effluent Limitations – Discharge Point 014.....	20
Table 6f.	Effluent Limitations – Discharge Point 015.....	20
Table 6g.	Effluent Limitations – Discharge Point 016.....	21
Table 6h.	Effluent Limitations – Discharge Point 017.....	21

**List of Attachments**

Attachment A – Definitions ..... A-1  
Attachment B – Topographic Map ..... B-1  
Attachment C – Flow Schematic ..... C-1  
Attachment D – Standard Provisions..... D-1  
Attachment E – Monitoring and Reporting Program ..... E-1  
Attachment F – Fact Sheet..... F-1

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**I. FACILITY INFORMATION**

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

**Table 4. Facility Information**

<b>Discharger</b>	Scotia Community Services District (CSD) Eel River Power, LLC
<b>Name of Facility</b>	Scotia CSD Wastewater Treatment Facility Eel River Power, LLC Steam Electric Power Plant
<b>Facility Address</b>	WWTF – Williams Street, Scotia, CA 95565
	Power Plant – 151 Main Street, Scotia, CA 95565
	Humboldt County
<b>Facility Contact, Title, and Phone</b>	WWTF – Frank Bacik, President, (707) 764-4131 Power Plant – Charles Abbott, General Manager (707) 764-5141
<b>Mailing Address</b>	WWTF – P.O. Box 245, Scotia, CA 95565 Power Plant – P.O. Box 38, Scotia, CA 95565
<b>Type of Facility</b>	WWTF – Publicly Owned Treatment Works (POTW) Power Plant – Steam electric power plant
<b>WWTF Facility Design Flow</b>	1.0 million gallons per day (MGD)
<b>WWTF Facility Permitted Flow</b>	0.77 MGD
<b>Power Plant Facility Design Flow (process)</b>	1.0 MGD (includes approximately 0.86 MGD of once through cooling water)
<b>Power Plant Facility Design Flow (discharge)</b>	0.13 MGD

**II. FINDINGS**

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

**A. Background.** The Scotia Community Services District (CSD) and Eel River Power, LLC (hereinafter collectively referred to as the Dischargers) are currently discharging under Order No. R1-2006-0020 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0006017 adopted on June 29, 2006. The Dischargers submitted a Report of Waste Discharge, dated April 1, 2011 and applied for a NPDES permit renewal to discharge treated wastewater from Scotia CSD Wastewater Treatment Facility (WWTF) and 1.0 MGD from the Eel River Power, LLC Steam Electric Power Plant, hereinafter collectively called the Facility. The application was deemed complete.

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

**B. Facility Description.** The Scotia CSD owns and operates a municipal WWTF. The treatment system consists of screening, grinding, and grit removal, a primary clarifier, a redwood trickling filter, a secondary clarifier, a chlorine contact chamber, three treatment/polishing ponds, and a sludge holding tank. Wastewater from the WWTF discharges to a 20-acre storage pond at Discharge Point 012B.

Eel River Power, LLC owns and operates a steam electric power plant (power plant). The power plant system consists of two multimedia filters, a reverse osmosis system, three boilers, and two cooling towers. The boilers convert up to 898 gallons per minute (gpm) of recovered condensate and filtered makeup water from the reverse osmosis system to steam at 600 pounds per square inch at 750 degrees. Steam from the boilers is sent to turbines A, B, and 3, which drive the generators to produce electricity. Some of the steam is extracted from turbines A and B for process uses including water heaters, de-aerators, and air injectors. Cooling towers A and B are used to cool the condenser on turbines A and B respectively.

The two multimedia filters used for power plant make-up water are back flushed bi-weekly using potable water. Each back flush discharges 9,000 gallons of wastewater at Discharge Point 013. The cooling towers discharge approximately 37,000 gallons per day (gpd) at Discharge Point 014(A/B). Approximately 11,000 gpd of boiler blow-down discharges from the power plant at Discharge Point 015 and combines with cooling tower blow-down for use in the hydraulic rock/wood separator. Water from the rock/wood separator is discharged to the storage pond at Discharge Point 017. Once-through cooling water from turbine 3 discharges at approximately 600 gpm at Discharge Point 016.

Discharge Points 012B, 013, 014, 015, 016, and 017 discharge directly or indirectly to a 20-acre storage pond which then discharges through a clarifier and out Discharge Point 003 to the Eel River, a water of the United States within the Scotia Hydrologic Sub area of the Eel River Watershed. Storm water at the Scotia Mill, which discharges from Discharge Points 001 through 011 is regulated under the General Permit to Discharge Storm Water Associated With Industrial Activity (WQ Order No. 97-03-DWQ). Attachment B provides a topographic map of the area around the facilities. Attachment C provides flow schematics of the WWTF and power plant.

**C. Legal Authorities.** This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S.

Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters.

This Order also serves as Waste Discharge Requirements (WDRs) for land discharges of effluent pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

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

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

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

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

**F. Technology-based Effluent Limitations.** Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations<sup>1</sup> require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. This discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at Part 133 and Effluent

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<sup>1</sup> All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

Limitations Guidelines and Standards for the Steam Electric Power Category in Part 423. The Regional Water Board has considered the factors listed in Water Code §§13241 and 13263 in establishing these requirements. This Order includes effluent limits that are more stringent than limits provided in Order No. R1-2006-0020. A detailed discussion of these effluent limitations is included in the Fact Sheet (Attachment F).

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

Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

**H. 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. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal and domestic supply. Thus, as discussed in detail in the Fact Sheet, beneficial uses applicable to area groundwater and the Lower Eel River within the Scotia Hydrologic Subarea of the Lower Eel River Hydrologic Area are as follows:

**Table 5. Basin Plan Beneficial Uses**

Beneficial Use (s)	Receiving Water Name Discharge Points	
	Eel River 003	Groundwater r
Municipal and Domestic Water Supply (MUN)	E	E
Agricultural Supply (AGR)	E	E

Beneficial Use (s)	Receiving Water Name Discharge Points	
	Eel River 003	Groundwater
Industrial Service Supply (IND)	E	E
Industrial Process Supply (PRO)	P	P
Groundwater Recharge (GWR)	E	---
Freshwater Replenishment (FRESH)	E	---
Navigation (NAV)	E	---
Hydropower Generation (POW)	P	---
Water Contact Recreation (REC-1)	E	---
Non-contact Water Recreation (REC-2)	E	---
Commercial and Sport Fishing (COMM)	E	---
Warm Freshwater Habitat (WARM)	---	---
Cold Freshwater Habitat (COLD)	E	---
Wildlife Habitat (WILD)	E	---
Preservation of Rare, Threatened or Endangered Species (RARE)	E	---
Marine Habitat (MAR)	---	--
Migration of Aquatic Organisms (MIGR)	E	---
Spawning, Reproduction, and/or Early Development (SPWN)	E	---
Shellfish Harvesting (SHELL)	---	---
Estuarine Habitat (EST)	---	---
Aquaculture (AQUA)	P	P
Native American Culture (CUL)	---	E

The State Water 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.

On November 12, 2010, USEPA provided partial approval of the list of impaired water bodies prepared by the State pursuant to CWA section 303(d), which requires identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. The partial approval supported the 303(d) listing of the Lower Eel River as impaired by aluminum, dissolved oxygen, sedimentation/siltation, and temperature. Pursuant to CWA section 303(d), the Regional Water Board must adopt Total Maximum Daily Loads (TMDLs) to

address impairing pollutants in 303(d) listed waters, and then implement TMDLs in NPDES permits. TMDLs establish the maximum quantity of a given pollutant that can be added to a water body from all sources without exceeding the applicable water quality standard for that pollutant and determine wasteload allocations (the portion of a TMDL allocated to existing and future point sources) for point sources and load allocations (the portion of a TMDL attributed to existing and future nonpoint sources) for nonpoint sources.

In December 2007, USEPA established a TMDL for sediment and temperature in the Lower Eel River. This Order is consistent with the TMDL. Requirements of this Order specifically implement the applicable Water Quality Control Plans.

- I. National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, which was amended on May 4, 1995 and November 9, 1999. About 40 criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules include water quality objectives for priority pollutants.
- J. State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
- K. Compliance Schedules and Interim Requirements.** The State Water Board adopted Resolution No. 2008-0025 on April 15, 2008, titled Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits, which includes compliance schedule policies for pollutants that are not addressed by the SIP. This Policy became effective on August 27, 2008. This Order does not include compliance schedules or interim effluent limitations.
- L. Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes. (section 131.21; 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (also known as the Alaska rule), new and

revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

**M. Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations for the WWTF consist of restrictions on 5-day biochemical oxygen demand (BOD<sub>5</sub>), pH, and total suspended solids (TSS). The technology-based effluent limitations for the power plant consist of restrictions on free available chlorine, total chlorine residual, total recoverable chromium, oil and grease, polychlorinated biphenyls (PCBs), pH, TSS, total recoverable zinc, and the remainder of the 126 priority pollutants contained in Appendix A to Part 423. Restrictions on these pollutants are discussed in section IV.B.2 and IV.B.3 of the Fact Sheet (Attachment F). This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum, federal technology-based requirements that are necessary to meet water quality standards.

WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to section 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

**N. Antidegradation Policy.** Section 131.12 requires that the State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water

Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. As discussed in detail in the Fact Sheet the permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.

- O. Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. As discussed in detail in the Fact Sheet, this Order's effluent limitations are consistent with the anti-backsliding requirements of the CWA and federal regulations.
- P. Endangered Species Act.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.
- Q. Monitoring and Reporting.** Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.
- R. Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.
- S. Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections IV.B and V.B of this Order are included to implement State law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these

provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

- T. Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet of this Order.
- U. Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

### III. DISCHARGE PROHIBITIONS

- A.** The discharge of any waste not disclosed by the Dischargers or not within the reasonable contemplation of the Regional Water Board is prohibited.
- B.** Creation of a pollution, contamination, or nuisance as defined by Section 13050 of the California Water Code is prohibited.
- C.** The discharge of soil, silt, bark, slash, sawdust, or other organic and earthen material from any logging, construction, or associated activity of whatever nature into any stream or watercourse in the basin in quantities deleterious to fish, wildlife, or other beneficial uses is prohibited.
- D.** The discharge of sludge or digester supernatant is prohibited, except as authorized under section VI.C.5.c of this Order (Solids Disposal and Handling Requirements). This prohibition includes discharges to the unlined dewatering/holding trench located between the WWTF and the active channel of the Eel River.
- E.** The discharge or reclamation use of untreated or partially treated waste (receiving a lower level of treatment than described in section II.A of the Fact Sheet) from anywhere within the collection, treatment, or disposal system is prohibited, except as provided for in Prohibition III.E and Attachment D, Standard Provision G (Bypass).
- F.** Any sanitary sewer overflow (SSO) that results in a discharge of untreated or partially treated wastewater to (a) waters of the State, (b) groundwater, or (c) land that creates a pollution, contamination, or nuisance as defined in California Water Code section 13050(m) is prohibited.
- G.** Discharges of waste to the Eel River or its tributaries are prohibited during the period May 15 through September 30 each year.

- H.** During the period of October 1 through May 14, discharges of wastewater shall not exceed one percent of the flow of the Eel River. For purposes of this Order, compliance with the discharge rate limitation is determined as follows:
- 1.** The discharge of treated wastewater at Discharge Point 003 shall be adjusted at least once daily to avoid exceeding, to the extent practicable, one percent of the most recent daily flow measurement of the Eel River as measured at Scotia at U.S. Geological Survey (USGS) Gage No. 11477000; and
  - 2.** In no case shall the total volume of treated wastewater discharged at Discharge Point 003 in a calendar month exceed one percent of the total volume of the Eel River at Scotia at USGS Gage No. 11477000 in the same calendar month.

During periods of discharge, USGS Station 11477000 shall be read at least once daily, and the total discharge flow rate through Discharge Point 003 shall be set for no greater than one percent of the flow of the Eel River at the time of the daily reading. At the beginning of the discharge season, the monthly flow volume comparisons shall be based on the date when the discharge commenced to the end of the calendar month. At the end of the discharge season, the 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.

- I.** The discharge of waste to land that is not owned by or under agreement to use by the Discharger is prohibited, except for use for fire suppression as provided in title 22, sections 60307 (a) and (b) of the California Code of Regulations.
- J.** The discharge of waste at any point not described in Finding II.B or authorized by any State Water Board or other Regional Water Board permit is prohibited.
- K.** The discharge of septage into the WWTF is prohibited.
- L.** Flow of waste into the Discharger's WWTF in excess of 0.77 MGD, is prohibited.
- M.** Discharge of metal cleaning wastes into the Eel River or into a waste stream that ultimately discharges to the Eel River is prohibited.
- N.** The intentional introduction of pollutant-free wastewater to the collection, treatment, or disposal system for purposes of dilution is prohibited. The blending of cooling water and boiler blowdown for the purpose of pH adjustment is not subject to this prohibition.

#### **IV. EFFLUENT LIMITATIONS**

##### **A. Final Effluent Limitations**

##### **1. Final Effluent Limitations – Discharge Point 003**

The discharge of stored wastewater shall comply with the following effluent limitations at Discharge Point 003, with compliance measured at Monitoring Location M-003 as described in the attached Monitoring and Reporting Program (Attachment E).

- a. There shall be no acute toxicity in the effluent when discharging to the Eel River as measured at Discharge Point 003. 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 the attached Monitoring and Reporting Program (Attachment E).

- b. The discharge of effluent shall comply with the following effluent limitations at Discharge Point 003, with compliance measured at Monitoring Location M-003 as described in the attached Monitoring and Reporting Program (Attachment E).

**Table 6a. Effluent Limitations – Discharge Point 003**

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	Standard Units	---	---	6.5	8.5
Total Chlorine Residual	mg/L	0.01	0.02	---	---
Settleable Solids	mL/L	0.1	0.2	---	---

**2. Final Effluent Limitations – Discharge Point 012**

- a. The disinfected effluent, sampled at Monitoring Location 012(A) as described in the attached Monitoring and Reporting Program (Attachment E) shall not contain concentrations of total coliform bacteria exceeding the following concentrations:

- i. The median concentrations shall not exceed a Most Probable Number (MPN) of 23 per 100 milliliters, using the bacteriological results of the last 30 calendar days for which analyses have been completed.
- ii. The number of coliform bacteria shall not exceed an MPN of 230 per 100 milliliters.
- b. The treated wastewater shall be adequately oxidized and disinfected as defined in title 22, Division 4, Chapter 3, California Code of Regulations.
- c. The discharge of secondary treated wastewater, as defined by the WWTF's treatment design and the numerical limitations below, shall comply with the following effluent limitations at Discharge Point 012, with compliance measured at Monitoring Location 012(B) as described in the attached Monitoring and Reporting Program (Attachment E).

**Table 6b. Effluent Limitations – Discharge Point 012**

Parameter	Units	Effluent Limitations				
		Average <sup>2</sup> Monthly	Average <sup>3</sup> Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical	mg/L	30	45	60	---	---

<sup>2</sup> The arithmetic mean of all daily determinations made during a calendar month. Where less than daily sampling is required, the average shall be determined by the summation of all the measured daily discharges divided by the number of days during the calendar month when the measurements were made. If only one sample is collected during that period of time, the value of the single sample shall constitute the monthly average.

<sup>3</sup> The arithmetic mean of all daily determinations made during a calendar week, Sunday to Saturday. Where less than daily sampling is required, the average shall be determined by the summation of all the measured daily discharges divided by the number of days during the calendar week when the measurements were made. If only one sample is collected during that period of time, the value of the single sample shall constitute the weekly average.

Parameter	Units	Effluent Limitations				
		Average <sup>2</sup> Monthly	Average <sup>3</sup> Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Oxygen Demand 5-day @ 20°C	lbs/day <sup>4</sup> <sub>5</sub>	64	96	129	---	---
Total Suspended Solids	mg/L	30	45	60	---	---
	lbs/day	64	96	129	---	---
pH	Standard Units	---	---	---	6.5	8.5

**d. Percent Removal:** The average monthly percent removal of BOD<sub>5</sub> and TSS shall not be less than 85 percent. Percent removal shall be determined from the monthly average value of influent wastewater concentration in comparison to the monthly average value of effluent concentration for the same constituent over a calendar month at Monitoring Locations M-INF and M-012(B).

**3. Final Effluent Limitations – Discharge Point 013**

**a.** The discharge of low volume waste as defined by 40 CFR § 423.12 from back-flushing multimedia filters, shall maintain compliance with the following effluent limitations at Discharge Point 013. Compliance shall be measured at Monitoring Location M-013 as described in the attached Monitoring and Reporting Program (Attachment E).

**Table 6c. Effluent Limitations – Discharge Point 013**

Parameter	Units	Effluent Limitations
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<sup>4</sup> Mass based effluent limitations are based on an average flow rate of 0.257 MGD.

<sup>5</sup> The mass discharge (lbs/day) is obtained from the following equation for any calendar day, week, or month.

$$\frac{8.34}{N} \sum_{i=1}^N Q_i C_i$$

in which N is the number of samples analyzed, Q<sub>i</sub> and C<sub>i</sub> are the flow rate (MGD) and the pollutant concentration (mg/L), respectively, which are associated with each of the N grab samples, which may be taken in the sampling period. If a composite sample is taken, C<sub>i</sub> is the concentration measured in the composite sample and Q<sub>i</sub> is the average flow rate occurring during the period over which samples are composited.

		<b>Average Monthly</b>	<b>Maximum Daily</b>	<b>Instantaneous Minimum</b>	<b>Instantaneous Maximum</b>
Total Suspended Solids	mg/L	30	100	---	---
Oil and grease	mg/L	15	20	---	---
Polychlorinated Biphenyls	µg/L	---	No Detectable Amount	---	---
pH	Standard Units	---	---	6.0	9.0

**4. Final Effluent Limitations – Discharge Point 014 (A/B)**

- a. The discharge of recirculated cooling water blowdown as defined by 40 CFR § 423.13 shall comply with the following effluent limitations at Discharge Point 014. Compliance shall be measured at Monitoring Location M-014A and B as described in the attached Monitoring and Reporting Program (Attachment E).

**Table 6d. Effluent Limitations – Discharge Point 014(A/B)**

<b>Parameter</b>	<b>Units</b>	<b>Effluent Limitations</b>			
		<b>Average Monthly</b>	<b>Maximum Daily</b>	<b>Instantaneous Minimum</b>	<b>Instantaneous Maximum</b>
Free Available Chlorine	mg/L	0.2	0.5	---	---
Priority Pollutants	µg/L	---	No Detectable Amount <sup>6</sup>	---	---
Chromium, Total	mg/L	0.2	0.2	---	---
Zinc, Total	mg/L	1.0	1.0	---	---
Polychlorinated Biphenyls	µg/L	---	No Detectable Amount	---	---
pH	Standard Units	---	---	6.0	9.0

<sup>6</sup> Does not apply to total chromium or total zinc concentrations

- b. The discharge of low volume waste as defined by 40 CFR § 423.12 from cooling tower cleaning wastes, shall maintain compliance with the following effluent limitations at Discharge Point 014. Compliance shall be measured at Monitoring Location M-014 as described in the attached Monitoring and Reporting Program (Attachment E).

**Table 6e. Effluent Limitations – Discharge Point 014**

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Total Suspended Solids	mg/L	30	100	---	---
Oil and grease	mg/L	15	20	---	---
Polychlorinated Biphenyls	µg/L	---	No Detectable Amount	---	---
pH	Standard Units	---	---	6.0	9.0

**5. Final Effluent Limitations – Discharge Point 015**

- a. The discharge of boiler blowdown, low volume waste, as defined by 40 CFR § 423.12 shall maintain compliance with the following effluent limitations at Discharge Point 015. Compliance shall be measured at Monitoring Location M-015 as described in the attached Monitoring and Reporting Program (Attachment E).

**Table 6f. Effluent Limitations – Discharge Point 015**

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Total Suspended Solids	mg/l	30	100	---	---
Oil and grease	mg/L	15	20	---	---
Polychlorinated Biphenyls	µg/L	---	No Detectable Amount	---	---
pH	Standard Units	---	---	6.0	9.0

**6. Final Effluent Limitations – Discharge Point 016**

- a. The discharge of once-through condenser cooling water as defined by 40 CFR § 423.13 shall maintain compliance with the following effluent limitations at Discharge Point 016. Compliance shall be measured at Monitoring Location M-016 as described in the attached Monitoring and Reporting Program (Attachment E).

**Table 6g. Effluent Limitations – Discharge Point 016**

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Polychlorinated biphenyls	µg/L	---	No detectable amount	---	---

**7. Final Effluent Limitations – Discharge Point 017**

- a. The discharge of hydraulic rock/wood separator water, low volume waste, as defined by 40 CFR § 423.12 shall maintain compliance with the following effluent limitations at Discharge Point 017. Compliance shall be measured at Monitoring Location M-017 as described in the attached Monitoring and Reporting Program (Attachment E).

**Table 6h. Effluent Limitations – Discharge Point 017**

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Total Suspended Solids	mg/l	30	100	---	---
Oil and grease	mg/L	15	20	---	---
Polychlorinated Biphenyls	µg/L	---	No Detectable Amount	---	---
pH	Standard Units	---	---	6.0	9.0

**B. Interim Effluent Limitations**

This section of the standardized permit form is not applicable.

**C. Land Discharge Specifications**

This section of the standardized permit form is not applicable.

#### **D. Reclamation Specifications**

This section of the standardized permit form is not applicable.

#### **E. Other Requirements**

- 1. Disinfection Process Requirements for Chlorination System.** A minimum chlorine residual of 1.5 mg/L shall be maintained at the end of the disinfection process. Compliance shall be measured at Monitoring Location M-012A as described in the attached Monitoring and Reporting Program (Attachment E).

### **V. RECEIVING WATER LIMITATIONS**

#### **A. Surface Water Limitations**

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. Compliance with receiving water limitations shall be measured at Monitoring Locations R-017 and R-018 as described in the attached Monitoring and Reporting Program (Attachment E). The discharge shall not cause the following in the Eel River:

- 1.** The waste discharge shall not cause the dissolved oxygen concentration of the receiving waters to be depressed below 7.0 mg/L. Additionally, the discharge shall not cause the dissolved oxygen content of the receiving water to fall below 10.0 mg/L more than 50 percent of the time, or below 7.5 mg/l more than 10 percent of the time assessed over a calendar year. In the event that the receiving waters are determined to have dissolved oxygen concentration of less than 7.0 mg/l, the discharge shall not depress the dissolved oxygen concentration below the existing level.
- 2.** The waste discharge shall not cause the specific conductance (micromhos<sup>7</sup>) concentration of the receiving waters to increase above 225 micromhos 50 percent of the time, or above 375 micromhos more than 10 percent of the time.
- 3.** The waste discharge shall not cause the total dissolved solids concentration of the receiving waters to increase above 140 mg/l more than 50 percent of the time, or above 275 mg/l more than 10 percent of the time.
- 4.** The discharge shall not cause the pH of the receiving waters to be depressed below 6.5 nor raised above 8.5. Within this range, the discharge shall not cause receiving water pH of the receiving waters to be changed at any time more than 0.5 pH units from normal ambient pH levels. If the pH of the receiving water is less than 6.5, the discharge shall not cause a further

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<sup>7</sup> Measured at 77° F.

- depression of the pH of the receiving water. If the pH of the receiving water is greater than 8.5, the discharge shall not cause a further increase in the pH of the receiving water.
5. The discharge shall not cause the turbidity of the receiving waters to be increased more than 20 percent above naturally occurring background levels.
  6. The discharge shall not cause the receiving waters to contain floating materials, including, but not limited to, solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.
  7. The discharge shall not cause the receiving waters to contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses.
  8. The discharge shall not cause coloration of the receiving waters that causes nuisance or adversely affects beneficial uses.
  9. The discharge shall not cause bottom deposits in the receiving waters to the extent that such deposits cause nuisance or adversely affect beneficial uses.
  10. The discharge shall not cause or contribute to receiving water concentrations of biostimulants that promote objectionable aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses of the receiving waters.
  11. The discharge shall not cause the receiving waters to contain 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, bioassays of appropriate duration, or other appropriate methods, as specified by the Regional Water Board.
  12. The discharge shall not alter the natural temperature of the receiving waters.
  13. The discharge shall not cause the receiving waters to contain concentrations of pesticides in excess of the limiting concentrations set forth in the Basin Plan. The discharge shall not cause the receiving waters to contain concentrations of pesticides in excess of the limiting concentrations established as Maximum Contaminant Levels (MCLs) by the CDPH in title 22, Cal. Code of Regs, section 64444.
  14. The discharge shall not cause the receiving waters to contain concentrations of pesticides in excess of the limiting concentrations set forth in the Basin Plan. The discharge shall not cause the receiving waters to contain concentrations of pesticides in excess of the limiting concentrations

established as Maximum Contaminant Levels (MCLs) by the California Department of Public Health (CDPH) in title 22, Cal. Code of Regs, section 64444.

15. The discharge shall not cause the receiving waters to contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses.
16. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board, as required by the federal CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA, or amendments thereto, the Regional Water Board will revise and modify this Permit in accordance with the more stringent standards.
17. The discharge shall not cause concentrations of chemical constituents to occur in excess of limits specified in Table 3-2 of the Basin Plan or in excess of more stringent MCLs established for these pollutants in title 22, Cal. Code of Regs. Division 4, Chapter 15, Articles 4 and 5.5.

#### **B. Groundwater Limitations**

1. The collection, storage, and use of wastewater or recycled water shall not cause or contribute to a statistically significant degradation of groundwater quality.
2. The collection, storage, and use of wastewater or recycled water shall not cause alterations in groundwater that result in contaminant concentrations that cause nuisance or adversely affect beneficial uses.
3. The collection, treatment, storage, and/or use of wastewater or recycled water shall not cause alterations of groundwater that result in chemical concentrations in excess of limits specified in Cal. Code of Regs, title 22 section 64435 Tables 2 and 3, limits specified in title 22 section 64444.5, or the Basin Plan.
4. The collection, treatment, storage, or use of wastewater shall not result in taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

### **VI. PROVISIONS**

#### **A. Standard Provisions**

##### **1. Federal Standard Provisions**

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

## **2. Regional Water Board Standard Provisions**

The Discharger shall comply with the following provisions:

- a.** Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.
- b.** In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, interim or final effluent limitation, land discharge specification, reclamation specification, receiving water limitation, or provision of this Order that may result in a significant threat to human health or the environment, such as inundation of treatment components, breach of pond containment, sanitary sewer overflow, irrigation runoff, etc., and/or that results in a discharge to a drainage channel or a surface water, the Discharger shall report orally and in writing to the Regional Water Board staff all unauthorized spills. Spill notification and reporting shall be conducted in accordance with section X.E. of the Monitoring and Reporting Program (Attachment E).
- c.** Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (Water Code § 1211)
- d.** Ponds used for the storage of recycled water shall be constructed in a manner that protects groundwater. The Discharger shall submit design proposals for new wastewater storage ponds to the Regional Water Board Executive Officer for review prior to construction and demonstrate that the pond complies with the Water Code and title 27 of the California Code of Regulations. Pond design and operation plan must include features and best management practices (BMPs) to protect groundwater and prevent exceedances of groundwater quality objectives.

## **B. Monitoring and Reporting Program Requirements**

The Discharger shall comply with the Monitoring and Reporting Program, and future revisions thereto, in Attachment E of this Order.

## C. Special Provisions

### 1. Reopener Provision

- a. **Standard Revisions.** If applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional Water Board may reopen this Order and make modifications in accordance with such revised standards.
- b. **Reasonable Potential.** This Order may be reopened for modification to include an effluent limitation if monitoring establishes that the discharge causes, has the reasonable potential to cause, or contributes to an excursion above an applicable water quality objective.
- c. **Whole Effluent Toxicity (WET).** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a chronic toxicity limitation and/or a limitation for a specific toxic pollutant identified by a TRE. In addition, if a numeric water quality objective for chronic toxicity is adopted by the State Water Board, this Order may be reopened to include an effluent limitation for chronic toxicity based on that objective. As directed by the State Water Resources Control Board (State Water Board), staff members are working to replace the toxicity control provisions established in Section 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) with a standalone policy. The provisions proposed in the Policy for Toxicity Assessment and Control (Policy) include a new method to determine the toxicity of discharges, statewide numeric objectives, and further standardization of toxicity provisions for National Pollutant Discharge Elimination System (NPDES) dischargers and facilities subject to Waste Discharge Requirements (WDR). Once adopted, this Order may be reopened or revised to reflect changes in accordance with the Policy.
- d. **303 (d)-Listed Pollutants.** If a new TMDL is adopted and is applicable to receiving waters for this discharge, this Order may be reopened to incorporate requirements of the TMDL. If the Regional Water Board determines that a voluntary offset program is feasible for and desired by the Discharger, then this Order may be reopened to reevaluate the effluent limitations for the pollutant or pollutants addressed by the TMDL and, if appropriate, to incorporate provisions recognizing the Discharger's participation in an offset program.
- e. **Special Studies.** If a water effect ratio, mixing zone or other water quality study provides new information and a basis for determining that a permit condition or conditions should be modified, the Regional Water Board may

reopen this Order and make modifications in accordance with section 122.62.

- f. **Nutrients.** This Order contains effluent limitations for ammonia, total nitrogen, and nitrate. If new water quality objectives for nutrients are established, or if monitoring data indicate the need for more stringent effluent limitations for these or other nutrient parameters, this Order may be reopened and modified to include new or modified effluent limitations, as necessary.

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

### a. Toxicity Reduction Requirements

- i. **Whole Effluent Toxicity (WET).** In addition to a limitation for whole effluent acute toxicity, the Monitoring and Reporting Program (MRP) of this Order requires routine monitoring for whole effluent chronic toxicity to determine compliance with the Basin Plan's narrative water quality objective for toxicity. As established by the MRP, if either of the effluent limitations for acute toxicity is exceeded (a single sample with less than 70% survival or a three sample median of less than 90% survival) or if the chronic toxicity monitoring trigger of 1.0 TUc (where  $TUc = 100/NOEC$ )<sup>8</sup> is exceeded, the Discharger shall conduct accelerated monitoring as specified in section V of the MRP.

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

- ii. **Toxicity Reduction Evaluations (TRE) Workplan.** The Dischargers 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 requirement may be met using an existing TRE Workplan which meets the criteria contained in this section. This workplan shall be reviewed and updated by the Dischargers as necessary in order to remain current and applicable to the discharge and discharge facilities.

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<sup>8</sup> This Order does not allow any credit for dilution for the chronic condition. Therefore, a TRE is triggered when the effluent exhibits a pattern of toxicity at 100% effluent.

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 Dischargers' 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).

**iii. Toxicity Reduction Evaluation (TRE).** 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, required by section V of the MRP, observed to exceed either the acute or chronic toxicity parameter.
- (b) The TRE shall be conducted in accordance with the Dischargers' workplan.
- (c) The TRE shall be in accordance with current technical guidance and reference material including, at a minimum, the USEPA manual EPA/833B-99/002.
- (d) The TRE may end at any stage if, through monitoring results, it is determined that there is no longer consistent toxicity.
- (e) The Dischargers may initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. As guidance, the Dischargers shall use the USEPA acute and chronic manuals, EPA/600/6-91/005F (Phase I), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III).
- (f) As toxic substances are identified or characterized, the Dischargers 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 Dischargers' actions and efforts to identify and control or reduce sources of consistent toxicity.

### 3. Best Management Practices and Pollution Prevention

- a. **Pollutant Minimization Program.** Each of the Dischargers named in this Order shall develop and conduct a Pollutant Minimization Program (PMP) as further described below when there is evidence (e.g., sample results reported as "Detected, but Not Quantified" (DNQ) when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods required by this Order, presence of WET, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either:
- i. A sample result is reported as DNQ and the effluent limitation is less than the reporting level (RL); or
  - ii. A sample result is reported as not detected (ND) and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in MRP section X.B.4.
  - iii. The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:
    - (a) An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;
    - (b) Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;
    - (c) Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;
    - (d) Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and

- (e) An annual status report that shall be sent to the Regional Water Board including:
  - (1) All PMP monitoring results for the previous year;
  - (2) A list of potential sources of the reportable priority pollutant(s);
  - (3) A summary of all actions undertaken pursuant to the control strategy; and
  - (4) A description of actions to be taken in the following year.

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

- a. The Dischargers shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Dischargers to achieve compliance with this Order. Proper operation and maintenance includes adequate laboratory quality control and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Dischargers only when necessary to achieve compliance with the conditions of this Order.  
[section 122.41(e)]
- b. The Dischargers shall maintain an updated Operation and Maintenance (O&M) Manual for the Facility. The Dischargers shall update the O&M Manual, as necessary, to conform to changes in operation and maintenance of the Facility. The O&M Manual shall be readily available to operating personnel onsite. The O&M Manual shall include the following:
  - i. Description of the treatment plant, table of organization showing the number of employees, duties and qualifications and plant attendance schedules (daily, weekends and holidays, part-time, etc). The description should include documentation that the personnel are knowledgeable and qualified to operate the treatment facility so as to achieve the required level of treatment at all times.
  - ii. Detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation and equipment.
  - iii. Description of laboratory and quality assurance procedures.
  - iv. Process and equipment inspection and maintenance schedules.
  - v. Description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the Dischargers will be able to comply with requirements of this Order.

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

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

### **a. Wastewater Collection Systems**

#### **i. Statewide-General WDRs for Sanitary Sewer Systems**

- (a) On May 2, 2006, the State Water Board adopted State Water Board Order No. 2006-0003-DWQ, Statewide General WDRs for Sanitary Sewer Systems. Order No. 2006-0003-DWQ requires that all public agencies that currently own or operate sanitary sewer systems apply for coverage under the General WDRs by November 2, 2006. On February 20, 2008, the State Water Board adopted Order No. WQ-2008-0002-EXEC Adopting Amended Monitoring and Reporting Requirements for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems. The Dischargers shall maintain coverage under, and shall be subject to the requirements of Order Nos. 2006-0003-DWQ and WQ-2008-0002-EXEC and any future revisions thereto for operation of its wastewater collection system.
- (b) In addition to the coverage obtained under Order No. 2006-0003, the Discharger's collection system is part of the system that is subject to this Order. As such, the Discharger must properly operate and maintain its collection system. (section 122.41 (e)) The Discharger must report any noncompliance (section 122.41 (l) (6) and (7)) and mitigate any discharge from the collection system in violation of this Order (section 122.41 (d)).

#### **ii. Sanitary Sewer Overflows**

- (a) The Discharger shall take all feasible steps to stop sanitary sewer overflows (SSOs) as soon as possible. All reasonable steps shall be taken to collect spilled sewage and protect the public from contact with wastes or waste-contaminated soils or surfaces.
- (b) The Discharger shall report orally and in writing to the Regional Water Board staff all SSOs and unauthorized spills of waste. Spill

notification and reporting shall be conducted in accordance with the MRP (Attachment E).

**b. Source Control Provisions**

The Discharger shall perform source control functions, to include the following:

- i. Implement the necessary legal authorities to monitor and enforce source control standards, restrict discharges of toxic materials to the collection system and inspect facilities connected to the system.
- ii. If waste haulers are allowed to discharge to the Facility, establish a waste hauler permit system, to be reviewed by the Executive Officer, to regulate waste haulers discharging to the collection system or Facility.
- iii. Conduct a waste survey one time every 5 years, or more frequently if required by the Executive Officer, to identify all industrial dischargers that might discharge pollutants that could pass through or interfere with the operation or performance of the Facility.

**(a) General prohibitions.** Pollutants introduced into WWTFs by a non-domestic source shall not pass through [section 403.3(n)] the WWTF or interfere [section 403.3(i)] with the operation or performance of the works. These general prohibitions and the specific prohibitions in paragraph (b) of this provision apply to all non-domestic sources introducing pollutants into a WWTF whether or not the source is subject to other National Pretreatment Standards or any national, state, or local pretreatment requirements.

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

- (1) Pollutants that create a fire or explosion hazard in the WWTF;
- (2) Pollutants that will cause corrosive structural damage to the WWTF, but in no case discharges with pH lower than 5.0, unless the WWTF is specifically designed to accommodate such discharges;
- (3) Solid or viscous pollutants in amounts that will cause obstruction to the flow in the WWTF resulting in interference;
- (4) Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a discharge at a flow rate and/or pollutant concentration that will cause interference with the WWTF;



- iv. Sludge or biosolids that are disposed of in a municipal solid waste landfill or used as landfill daily cover shall meet the applicable requirements of Part 258. In its annual Self-Monitoring Report, the Discharger shall report the amount of sludge or biosolids disposed of, and the landfill(s) which received the sludge or biosolids.
- v. The beneficial use of biosolids by application to land as soil amendment is not covered or authorized by this Order. Biosolids that are applied to land as soil amendment by the Discharger within the North Coast Region shall comply with State Water Board Water Quality Order No. 2004-0012-DWQ (*General Waste Discharge Requirements for the Discharge of Biosolids to Land as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities*) or other permits issued by the Regional Water Board.
- vi. The Discharger shall take all reasonable steps to prevent and minimize any sludge use or disposal in violation of this Order that is likely to adversely affect human health or the environment.
- vii. Solids and sludge treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors and flies, and shall not result in groundwater contamination.
- viii. Solids and sludge treatment and storage sites shall have facilities adequate to divert surface water runoff from adjacent areas, to protect the boundaries of the site from erosion, and to prevent drainage from the treatment and storage site. Adequate protection is defined as protection from at least a 100-year storm event.
- ix. The discharge of sewage sludge, biosolids, and other waste solids shall not cause waste material to be in a position where it is, or can be, conveyed from the treatment and storage sites and deposited in the waters of the State.

**d. Operator Certification**

Supervisors and operators of municipal WWTFs shall possess a certificate of appropriate grade in accordance with title 23, Cal. Code of Regs, section 3680. The State Water Board may accept experience in lieu of qualification training. In lieu of a properly certified WWTF operator, the State Water Board may approve use of a water treatment facility operator of appropriate grade certified by the CDPH where water reclamation is involved.

**e. Adequate Capacity**

If the Discharger's WWTF will reach capacity within 4 years, the Discharger shall notify the Regional Water Board. A copy of such

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

## **6. Other Special Provisions**

### **a. Storm Water**

For the control of storm water discharge from the site of the WWTF and the power plant, if applicable, the Discharger shall seek authorization to discharge under and meet the requirements of the State Water Board's Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities* (or subsequent renewed versions of the General Permit).

### **b. Power Plant Solids Disposal and Handling Requirements.**

- i. Bottom and Fly Ash generated at the Power Plant facility shall be stored in a title 27 compliant area until it can be either disposed of at a solid waste facility for which waste discharge requirements have been prescribed by a Regional Water Board or disposed of in a manner approved by the Executive Officer in writing.
- ii. Collected screenings, sludges, and other solids (including residual solids that collect in storage tanks) shall be disposed of at a legal solid waste disposal facility. Solid waste disposal sites used in California shall be regulated by waste discharge requirements prescribed by the Regional Water Board.

## **7. Compliance Schedules**

This section of the Order is not applicable.

## **VII. COMPLIANCE DETERMINATION**

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

### **A. General**

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

### **B. Compliance with Effluent Limitations Expressed as a Sum of Several Constituents**

Dischargers are out of compliance with an effluent limitation which applies to the sum of a group of chemicals (e.g., PCB's) if the sum of the individual pollutant concentrations is greater than the effluent limitation. Individual pollutants of the group will be considered to have a concentration of zero if the constituent is reported as ND or DNQ.

### **C. Multiple Sample Data**

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

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

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

### **D. Average Monthly Effluent Limitation (AMEL)**

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that

month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

**E. Average Weekly Effluent Limitation (AWEL)**

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

**F. Maximum Daily Effluent Limitation (MDEL)**

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

**G. Instantaneous Minimum Effluent Limitation**

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

**H. Instantaneous Maximum Effluent Limitation**

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

effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

#### I. Mass-Based Effluent Limitations

Compliance with mass- and concentration-based effluent limitations for the same parameter shall be determined separately.

- 1. Six-Month Median.** The six-month median limitation applies as a moving median of daily values for any 180-day period in which daily values represent flow weighted average concentrations within a 24-hour period. Compliance shall be determined with six-month median limitations by determining a rolling median of effluent concentrations over a 180-day period. Compliance with a mass-based limitation shall be determined by using the following formula:

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

$C_e$  = rolling 180-day median of effluent concentrations ( $\mu\text{g/L}$ )

$Q$  = average flow rate over that same 180-day period (mgd)

If only one effluent sample is collected during that period that one sample shall be used to determine compliance with the mass-based limitation.

- 2. Daily Maximum.** Compliance with the daily maximum mass-based effluent limitation shall be determined using the following formula:

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

$C_e$  = daily maximum effluent concentration ( $\mu\text{g/L}$ )

$Q$  = instantaneous flow rate at the time of sample collection for a grab sample, or a daily average flow rate for a 24-hour composite sample (mgd)

- 3. Instantaneous Maximum.** Compliance with the instantaneous maximum mass-based limitation shall be determined using the following formula:

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

$C_e$  = daily maximum effluent concentration ( $\mu\text{g/L}$ )

$Q$  = instantaneous flow rate at the time of sample collection for a grab sample, or a daily average flow rate for a 24-hour composite sample (mgd)

- 4. 30-Day Average.** Compliance with the 30-day mass-based average limitation shall be determined using the following formula:

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

$C_e$  = average of effluent concentrations collected during the 30-day period ( $\mu\text{g/L}$ )

$Q$  = average flow rate averaged over the same 30-day period (mgd)

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

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

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

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

- 6. Weekly Average.** Compliance with the monthly mass-based average limitation shall be determined using the following formula:

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

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

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

**J. Bacteriological Limitations**

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

## ATTACHMENT A – DEFINITIONS

### Arithmetic Mean ( $\mu$ )

Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

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

### Average Annual Flow

The daily flow of wastes through the treatment plant averaged over a calendar month, calculated as the sum of all monthly discharges measured during a calendar year divided by 12.

### Average Wet Weather Flow (AWWF)

The highest allowable average of daily discharges averaged over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

### Average Monthly Effluent Limitation (AMEL)

The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

### Average Weekly Effluent Limitation (AWEL)

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

### Bioaccumulative

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

### BMPs

“Best management practices.” Best management practices means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of “waters of the United States.” BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

### **Bottom Ash**

The ash that drops out of the furnace gas stream in the furnace and in the economizer sections. Economizer ash is included when it is collected with bottom ash.

### **Carcinogenic**

Pollutants are substances that are known to cause cancer in living organisms.

### **Chemical Metal Cleaning Waste**

Chemical Metal Cleaning Waste is defined as any wastewater resulting from the cleaning of any metal process equipment with chemical compounds, including, but not limited to, boiler tube cleaning.

### **Coefficient of Variation (CV)**

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

### **Daily Discharge**

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

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

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

### **Detected, but Not Quantified (DNQ)**

DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

### **Dilution Credit**

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

### **Effective Concentration**

Effective Concentration (EC) is a point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death,

immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Kärber. EC25 is the concentration of toxicant (in percent effluent) that causes a response in 25 percent of the test organisms.

### **Effluent Concentration Allowance (ECA)**

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

### **Enclosed Bays**

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

### **Estimated Chemical Concentration**

The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

### **Estuaries**

Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

### **Fly Ash**

Fly Ash is the ash that is carried out of the furnace by the gas stream and collected by mechanical precipitators, electrostatic precipitators, and /or fabric filters. Economizer ash is included when it is collected with fly ash.

### **Inhibition Concentration**

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

### **Inland Surface Waters**

All surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

### **Instantaneous Maximum Effluent Limitation**

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

### **Instantaneous Minimum Effluent Limitation**

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

### **Low Volume Wastes**

The term low volume waste sources means, taken collectively as if from one source, wastewater from all sources except those for which specific limitations are otherwise established in 40 CFR 423. Low volume wastes sources include, but are not limited to: wastewaters from wet scrubber air pollution control systems, ion exchange water treatment systems, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, and recirculating house service water systems. Sanitary and air conditioning wastes are not included.

### **Maximum Daily Effluent Limitation (MDEL)**

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

### **Median**

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

### **Metal Cleaning Waste**

Metal Cleaning Waste is any wastewater resulting from cleaning [with or without chemical cleaning compounds] any metal process equipment including, but not limited to, boiler tube cleaning, boiler fire side cleaning, and air preheater cleaning.

**Method Detection Limit (MDL)**

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

**Minimum Level (ML)**

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

**Mixing Zone**

Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

**Not Detected (ND)**

Sample results which are less than the laboratory's MDL.

**Ocean Waters**

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

**Persistent Pollutants**

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

**Pollutant Minimization Program (PMP)**

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

### **Pollution Prevention**

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

### **Priority Pollutants**

Those pollutants identified by the California Toxics Rule (CTR) at section 131.38.

### **Reporting Level (RL)**

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

### **Satellite Collection System**

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

### **Source of Drinking Water**

Any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

### **Standard Deviation ( $\sigma$ )**

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

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

where:

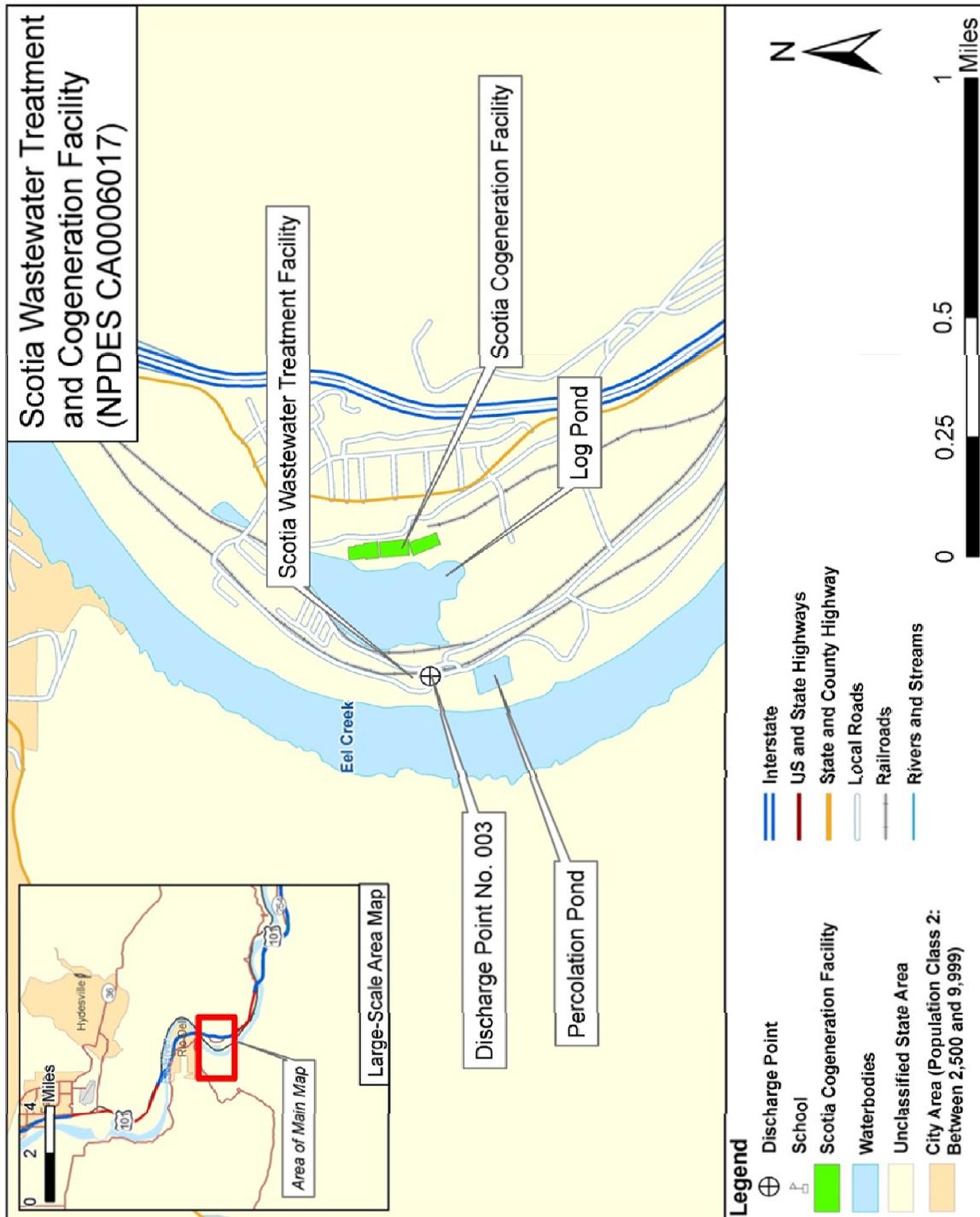
- x is the observed value;
- $\mu$  is the arithmetic mean of the observed values; and
- n is the number of samples.

**Toxicity Reduction Evaluation (TRE)**

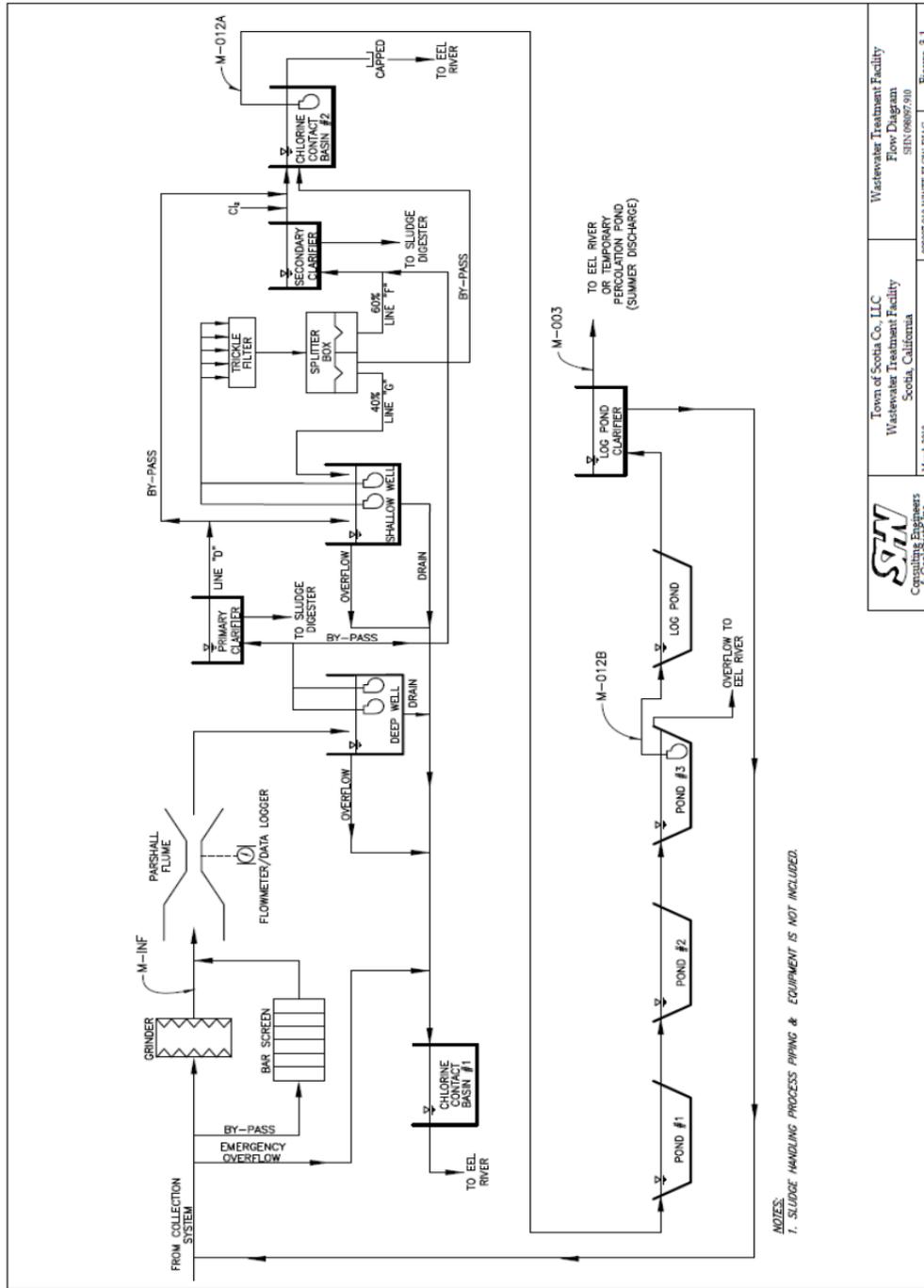
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection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

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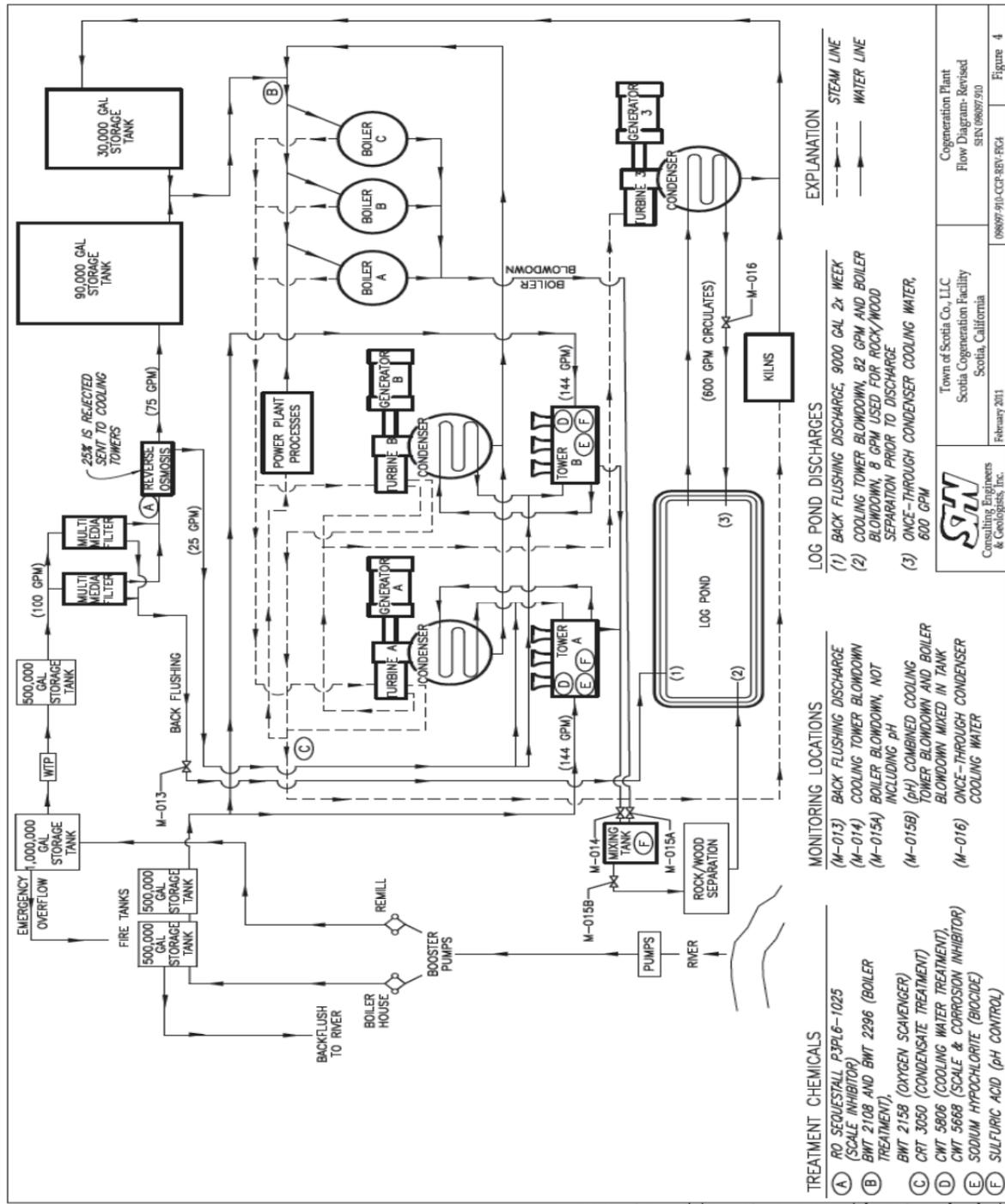
**ATTACHMENT B – TOPOGRAPHIC MAP**



**ATTACHMENT C – FLOW SCHEMATIC**



 Consulting Engineers & Geologists, Inc.	Town of Scotia Co., LLC Wastewater Treatment Facility Scotia, California March 2010	Wastewater Treatment Facility Flow Diagram S111 (08097-910) 08097-910 WWT-FLOW-DIAG   Figure 3-1
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## **ATTACHMENT D – STANDARD PROVISIONS**

### **I. STANDARD PROVISIONS – PERMIT COMPLIANCE**

#### **A. Duty to Comply**

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (section 122.41(a).)
2. The Discharger shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (section 122.41(a)(1).)

#### **B. Need to Halt or Reduce Activity Not a Defense**

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

#### **C. Duty to Mitigate**

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

#### **D. Proper Operation and Maintenance**

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

#### **E. Property Rights**

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

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

**F. Inspection and Entry**

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

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (section 122.41(i)(1));
3. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (section 122.41(i)(2));
4. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (section 122.41(i)(3)); and
5. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (section 122.41(i)(4).)

**G. Bypass**

1. Definitions
  - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (section 122.41(m)(1)(i).)
  - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (section 122.41(m)(1)(ii).)
2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (section 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (section 122.41(m)(4)(i)):
  - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (section 122.41(m)(4)(i)(A));
  - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (section 122.41(m)(4)(i)(B)); and
  - c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (section 122.41(m)(4)(i)(C).)
4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (section 122.41(m)(4)(ii).)
5. Notice
  - a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (section 122.41(m)(3)(i).)
  - b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (section 122.41(m)(3)(ii).)

#### **H. Upset**

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (section 122.41(n)(1).)

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

noncompliance, is final administrative action subject to judicial review.  
(section 122.41(n)(2).)

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (section 122.41(n)(3)):
  - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (section 122.41(n)(3)(i));
  - b. The permitted facility was, at the time, being properly operated (section 122.41(n)(3)(ii));
  - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (section 122.41(n)(3)(iii)); and
  - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above.  
(section 122.41(n)(3)(iv).)
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof.  
(section 122.41(n)(4).)

## **II. STANDARD PROVISIONS – PERMIT ACTION**

### **A. General**

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

### **B. Duty to Reapply**

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

### **C. Transfers**

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

### **III. STANDARD PROVISIONS – MONITORING**

- A.** Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (section 122.41(j)(1).)
- B.** Monitoring results must be conducted according to test procedures under section Part 136 or, in the case of sludge use or disposal, approved under section Part 136 unless otherwise specified in section Part 503 unless other test procedures have been specified in this Order. (section 122.41(j)(4) and 122.44(i)(1)(iv).)

### **IV. STANDARD PROVISIONS – RECORDS**

- A.** Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by section Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (section 122.41(j)(2).)
- B. Records of monitoring information shall include:**
  - 1. The date, exact place, and time of sampling or measurements (section 122.41(j)(3)(i));
  - 2. The individual(s) who performed the sampling or measurements (section 122.41(j)(3)(ii));
  - 3. The date(s) analyses were performed (section 122.41(j)(3)(iii));
  - 4. The individual(s) who performed the analyses (section 122.41(j)(3)(iv));
  - 5. The analytical techniques or methods used (section 122.41(j)(3)(v)); and
  - 6. The results of such analyses. (section 122.41(j)(3)(vi).)
- C. Claims of confidentiality for the following information will be denied (section 122.7(b)):**
  - 1. The name and address of any permit applicant or Discharger (section 122.7(b)(1)); and
  - 2. Permit applications and attachments, permits and effluent data. (section 122.7(b)(2).)

## **VI. STANDARD PROVISIONS – REPORTING**

### **A. Duty to Provide Information**

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

### **B. Signatory and Certification Requirements**

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (section 122.41(k).)
2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (section 122.22(a)(3).)
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (section 122.22(b)(1));
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (section 122.22(b)(2)); and
  - c. The written authorization is submitted to the Regional Water Board and State Water Board. (section 122.22(b)(3).)

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (section 122.22(c).)
5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

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

### **C. Monitoring Reports**

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (section 122.22(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (section 122.41(l)(4)(i).)
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under section Part 136 or, in the case of sludge use or disposal, approved under section Part 136 unless otherwise specified in section Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (section 122.41(l)(4)(ii).)
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (section 122.41(l)(4)(iii).)

#### **D. Compliance Schedules**

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

#### **E. Twenty-Four Hour Reporting**

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (section 122.41(l)(6)(i).)
2. The following shall be included as information that must be reported within 24 hours under this paragraph (section 122.41(l)(6)(ii)):
  - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (section 122.41(l)(6)(ii)(A).)
  - b. Any upset that exceeds any effluent limitation in this Order. (section 122.41(l)(6)(ii)(B).)
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (section 122.41(l)(6)(iii).)

#### **F. Planned Changes**

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

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (section 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (section 122.41(l)(1)(ii).)

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

**G. Anticipated Noncompliance**

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

**H. Other Noncompliance**

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

**I. Other Information**

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

**VII. STANDARD PROVISIONS – ENFORCEMENT**

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

**VIII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS**

**A. Publicly-Owned Treatment Works (POTWs)**

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

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (section 122.42(b)(1)); and
2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order. (section 122.42(b)(2).)
3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the

change on the quantity or quality of effluent to be discharged from the POTW.  
(section 122.42(b)(3).)

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**ATTACHMENT E – MONITORING AND REPORTING PROGRAM**

**Table of Contents**

I.	General Monitoring Provisions .....	E-3
II.	Monitoring Locations .....	E-4
III.	Influent Monitoring Requirements .....	E-5
	A. Monitoring Location M-INF .....	E-5
IV.	Effluent Monitoring Requirements .....	E-5
	A. Monitoring Location M-012A .....	E-5
	B. Monitoring Location M-012B .....	E-6
	C. Monitoring Location M-013 .....	E-6
	D. Monitoring Location M-014 .....	E-6
	E. Monitoring Location M-015A/B .....	E-7
	F. Monitoring Location M-MCW .....	E-8
	G. Monitoring Location M-016 .....	E-8
	H. Monitoring Location M-017 .....	E-9
	I. Monitoring Location M-003 .....	E-9
V.	Whole Effluent Toxicity Testing Requirements .....	E-10
VI.	Land Discharge .....	E-19
VII.	Reclamation .....	E-19
VIII.	Receiving Water Monitoring Requirements .....	E-19
	A. Surface Water Monitoring Locations R-017 .....	E-19
	B. Surface Water Monitoring Locations R-018 .....	E-20
IX.	Other Monitoring Requirements .....	E-21
X.	Reporting Requirements .....	E-21
	A. General Monitoring and Reporting Requirements .....	E-21
	B. Self Monitoring Reports (SMRs) .....	E-21
	C. Other Reports .....	E-24
	D. Spills and Overflows Notification .....	E-27
	E. Discharge Monitoring Reports (DMRs) .....	E-28

**List of Tables**

Table E-1.	Monitoring Station Locations .....	E-4
Table E-2.	Influent Monitoring – Monitoring Location M-INF .....	E-5
Table E-3.	Effluent Monitoring – Monitoring Location M-012A .....	E-5
Table E-4.	Effluent Monitoring – Monitoring Location M-012B .....	E-6
Table E-5.	Effluent Monitoring – Monitoring Location M-013 .....	E-6
Table E-6.	Effluent Monitoring – Monitoring Locations M-014 .....	E-7

Table E-7.	Effluent Monitoring – Monitoring Locations M-014 .....	E-7
Table E-8.	Effluent Monitoring – Monitoring Location M-015A .....	E-8
Table E-9.	Effluent Monitoring – Monitoring Location M-015B .....	E-8
Table E-10.	Internal Monitoring – Monitoring Location M-MCW .....	E-8
Table E-11.	Effluent Monitoring – Monitoring Location M-016 .....	E-9
Table E-12.	Effluent Monitoring – Monitoring Location M-017 .....	E-9
Table E-13.	Effluent Monitoring – Monitoring Location M-003 .....	E-9
Table E-14.	Receiving Water Monitoring – Monitoring Location R-017 .....	E-19
Table E-15.	Receiving Water Monitoring – Monitoring Location R-018 .....	E-21
Table E-16.	Monitoring Periods and Reporting Schedule .....	E-22

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## **ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)**

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

### **I. GENERAL MONITORING PROVISIONS**

- A.** 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 1 hour.
- B.** If the Discharger monitors any pollutant more frequently than required by this permit, using test procedures approved under 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.
- C.** Laboratories analyzing monitoring samples shall be certified by the California Department of Public Health (DPH; formerly the Department of Health Services), in accordance with the provision of Water Code section 13176, and must include quality assurance/quality control data with their reports.
- D.** The Discharger shall develop, maintain, and adhere to a standard operating procedure that follows the appropriate Standard Method for any sampling analysis performed by the Discharger for compliance with this order or MRP. Common examples of such analyses include flow, pH, chlorine residual and dissolved oxygen because the holding times for these analyses are sufficiently short that Dischargers often perform the analyses on-site or in the field. Any standard operating procedure kept for such analyses shall include, at a minimum:
  - 1.** Instrument calibration protocols and a log of such calibrations;
  - 2.** Staff training procedures and a log of such trainings; and
  - 3.** A procedure for taking multiple readings of the same sample for data quality assurance.
- E.** Compliance and reasonable potential monitoring analyses shall be conducted using commercially available and reasonably achievable detection limits that are lower than the applicable effluent limitation. If no minimum level (ML) value is below the effluent limitation, the lowest ML shall be selected as the reporting level (RL).

## 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:

**Table E-1. Monitoring Station Locations**

<b>Discharge Point Name</b>	<b>Monitoring Location Name</b>	<b>Monitoring Location Description</b>
--	M-INF	Influent monitoring location - a point in the facility headworks preceding any treatment and receiving all waste from the collection system
012	M-012A	Chlorine contact chamber effluent weir
012	M-012B	Point of discharge at the end of the sanitary waste treatment train prior to discharge into the storage pond
013	M-013	Point of effluent discharge from water treatment back-flushing system
014A/B	M-014	Point of discharge into the storage pond from cooling towers A and B, located prior to mixing with boiler blow-down
015	M-015A	Point of discharge into the storage pond from boiler blow-down, located prior to mixing with cooling tower blow-down from cooling towers A and B
015	M-015B	Point of discharge into the storage pond from boiler blow-down, located after mixing with cooling tower blow-down from cooling towers A and B and prior to the rock/wood separator
--	M-MCW	Internal monitoring point for metal cleaning wastes
016	M-016	Point of discharge into the storage pond from turbine 3 once through cooling water
017	M-017	Point of discharge into the storage pond from the rock/wood separator
003	M-003	Storage pond effluent discharge
Receiving water	R-017	Eel River surface water upstream beyond influence of the discharge
Receiving water	R-018	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 waste water treatment facility (WWTF) at Monitoring Location M-INF as follows:

**Table E-2. Influent Monitoring – Monitoring Location M-INF**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
BOD (20° C, 5-Day) <sup>2</sup>	mg/L	24-Hour Composite	Weekly	Std Method 5210B
Total Suspended Solids <sup>2</sup>	mg/L	24-Hour Composite	Weekly	Std Method 2540D
Flow (Mean) <sup>3</sup>	MGD	Meter	Continuous	--

### IV. EFFLUENT MONITORING REQUIREMENTS

#### A. Monitoring Location M-012A

1. The Discharger shall monitor the disinfected effluent at Monitoring Location M-012A as follows:

**Table E-3. Effluent Monitoring – Monitoring Location M-012A**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Total Coliform Organisms	MPN/100 ml	Grab	Weekly	Std Method 9221
Chlorine, Total Residual	mg/L	Grab Or Meter	Daily	Part 136

<sup>1</sup> In accordance with the current edition of Standard Methods (Std Method) for the Examination of Water and Wastewater (American Public Health Administration) or current test procedures specified in section Part 136.

<sup>2</sup> Monitoring of 5-day biochemical oxygen demand (BOD<sub>5</sub>) and total suspended solids (TSS) in the influent shall occur near simultaneously with effluent monitoring for the same parameters.

<sup>3</sup> In addition to daily flows, the Discharger shall report average monthly flow calculated over a calendar month.

**B. Monitoring Location M-012B**

1. The Discharger shall monitor the secondary treated effluent at Monitoring Location M-012B as follows:

**Table E-4. Effluent Monitoring – Monitoring Location M-012B**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
BOD <sub>5</sub> (20° C, 5-Day) <sup>2</sup>	mg/L	24-Hour Composite	Weekly	Std Method 5210B
Total Suspended Solids <sup>2</sup>	mg/L	24-Hour Composite	Weekly	Std Method 2540D
Flow (Mean) <sup>4</sup>	MGD	Meter	Continuous	--
Hydrogen Ion (pH)	Standard	Grab	Weekly	Part 136

**C. Monitoring Location M-013**

1. The Discharger shall monitor filter back-flush effluent at Monitoring Location M-013 as follows:

**Table E-5. Effluent Monitoring – Monitoring Location M-013**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Total Suspended Solids	mg/L	Grab	Monthly	Std Method 2540D
Oil And Grease	mg/L	Grab	Monthly	Part 136
Flow (Mean)	MGD	Continuous	Each Batch	---
Hydrogen Ion (pH)	Standard	Grab	Each Batch	Part 136

**D. Monitoring Location M-014**

1. The Discharger shall monitor the cooling tower blowdown at Monitoring Location M-014 and as follows:

**Table E-6. Effluent Monitoring – Monitoring Locations M-014**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Free Available Chlorine	mg/L	Grab	Weekly	Std Methods
Total Chromium	mg/L	Grab	Monthly	Part 136
Total Zinc	ml/L	Grab	Monthly	Part 136
Select Priority Pollutants <sup>4</sup>	mg/L	Grab	Semi-Annually <sup>5</sup>	Std Methods
Flow (Mean)	MGD	Meter	Daily	--
Hydrogen Ion (pH)	Standard	Grab	Weekly	Part 136

2. The Discharger shall monitor the cooling tower cleaning wastes at Monitoring Location M-014 as follows:

**Table E-7. Effluent Monitoring – Monitoring Locations M-014**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Total Suspended Solids	mg/L	Grab	Each Batch	Std Method 2540D
Oil And Grease	mg/L	Grab	Each Batch	Part 136
Flow (Mean)	MGD	Continuous	Each Batch	---
Hydrogen Ion (pH)	Standard	Grab	Each Batch	Part 136

**E. Monitoring Location M-015A/B**

1. The Discharger shall monitor boiler blowdown prior to commingling with any other waste stream at Monitoring Location M-015A as follows:

<sup>4</sup> Applies to those pollutants contained in chemicals added for cooling tower maintenance except Total Chromium and Total Zinc

<sup>5</sup> Increased monitoring frequency will apply if chemicals used in process make-up water change between scheduled sampling periods

**Table E-8. Effluent Monitoring – Monitoring Location M-015A**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Total Suspended Solids	mg/L	Grab	Monthly	Std Method 2540D
Oil And Grease	mg/L	Grab	Monthly	Part 136
Flow (Mean)	MGD	Meter	Daily	--

- The Discharger shall monitor boiler blowdown after commingling with cooling tower blowdown at Monitoring Location M-015B as follows:

**Table E-9. Effluent Monitoring – Monitoring Location M-015B**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Hydrogen Ion (pH)	Standard	Grab	Weekly	Standard Methods

**F. Monitoring Location M-MCW**

- The Discharger shall monitor metal cleaning wastes at Monitoring Location M-MCW as follows:

**Table E-10. Internal Monitoring – Monitoring Location M-MCW**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Total Suspended Solids	mg/L	Grab	Each Batch	Std Method 2540D
Oil And Grease	mg/L	Grab	Each Batch	Part 136
Flow (Mean)	MGD	Continuous	Each Batch	---
Hydrogen Ion (pH)	Standard	Grab	Each Batch	Part 136

**G. Monitoring Location M-016**

- The Discharger shall monitor the once-through condenser cooling water effluent at Monitoring Location M-016 as follows:

**Table E-11. Effluent Monitoring – Monitoring Location M-016**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Total Residual Chlorine	mg/L	Grab	Monthly	Part 136

**H. Monitoring Location M-017**

1. The Discharger shall monitor the effluent at Monitoring Location M-017 as follows:

**Table E-12. Effluent Monitoring – Monitoring Location M-017**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Total Suspended Solids	mg/L	Grab	Monthly	Std Method 2540D
Oil And Grease	mg/L	Grab	Monthly	Part 136
Flow (Mean)	MGD	Continuous	Monthly	---
Hydrogen Ion (pH)	Standard	Grab	Monthly	Part 136

**I. Monitoring Location M-003**

1. The Discharger shall monitor the effluent discharged from the storage pond at Monitoring Location M-003 when discharging to either the Eel River or the percolation disposal pond as follows:

**Table E-13. Effluent Monitoring – Monitoring Location M-003**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Hydrogen Ion (pH)	Standard	Grab	Weekly	Part 136
Chlorine, Total Residual	mg/L	Grab Or Meter	Daily	Part 136
Acute Toxicity	TUa	Grab	Semi-annually <sup>6</sup>	See Acute Toxicity Monitoring Requirements Section V.

<sup>6</sup> Sampling required to occur during the wintertime discharge to the Eel River.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Chronic Toxicity	TUc	Grab	Annually <sup>7</sup>	See Chronic Toxicity Monitoring Requirements Section V.
Flow (Mean And Maximum)	MGD	Meter	Daily	--
Ammonia Nitrogen	mg/L as N	Grab	Monthly <sup>8</sup>	Std Method 4130
Nitrate Nitrogen	mg/L as N	Grab	Monthly	Std Method 4130
Nitrite Nitrogen	mg/L as N	Grab	Monthly	Std Method 4130
Organic Nitrogen	mg/L as N	Grab	Monthly	Std Method 4500
Nitrogen, Total (as N)	mg/L as N	Grab	Monthly	Std Method
Phosphorus, Total (as P)	mg/L as P	Grab	Monthly	Std Method 4130
Priority Pollutants	µg/L	Grab	1x / 5 Years	Std Methods
Settleable Solids	ml/L	Grab	Weekly	Std Method 2540F

## V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

### A. Acute Toxicity Testing

The Discharger shall conduct whole effluent toxicity (WET) testing to determine compliance with the acute toxicity effluent limitations established in section IV.A.1. of the Order. The Discharger shall meet the following acute toxicity testing requirements:

- 1. Test Frequency.** The Discharger shall conduct acute WET testing in accordance with the schedule established by this MRP, as summarized in Table E-11, above, when discharging to surface water.

<sup>7</sup> Annual chronic toxicity sampling shall be conducted using effluent collected during the wintertime discharge to the Eel River.

<sup>8</sup> Receiving water measurements for pH and temperature monitoring must coincide with monthly effluent monitoring for ammonia.

- 2. Sample Type.** For 96-hour static renewal or 96-hour static non-renewal testing, the samples shall be a 24-hr composite sample and shall be representative of the volume and quality of the discharge. Effluent samples shall be collected at Monitoring Location M-003. Ammonia, pH, and temperature shall be recorded at 24-hour intervals during the test and shall be reported with the toxicity test results.
- 3. Test Species.** Test species for acute testing shall be an invertebrate, the water flea, *Ceriodaphnia dubia*, and a vertebrate, the rainbow trout, *Oncorhynchus mykiss*, for at least the first two suites of tests conducted within 12 months after the effective date of this Order. After this screening period, monitoring shall be conducted using the most sensitive species. At least once every 5 years, the Discharger shall re-screen with the two species described above and continue routine monitoring with the most sensitive species.
- 4. Test Methods.** The presence of acute toxicity shall be estimated as specified in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (USEPA Report No. EPA-821-R-02-012, 5<sup>th</sup> edition or subsequent editions), or other methods approved by the Executive Officer. Test procedures related to pH control, sample filtration, aeration, temperature control, and sample dechlorination shall be performed in accordance with the USEPA method and fully explained and justified in each acute toxicity report submitted to the Regional Water Board. Control of the pH in acute toxicity tests is allowed, provided the test pH is maintained at the measured effluent pH, and the control of pH is done in a manner that has the least influence on the test water chemistry and on the toxicity of other pH sensitive materials such as some heavy metals, sulfide, and cyanide.
- 5. Test Dilutions.** The acute toxicity test shall be conducted using 100 percent effluent collected at Monitoring Location M-003.
- 6. Test Failure.** If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger shall re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.
- 7. Accelerated Monitoring.** If the result of any acute toxicity test fails to meet the single test minimum limitation established in section IV.A.1d or IV.A.2.d of the Order (70 percent survival), and the testing meets all test acceptability criteria, the Discharger shall take two more samples, one within 14 days, and one within 21 days of receiving the initial sample result. If any of the additional samples do not comply with the three sample median minimum limitation (90 percent survival), the Discharger shall initiate a Toxicity Reduction Evaluation (TRE) in accordance with section VI.C.2.a of the Order.

If the two additional samples are in compliance with the acute toxicity requirement, and the testing meets all test acceptability criteria, then TRE implementation 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.

- 8. Notification.** The Discharger shall notify the Regional Water Board in writing 14 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 shall be given.
- 9. Reporting.** Test results for acute toxicity tests shall be reported according to section 12 (Report Preparation) of *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* or in an equivalent format that clearly demonstrates that the Discharger is in compliance with effluent limitations and other permit requirements.
- 10. Ammonia Toxicity.** The acute toxicity test shall be conducted without modifications to eliminate ammonia toxicity.

#### **B. Chronic Toxicity Control**

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

- 1. Test Frequency.** The Discharger shall conduct chronic WET testing in accordance with the schedule established by this MRP, as summarized in Table E-11 when discharging to surface water.
- 2. Sample Type.** For 96-hour static renewal or 96-hour static non-renewal testing, the samples shall be 24-hr composite samples and shall be representative of the volume and quality of the discharge. Effluent samples shall be collected at Monitoring Location M-003.
- 3. Test Species.** Test species for chronic testing shall be an invertebrate, the water flea, *Ceriodaphnia dubia* (survival and reproduction test); a vertebrate, the fathead minnow, *Pimephales promelas* (larval survival and growth test), and a plant, the green alga, *Selenastrum capricornutum* (growth test). At least one test during the screening period shall be conducted when the effluent is unaffected by storm-related inflow into the WWTF. Based upon results from the first two suites of toxicity tests, the Discharger will determine the most sensitive aquatic species and continue to monitor with the most

sensitive species. At least once every 5 years, the Discharger shall re-screen to reconfirm most sensitive species for the chronic toxicity test.

4. **Test Methods.** The presence of chronic toxicity shall be estimated as specified in USEPA's *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms* (USEPA Report No. EPA-821-R-02-013, 4<sup>th</sup> or subsequent editions). Test procedures related to pH control, sample filtration, aeration, temperature control, and sample dechlorination shall be performed in accordance with the USEPA method and fully explained and justified in each chronic toxicity report submitted to the Regional Water Board. Control of the pH in chronic toxicity tests is allowed, provided the test pH is maintained at the measured pH of the downstream receiving water, and the control of pH is done in a manner that has the least influence on the test water chemistry and on the toxicity of other pH sensitive materials such as some heavy metals, sulfide, and cyanide.
5. **Test Dilutions.** The chronic toxicity test shall be conducted using a series of at least five dilutions and a control. The series shall consist of the following dilution series: 12.5, 25, 50, 75, and 100 percent effluent. Control and dilution water should be receiving water at an appropriate location upstream of the discharge point. Laboratory water may be substituted for receiving water, as described in the manual, upon approval by the Regional Water Board Executive Officer. Specifically, for the *Selenastrum capricornutum* test, synthetic laboratory water with a hardness similar to the receiving water shall be used as the control and dilution water. If the dilution water used is different from the culture water, a second control using culture water shall be used.
6. **Reference Toxicant.** If organisms are not cultured in-house, concurrent testing with a reference toxicant shall be conducted. Where organisms are cultured in-house, monthly reference toxicant testing is sufficient. Reference toxicant tests also shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc.).
7. **Test Failure.** If either the reference toxicant test or the chronic toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger shall re-sample and re-test as soon as possible, not to exceed 14 days following notification of test failure.
8. **Notification.** The Discharger shall notify the Regional Water Board in writing within 14 days after the receipt of test results that indicate an exceedance of the monitoring trigger for chronic toxicity during regular or accelerated monitoring.

- 9. Accelerated Monitoring Requirements.** If the result of any chronic toxicity test exceeds a chronic toxicity trigger of 1.0 TUc, and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring. Accelerated monitoring shall consist of four additional effluent samples, on test conducted approximately every week, over a 4-week period. Testing shall commence within 14 days of receipt of the sample results of the exceedance of the chronic toxicity trigger. If the discharge will cease before the additional samples can be collected, the Discharger shall contact the executive Officer within 21 days with a plan to demonstrate compliance with the Basin Plan's narrative water quality objective for toxicity. The following protocol shall be used for accelerated monitoring and TRE implementation.
- a. If the results of four consecutive accelerated monitoring tests do not exceed the chronic toxicity trigger, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring. If there is adequate evidence of a pattern of effluent toxicity, however, the Regional Water Board Executive Officer may require that the Discharger initiate a TRE.
  - b. If the source(s) of the toxicity is easily identified (i.e., temporary plant upset), the Discharger shall make necessary corrections to the Facility and shall continue accelerated monitoring until four consecutive accelerated tests do not exceed the chronic toxicity trigger. Upon confirmation that the effluent toxicity has been removed, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring.
  - c. If the result of any accelerated toxicity test exceeds the chronic toxicity trigger, the Discharger shall cease accelerated monitoring and initiate a TRE to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity. Within thirty (30) days of notification by the laboratory of the test results exceeding the chronic toxicity trigger during accelerated monitoring, the Discharger shall submit a TRE Action Plan to the Regional Water Board including, at minimum:
    - i. Specific actions the Discharger took to investigate and identify the cause(s) of toxicity, including a TRE WET monitoring schedule;
    - ii. Specific actions the Discharger took to mitigate the impact of the discharge and prevent the recurrence of toxicity;
    - iii. Recommendations for further actions to mitigate continued toxicity, if needed; and

- iv. A schedule for implementation of recommended actions. 10. Ammonia Toxicity. The chronic toxicity test shall be conducted without modifications to eliminate ammonia toxicity.

**10. Ammonia Toxicity.** The chronic toxicity test shall be conducted without modifications to eliminate ammonia toxicity.

**C. Chronic Toxicity Reporting Requirements**

**1. Routine Reporting.** Test results for chronic tests shall be reported according to the acute and chronic manuals and this MRP and shall be attached to the corresponding monthly self-monitoring report. Test results shall include, at a minimum, for each test:

- a. Sample date(s);
  - b. Test initiation date;
  - c. Test species;
  - d. End point values for each dilution (e.g., number of young, growth rate, percent survival);
  - e. NOEC value(s) in percent effluent;
  - f. IC15, IC25, IC40, and IC50 values (or EC15, EC25...etc.) in percent effluent;
  - g. TUC values (100/NOEC);
  - h. Mean percent mortality ( $\pm$ s.d.) after 96 hours in 100 percent effluent (if applicable);
  - i. NOEC and LOEC values for reference toxicant test(s);
  - j. IC50 and EC50 value(s) for reference toxicant test(s);
  - k. Available water quality measurements for each test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, ammonia);
  - l. Statistical methods used to calculate endpoints; and
  - m. The statistical output page, which includes the calculation of percent minimum significant difference (PMSD).
- 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"; and

- 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 a sub lethal 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  $TUC = 100/NOEC$  or  $100/ICp$  or  $ECp$  (in percent effluent).

### **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 in the manual, 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 exceedence of the toxicity monitoring trigger.

- c. The Discharger may return to routine monitoring after appropriate elements of the TRE work plan are implemented and toxicity drops below “trigger” levels, or as directed by the Executive Officer.

#### **6. Reporting for Toxicity Tests**

- a. Test results for chronic toxicity tests shall be reported according to the chronic toxicity manual 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 14 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 shall be given.

#### **D. Toxicity Reduction Evaluations**

- 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

This section of the standardized permit form is not applicable.

## VII. RECLAMATION

This section of the standardized permit form is not applicable.

## VIII. RECEIVING WATER MONITORING REQUIREMENTS

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 (USGS Station 11477000).

### A. Surface Water Monitoring Locations R-017

The Discharger shall monitor the Eel River concurrently with effluent monitoring at Monitoring Location R-017, upstream of influence of the discharge as follows:

**Table E-14. Receiving Water Monitoring – Monitoring Location R-017**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Flow	mgd	Gauge <sup>9</sup>	Daily	--
Hydrogen Ion (pH)	pH	Grab	Monthly <sup>8</sup>	Part 136
Temperature	°F or °C	Grab	Monthly <sup>8</sup>	Part 136
Dissolved Oxygen	mg/L	Grab	Monthly	Part 136
Electrical Conductivity @ 25°C	µmhos/cm	Grab	Monthly	Part 136
Total Dissolved Solids	mg/L	Grab	Monthly	Part 136
Turbidity	mg/L	Grab	Monthly	Std Method 2130B
Visual Observations <sup>10</sup>	---	Visual	Monthly	---
Priority Pollutants	µg/L	Grab	1x / Order term	Std Methods
Hardness (as CaCO <sub>3</sub> )	mg/L	Grab	Monthly	Std Methods

<sup>9</sup> The flow in the Eel River shall be measured daily during the discharge season (October 1 through May 14) at the Scotia gauging station (USGS Station 11477000).

<sup>10</sup> Visual observations shall be made for evidence of floatables (i.e., solids, liquids, foam, and scum), visible films (i.e., oils, greases, and waxes), aquatic growths, and discoloration. Observations shall be recorded and included in the monthly self-monitoring reports.

**B. Surface Water Monitoring Locations R-018**

The Discharger shall monitor the Eel River concurrently with effluent monitoring at Monitoring Location R-018, at the point of discharge as follows:

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**Table E-15. Receiving Water Monitoring – Monitoring Location R-018**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Hydrogen Ion (pH)	pH	Grab	Monthly	Part 136
Temperature	°F or °C	Grab	Monthly	Part 136
Dissolved Oxygen	mg/L	Grab	Monthly	Part 136
Electrical Conductivity @ 25°C	micromhos	Grab	Monthly	Part 136
Total Dissolved Solids	mg/L	Grab	Monthly	Part 136
Turbidity	mg/L	Grab	Monthly	Std Method 2130B
Visual Observations <sup>10</sup>	---	Visual	Monthly	---

**IX. OTHER MONITORING REQUIREMENTS**

This section of the standardized permit form is not applicable.

**X. REPORTING REQUIREMENTS**

**A. General Monitoring and Reporting Requirements**

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. **Special Study.** No Special studies are required in accordance with this Order.
3. The chemical compounds used for treatment in the Power Plant may change periodically, with a minimum 30 day prior notification to the Regional Water Board. Each time a change is made the Discharger will provide an accurate and complete list of all compounds used at the. The 30-day notification shall include a separate list of those chemical compounds overlapping with the list of priority pollutants.

**B. Self Monitoring Reports (SMRs)**

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit self-monitoring reports using the State Water Board’s California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). Until such notification is given, the Discharger shall hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit monthly Self Monitoring Reports including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
3. All monitoring results shall include complete laboratory data sheets for each analysis and be submitted in conjunction with the monthly SMR on the 1st day of the second month following sample collection. Annual summary reports shall be due on February 1 following each calendar year.
4. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

**Table E-16. Monitoring Periods and Reporting Schedule**

<b>Sampling Frequency</b>	<b>Monitoring Period Begins On</b>	<b>Monitoring Period</b>	<b>SMR Due Date</b>
Continuous	July 1, 2012	All	First Day Of Second Calendar Month Following Month Of Sampling
Daily	July 1, 2012	(Midnight Through 11:59 Pm) Or Any 24-Hour Period That Reasonably Represents A Calendar Day For Purposes Of Sampling.	First Day Of Second Calendar Month Following Month Of Sampling
Weekly	July 1, 2012	Sunday Through Saturday	First Day Of Second Calendar Month Following Month Of Sampling
Monthly	July 1, 2012	1st Day Of Calendar Month Through Last Day Of Calendar Month	First Day Of Second Calendar Month Following Month Of Sampling
Semi-Annually	July 1, 2012	January 1 Through June 30 July 1 Through December 31	First Day Of Second Calendar Month Following Month Of Sampling 1
Annually	January 1, 2012	January 1 Through December 31	February 1

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
1x / 5 Years	July 1, 2012	October 1 Through May 15	First Day Of Second Calendar Month Following Month Of Sampling, to be submitted no later than June 30, 2016

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

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

- a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

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

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
- d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

- 6. Self Monitoring Reports.** The Discharger shall submit self monitoring reports (SMRs) in accordance with the following requirements:
- a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.
  - b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify:
    - i. Facility name and address;
    - ii. WDID number;
    - iii. Applicable period of monitoring and reporting;
    - iv. Violations of the WDRs (identified violations must include a description of the requirement that was violated and a description of the violation);
    - v. Corrective actions taken or planned; and
    - vi. The proposed time schedule for corrective actions.
  - c. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

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

**C. Other Reports.**

- 1. Special Studies and Technical Reports Submittals.** The Dischargers shall both report the results of any special studies, acute and chronic toxicity testing, TRE/TIE, PMP, and Pollution Prevention Plan required by Special Provisions VI.C.2 and 3 of this Order. The Dischargers shall both submit reports with the first monthly SMR scheduled to be submitted on or immediately following the report due date in compliance with SMR reporting requirements described in subsection X.B.5 above.
- 2. Annual Report.** The Dischargers shall both submit an annual report to the Regional Water Board for each calendar year. The report shall be submitted by February 1st of the following year. The report shall include, at a minimum, the following:

- a. Monitoring Data Summaries.** Both tabular and, where appropriate, graphical summaries of the monitoring data and disposal records from the previous year. If the Permittees monitor any pollutant more frequently than required by this Permit, using test procedures approved under 40 CFR Part 136 or as specified in this Permit, the results of this monitoring shall be included in the calculation and report of the data submitted SMR.
- b. Compliance Reporting.** A comprehensive discussion of the facilities' 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 Permit.
- c. Sanitary Sewer System Reporting.** The Discharger shall submit, as part of its annual report to the Regional Water Board, a description of the Discharger's activities within the sanitary sewer system over the previous calendar year. The report shall contain:
  - i.** A description of any change in the local legal authorities enacted to implement the Sewer System Management Plan (SSMP).
  - ii.** A summary of the SSOs that occurred in the past year. The summary shall include the date, location of overflow point, affected receiving water (if any), estimated volume, and cause of the SSO, and the names and addresses of the responsible parties as well as the names and addresses of the property owner(s) affected by the SSO.
  - iii.** A summary of compliance and enforcement activities during the past year. The summary shall include fines, other penalties, or corrective actions taken as a result of the SSO. The summary shall also include a description of public participation activities to involve and inform the public.
  - iv.** Documentation that all feasible steps to stop and mitigate impacts of SSOs have been taken.
- d. Source Control Activity Reporting.** The Dischargers shall submit, as part of their annual report to the Regional Water Board, a description of the Dischargers' source control activities, during the past year. These annual reports are due on March 1st of each year.
  - i.** A copy of the source control standards.
  - ii.** A description of the waste hauler permit system.
  - iii.** A summary of the compliance and enforcement activities during the past year. The summary shall include the names and addresses of any industrial or commercial users under surveillance by the Discharger, an explanation of whether they were inspected, sampled,

or both, the frequency of these activities at each user, and the conclusions or results from the inspection or sampling of each user.

- iv. A summary of any waste survey results.
  - v. A summary of public participation activities to involve and inform the public.
- e. Solids Handling and Disposal Activity Reporting.** The Dischargers shall both submit, as part of the annual report to the Regional Water Board, a description of the Dischargers' solids handling, disposal, and reuse activities over the previous calendar year. At a minimum, the report shall contain:
- i. Annual sludge production, in dry tons and percent solids.
  - ii. A schematic diagram showing sludge handling facilities (e.g., digesters, thickeners, drying beds), if any, and a solids flow diagram.
  - iii. Methods of final disposal of sludge:
    - (a) For any portion of sludge discharged to a sanitary landfill, the Discharger shall provide the volume of sludge transported to the land fill or other appropriately permitted facility, the names and locations of the facilities receiving sludge, the Regional Water Board's WDRs order number for the regulated facility, and the landfill classification.
    - (b) For any portion of sludge discharged through land application, the Discharger shall provide the volume of biosolids applied, the date and locations where biosolids were applied, the Regional Water Board's WDRs order number for the regulated discharge, a demonstration that the discharge was conducted in compliance with applicable permits and regulations, and, if applicable, corrective actions taken or planned to bring the discharge into compliance with WDRs.
    - (c) For any portion of sludge further treated through composting, the Discharger shall provide a summary of the composting process, the volume of sludge composted, and a demonstration and signed certification statement that the composting process and final product met all requirements for Class A biosolids.
  - iv. Annual fly ash production, in dry tons.
  - v. Annual bottom ash production, in dry tons.
  - vi. A schematic diagram showing all ash handling facilities, if any, and an ash flow diagram.
  - vii. Methods of final disposal of fly and bottom ash.

#### **D. Spills and Overflows Notification**

1. All spills, unauthorized discharges, and SSOs equal to or in excess of 1,000 gallons or any size spill or SSO that results in a discharge to a drainage channel or a surface water:
  - a. As soon as possible, but not later than two (2) hours after becoming aware of the discharge, the Discharger shall notify the California Emergency Management Agency (Cal EMA), the local health officer or directors of environmental health with jurisdiction over affected water bodies or land areas, and the Regional Water Board.<sup>11</sup>

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

- i. Name and contact information of caller;
  - ii. Date, time and location of spill occurrence;
  - iii. Estimates of spill volume, rate of flow, and spill duration;
  - iv. Surface water bodies impacted, if any;
  - v. Cause of spill;
  - vi. Cleanup actions taken or repairs made; and
  - vii. Responding agencies.
- b. As soon as possible, but not later than twenty-four (24) hours after becoming aware of a discharge, the Discharger shall submit to the Regional Water Board a certification that Cal EMA and the local health officer or directors of environmental health with jurisdiction over affected water bodies or land areas have been notified of the discharge. For the purpose of this requirement, "certification" means a Cal EMA certification number and, for the local health department, name of local health staff, department name, phone number and date and time contacted.
  - c. **Within five (5) business days**, the Discharger shall submit a written report to the Regional Water Board office. The report must include all available details related to the cause of the spill and corrective action taken or planned to be taken, as well as copies of reports submitted to other agencies.
    - i. Information provided in the verbal notification;
    - ii. Other agencies notified by telephone;
    - iii. Detailed description of cleanup actions and repairs taken; and
    - iv. Description of actions that will be taken to minimize or prevent future spills.

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<sup>11</sup> The contact number for spill reporting for Cal EMA is (800) 852-7550. The contact number of the Regional Water Board during normal business hours is (707) 576-2220. After normal business hours, spill reporting to OES will satisfy the 2 hour notification requirement for the Regional Water Board.

- d. In the cover letter of the SMR, the Discharger shall include a brief written summary of the event and any additional details related to the cause or resolution of the event, including, but not limited to results of any water quality monitoring conducted.
- 2. All spills, unauthorized discharges, and sanitary sewer overflows (SSOs) less than 1,000 gallons that do not reach a drainage channel or a surface water:
  - a. As soon as possible, but not later than twenty-four (24) hours after becoming aware of the discharge, the Discharger shall notify the Regional Water Board and provide the applicable information in requirement 1.a of this section.
  - b. In the cover letter of the SMR, the Discharger shall include a written description of the spill event.

**E. Discharge Monitoring Reports (DMRs)**

DMRs are required for facilities designated as Major dischargers.

- 1. As described in Section X.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the discharger to electronically submit self-monitoring reports that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, major dischargers shall submit DMRs in accordance with the requirements described below. The Facility is currently designated as a minor discharger.
- 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:

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

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

**ATTACHMENT F – FACT SHEET**

**Table of Contents**

I.	Permit Information.....	F-4
II.	Facility Description .....	F-5
	A. Description of Wastewater Sources, Treatment and Controls .....	F-5
	B. Cooling Water Systems .....	F-7
	C. Receiving Waters .....	F-8
	D. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data .....	F-9
	E. Compliance Summary .....	F-13
	F. Planned Changes .....	F-13
III.	Applicable Plans, Policies, and Regulations.....	F-14
	A. Legal Authorities.....	F-14
	B. California Environmental Quality Act (CEQA).....	F-14
	C. State and Federal Regulations, Policies, and Plans .....	F-14
	D. Impaired Water Bodies on CWA 303(d) List.....	F-17
	E. Other Plans, Polices and Regulations .....	F-19
IV.	Rationale For Effluent Limitations and Discharge Specifications .....	F-19
	A. Discharge Prohibitions.....	F-20
	B. Technology-Based Effluent Limitations .....	F-24
	1. Scope and Authority.....	F-24
	2. Applicable Technology Based Effluent Limitations – Power Plant.....	F-26
	3. Applicable Technology Based Effluent Limitations – WWTF .....	F-30
	C. Water Quality-Based Effluent Limitations (WQBELs) .....	F-33
	1. Scope and Authority .....	F-33
	2. Applicable Beneficial Uses and Water Quality Criteria and Objectives.....	F-34
	3. Determining the Need for WQBELs .....	F-35
	4. WQBEL Calculations .....	F-39
	5. Whole Effluent Toxicity (WET).....	F-40
	D. Final Effluent Limitations .....	F-41
	1. Satisfaction of Anti-Backsliding Requirements .....	F-41
	2. Satisfaction of Antidegradation Policy .....	F-42
	3. Stringency of Requirements for Individual Pollutants .....	F-42
	4. Summary of Final Effluent Limitations .....	F-43
	E. Interim Effluent Limitations .....	F-49
	F. Land Discharge Specifications .....	F-49
	G. Reclamation Specifications .....	F-49
V.	Rationale for Receiving Water Limitations.....	F-49
	A. Surface Water.....	F-49
	B. Groundwater.....	F-50

VI.	Rationale for Monitoring and Reporting Requirements .....	F-50
A.	Influent Monitoring .....	F-50
B.	Effluent Monitoring.....	F-50
C.	Whole Effluent Toxicity Testing Requirements .....	F-51
D.	Receiving Water Monitoring .....	F-54
	1. Surface Water .....	F-54
	2. Groundwater.....	F-55
VII.	Rationale for Provisions .....	F-55
A.	Standard Provisions .....	F-55
B.	Regional Water Board Standard Provisions .....	F-55
C.	Special Provisions .....	F-56
	1. Reopener Provisions .....	F-56
	2. Special Studies and Additional Monitoring Requirements .....	F-57
	3. Best Management Practices and Pollution Prevention .....	F-58
	4. Construction, Operation and Maintenance Specifications .....	F-58
	5. Special Provisions for Municipal Facilities (POTWs Only).....	F-58
	6. Other Special Provisions .....	F-61
	7. Compliance Schedules.....	F-61
VIII.	Public Participation.....	F-61
A.	Notification of Interested Parties .....	F-61
B.	Written Comments.....	F-61
C.	Public Hearing .....	F-62
D.	Waste Discharge Requirements Petitions .....	F-62
E.	Information and Copying .....	F-62
F.	Register of Interested Persons .....	F-62
G.	Additional Information.....	F-63

**List of Tables**

Table F-1.	Facility Information.....	F-4
Table F-2.	Facility Average Discharge Flows .....	F-7
Table F-3.	Chemicals Added to Power Plant Process Waters .....	F-8
Table F-4a.	Historic Effluent Limitations and Monitoring Data at Discharge Point 003 .....	F-9
Table F-4b.	Historic Effluent Limitations and Monitoring Data at Discharge Point 012 .....	F-10
Table F-4c.	Historic Effluent Limitations and Monitoring Data at Discharge Point 013 .....	F-11
Table F-4d.	Historic Effluent Limitations and Monitoring Data at Discharge Point 014 .....	F-12
Table F-4e.	Historic Effluent Limitations and Monitoring Data at Discharge Point 015 .....	F-12
Table F-4f.	Historic Effluent Limitations and Monitoring Data at Discharge Point 016 .....	F-13
Table F-5.	Basin Plan Beneficial Uses .....	F-15
Table F-6.	Low Volume Wastes – Standards Based on BPT .....	F-27
Table F-7.	Once Through Cooling Water – Standards Based on BPT .....	F-28
Table F-8.	Cooling Tower Blowdown – Standards Based on BPT .....	F-28

Table F-9.	Cooling Tower Blowdown – Standards Based on BAT .....	F-29
Table F-10.	Cooling Tower Blowdown – Standards Based on BAT .....	F-29
Table F-11.	Cooling Tower Blowdown – Standards Based on BAT .....	F-30
Table F-12.	Summary of Technology-based Effluent Limitations - WWTF.....	F-32
Table F-13.	Applicable Water Quality Criteria .....	F-35
Table F-14.	Summary of RPA Results .....	F-38
Table F-15.	Final WQBELs Based on Aquatic Life Criteria .....	F-39
Table F-16.	Final WQBELs Based on Aquatic Life Criteria .....	F-40
Table F-17.	Summary of Final Effluent Limitations at Discharge Point 003 .....	F-44
Table F-18a.	Summary of Final Effluent Limitations at Discharge Point 012(B).....	F-45
Table F-18b.	Summary of Final Effluent Limitations at Discharge Point 013 .....	F-46
Table F-18c.	Summary of Final Effluent Limitations at Discharge Point 014(A/B) .....	F-46
Table F-18d.	Summary of Final Effluent Limitations at Discharge Point No. 015 .....	F-48
Table F-18e.	Summary of Final Effluent Limitations at Discharge Point No. 016 .....	F-48

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**ATTACHMENT F – FACT SHEET**

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

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

**I. PERMIT INFORMATION**

The following table summarizes administrative information related to the facility.

**Table F-1. Facility Information**

<b>WDID</b>	1B83104OHUM
<b>Discharger</b>	Scotia Community Services District (CSD) Eel River Power, LLC
<b>Name of Facility</b>	Scotia CSD Wastewater Treatment Facility Eel River Power, LLC Steam Electric Power Plant
<b>Facility Address</b>	WWTF - Williams Street, Scotia, CA 95565 Power Plant – 151 Main Street, Scotia, CA 95565 Humboldt County
<b>Facility Contact, Title and Phone</b>	WWTF – Frank Bacik, President, (707) 764-4131 Power Plant – Charles Abbot, General Manager, (707) 764-5141
<b>Authorized Person to Sign and Submit Reports</b>	WWTF – Frank Bacik, President, (707) 764-4131 Power Plant – Charles Abbot, General Manager, (707) 764-5141
<b>Mailing Address</b>	WWTF – P.O. Box 245, Scotia, CA 95565 Power Plant – P.O. Box 38, Scotia, CA 95565
<b>Billing Address</b>	Same as Mailing Address
<b>Type of Facility</b>	WWTF – SIC 4952 Power Plant – SIC 4911
<b>Major or Minor Facility</b>	Minor
<b>Threat to Water Quality</b>	2
<b>Complexity</b>	B
<b>Pretreatment Program</b>	N/A
<b>Reclamation Requirements</b>	N/A
<b>Facility Permitted Flow WWTF</b>	0.77 MGD Maximum Wet Weather Flow

<b>Facility Design Flow WWTF</b>	1.0 MGD
<b>Facility Design Flow (process) Power Plant</b>	1.0 MGD
<b>Watershed</b>	Scotia Hydrologic Sub area
<b>Receiving Water</b>	Eel River
<b>Receiving Water Type</b>	Inland Surface Water

- A. The Scotia Community Services District (CSD) is the owner and operator of the Scotia CSD Wastewater Treatment Facility (WWTF), a publically owned treatment works (POTW). Eel River Power, LLC is the owner and operator of a wood-fueled steam electric power plant (Power Plant). Scotia CSD and Eel River Power, LLC are hereinafter collectively referred to as the Dischargers and the WWTF and Power Plant are hereinafter collectively called the Facilities.
- B. The Facilities discharge wastewater to the Eel River, a water of the United States and are currently regulated by Order No. R1-2006-0020, which was adopted on June 29, 2006 and expired on September 30, 2011. The terms of Order No. R1-2006-0020 automatically continued in effect after the permit expiration date.
- C. The Dischargers filed a report of waste discharge and submitted an application for renewal of their Waste Discharge Requirements (WDRs) and National Pollution Discharge Elimination System (NPDES) permit on April 1, 2011. Supplemental information was requested on September 27, 2011 and was received on October 14, 2011. A site visit was conducted on October 19, 2011 to observe operations and collect additional data to develop permit limitations and conditions.

**II. FACILITY DESCRIPTION**

The Scotia CSD owns and operates a secondary municipal WWTF and associated wastewater collection and disposal facilities. Eel River Power, LLC owns and operates a wood-fired steam electric power plant. The Facilities are located west of the Town of Scotia, California adjacent to the Eel River and serve a population of approximately 1,000 in the Town of Scotia. From October 1 through May 14, treated wastewater is discharged from Discharge Point 003 to the Eel River. The discharge to the Lower Eel River is located within the Scotia Hydrologic Subarea of the Eel River Hydrologic Unit.

**Description of Wastewater Sources, Treatment and Controls**

Approximately 1,000 residents and between 715 and 500 employees generate municipal wastewater in the Town of Scotia. Wastewater is conveyed to the municipal WWTF system through approximately 5 miles of underground collection system. Reported annual average daily flows into the WWTF in 2010 were 0.13 MGD. Once at the WWTF, raw sewage enters the headworks where it passes through a bar screen, chop pump, and grit chamber. The sewage is then pumped

to the primary clarifier for solids settling and removal. Wastewater is decanted from the primary clarifier and pumped to a redwood-media trickling filter. At optimum flows, 60% of the trickling filter effluent is routed to a secondary clarifier and the remaining 40% is recirculated through the redwood filter media. Flow from the secondary clarifier enters a serpentine chlorine contact chamber for disinfection before it is pumped to a series of three vegetated treatment ponds, the first of which contains two aerators. Treated effluent discharges from the final treatment pond to a 20-acre storage pond at Discharge Point 012B. An overflow pipe is connected to the third treatment/polishing pond that would allow for emergency discharges directly to the Eel River. However, discharges from this location are prohibited.

Solids are pumped from the bottom of the primary clarifier into a holding tank. The Discharger previously disposed of sludge in a dewatering/holding trench located between the WWTF and the active channel of the Eel River; however, disposal of sludge in the unlined trench is prohibited. The Discharger is currently negotiating a contract for solids disposal at an off-site permitted facility. In the event that an agreement with a permitted off-site facility is not forthcoming, the Discharger has indicated they will construct a lined trench for on-site disposal of biosolids.

The Eel River Power, LLC generating facility is a wood waste fired power plant with an average generating output of 639 megawatts (MW) per day in three steam-generating boilers. The power plant system consists of two multimedia filters, a reverse osmosis system, three boilers, and two cooling towers. The power plant is fueled using high-moisture redwood which is supplied by a nearby lumber mill and from local logging slash. The power plant draws water from the Scotia potable water system through two multimedia filters then through a reverse osmosis system. Seventy five percent (75%) of the water is highly purified. The highly purified permeate is stored for use in the boilers to generate steam. The remaining twenty-five percent (25%) reject water with high impurities is sent to the cooling towers. Filter back flush water is discharged to the storage pond at Discharge Point 013. Steam from the boilers drives turbines, which in turn generate electricity. Boiler blowdown water and cooling tower blowdown water are discharged at internal Discharge Points 015 and 014, respectively, to a yellow storage tank. The combined boiler blowdown water and cooling tower blowdown water is then used in the rock/wood separator which overflows to a floor drain beneath the separator and discharges to the storage pond at Discharge Point 017. The power plant discharges filter back-flush water, cooling tower blow-down, once through cooling water, boiler blowdown, and rock-wood separator water.

An average total of 1.0 MGD of wastewater is discharged from the power plant directly into the storage pond through three points located at the southeast end of the pond (i.e., Discharge Points 013, 016, and 017). Once through cooling water accounts for about ninety-one percent (91%) of the total discharge from the power

plant. Power plant process wastewaters and sanitary wastewater from the WWTF are discharged to a 20-acre storage pond and combined with storm water runoff from the town of Scotia. During the discharge season (October 1 through May 14), overflow from the storage pond is directed to a final clarifier and discharges to the Eel River at Discharge Point 003. During the non-discharge season (May 15 through September 30), overflow from the storage pond is discharged to a percolation pond adjacent to the Eel River. Pursuant to a June 9, 2011 Water Quality Certification issued by the Regional Water Board pursuant to section 401 of the CWA, discharge of treated wastewater to the constructed percolation pond adjacent to the Eel River is prohibited after December 31, 2013.

The Discharges from the WWTF and power plant are made up of the following:

**Table F-2. Facility Average Discharge Flows**

<b>Discharge Point</b>	<b>Wastewater Discharge</b>	<b>Average Flow (MGD)</b>
003	Storage Pond final discharge to Eel River	0.29
012 A/B	Secondary Treated Municipal Wastewater	0.200
013	Multimedia filters back flush water	0.0009
014 A/B	Cooling tower Blow-down towers A & B	0.037 <sup>1</sup>
015	Boiler blow-down	0.011
016	Once-through cooling water	0.864
017	Hydraulic rock/wood separator water	0.048

### **Cooling Water Systems**

To provide condenser cooling at the power plant, the facility operates two separate cooling water systems. The main system generates power using turbine units A and B. These units are cooled using recirculated water passing through cooling towers A and B. This cooling system operates condensers A and B using a combination of reject water from the reverse osmosis system and recirculated water from the Scotia fire water system. Blow-down from cooling towers A and B is continuous at an average rate of 41 gpm from each tower. Turbine 3 is cooled using once-through cooling water that circulates from the storage pond through condenser 3 at an average rate of 600 gpm.

Chemical compounds currently associated with systems at the power plant are used either alone or in formulated combinations to treat various components as follows:

<sup>1</sup> Flow represents the combined average discharge from both 014A and 014B.

**Table F-3. Chemicals Added to Power Plant Process Waters**

<b>System Component</b>	<b>Product Name(s)</b>	<b>Chemical Name(s)</b>	<b>Primary Function</b>
Reverse Osmosis System	PermaTreat® PC-191	Phosphonate	Antiscalant
Reverse Osmosis System	NALCO 7408	Sodium Bisulfite	Chlorine Scavenger
Reverse Osmosis System	RoQuest™ 4500	Ferric Salt/Cationic Polymer	Coagulant
Boiler System	NALCO BT-3011	Sodium Hydroxide Sodium Tripolyphosphate	Boiler Water Treatment
Boiler System	NALCO ELIMIN-OX®	Carbohydrazide	Oxygen Scavenger
Steam Line	TRI-ACT® 1800	Cyclohexylamine Monoethanolamine Methoxypropylamine	Corrosion Inhibitor
Cooling Towers	NALCO 23274	N/A	Cooling Water Treatment
Cooling Towers	NALCO 1336	Sodium Tolyltriazole	Corrosion Inhibitor
Cooling Towers	NALCO 73550	Nonionic Surfactant Nonionic Alkyl Polyglycoside	Clean Tower Biodetergent
Cooling Towers	NALCO 73551	Polyalkylene glycol	Deposit Penetrant
Cooling Towers	Sodium Hypochlorite	Sodium Hypochlorite Sodium Hydroxide	Biocide
Cooling Towers	Sulfuric Acid	Sulfuric Acid	pH Control

The chemical compounds used for treatment in the Power Plant may change periodically, with prior notification to the Regional Water Board. Each time a change is made the Discharger will provide an accurate and complete list of all compounds used at the facility.

**Receiving Waters**

The storage pond (former log pond) overflows through a clarifier at Latitude 40°28'45" N, Longitude 124°6'27" W through Discharge Point 003 into the Scotia Hydrologic Sub-Unit of the lower Eel River.

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 and discharges from the Facilities are subject to waste load allocations established in the *Lower Eel River Total Maximum Daily Loads for Temperature and Sediment*, as discussed in section III.D of the Fact Sheet. 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.

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

Effluent limitations contained in Order No. R1-2006-0020 for discharges to the Eel River from the Facilities through Discharge Points 003, 012, 013, 014, 015 and 016 and representative monitoring data from the term of Order No R1-2006-0020 are as follows:

**Table F-4a. Historic Effluent Limitations and Monitoring Data at Discharge Point 003**

Parameter	Units	Effluent Limitations		Monitoring Data (From October 2006 To October 2009)	
		Average Monthly	Maximum Daily	Reported Value of Highest Violation	Total Number of Violations
Total Chlorine Residual	mg/L	--	2	--	No Violation
Settleable Solids	mL/L	--	3	--	No Violation

<sup>2</sup> Wastewater discharge to the Eel River shall not contain total residual chlorine at detectable levels above 0.1 mg/L.

<sup>3</sup> The discharge of stored wastewater shall not contain any measurable settleable solids.

Parameter	Units	Effluent Limitations		Monitoring Data (From October 2006 To October 2009)	
		Average Monthly	Maximum Daily	Reported Value of Highest Violation	Total Number of Violations
Acute Toxicity (percent survival)	%	70 <sup>4</sup> /90 <sup>5</sup>		--	No Violation
pH	std units	Not less than 6.5 nor greater than 8.5		8.6/9.4 <sup>6</sup>	7

**Table F-4b. Historic Effluent Limitations and Monitoring Data at Discharge Point 012**

Parameter	Units	Effluent Limitations			Monitoring Data (From October 2006 To October 2009)	
		Average Monthly	Average Weekly	Maximum Daily	Reported Value of Highest Violation	Total Number of Violations
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	30	45	60	76	4
	lbs/day	64	96	129	219	9
	% Removal	85 <sup>7</sup>	--	--	--	2
Total Suspended Solids	mg/L	30	45	60	61	2
	lbs/day	64	96	129	145	2
	% Removal		--	--	--	1

<sup>4</sup> Minimum for any one bioassay.

<sup>5</sup> Minimum allowable median value for any three or more consecutive bioassays.

<sup>6</sup> Minimum and maximum instantaneous values.

<sup>7</sup> Minimum allowable percent removal.

Parameter	Units	Effluent Limitations			Monitoring Data (From October 2006 To October 2009)	
		Average Monthly	Average Weekly	Maximum Daily	Reported Value of Highest Violation	Total Number of Violations
Total Coliform Bacteria	MPN/100 mL	23	--	230	--	No Violation
pH	std units	Not less than 6.5 nor greater than 8.5			--	No Violation

**Table F-4c. Historic Effluent Limitations and Monitoring Data at Discharge Point 013**

Parameter	Units	Effluent Limitations		Monitoring Data (October 2006 To October 2009)	
		Average Monthly	Maximum Daily	Reported Value of Highest Violation	Total Number of Violations
Total Suspended Solids	mg/L	30	100	--	No Violation
Oil and Grease	mg/L	15	20	--	No Violation
PCBs	µg/L	--	<sup>8</sup>	--	No Violation
pH	std units	Not less than 6.0 nor greater than 9.0		--	No Violation

<sup>8</sup> No detectable quantity of the pollutant may be discharged.

**Table F-4d. Historic Effluent Limitations and Monitoring Data at Discharge Point 014**

Parameter	Units	Effluent Limitations		Monitoring Data (October 2006 To October 2009)	
		Average Monthly	Maximum Daily	Reported Value of Highest Violation	Total Number of Violations
Free Available Chlorine	mg/L	30	100	--	No Violation
Priority Pollutants	µg/L	--	12	Varies	4
Chromium, Total Recoverable	mg/L	0.2	0.2	--	No Violation
Zinc, Total Recoverable	mg/L	1.0	1.0	--	No Violation
PCBs	µg/L	--	12	--	No Violation
pH	std units	Not less than 6.0 nor greater than 9.0		--	No Violation

**Table F-4e. Historic Effluent Limitations and Monitoring Data at Discharge Point 015**

Parameter	Units	Effluent Limitations		Monitoring Data (October 2006 To October 2009)	
		Average Monthly	Maximum Daily	Reported Value of Highest Violation	Total Number of Violations
Total Suspended Solids	mg/L	30	100	--	No Violation
Oil and Grease	mg/L	15	20	--	No Violation
PCBs	µg/L	--	12	--	No Violation
pH	std units	Not less than 6.0 nor greater than 9.0		--/9.1	1

**Table F-4f. Historic Effluent Limitations and Monitoring Data at Discharge Point 016**

Parameter	Units	Effluent Limitations		Monitoring Data (October 2006 To October 2009)	
		Average Monthly	Maximum Daily	Reported Value of Highest Violation	Total Number of Violations
Total Chlorine Residual	mg/L	--	0.2	--	No Violation
PCBs	µg/L	--	12	--	No Violation

**Compliance Summary**

On September 20, 2006, the Regional Water Board issued Cease and Desist Order (CDO) No. R1-2006-0073 which directed the Dischargers to comply with percent removal limitations for BOD<sub>5</sub> and TSS for discharges from the WWTF at Discharge Point 012. The CDO imposed a time schedule for the Dischargers to develop and implement a pollution prevention plan in order to comply with the limitations. In addition, the CDO exempts the Dischargers from any Mandatory Minimum Penalties (MMP) which would otherwise be applicable during the period in which the time schedule is in effect.

On December 10, 2009, the Regional Water Board issued Administrative Civil Liability (ACL) Order No. R1-2009-0099 which assessed Mandatory Minimum Penalties (MMPs) for 12 violations of effluent limitations in Order Nos. 99-59 and R1-2006-0020 resulting in MMPs that totaled \$42,000. The Dischargers waived their right to a public hearing and requested to pay \$13,500 to the SWPCAA and \$28,500 on three SEPs. The Discharger indicated that the first SEP would involve implementing a water conservation program for the Town of Scotia by conducting two Residential Water Conservation Workshops and providing a rebate on the purchase of 150 new low-flow toilets. The second SEP involved the development and implementation of a Storm Water Management Program for the Town of Scotia and two Residential Storm Water Workshops and a Storm Water Training Session with Town of Scotia Personnel. The third SEP involved providing NPDES compliance training for Town of Scotia residents and personnel.

On April 6, 2011, the Regional Water Board issued ACL Complaint No. R1-2011-0047 which assessed MMPs for eight effluent violations occurring between November 25, 2008 and January 28, 2010, resulting in MMPs that totaled \$24,000. The ACL required the Dischargers to address the MMPs by paying \$24,000 in full to the SWPCAA.

**Planned Changes**

The Dischargers have indicated that they will retire use of the percolation pond adjacent to the Eel River over the next two years. The Dischargers are currently in the process of drafting an agreement governing the use of the storage pond for effluent disposal during the period May 15 through September 30 of each year.

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

### **B. California Environmental Quality Act (CEQA)**

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

### **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.

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:

**Table F-5. Basin Plan Beneficial Uses**

Beneficial Use (s)	Receiving Water Name Discharge Points	
	Eel River 003	Groundwater
Municipal and Domestic Water Supply (MUN)	E	E
Agricultural Supply (AGR)	E	E
Industrial Service Supply (IND)	E	E
Industrial Process Supply (PRO)	P	P
Groundwater Recharge (GWR)	E	---
Freshwater Replenishment (FRESH)	E	---
Navigation (NAV)	E	---
Hydropower Generation (POW)	P	---
Water Contact Recreation (REC-1)	E	---
Non-contact Water Recreation (REC-2)	E	---
Commercial and Sport Fishing (COMM)	E	---
Warm Freshwater Habitat (WARM)	---	---
Cold Freshwater Habitat (COLD)	E	---
Wildlife Habitat (WILD)	E	---
Preservation of Rare, Threatened or Endangered Species (RARE)	E	---
Marine Habitat (MAR)	---	--
Migration of Aquatic Organisms (MIGR)	E	---
Spawning, Reproduction, and/or Early Development (SPWN)	E	---
Shellfish Harvesting (SHELL)	---	---
Estuarine Habitat (EST)	---	---
Aquaculture (AQUA)	P	P
Native American Culture (CUL)	---	E

In addition to the beneficial uses set out in the Basin Plan, there are several implementation plans that include actions intended to meet water quality objectives and protect beneficial uses of the North Coast Basin. For the Eel River and its tributaries, no point source waste discharges are allowed during the period of May 15 through September 30 and for all other periods the receiving stream's flow must be at least 100 times greater than the waste flow unless an exception to the requirement is granted by the Regional Water Board.

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.

Requirements of this Order implement the Basin Plan.

- 2. Thermal Plan.** The State Water 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 coastal and interstate waters and enclosed bays and estuaries of the State. Requirements of this Order implement the Thermal Plan to the extent that it is applicable to receiving waters for this Discharger.
- 3. National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, which was amended on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the State. The CTR was amended on February 13, 2001. These rules include water quality criteria for priority pollutants.
- 4. State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Boards in the Basin Plans. The SIP became effective on May 18, 2000 with

respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control.

- 5. Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (section 131.21, 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.
- 6. Antidegradation Policy.** Section 131.12, title 40 of the Code of Federal Regulations (section 131.12) requires that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16. Resolution 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16. Section IV.D.2 of this Fact Sheet discusses how the requirements of this Order satisfy the Antidegradation Policy.
- 7. Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. Section IV.D.1 of this Fact Sheet provides a detailed discussion of how the requirements of this Order satisfy anti-backsliding requirements.

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

Section 303(d) of the federal CWA requires states to identify waterbodies that do not meet water quality standards and are not supporting their beneficial uses after implementation of technology-based effluent limitations on point sources. Each state must submit an updated list, the 303(d) List of Impaired Waterbodies, to USEPA by April of each even numbered year. In addition to identifying the waterbodies that are not supporting beneficial uses, the 303(d) list also identifies

the pollutant or stressor causing impairment and establishes a schedule for developing a control plan to address the impairment. USEPA requires the Regional Water Board to develop total maximum daily loads (TMDLs) for each 303(d) listed pollutant and water body contaminant. TMDLs establish the maximum quantity of a given pollutant that can be added to a water body from all sources without exceeding the applicable water quality standard for that pollutant and determine wasteload allocations (the portion of a TMDL allocated to existing and future point sources) for point sources and load allocations (the portion of a TMDL attributed to existing and future nonpoint sources) for nonpoint sources.

On November 12, 2009, USEPA provided partial approval of the 303(d) list of impaired water bodies prepared by the State. The partial approval supported the 303(d) listing of the Lower Eel River as impaired by aluminum, dissolved oxygen, sedimentation/siltation, and temperature. TMDLs for aluminum and dissolved oxygen in the Lower Eel River are scheduled for completion in 2021. On December 18, 2007, USEPA approved the *Lower Eel River Total Maximum Daily Loads for Temperature and Sediment*.

Regarding temperature, the TMDL concludes that most sources of heat in the Lower Eel River are from diffuse, nonpoint sources and result from such factors as removal of stream shade, longer travel time, changes in timing and volume of natural stream flow due to water diversions and impoundments, and increased sediment loads that cause widening of streams. As the critical time period for temperature is in the summer, the TMDL was established for that critical time period, which is also the time period when point source discharges from the Facility are prohibited. The TMDL concludes that, because of the summer discharge prohibition, area facilities such as the Facility do not contribute to temperature loadings to the Lower Eel River Watershed during critical periods, and therefore, the TMDL establishes a “zero” WLA to mean that, as long as the Discharger adheres to the summer discharge prohibition, it will be in compliance with the approved TMDL for temperature.

Regarding sediment, the TMDL establishes a maximum loading of 125 percent of the natural sediment loading for the watershed and further defines that loading rate as 2.5 tons of sediment per square mile of watershed per day on a long term basis. Although nonpoint sources were found to be primarily responsible for excessive sediment loadings to the Lower Eel River, the TMDL establishes WLAs for area wastewater treatment facilities at levels corresponding to existing permit limitations for suspended solids and a monthly average WLA for settleable solids of 0.1 ml/L. The previous Order included an effluent limitation prohibiting the discharge of measureable concentrations of settleable solids. As discussed in section IV.D.1 of the Fact Sheet and consistent with anti-backsliding requirements, this Order

therefore retains limitations for settleable solids and TSS from Order No. R1-2006-0020.

**E. Other Plans, Policies and Regulations**

1. **Storm Water.** State Water Board Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities, does not require wastewater treatment facilities with design flows less than 1 MGD to obtain coverage. ERP is currently covered under the General Permit. The Discharger described storm water discharges, appropriate pollution prevention practices and best management practices in a completed Notice of Intent dated March 7, 2011 and submitted it to the State Water Board pursuant to the Statewide General Permit Program.
2. **Sanitary Sewer Systems.** On May 2, 2006, the State Water Board adopted State Water Board Order No. 2006-0003-DWQ, Statewide General WDRs for Sanitary Sewer Systems. The general permit is applicable to all “federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility in the State of California.” The purpose of the general permit is to promote the proper and efficient management, operation, and maintenance of sanitary sewer systems and to minimize the occurrences and impacts of sanitary sewer overflows. Section VI.C.5.a of the Order requires the Discharger to seek/maintain coverage under Order No. 2006-0003-DWQ, and restates some provisions of the general permit.
3. **Discharge of Biosolids to Land.** On July 22, 2004, the State Water Board adopted State Water Board Order No. 2004-0012-DWQ, General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities. The general waste discharge requirements establish standards for agronomic applications and the use of biosolids as a soil amendment or fertilizer in agriculture, forestry, and surface mining reclamation, and include provisions to mitigate significant environmental impacts. The Order requires the Discharger to dispose of biosolids at a legally permitted facility, obtain coverage under Order No. 2004-0012-DWQ or other appropriate WDRs for the discharge of biosolids from the wastewater treatment plant. Section VI.C.5.f of the Order requires the Discharger to seek coverage under Order No. 2004-0012-DWQ, if applicable, and restates some provisions of the general permit.
4. **Solids Disposal and Handling Requirements** (Special Provisions VI.C.6.b). This Order establishes solids disposal and handling requirements to ensure that solids are properly contained prior to disposal that that they are disposed at a

solid waste facility for which WDRs have been prescribed by the Regional Water Board or in a manner approved by the Executive Officer.

### **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: section 122.44(a) requires that permits include applicable technology-based limitations and standards; and section 122.44(d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where the discharge has the reasonable potential to cause or contribute to an excursion above a narrative criterion, but numeric water quality objectives have not been established, WQBELs may be established using one or more of three methods described at section 122.44(d)(vi). First, WQBELs may be established using a calculated water quality criterion, such as a proposed State criterion or an explicit State policy or regulation interpreting its narrative criterion. Second, WQBELs may be established on a case-by-case basis using USEPA criteria guidance published under CWA section 304(a). Third, WQBELs may be established using an indicator parameter for the pollutant of concern.

#### **A. Discharge Prohibitions**

- 1. Discharge Prohibition III. A.** The discharge of any waste not disclosed by the Dischargers 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 Board Order WQO 2002-0012 regarding the petition of WDR Order No. 01-072 for the East Bay Municipal Utility District and Bay Area Clean Water Agencies. In Order WQO 2002-0012, the State Water Board found that this prohibition is acceptable in permits, but should be interpreted to apply only to constituents that are either not disclosed by the discharger or are not reasonably anticipated to be present in the discharge, but have not been disclosed by the discharger. It specifically does not apply to constituents in the discharge that do not have “reasonable potential” to exceed water quality objectives.

The State Water Board has stated that the only pollutants not covered by this prohibition are those which were “disclosed to the permitting authority and . . . can be reasonably contemplated.” (In re the Petition of East Bay Municipal Utilities District et al., (State Water Board 2002) Order No. 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.

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 permit adoption.

- 2. Discharge Prohibition III.B.** Creation of a pollution, contamination, or nuisance, as defined by section 13050 of the Water Code is prohibited. This prohibition is based on Water Code section 13050. It has been retained from Order No. R1-2006-0020.
- 3. Discharge Prohibition III.C.** The discharge of soil, silt, bark, slash, sawdust, or other organic and earthen material from any logging, construction, or associated activity of whatever nature into any stream or watercourse in the basin in quantities deleterious to fish, wildlife, or other beneficial uses is prohibited.  
  
This prohibition has been retained from the previous Order and is based on the *Action Plan for Logging, Construction, and Associated Activities* contained in the Basin Plan. The Discharger uses waste wood products and other sources of biomass to fuel the power plant. These materials are stored outdoors, without cover. This prohibition applies to discharges associated with Discharge Point 003. Storm water discharges associated with runoff from wood waste stockpiles shall be regulated in accordance with the General Industrial Storm Water Permit.
- 4. Discharge Prohibition III.D.** The discharge of sludge is prohibited, except as authorized under section VI.C.5.c. Solids Disposal and Handling Requirements.  
  
This prohibition is based on restrictions on the disposal of sewage sludge found in federal regulations (Part 503 (Biosolids), Part 527, and Part 258) and title 27 California Code of Regulations. It has been retained from Order No. R1-2006-0020.
- 5. Discharge Prohibition III.E.** The discharge or reclamation of untreated or partially treated waste (receiving a lower level of treatment than described in Finding No. II.B.) from anywhere within the collection, treatment, or disposal

facility is prohibited, except as provided for in Attachment D, Standard Provision G [*Bypass Provision*].

This Prohibition has been retained from Order No. R1-2006-0020 and is based on the Basin Plan to protect beneficial uses of the receiving water from unpermitted discharges, and the intent of Water Code sections 13260 through 13264 relating to the discharge of waste to waters of the State without filing for and being issued an Order. This prohibition applies to spills not related to sanitary sewer overflows (SSOs) and other unauthorized discharges of wastewater within the collection, treatment, and disposal facilities. The discharge of untreated or partially treated wastewater from the collection, treatment, or disposal facility represents an unauthorized bypass pursuant to section 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.

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

This prohibition applies to spills related to SSOs and is based on State standards, including section 13050 of the Water Code and the Basin Plan. This prohibition is consistent with the States' antidegradation policy as specified in State Water Board Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California) in that the prohibition imposes conditions to prevent impacts to water quality, does not allow the degradation of water quality, will not unreasonably affect beneficial uses of water, and will not result in water quality less than that prescribed in State Water Board or Regional Water Board plans and policies.

This prohibition is stricter than the prohibitions stated in State Water Board Order 2006-0003-DWQ, Statewide General WDRs for Sanitary Sewer Systems. Order 2006-0003-DWQ prohibits SSOs that result in the discharge of untreated or partially treated wastewater to waters of the United States and SSOs that create a nuisance. Prohibition III.E of this Order further prohibits any SSO that results in the discharge of untreated or partially treated wastewater to groundwater due to the prevalence of high groundwater in this Region and this Region's reliance on groundwater as a drinking water source.

- 7. Discharge Prohibition III. G.** The discharge of waste from the Facilities to the Eel River or its tributaries is prohibited during the period May 15 through September 30 each year.

This prohibition is required by the Basin Plan. The Basin Plan prohibits discharges to the Eel River and its tributaries from 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. Discharge Prohibition III.H.** During the period of October 1 through May 14, discharges of wastewater at Discharge Point 003 shall not exceed one percent of the flow of the Eel River.

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. Basin Plan Prohibition No. 3 does not specify how compliance with the one-percent flow requirement will be determined. This Order specifies that the discharge may comply with the one percent requirement as a monthly average for the surface water discharge season, provided the Discharger makes a reasonable effort to adjust the discharge of treated wastewater to one percent of the most recent daily flow measurement of the Eel River at the Scotia gage (USGS Station 11477000). This modification provides day-to-day operational flexibility for the Dischargers while retaining the intent of the prohibition. This prohibition is applicable to the total flow discharged at Discharge Point 003.

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

Land used for the application of wastewater must be owned by, or be under the control of, the Discharger by contract so that the Discharger maintains a means for ultimate disposal of treated wastewater.

- 10. Discharge Prohibition III.J.** The discharge of waste at any point not described in Finding II.B. or authorized by any State Water Board or other Regional Water Board permit 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 Water Code section 13263. It has been retained from Order No. R1-2006-0020.

- 11. Discharge Prohibition III.K.** The discharge of septage into the WWTF is prohibited.

This prohibition is established and is necessary to ensure that the Discharger's treatment system is demonstrating adequate treatment performance necessary to prevent an exceedance of receiving water quality standards or objectives.

**12. Discharge Prohibition III. L.** Flow of waste into the Discharger's WWTF in excess of 0.77 MGD, is prohibited.

Although the design flow of the WWTF is 1.0 MGD, this Order retains the influent flow prohibition from Order No. R5-2006-0020, as the Discharger has not requested nor provided requisite technical support for an increase in the permitted flow.

**13. Discharge Prohibition III. M.** Discharge of metal cleaning wastes into the Eel River or into a waste stream that ultimately discharges to the Eel River is prohibited.

This prohibition is established to ensure compliance with 40 CFR 423.12 (b) (5), which contains technology-based effluent limitations for metal cleaning wastes. No information has been submitted to the Regional Water Board regarding this common waste stream, therefore it is not anticipated for discharge. This prohibition is a substitute for the otherwise requisite technology based effluent limitations.

**14. Discharge Prohibition III. N.** The intentional introduction of pollutant-free wastewater to the collection, treatment, or disposal system for purposes of dilution is prohibited. The blending of cooling water and boiler blowdown for the purpose of pH adjustment is not subject to this prohibition.

This prohibition is necessary to ensure that the Discharger's treatment system is demonstrating adequate treatment performance necessary to prevent an exceedance of receiving water quality standards or objectives.

**B. Technology-Based Effluent Limitations**

**1. Scope and Authority.**

- a. The Clean Water Act requires that technology-based effluent limitations be established based on several levels of controls:
  - i. Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and nonconventional pollutants.
  - ii. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are

- economically achievable within an industrial point source category. BAT standards apply to toxic and nonconventional pollutants.
- iii. Best conventional pollutant control technology (BCT) represents the level of control from existing industrial point sources of conventional pollutants, including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the cost reasonableness of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.
  - iv. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.
- b. The Clean Water Act requires the USEPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS for specific industrial categories. Section 301(b)(1)(B) of the Clean Water Act requires that POTWs, at a minimum, meet effluent limitations based on secondary treatment as defined by the USEPA Administrator. Pursuant to section 304(d) of the Clean Water Act, the USEPA established the minimum performance requirements for POTWs at Part 133 of the Code of Federal Regulations. Secondary treatment standards constitute BPT, the minimum effluent limitations for point source discharges. In developing secondary treatment standards, USEPA was required to take into account specific factors identical to those requiring consideration in developing limits, including cost/benefits, age of equipment, process employed, engineering aspects, and non-water quality environmental impacts. (33 U.S.C. § 1314(b)(1)(B).)
- c. Where the USEPA has not yet developed ELGs for a particular industry or a particular pollutant, section 402 (a)(1) of the Clean Water Act and 40 CFR section 125.3 authorize the use of best professional judgment to derive technology-based effluent limitations on a case-by-case basis.
  - d. Regulations promulgated in 40 CFR section 125.3(c)(2) require the permit writer to consider: 1) the appropriate technology for the category or class of point sources of which the applicant is a member; and 2) any unique factors relating to the applicant.
  - e. USEPA developed secondary treatment regulations, which are specified in section 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<sub>5</sub>), total suspended solids (TSS), and pH, as follows:

**i. BOD<sub>5</sub> and Suspended Solids**

- (a) The 30-day average shall not exceed 30 mg/l.
- (b) The 7-day average shall not exceed 45 mg/l.
- (c) The 30-day average percent removal shall not be less than 85 percent.

**ii. pH**

- (a) 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.

- f. In addition, 40 CFR section 122.45(f) requires the establishment of mass-based effluent limitations for all pollutants limited in permits, except, 1) for pH, temperature, radiation, or other pollutants which cannot appropriately be expressed by mass, (2) when applicable standards and limitations are expressed in terms of other units of measure and 3) where the permit limitation is established on a case-by-case basis under section 125.3, and the limitations expressed in terms of mass are infeasible because the mass of the pollutant discharged cannot be related to a measure of operation, and permit conditions ensure that dilution will not be used as a substitute for treatment. Pollutants limited in terms of mass additionally may be limited in terms of other units of measurement, and the permit shall require that permittee to comply with both limitations. Mass-based effluent limitations are based on the facility flow.
- g. 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 of the California Code of Regulations.
- h. 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. These limitations are a typical standard of performance for secondary treatment facilities and are included as a limitation based on the BPJ of Regional Water Board staff.

**2. Applicable Technology Based Effluent Limitations – Power Plant**

Pursuant to CWA Section 306 (b)(1)(B), USEPA has established standards of performance for the steam electric power point source category, for existing and new sources at 40 CFR Part 423. The provisions of 40 CFR Part 423 are applicable to discharges resulting from the operation of a generating unit by an establishment primarily engaged in the generation of electricity for distribution and sale which results primarily from a process utilizing fossil-type fuel or nuclear fuel in conjunction with a thermal cycle employing the steam water system as the thermodynamic medium. Although the fuel at the power plant is primarily composed of wood waste materials from milling operations rather than petroleum based products, many of the waste streams associated with processes at the power plant are substantially similar, if not identical to waste streams associated with power plants fueled by petroleum products. In addition, the power plant currently sells excess power to PG&E. In addition, similar to plants that do sell power, the Scotia power plant provides electricity to the entire Town of Scotia including residential, commercial, and industrial uses. Based on the BPJ, regulations have been applied to the power plant only for waste streams consistent with activities designated under 40 CFR Part 423. Waste streams identified under 40 CFR Part 423 not consistent with activities occurring at the power plant have not been included in this Order.

Following are applicable technology-based standards of performance (BPT and BAT) applicable to the power plant from the ELGs for existing sources at Part 423. The guidelines do not include standards of performance based on BCT.

**a. Standards of Performance Based on BPT**

- i. The pH of all discharges, except once-through cooling water, shall be within the range of 6.0 – 9.0 standard units [40 CFR 423.12 (b) (1)].
- ii. There shall be no discharge of polychlorinated biphenyl compounds (PCBs) such as those commonly used for transformer fluid. [40 CFR 423.12 (b) (2)].
- iii. Low volume wastes are defined as those non-cooling wastewater sources for which specific limitations are not established by the effluent limitation guidelines at 40 CFR 423. The quantity of pollutants discharged from low volume waste sources shall not exceed the quantity determined by multiplying the flow of the low volume waste sources times the concentration listed in the following table [40 CFR 423.12 (b) (3)]:

**Table F-6. Low Volume Wastes – Standards Based on BPT**

Pollutant	Units	Daily Max	30-Day Avg
Total Suspended Solids	mg/L	100.0	30.0

Pollutant	Units	Daily Max	30-Day Avg
Oil and Grease	mg/L	20.0	15.0

- iv. The quantity of pollutants discharged in once through cooling water shall not exceed the quantity determined by multiplying the flow of once through cooling water sources times the concentration listed in the following table [40 CFR 423.12 (b) (6)].

**Table F-7. Once Through Cooling Water – Standards Based on BPT**

Pollutant	Units	Maximum	Average
Free Available Chlorine	mg/L	0.5	0.2

- v. Blow-down is defined as the minimum discharge of re-circulated water for the purpose of discharging materials contained in the water, the further build-up of which would cause concentration in amounts exceeding limits established by best engineering practices. The quantity of pollutants discharged in cooling tower blowdown shall not exceed the quantity determined by multiplying the flow of cooling tower blowdown sources times the concentration listed in the following table [40 CFR 423.12 (b) (7)].

**Table F-8. Cooling Tower Blowdown – Standards Based on BPT**

Pollutant	Units	Maximum	Average
Free Available Chlorine	mg/L	0.5	0.2

- vi. Neither free available chlorine nor total residual chlorine may be discharged from any cooling tower unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate that the units in a particular location cannot operate at or below this level or chlorination [40 CFR 423.12 (b) (8)]. Eel River Power, LLC has indicated that chlorine is used continuously in the cooling towers and the power plant is unable to achieve compliance with this requirement. Waste discharges from the cooling towers discharge into the 20 acre storage pond prior to discharge to the Eel River. Total

chlorine residual is limited at the discharge exiting the storage pond. Therefore, this Order does not apply this requirement.

vii. At the permitting authority's discretion, the pollutant discharge limitation may be expressed as concentration-based limitations instead of the mass-based limitations [40 CFR 423.12 (b) (11)]. The Regional Water Board has elected to apply concentration-based limitations for low volume wastes.

**b. Standards of Performance Based on BAT**

- i. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid [40 CFR 423.13 (a)].
- ii. Blow-down is defined as the minimum discharge of re-circulated water for the purpose of discharging materials contained in the water, the further build-up of which would cause concentration in amounts exceeding limits established by best engineering practices. The quantity of pollutants discharged in cooling tower blowdown shall not exceed the quantity determined by multiplying the flow of cooling tower blow-down from each discharge point times the concentration listed in the following table [40 CFR 423.13 (d) (1)]:

**Table F-9. Cooling Tower Blowdown – Standards Based on BAT**

Pollutant	Maximum (mg/L)	Average (mg/L)
Free Available Chlorine	0.5	0.2

**Table F-10. Cooling Tower Blowdown – Standards Based on BAT**

Pollutant	Daily Max (mg/L)	30 Day Avg (mg/L)
Chromium, Total	0.2	0.2
Zinc, Total	1.0	1.0
126 <sup>9</sup> Priority Pollutants <sup>10</sup>	No Detectable Amount <sup>5</sup>	No Detectable Amount

- iii. Neither free available chlorine nor total residual chlorine may be discharged from any cooling tower unit for more than two hours in any one day and not more than one unit in any plant may discharge free

<sup>9</sup> Applies to those pollutants contained in chemicals added for cooling tower maintenance except Total Chromium and Total Zinc.

<sup>10</sup> Appendix A to 40 CFR Part 423.

available or total residual chlorine at any one time unless the utility can demonstrate that the units in a particular location cannot operate at or below this level of chlorination. Eel River Power, LLC has indicated that chlorine is used continuously in the cooling towers and the power plant is unable to achieve compliance with this requirement. Waste discharges from the cooling towers discharge into the 20 acre storage pond prior to discharge to the Eel River. Total chlorine residual is limited at the discharge exiting the storage pond. Therefore, this Order does not apply this requirement.

- iv. Once-through cooling water is defined as water which is passed through the main cooling condensers in one or two passes for the purpose of removing waste heat. For any plant with a total rated electric generating capacity of 25 or more megawatts, the quantity of pollutants discharged from once through cooling water sources shall not exceed the quantity determined by multiplying the flow of once through cooling water from each discharge point times the concentration listed in the following table [40 CFR 423.13 (b) (1)]. Once through cooling water is taken from the storage pond and no chlorine is added to the once through cooling water. Therefore, this requirement is not applicable.

**Table F-11. Cooling Tower Blowdown – Standards Based on BAT**

<b>Pollutant</b>	<b>Maximum Concentration (mg/L)</b>
Total Residual Chlorine	0.20

- v. Total residual chlorine may not be discharged from any single once through cooling water generating unit for more than two hours per day unless the Discharger demonstrates to the permitting authority that discharge for more than two hours per day is required for macroinvertebrate control [40 CFR 423.13 (b) (2)]. Once through cooling water is taken from the storage pond and no chlorine is added to the once through cooling water. Therefore, this requirement is not applicable and is not retained in this Order.
- vi. At the permitting authority’s discretion, the BAT pollutant discharge limitation may be expressed as concentration-based limitations instead of the mass-based limitations [40 CFR 423.13 (g)]. The Regional Water Board has elected to apply concentration-based limitations for cooling tower blowdown.

### **3. Applicable Technology Based Effluent Limitations – WWTF**

The following table summarizes technology-based effluent limitations that are applicable to the WWTF discharge to the storage pond:

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**Table F-12. Summary of Technology-based Effluent Limitations - WWTF**

Parameter s	Units	Effluent Limitations				
		Average Monthl y	Average Weekly	Maximu m Daily	Instantaneou s Minimum	Instantaneou s Maximum
Biochemic al Oxygen Demand 5- day @ 20°C	mg/L	30	45	60	---	---
	lbs/day <sup>11,12</sup>	64	96	129	---	---
	% Removal <sup>13</sup>	85	---	---	---	---
Total Suspended Solids	mg/L	30	45	60	---	---
	lbs/day <sup>17, 18</sup>	64	96	129	---	---
	% Removal <sup>19</sup>	85	---	---	---	---
pH	std units	---	---	---	6.0	9.0
Settleable Solids	ml/L	0.1	---	0.2	---	---
Total Coliform	MPN/100 mL	23	---	230	---	---

The concentration based effluent limitations for BOD and suspended solids in the proposed Permit are derived from federal requirements (40 CFR 133.102). Secondary treatment requirements are defined by the USEPA as achievement of 30 mg/l BOD and suspended solids and 85 percent removal of these pollutants on a 30-day average. These limits were based on typical WWTF influent concentrations of 200 mg/l BOD and suspended solids.

<sup>11</sup> The mass discharge (lbs/day) is obtained from the following calculation for any calendar week or month:

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

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

<sup>12</sup> Mass-based effluent limitations are based on the average flow of 0.257 mgd.

<sup>13</sup> Percent removal is determined for both BOD<sub>5</sub> and TSS through comparison of the monthly average concentrations measured in the influent and effluent.

**Percent Removal.** This is a standard secondary treatment technology-based effluent limitation derived from federal requirements (40 CFR 133.102; definition in 133.101).

Percent removal for BOD and total suspended solids 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.

### **C. Water Quality-Based Effluent Limitations (WQBELs)**

#### **1. Scope and Authority**

Section 301(b) of the CWA and NPDES regulations at section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards, including numeric and narrative objectives within a standard.

Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause, or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard.

A reasonable potential analysis (RPA) demonstrated reasonable potential for discharges from the Facilities to cause or contribute to exceedances of applicable water quality criteria for chlorine and pH.

Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established in accordance with the requirements of section 122.44(d)(1)(vi), using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information.

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 the Basin Plan and in other State and federal rules, plans, and policies, including applicable water quality criteria from 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 this Order and section III.C.1 of this Fact Sheet.
- b. **Basin Plan Water Quality Objectives.** In addition to the specific water quality objectives indicated above, the Basin Plan contains narrative objectives for color, tastes and odors, floating material, suspended material, settleable material, oil and grease, biostimulatory substances, sediment, turbidity, pH, dissolved oxygen, bacteria, temperature, toxicity, pesticides, chemical constituents, and radioactivity that apply to inland surface waters, enclosed bays, and estuaries, including the Eel River.
- c. **State Implementation Policy (SIP), CTR and NTR.** Water quality criteria applicable to the discharge to the Eel River are established by the CTR, established by the USEPA at section 131.38; and the NTR, established by the USEPA at section 131.36. Criteria for most of the 126 priority pollutants are contained within the CTR and NTR.

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.

At title 22, Division 4, Chapter 15, Cal. Code of Regs, the Department of Public Health (DPH) has established Maximum Contaminant Levels (MCLs) for certain pollutants. Chapter 3 of the Basin Plan establishes these MCLs as water quality objectives applicable to receiving waters with the beneficial use designation of municipal and domestic supply.

The SIP, which is described in Finding II.J of the Order and section III.C.4 of this Fact Sheet, includes procedures for determining the need for and calculating WQBELs and requires dischargers to submit data sufficient to do

so. Table F-12 summarizes applicable water quality criteria/objectives for each priority pollutant that has been detected at a measurable concentration in the effluent or in the receiving water during the term of Order No. R1-2006-0020.

**Table F-13. Applicable Water Quality Criteria**

Constituent	Water Quality Criteria (µg/L)			
	Title 22 MCLs	CTR/NTR Aquatic Life		CTR/NTR Human Health
		Acute	Chronic	
Antimony	6	--	--	14
Arsenic, Total Recoverable	50	340	150	--
Cadmium, Total Recoverable <sup>14</sup>	1.9	3.2	1.9	--
Chromium (VI), Total Recoverable <sup>14</sup>	50	16	11	--
Copper, Total Recoverable <sup>14</sup>	--	10	7.1	1,300
Lead, Total Recoverable <sup>14</sup>	50	55	2.1	--
Mercury	2.0	--	--	0.050
Nickel, Total Recoverable <sup>14</sup>	100	360	40	610
Selenium, Total Recoverable	10	--	5	--
Zinc, Total Recoverable <sup>14</sup>	--	92	92	--

### 3. Determining the Need for QBELs

#### a. Non-Priority Pollutants

- i. **Chlorine Residual.** The Basin Plan establishes a narrative water quality objective for toxicity, stating that “[a]ll waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life.” The Regional Water Board considers any chlorinated discharge as having the reasonable potential to cause or contribute to exceedances of this water quality objective for toxicity, and therefore, the Order establishes effluent limitations for chlorine. USEPA has established the following criteria for chlorine-produced oxidants for protection of

<sup>14</sup> Aquatic life criteria for this metal are hardness dependent (in general, as hardness decreases, metal toxicity increases). For this metal, a hardness of 73 mg/L CaCO<sub>3</sub>, the lowest hardness measured in the receiving water, was used to determine “reasonable potential.” If an effluent limitation was required based on a finding of “reasonable potential” for this metal, the Order requires a determination of limitations based on actual receiving water hardness measured at the time of compliance determination.

freshwater aquatic life. [*Quality Criteria for Water 1986* (The Gold Book, 1986, EPA 440/5/-86-001)]

<b>Chronic Criterion</b>	<b>Acute Criterion</b>
0.011 mg/L	0.019 mg/L

Order No. R1-2006-0020 required that there be no detectable level of chlorine in the effluent at the point of discharge. This Order revises effluent limitations for chlorine residual to be consistent with the water quality criteria, which are below current analytical detection limits. The water quality criteria recommended by USEPA have been translated to average monthly and maximum daily effluent limitations for total chlorine residual.

Dechlorination is not required when discharging to the percolation ponds.

- ii. **pH.** Table 3-1 of the Basin establishes pH limits for discharge to the Eel River as 6.5 to 8.5. These limits are more restrictive than the federal standards. Basin Plan requirements have been applied only during the discharge season. The federal standards will be used during periods of discharge to the percolation ponds.

**b. Priority Pollutants**

- i. **Reasonable Potential Analysis.** 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 an RPA. For this RPA, the Regional Water Board has used effluent and receiving water monitoring data generated from a March 10, 2010 priority pollutant scan, September 9, 2010 metals data, and SMR data collected between October 2006 and December 2010 for Discharge Point 003.

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. Receiving water hardness data was not collected during the term of Order No. R1-2006-0020. Therefore, for the reasonable potential analysis, a receiving water hardness concentration of 73 mg/L CaCO<sub>3</sub> was selected, based on receiving water data submitted by the Discharger during the term of Order No. 99-59. 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.

**(a) Trigger 1.** If the MEC is greater than C, there is reasonable potential, and an effluent limitation is required.

**(b) 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.

**(c) 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.

**ii. Priority Pollutant Reasonable Potential Determination.** Reasonable potential could not be determined for all pollutants, as there are not applicable water quality criteria and/or available monitoring data for all pollutants. The RPA determined that there is either no reasonable potential or there was insufficient information to conclude affirmative reasonable potential for the 126 priority pollutants.

The following table summarizes the RPA for each priority pollutant that was reported in detectable concentrations in the effluent from the Facility or background receiving water. The MECs, most stringent WQO/WQCs (C), and background concentrations (B) used in the RPA are presented in the following table, along with the RPA results (yes or no) for each priority pollutant analyzed.

**Table F-14. Summary of RPA Results**

<b>CTR #</b>	<b>Priority Pollutant</b>	<b>MEC or Minimum DL<sup>15,16</sup></b>	<b>C</b>	<b>B or Minimum DL</b>	<b>RPA Results<sup>17</sup></b>
1	Antimony	0.22	6.0	0.09	No
2	Arsenic, Total Recoverable	1.7	50	0.57	No
4	Cadmium, Total Recoverable	0.02	1.9	<0.011	No
5b	Chromium (VI), Total Recoverable	0.38	11	2.6	No
6	Copper, Total Recoverable	1.1	7.1	1.9	No
7	Lead, Total Recoverable	0.44	2.1	0.31	No
8	Mercury	0.0011	0.050	0.0035	No
9	Nickel, Total Recoverable	1.5	40	4.3	No
10	Selenium, Total Recoverable	0.24	5.0	0.46	No
13	Zinc, Total Recoverable	3.0	92	2.5	No

Based on analysis of effluent samples collected from Monitoring Location M-003 on March 10, 2010 and September 9, 2010, the Regional Water Board, using methods presented in the SIP, finds that discharges from the Facilities did not demonstrate reasonable potential to cause or contribute to in-stream

<sup>15</sup> The MEC or B is the actual detected concentration unless it is preceded by "<", in which case the value shown is the minimum detection level as the analytical result was reported as not detected (ND). Values reported as DNQ were "detected, but not quantified".

<sup>16</sup> The MEC or B is "Not Available" when there are no monitoring data for the constituent.

<sup>17</sup> RPA Results:

- = Yes, if MEC > WQO/WQC, or B > WQO/WQC and MEC is detected;
- = No, if MEC and B are < WQO/WQC or all effluent data are undetected;
- = Undetermined (Ud), if no criteria have been promulgated.

excursions above any applicable water quality standards. Therefore, WQBELs are not established by this Order for priority pollutants.

#### 4. WQBEL Calculations

Final WQBELs for chlorine residual have been determined using the methods described in section 1.4 of the SIP.

**Step 1:** To calculate the effluent limitations, an effluent concentration allowance (ECA) is calculated for each pollutant found to have reasonable potential using the following equation, which takes into account dilution and background concentrations:

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

C = the applicable water quality objective or criterion (adjusted for receiving water hardness and expressed as the total recoverable metal, if necessary)

D = dilution credit (here D = 0, as the discharge to the Eel River does not qualify for a dilution credit)

B = background concentration

Here, because no credit for dilution is allowed, the ECA is equal to the applicable criterion (ECA = C).

**Step 2:** For each ECA based on an aquatic life criterion/objective (here, chlorine residual), the long term average discharge condition (LTA) is determined by multiplying the ECA by a factor (multiplier), which adjusts the ECA to account for effluent variability. The multiplier depends on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the values of the CV. When the data set contains less than 10 sample results, or when 80 percent or more of the data set is reported as non-detect (ND) (as for the Facility), the CV is set equal to 0.6. Derivation of the multipliers is presented in section 1.4 of the SIP.

From Table 1 of the SIP, the ECA multipliers for calculating LTAs at the 99th percentile occurrence probability are 0.32 (acute multiplier) and 0.53 (chronic multiplier). The LTAs are determined as follows in Table F-7.

**Table F-15. Final WQBELs Based on Aquatic Life Criteria**

Pollutant	ECA		ECA Multiplier		LTA (mg/L)	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Chlorine, Total Residual	0.019	0.011	0.32	0.53	0.0061	0.0058

**Step 3:** WQBELs, including an average monthly effluent limitation (AMEL) and a maximum daily effluent limitation (MDEL) are calculated using the most limiting (lowest) LTA. The LTA is multiplied by a factor that accounts for averaging periods and exceedance frequencies of the effluent limitations, and for the AMEL, the effluent monitoring frequency. Here, the 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 chlorine residual are determined as follows.

**Table F-16. Final WQBELs Based on Aquatic Life Criteria**

Pollutant	LTA (mg/L)	MDEL Multiplier	AMEL Multiplier	MDEL (mg/L)	AMEL (mg/L)
Chlorine, Total Residual	0.0058	3.11	1.55	0.02	0.01

**Step 4:** When the most stringent water quality criterion/objective is a human health criterion/objective, the AMEL is set equal to the ECA. From Table 2 of the SIP, 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 1.55. The MDEL for protection of human health is calculated by multiplying the ECA by the ratio of the MDEL multiplier to the AMEL multiplier. Chlorine residual does not have an applicable human health criteria/objective.

**5. Whole Effluent Toxicity (WET)**

Effluent limits for acute and chronic whole effluent toxicity (WET) 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 establishes a narrative water quality 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.

Consistent with Order No. R1-2006-0020, this Order includes an effluent limitation for acute toxicity in accordance with the Basin Plan, which requires

that the average survival of test organisms in undiluted effluent for any three consecutive 96-hour bioassay tests be at least 90 percent, with no single test having less than 70 percent survival.

In addition to the Basin Plan requirements, section 4 of the SIP states that chronic toxicity effluent limitations are required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters. Chronic toxicity testing in March 2010 at Discharge Point 003 did not exhibit chronic toxicity. In accordance with the SIP, 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**

##### **1. Satisfaction of Anti-Backsliding Requirements**

Except as provided in section 122.44(l)(2), federal anti-backsliding regulations require effluent limitations, standards, and conditions contained in reissued permits to be at least as stringent as the effluent limitations, standards, and conditions contained in the previous permit. All effluent limitations, standards, and conditions contained in this Order are at least as (or more) stringent as the effluent limitations in Order No. R1-2006-0020.

With respect to discharges of chlorine residual from Discharge Point 003, new effluent limitations are established in this Order. In the previous Order, the effluent limitation was expressed as no detectable levels of chlorine residual in the discharge, using a method detection limit of 0.1 mg/L. The new limitations are expressed as an average monthly limitation of 0.01 mg/L and a maximum daily limitation of 0.02 mg/L. The new limitations established in the Order are numerically lower than the minimum detection limit for the final effluent limitation of the previous permit that required no detectable level of chlorine in the effluent at the point of discharge. Although no longer expressed as “non-detect”, the newly established effluent limitations are effectively more stringent limitations because the discharge is required to achieve an effluent concentration of chlorine residual that is numerically lower than was required by the previous permit. Thus, anti-backsliding requirements are satisfied for chlorine residual.

Removal of effluent limitations for chlorine residual results in conditions at least as stringent as the effluent limitations in the previous Order. Once through cooling water is taken from the storage pond and no chlorine is added to the once through cooling water. The new information provided by the Discharger confirms that chlorine was never detected in the once-thru cooling effluent during the previous permit cycle. Therefore, the protection afforded under the modified permit results in a level of protection for beneficial uses equal to the previous conditions of Order No. R1-2006-0021.

Additionally, this Order is consistent with section 303 (d)(4)(B) of the Clean Water Act, which allows for changes to effluent limitations or other permitting standards provided that the quality of receiving waters equals or exceeds levels necessary to protect the beneficial uses for such waters and the change is consistent with the antidegradation policy. Consistency with the anti-degradation policy is addressed below.

## **2. Satisfaction of Antidegradation Policy**

**a. Surface Water.** This Order is consistent with applicable federal and State antidegradation policies, as it does not authorize the discharge of increased concentrations of pollutants or increased volumes of treated wastewater beyond that which was permitted to discharge in accordance with the previous Order.

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

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

## **3. Stringency of Requirements for Individual Pollutants**

This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations for discharges from the power plant consist of restrictions on free available chlorine, total recoverable chromium, PCBs, total recoverable zinc, and the remaining priority pollutants as defined in section 423. Restrictions on these pollutants are discussed in section IV.B in this Fact Sheet. The technology-based effluent limitations for discharges from the WWTF consist of restrictions on BOD<sub>5</sub> and TSS. Restrictions on these pollutants are discussed in sections IV.B.3 of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations for chlorine residual, pH, total coliform bacteria, and settleable solids that are more stringent than the minimum, federal technology-based requirements but are necessary to meet water quality

standards. These requirements are discussed in section IV.C.3 of this Fact Sheet.

WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to section 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless “applicable water quality standards for purposes of the CWA” pursuant to section 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order (specifically the addition of the beneficial use of Native American Culture (CUL) and the General Objective regarding antidegradation) were approved by USEPA on March 4, 2005, and are applicable water quality standards pursuant to section 131.21(c)(2). Collectively, this Order’s restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

#### **4. Summary of Final Effluent Limitations**

##### **a. Final Effluent Limitations – Discharge Point 003**

The discharge of stored wastewater shall comply with the following effluent limitations at Discharge Point 003, with compliance measured at Monitoring Location M-003 as described in the attached Monitoring and Reporting Program (Attachment E).

- i.** There shall be no acute toxicity in the effluent when discharging to the Eel River as measured at Discharge Point 003. 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:
  - (a)** Minimum for any one bioassay: 70 percent survival
  - (b)** Median for any three or more consecutive bioassays: at least 90 percent survival

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

- ii. The discharge of effluent shall comply with the following effluent limitations at Discharge Point 003, with compliance measured at Monitoring Location M-003 as described in the attached Monitoring and Reporting Program (Attachment E).

**Table F-17. Summary of Final Effluent Limitations at Discharge Point 003**

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	Standard Units	---	---	6.5	8.5
Total Chlorine Residual	mg/L	0.01	0.02	---	---
Settleable Solids	mL/L	0.1	0.2	---	---

**b. Final Effluent Limitations – Discharge Point 012(A/B)**

- i. The disinfected effluent, sampled at Monitoring Location 012(A) as described in the attached Monitoring and Reporting Program (Attachment E) shall not contain concentrations of total coliform bacteria exceeding the following concentrations:
  - (a) The median concentrations shall not exceed a Most Probable Number (MPN) of 23 per 100 milliliters, using the bacteriological results of the last 30 calendar days for which analyses have been completed.
  - (b) The number of coliform bacteria shall not exceed an MPN of 230 per 100 milliliters.
- ii. The treated wastewater shall be adequately oxidized and disinfected as defined in title 22, Division 4, Chapter 3, California Code of Regulations.
- iii. The discharge of secondary treated wastewater, as defined by the WWTF's treatment design and the numerical limitations below, shall comply with the following effluent limitations at Discharge Point 012, with compliance measured at Monitoring Location M-012(B) as described in the attached Monitoring and Reporting Program (Attachment E).

**Table F-18a. Summary of Final Effluent Limitations at Discharge Point 012(B)**

Parameter	Units	Effluent Limitations					Basis <sup>18</sup>
		Average <sup>19</sup> Monthly	Average <sup>20</sup> Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Biochemical Oxygen Demand 5-day @ 20°C	mg/L	30	45	60	--	--	CFR
	lbs/day <sup>21 22</sup>	64	96	129	--	--	CFR
Total Suspended Solids	mg/L	30	45	60	--	--	CFR
	lbs/day	64	96	129	--	--	CFR
pH	Standard Units	--	--	--	6.5	8.5	BP

<sup>18</sup> CFR – Based on secondary treatment requirements established at section Part 133.  
 BP – Based on water quality objectives contained in the Basin Plan.  
 CTR – Based on water quality criteria contained in the California Toxics Rule and applied as specified in the SIP.  
 NAWQC – Based on USEPA’s National Ambient Water Quality Criteria for the protection of freshwater aquatic life to implement the Basin Plan’s narrative toxicity objective. Title 22 – Based on DPH Reclamation Criteria, California Code of Regulations, Division 4, Chapter 3 (title 22).

<sup>19</sup> The arithmetic mean of all daily determinations made during a calendar month. Where less than daily sampling is required, the average shall be determined by the summation of all the measured daily discharges divided by the number of days during the calendar month when the measurements were made. If only one sample is collected during that period of time, the value of the single sample shall constitute the monthly average.

<sup>20</sup> The arithmetic mean of all daily determinations made during a calendar week, Sunday to Saturday. Where less than daily sampling is required, the average shall be determined by the summation of all the measured daily discharges divided by the number of days during the calendar week when the measurements were made. If only one sample is collected during that period of time, the value of the single sample shall constitute the weekly average.

<sup>21</sup> Mass based effluent limitations presented here are based on an average flow rate of 0.257 MGD.

<sup>22</sup> The mass discharge (lbs/day) shall be determined using the following equation.

$$\frac{8.34}{N} \sum_{i=1}^N Q_i C_i$$

Where N is the number of samples analyzed in the monitoring period. Q<sub>i</sub> and C<sub>i</sub> are the flow rate (MGD) and the pollutant concentration (mg/L), respectively, which are associated with each of the N grab samples collected in that calendar day, week, or month. If a composite sample is taken, C<sub>i</sub> is the concentration measured in the composite sample, and Q<sub>i</sub> is the average flow rate during the period in which samples were composited.

**iv. Percent Removal:** The average monthly percent removal of BOD<sub>5</sub> (5-day 20°C) and total suspended solids shall not be less than 85 percent as measured at Monitoring Location M-012(B). Percent removal shall be determined from the monthly average value of influent wastewater concentration in comparison to the monthly average value of effluent concentration for the same constituent over a calendar month at Monitoring locations M-INF and M-012(B). (section 133.101(j)).

**c. Final Effluent Limitations – Discharge Point 013**

**i.** The discharge of low volume waste as defined by 40 CFR § 423.12 from back-flushing multimedia filters, shall maintain compliance with the following effluent limitations at Discharge Point 013. Compliance shall be measured at Monitoring Location M-013 as described in the attached Monitoring and Reporting Program (Attachment E).

**Table F-18b. Summary of Final Effluent Limitations at Discharge Point 013**

Parameter	Units	Effluent Limitations 013				Basis <sup>24</sup>
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Total Suspended Solids	mg/L	30	100	---	---	BPJ
Oil and grease	mg/L	15	20	---	---	BPJ
Polychlorinated Biphenyls	µg/L	---	No Detectable Amount	---	---	BPJ
pH	Standard Units	---	---	6.0	9.0	BPJ

**d. Final Effluent Limitations – Discharge Point 014 (A/B)**

**i.** The discharge of recirculated cooling water blowdown as defined by 40 CFR § 423.13 shall comply with the following effluent limitations at Discharge Points 014. Compliance shall be measured at Monitoring Location M-014 A and B as described in the attached Monitoring and Reporting Program (Attachment E).

**Table F-18c. Summary of Final Effluent Limitations at Discharge Point 014(A/B)**

Parameter	Units	Effluent Limitations 014(A/B)	Basis
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		<b>Average Monthly</b>	<b>Maximum Daily</b>	<b>Instantaneous Minimum</b>	<b>Instantaneous Maximum</b>	<sup>24</sup>
Free Available Chlorine	mg/L	0.2	0.5	---	---	BPJ
126 Priority Pollutants	µg/L	---	No Detectable Amount <sup>23</sup>	---	---	BPJ
Chromium, Total Recoverable	mg/L	0.2	0.2	---	---	BPJ
Zinc, Total Recoverable	mg/L	1.0	1.0	---	---	BPJ
Polychlorinated Biphenyls	µg/L	---	No Detectable Amount	---	---	BPJ
pH	Standard Units	---	---	6.0	9.0	BPJ

**e. Final Effluent Limitations – Discharge Point 015**

- i. The discharge of boiler blowdown, low volume waste, as defined by 40 CFR § 423.12 shall maintain compliance with the following effluent limitations at Discharge Point 015. Compliance shall be measured at Monitoring Location M-015 as described in the attached Monitoring and Reporting Program (Attachment E).

<sup>23</sup> Does not apply to total chromium or total zinc concentrations

**Table F-18d. Summary of Final Effluent Limitations at Discharge Point No. 015**

Parameter	Units	Effluent Limitations 015				Basis <sup>24</sup>
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Total Suspended Solids	mg/l	30	100	---	---	BPJ
Oil and grease	mg/L	15	20	---	---	BPJ
Polychlorinated Biphenyls	µg/L	---	No Detectable Amount	---	---	BPJ
pH	Standard Units	---	---	6.0	9.0	BPJ

**f. Final Effluent Limitations – Discharge Point 016**

- i. The discharge of once-through condenser cooling water as defined by 40 CFR § 423.13 shall maintain compliance with the following effluent limitations at Discharge Point 016. Compliance shall be measured at Monitoring Location M-016 as described in the attached Monitoring and Reporting Program (Attachment E).

**Table F-18e. Summary of Final Effluent Limitations at Discharge Point No. 016**

Parameter	Units	Effluent Limitations 016				Basis <sup>24</sup>
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Chlorine residual	mg/l	---	0.2	---	---	BPJ
Polychlorinated biphenyls	µg/L	---	No detectable amount	---	---	BPJ
pH	Standard Units	---	---	6.0	9.0	BPJ

**g. Final Effluent Limitations – Discharge Point 017**

- i. The discharge of low volume waste as defined by 40 CFR § 423.12 from the hydraulic rock/wood separator, shall maintain compliance with the

following effluent limitations at Discharge Point 017. Compliance shall be measured at Monitoring Location M-017 as described in the attached Monitoring and Reporting Program (Attachment E).

**Table F-18f. Summary of Final Effluent Limitations at Discharge Point 017**

Parameter	Units	Effluent Limitations 013				Basis <sup>24</sup>
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Total Suspended Solids	mg/L	30	100	---	---	BPJ
Oil and grease	mg/L	15	20	---	---	BPJ
Polychlorinated Biphenyls	µg/L	---	No Detectable Amount	---	---	BPJ
pH	Standard Units	---	---	6.0	9.0	BPJ

**E. Interim Effluent Limitations**

This section of the standardized permit form is not applicable.

**F. Land Discharge Specifications**

This section of the standardized template is not applicable.

**G. Reclamation Specifications**

This section of the standardized template is not applicable.

**RATIONALE FOR RECEIVING WATER LIMITATIONS**

**A. Surface Water**

CWA section 303(a-c) requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The Regional Water Board adopted water quality criteria as water quality objectives in the Basin Plan. The Basin Plan states that “[t]he numerical and narrative water quality objectives define the least stringent standards that the Regional [Water] Board will apply to regional waters in order to protect the beneficial uses.” The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This Order contains receiving water limitations based on the Basin Plan numerical and narrative water quality objectives for biostimulatory substances,

bacteria, chemical constituents, color, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, and turbidity.

## **B. Groundwater**

The beneficial uses of the underlying ground water are MUN, AGR, IND, PRO (potential), AQUA (potential), and CUL. Groundwater limitations are required to protect the beneficial uses of the underlying groundwater.

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

## **RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS**

Section 122.48 requires that all NPDES permits specify requirements for recording and reporting of monitoring results. Water Code sections 13267 and 13383 authorizes the Regional 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**

1. NPDES regulations at section 133 define secondary treatment to include 85 percent removal of BOD<sub>5</sub> 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.
2. Influent flow monitoring is required to monitor the water balance during treatment, and thereby, monitor seepage/percolation to ground water.

### **B. Effluent Monitoring**

1. Pursuant to the requirements of section 122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to assess the potential for impacts of the discharge to the receiving stream and groundwater.
2. This Order establishes a new monitoring location at Monitoring Location M-017 following the rock/wood separator in order to monitor pH and TSS contributions of discharges to the storage pond.

3. Monitoring is required for all parameters with effluent limitations contained in this Order.
4. Continuous flow monitoring has been retained from the previous Order to characterize effluent flows for the calculation of mass to determine compliance with mass-based effluent limitations for BOD<sub>5</sub> and TSS and for calculations of discharge rates into surface water.
5. 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 during the Order term to determine compliance with technology based effluent limitations, water quality objectives for toxics established by the NTR, CTR, and the Basin Plan.
6. The Regional Water Board is increasingly concerned about the biostimulatory properties of discharges to surface waters in the North Coast Region. Biostimulatory pollutants, such as nitrogen and phosphorus containing compounds, are a common component of domestic wastewater. Due to these concerns, this Order establishes monthly monitoring requirements for ammonia, nitrate, nitrite, organic nitrogen, total nitrogen, and phosphorus.
7. Effluent monitoring for temperature is established in this Order to adjust water quality criteria for ammonia, which are based on pH and temperature.
8. Priority pollutant data for the effluent has been provided by the Discharger over the term of Order No. R1-2006-0020, and was used to conduct an RPA. In accordance with section 1.3 of the SIP, periodic monitoring is required for priority pollutants for which criteria or objectives apply and for which no effluent limitations have been established. Therefore, this Order requires monitoring for priority pollutants in the effluent once during the term of the permit.

### **C. Whole Effluent Toxicity Testing Requirements**

#### **1. Acute Toxicity**

- a. **Rationale.** 96-hour bioassay testing is required to demonstrate compliance with the effluent limitation for acute toxicity (Effluent Limitation IV.A.1.b).
- b. **Test Frequency.** Consistent with the previous Order, this Order requires acute toxicity testing twice annually during the discharge season. Because the discharge to surface water is seasonally limited, this monitoring frequency is considered equivalent to USEPA's recommendation for monthly WET testing for facilities listed as "major facilities" and quarterly testing for "minor facilities." (Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity Testing Programs, USEPA, 1996).

- c. Sample Location.** Representative effluent samples shall be collected at Monitoring Location EFF-003 when discharging at Discharge Point 003.
- d. Sample Type.** This Order specifies a 96-hour static renewal or static non-renewal test as described in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (USEPA Report No. EPA-821-R-02-012, 5th edition or subsequent editions). Upon request, other methods may be approved by the Regional Water Board's Executive Officer.
- e. Test Species.** This Order requires the Discharger to conduct acute toxicity tests with the water flea, *Ceriodaphnia dubia*, and the rainbow trout, *Oncorhynchus mykiss*, for at least two suites of tests. For the first two suites of acute toxicity tests, the Discharger will determine the most sensitive aquatic species and continue to monitor with the most sensitive species. At least once every 5 years, the Discharger will rescreen to reconfirm the most sensitive species for the acute toxicity test.
- f. Test Method.** The presence of acute toxicity shall be estimated as specified in effluent limitation IV.A.1.b of the Order and shall be consistent with *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (USEPA Report No. EPA-821-R-02-012, 5<sup>th</sup> edition or subsequent editions). Upon request, other methods may be approved by the Regional Water Board Executive Officer.
- g. Dilution Water.** Acute toxicity tests shall be conducted using undiluted effluent.
- h. Test Failure.** If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger shall re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.
- i. Accelerated Monitoring.** This provision requires accelerated acute toxicity testing when routine acute toxicity test results exceed the single sample effluent limitation (70 percent survival). The purpose of accelerated monitoring is to determine, in an expedient manner, whether there is a pattern of toxicity before requiring the implementation of a toxicity reduction evaluation (TRE). Under this provision, the Discharger is required to conduct testing on at least two additional samples, one within 14 days, and one within 21 days of receiving the initial sample result. If any of the additional samples do not comply with the three sample median minimum limitation (90 percent survival) using that sample result and the two previous sample results, the Discharger shall initiate a TRE. If any test of a sample is ruled invalid, the

Discharger will re-sample within 7 days following notification of test invalidation.

- j. Notification and Reporting.** The MRP includes notification requirements regarding test results that exceed the acute toxicity effluent limitation and require reporting of WET test results in accordance with the acute toxicity manual Chapter 12 (Report Preparation) or in an equivalent format.

## 2. Chronic Toxicity

- a. Rationale.** Chronic WET testing is required once annually, during the discharge season, in order to demonstrate compliance with the Basin Plan's narrative toxicity objective.
- b. Test Frequency.** USEPA has no fixed guidance on the establishment of monitoring frequency, but recommends monthly WET testing for facilities listed as "major facilities" and quarterly testing for "minor facilities" during the first year of WET testing in order to develop sufficient data to conduct an RPA. USEPA further recommends that a reduction in sampling frequency is appropriate if no individual toxicity test exceeds the WET limit or trigger.
- c. Sample Location.** Representative effluent samples shall be collected at Monitoring Location EFF-003 when discharging at Discharge Point 003.
- d. Sample Type.** The Discharger shall collect 24-hour composite samples of effluent discharged from Discharge Point 003 for critical life stage toxicity testing as indicated in this Order.
- e. Test Species.** This Order requires the Discharger to conduct short-term 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, *Selenastrum capricornutum* (growth test). Initially, the Discharger is required to determine the most sensitive test species and monitor the discharge for chronic toxicity using that species for no more than 5 years, whereupon, the Discharger will repeat the screening procedure to confirm the most sensitive species. If reasonable potential to exceed the narrative water quality objective is found to exist, the Order may be reopened to include a chronic toxicity limitation, as appropriate. The Basin Plan does not allow a mixing zone for this discharge; therefore, reasonable potential will be based on results of chronic toxicity tests from samples collected at the end of the pipe.
- f. Test Method.** The presence of chronic toxicity shall be estimated as specified in and shall be consistent with *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater*

*Organisms* (USEPA Report No. EPA-821-R-02-013, 4<sup>th</sup> Edition or subsequent editions).

- g. Dilution Water.** Control and dilution water should be receiving water at a location immediately upstream and outside the influence of the outfall for all test methods except the short-term chronic *Selenastrum capricornutum* test. For the *Selenastrum capricornutum* test method, synthetic laboratory water with a hardness similar to the receiving water shall be used as a control and diluent. Laboratory water may be substituted for receiving water, as described in the manual, upon approval by the Regional Water Board Executive Officer.
- h. Accelerated Monitoring.** Guidance regarding accelerated monitoring and TRE initiation is provided in the *Technical Support Document for Water Quality-Based Toxics Control*, EPA/505/2-90-001, March 1991 (TSD). The TSD at page 118 states, “EPA recommends if toxicity is repeatedly or periodically present at levels above effluent limits more than 20 percent of the time, a TRE should be required.” If there is adequate evidence of a pattern of effluent toxicity (i.e., toxicity present exceeding the monitoring trigger 20 percent of the time), the Regional Water Board’s Executive Officer will require the Discharger to initiate a TRE. The TRE will include follow-up monitoring requirements to assure toxicity has been mitigated. Due to possible seasonality of the toxicity, the accelerated monitoring should be performed in a timely manner, preferably taking no more than 2 to 3 months to complete.
- i. Monitoring Trigger.** A numeric chronic toxicity monitoring trigger of 1.0 TU<sub>c</sub> (where TU<sub>c</sub> = 100/NOEC) is established by the Order, because this Order does not allow any dilution for the chronic condition. Therefore, a TRE is triggered when the effluent exhibits a pattern of toxicity at 100 percent effluent.

## **D. Receiving Water Monitoring**

### **1. Surface Water**

- a.** Upstream receiving water monitoring requirements for pH, dissolved oxygen, electrical conductivity, total dissolved solids, temperature, turbidity, and visual observations is retained from the previous Order at Monitoring Location R-017 to assess background receiving water quality. This Order establishes daily monitoring for flow, which shall be measured at the Scotia gauging station, to determine compliance with Prohibition III.H. This Order increases the monitoring frequency for hardness from once per permit term to monthly to ensure the water quality criteria/objectives for metals are correctly adjusted for the receiving water when determining reasonable

potential. Monitoring for priority pollutants upstream at Monitoring Location R-017 is required once during the permit term to collect the necessary data to determine reasonable potential as required in section 1.2 of the SIP. To the extent practicable, the hardness (as CaCO<sub>3</sub>) and pH of the upstream receiving water shall also be monitored concurrently with the priority pollutants to ensure the water quality criteria/objectives are correctly adjusted for the receiving water when determining reasonable potential as specified in section 1.3 of the SIP.

- b. Monitoring requirements for pH, dissolved oxygen, electrical conductivity, total dissolved solids, temperature, turbidity, and visual observations at Monitoring Location R-018 are retained from the previous Order to assess receiving water quality at the point of discharge and in downstream receiving water.

## **2. Groundwater**

- a. Routine ground water monitoring is not required by this Order.

## **RATIONALE FOR PROVISIONS**

### **Standard Provisions**

Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Section 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with section 123.25, this Order omits federal conditions that address enforcement authority specified in section 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

### **Regional Water Board Standard Provisions**

In addition to the Federal Standard Provisions (Attachment D), the Discharger must comply with the Regional Water Board Standard Provisions provided in Standard Provisions VI.A.2.

1. Order Provision VI.A.2.a identifies the State's enforcement authority under the Water Code, which is more stringent than the enforcement authority specified in the federal regulations (e.g., section 122.41(j)(5) and (k)(2)).

2. Order Provision VI.A.2.b requires the Discharger to notify Regional Water Board staff, orally and in writing, in the event that the Discharger does not comply or will be unable to comply with any Order requirement. The Provision requires the Discharger to make direct contact with a Regional Water Board staff person.
3. Order Provision VI.A.2.c requires the Discharger to petition with, and receive approval from, the State Water Board Division of Water Rights prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse. This requirement is mandated by Water Code section 1211.
4. Order Provision VI.A.2.d requires the Discharger to submit design proposals for new wastewater storage ponds to the Regional Water Board Executive Officer for review prior to construction. Construction plans must demonstrate that the pond design will ensure protection of groundwater beneficial uses and complies with the Water Code and title 27 of the California Code of Regulations.

## Special Provisions

### 1. Reopener Provisions

- a. **Standard Revisions (Special Provisions VI.C.1.a).** Conditions that necessitate a major modification of a permit are described in section 122.62, which include the following:
  - i. When standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision. Therefore, if revisions of applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such revised standards.
  - ii. When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.
- b. **Reasonable Potential (Special Provisions VI.C.1.b).** This provision allows the Regional Water Board to modify, or revoke and reissue, this Order if present or future investigations demonstrate that the Discharger governed by this Order is causing or contributing to excursions above any applicable priority pollutant criterion or objective or adversely impacting water quality and/or the beneficial uses of receiving waters.
- c. **Whole Effluent Toxicity (Special Provisions VI.C.1.c).** This Order requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity through a TRE. This Order may be reopened to include a numeric chronic toxicity limitation, a new acute

toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric chronic toxicity water quality objective or a statewide toxicity policy is adopted by the State Water Board, this Order may be reopened to include a numeric chronic toxicity limitation based on that objective or alternate toxicity monitoring requirements as appropriate.

- d. 303 (d)-Listed Pollutants (Special Provisions VI.C.1.d).** This provision allows the Regional Water Board to reopen this Order to modify existing effluent limitations or add effluent limitations for pollutant(s) that are the subject of any future TMDL action.
- e. Special Studies (Special Provisions VI.C.1.e).** The Discharger may elect to study the feasibility of the use of water effect ratios and/or mixing zones to meet water quality objectives and effluent limitations for toxic pollutants. If these or other future water quality studies provide new information and a basis for determining that a permit condition or conditions should be modified, the Regional Water Board may reopen this Order and make appropriate modifications to this Order.
- f. Nutrients (Special Provisions VI.C.1.f).** This reopener allows the Regional Water Board to reopen and modify the Order to include new or revised effluent limitations for nutrients if monitoring data indicates the need for new or revised effluent limitations for ammonia, nitrate, total nitrogen, or other nutrient parameters.

## 2. Special Studies and Additional Monitoring Requirements

- a. Toxicity Reduction Requirements (Special Provision VI.C.2.a).** The SIP requires the use of short-term chronic toxicity tests to determine compliance with the narrative toxicity objectives for aquatic life in the Basin Plan. Attachment E of this Order requires chronic toxicity monitoring for demonstration of compliance with the narrative toxicity objective.

In addition to WET monitoring, Special Provision VI.C.2.a.ii requires the Discharger to submit to the Regional Water Board a TRE Work Plan for approval by the Executive Officer, to ensure the Discharger has a plan to immediately move forward with the initial tiers of a TRE, in the event effluent toxicity is encountered in the future. The TRE is initiated by evidence of a pattern of toxicity demonstrated through the additional effluent monitoring provided as a result of an accelerated monitoring program.

- b. TRE Guidance.** The Discharger is required to prepare a TRE Work Plan in accordance with USEPA guidance. Numerous guidance documents are available, as identified below:

- i. *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA/833B-99/002), August 1999.
- ii. *Generalized Methodology for Conducting Industrial TRES* (EPA/600/2-88/070), April 1989.
- iii. *Methods for Aquatic Toxicity Identification evaluations: Phase I Toxicity Characterization Procedures*. Second Edition, EPA 600/6-91/005F, February 1991.
- iv. *Toxicity Identification evaluation: Characterization of Chronically Toxic Effluents, Phase I*, EPA 600/6-91/005F, May 1992.
- v. *Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity*, Second Edition, EPA 600/R-92/080, September 1993.
- vi. *Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity*, Second Edition, EPA 600/R-92/081, September 1993.
- vii. *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, EPA-821-RSW-02-012, October 2002.
- viii. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, EPA-821-RSW-02-013, October 2002.
- ix. *Technical Support Document for Water Quality-based Toxics Control*, EPA/505/2-90-001, March 1991.

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

- a. **Pollutant Minimization Plan (Special Provision VI.C.3.a).** Provision VI.C.3.a is included in this Order as required by section 2.4.5 of the SIP. The Regional Water Board includes standard provisions in all NPDES 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. Construction, Operation and Maintenance Specifications**

- a. **Operation and Maintenance (Special Provisions VI.C.4.a and VI.C.4.b).** Section 122.41 (e) requires proper operation and maintenance of permitted wastewater systems and related facilities to achieve compliance with permit conditions. An up-to-date operation and maintenance manual, as required by Provision VI.C.4.b of the Order, is an integral part of a well-operated and maintained facility.

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

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 (Provision VI.C.5.a)**

- i. Statewide General WDRs for Sanitary Sewer Systems (Special Provision VI.C.5.a.i).** The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ (General Order) on May 2, 2006. The General Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans (SSMPs) and report all SSOs, among other requirements and prohibitions.

Furthermore, the General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating SSOs. Inasmuch as the Discharger's collection system is part of the system that is subject to this Order, certain standard provisions are applicable as specified in Provisions, section VI.C.5. The Discharger must comply with both the General Order and this Order. The Discharger and public agencies that are discharging wastewater into the Facility were required to obtain enrollment for regulation under the General Order by December 1, 2006.

All NPDES permits for POTWs currently include federally required standard conditions to mitigate discharges (section 122.41(d)), to report non-compliance (section 122.41(1)(6) and (7)), and to properly operate and maintain facilities (section 122.41(e)). This provision is consistent with these federal requirements.

- ii. Sanitary Sewer Overflows (Provision VI.C.5.a.ii).** The Order also includes reporting provisions (Provision VI.C.5.(a)(2) 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. In addition, as an Enrollee under General Order No. 2006-0003-DWQ, the Discharger is required to report SSOs to an online SSO database administered through the California Integrated Water Quality System (CIWQS) and via telefax when the online SSO database is not available. Detailed notification and reporting

requirements for SSOs and sewage spills are specified in section E of the MRP. The goal of these provisions is to ensure appropriate and timely response by the Discharger to SSOs to protect public health and water quality.

The MRP that is part of the Order establishes oral reporting limits for SSOs. The Discharger is required to orally report all spills, SSOs, and unauthorized discharges. If the spill volume is greater than 1,000 gallons or the spill reaches a drainage channel or surface waters, it must be reported within 2 hours of the Discharger becoming aware of the spill. All other spills must be reported within 24 hours. 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. Source Control Provisions (Special Provision VI.C.5.b).** Because the permitted flow of the Facility is less than 5.0 mgd, the Order does not require the Discharger to develop a pretreatment program that conforms to federal regulations. The Discharger's source identification and reduction program will need to address only those pollutants that continue to be detected by levels that trigger reasonable potential.

In addition, the Regional Water Board recognizes that some form of source control is prudent to ensure the efficient operation of the WWTF, the safety of the Discharger's staff, and to ensure that pollutants do not pass through the treatment facility to impair beneficial uses of the receiving water. The Order includes prohibitions for the discharge of pollutants that may interfere, pass through, or be incompatible with treatment operations, interfere with the use of disposal of sludge, or pose a health hazard to personnel.

- c. Sludge Disposal and Handling (Provision VI.C.5.c).** The disposal or reuse of wastewater treatment screenings, sludges, or other solids removed from the liquid waste stream is regulated by Parts 257, 258, 501, and 503 and the State Water Board promulgated provisions of title 27, Cal. Code of Regs., Division 2. This Order prohibits storage of screenings, sludges, and solids removed from the liquid waste stream in the dewatering trench adjacent to the Eel River.
- d. Operator Certification (Special Provision VI.C.5.d).** This provision requires the WWTF to be operated by supervisors and operators who are certified as required by title 23, Cal. Code of Regs., section 3680.
- e. Adequate Capacity (Special Provision VI.C.5.e).** The goal of this provision is to ensure appropriate and timely planning by the Discharger to ensure adequate capacity for the protection of public health and water quality. A

hydraulic study was conducted during the term of the permit and determined that the design average dry weather flow of the WWTF is 1.0 MGD. Annual average flows at the Facility are approximately 0.200 MGD.

## **6. Other Special Provisions**

- a. Storm Water (Special Provision VI.C.6.a).** This provision requires the Discharger, if applicable, to comply with the State's regulations relating to regulation of industrial storm water activities.
- b. Power Plant Solids Disposal and Handling Requirements (Special Provisions VI.C.6.b).** This Order establishes solids disposal and handling requirements for the Power Plant to ensure that fly ash and bottom ash are properly contained prior to disposal that that they are disposed at a solid waste facility for which WDRs have been prescribed by the Regional Water Board or in a manner approved by the Executive Officer.

## **7. Compliance Schedules**

This section of the Order is not applicable.

## **PUBLIC PARTICIPATION**

The California Regional Water Quality Control Board, North Coast Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for Scotia CSD and Eel River Power, LLC. 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.

### **Notification of Interested Parties**

The Regional Water Board has notified the Dischargers and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the publication in the Eureka Times Standard on January 19, 2012 and through posting on the Regional Water Board's Internet site at [http://www.waterboards.ca.gov/northcoast/public\\_notices/notice\\_of\\_consideration/](http://www.waterboards.ca.gov/northcoast/public_notices/notice_of_consideration/) beginning on January 19, 2012.

### **Written Comments**

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person or by mail to the Executive Officer at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on February 20, 2012.

### **Public Hearing**

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

Date: April 26, 2012  
Time: 8:30 am  
Location: Regional Water Board Office, Board Hearing Room  
5550 Skylane Boulevard, Suite A,  
Santa Rosa, CA 95403

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

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

### **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

### **Information and Copying**

The Report of Waste Discharge (ROWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling **(707) 576-2220**.

### **Register of Interested Persons**

Scotia Community Services District Wastewater Treatment Facility  
Eel River Power, LLC Steam Electric Power Plant  
ORDER NO. R1-2012-0015  
NPDES NO. CA0006017

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

**Additional Information**

Requests for additional information or questions regarding this order should be directed to Lisa Bernard at [lbernard@waterboards.ca.gov](mailto:lbernard@waterboards.ca.gov) or (707) 576-2677.

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