

California Regional Water Quality Control Board Central Coast Region



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Edmund G. Brown Governor

ORDER NO. R3-2011-0008 NPDES NO. CA0048267

WASTE DISCHARGE REQUIREMENTS FOR THE CALIFORNIA DEPARTMENT OF PARKS AND RECREATION BIG BASIN REDWOODS WASTEWATER TREATMENT PLANT

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

Table 1. Discharger Information

V			
Discharger	California Department of Parks and Recreation		
Name of Facility	Big Basin Redwoods SP Wastewater Treatment Plant		
	21600 Big Basin Way		
Facility Address	Boulder Creek, CA 95006		
	Santa Cruz County		
The U.S. Environmental Protection Agency (USEPA) and the Central Coast Regional Water Quality Control Board have classified this discharge as a minor discharge.			

Discharges by the **California Department of Parks and Recreation** from the discharge point identified below are subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Tertiary Treated Domestic Wastewater	37º 09' 52.29" N	122º 13' 43.42" W	Waddell Creek, East Branch

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	December 1, 2011
This Order shall become effective on:	March 1, 2012
This Order shall expire on:	December 1, 2016
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	180 days prior to the Order expiration date

THEREFORE, IT IS HEREBY ORDERED, that this Order supersedes Order No. R3-2005-0035 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted

thereunder, and the provisions of the federal CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, Roger W. Briggs, Executive Officer, do hereby certify that this Order, with all attachments, is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Coastal Region on December 1, 2011.

Roger W. Briggs, Executive Officer

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I. PLANT INFORMATION

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

Discharger	California Department of Parks and Recreation		
Name of Facility	Big Basin Redwoods SP Wastewater Treatment Plant		
	21600 Big Basin Way		
Facility Address	Boulder Creek, California 95006		
	Santa Cruz County		
Facility Contact, Title, and Phone	Daniel Carroll, Chief Plant Operator (831) 338-8875		
Mailing Address	21600 Big Basin Way, Boulder Creek, CA 95006		
Type of Facility	Publicly Owned Treatment Works (POTW)		
Facility Design Flow0.03 million gallons per day (MGD) (average daily dry wea capacity)0.13 MGD (design peak wet weather treatment capacity)			

Table 4. Plant Information

II. FINDINGS

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

A. Background. The California Department of Parks and Recreation (California State Parks, hereinafter the Discharger) is currently discharging pursuant to Order No. R3-2005-0035 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0048267. The Discharger submitted a Report of Waste Discharge, dated February 17, 2010, and applied to renew its NPDES permit to discharge up to 0.03 MGD (average dry weather flow) of tertiary treated wastewater from the Big Basin Redwoods Wastewater Treatment Plant. The application was deemed complete on February 17, 2010, by Water Board staff.

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

B. Plant Description. The Big Basin Wastewater Treatment Plant (Plant) provides primary clarification, biological secondary treatment, secondary clarification, tertiary treatment, ammonia removal, ultraviolet (UV) disinfection, and pH control.

The Plant receives raw domestic wastewater from Big Basin Redwood State Park's (Park) camper and day-user population, 23 permanent residences for Park employees, and minor infiltration during and following storm events. The wastewater collection system consists of 5.2 miles of sewer mains and two lift stations. In 2005, the Plant lined the collection system and sealed manholes to reduce inflow and infiltration.

At the Plant headworks, raw influent enters the comminutor for grinding of large solids before wastewater gravity flows into the primary clarifier. Effluent from the primary

clarifier is pumped to the trickling filter. The trickling filter uses an attached growth system to biologically treat primary effluent and convert ammonia to nitrate. Trickling filter effluent is mixed with polymer at the coagulant rapid mix basin before entering the secondary clarifier.

Secondary effluent is pumped to the slow sand filter to remove any remaining fine particles. Sand filter effluent is pumped to the ammonia removal system where ammonia is removed with clinoptolite using an ion-exchange process. Following ammonia removal, water enters the UV tank. The UV tank discharges through the UV disinfection units and into the pH mixing and control tank, which uses sodium hydroxide to adjust pH before discharge to the East Branch of Waddell Creek.

The Plant does not maintain chlorination/dechlorination equipment or chemicals for backup disinfection. When the final effluent does not meet pH, turbidity, or UV requirements for discharge, or flow is too low to be treated by the UV equipment, the automatic valve on the sand filter discharge line closes, and flow is stored in the sand filter until pH or turbidity limits are achieved.

Solids are treated and stabilized using anaerobic digestion. Settled and floating material from the primary clarifier is collected in hoppers and pumped to the anaerobic digester for solids handling. Settled secondary clarifier sludge is also pumped into the anaerobic digester to mix with sludge from the primary clarifier. Solids stabilization occurs in the anaerobic digester without heating or mixing. After approximately one year of retention in the digester, digested sludge is pumped to sludge drying beds. Dried sludge is used as a soil conditioner or delivered to a local landfill.

The Plant can experience reduced influent flowrates during periods of low Park visitation, typically in the fall. The Plant's 2005 through 2009 annual reports provide recorded influent flows as low as 0.000 MGD. During low influent flow periods, Plant staff may augment raw influent flow with potable water to keep water flowing through the Plant and thereby minimize ammonia build up. Potable water comes into the Plant through a dedicated 1½-inch pipe. Chlorine residuals when potable water enters the Plant generally range up to 0.02 milligram per liter (mg/L). The maximum chlorine residual in the potable water (0.05 mg/L) commingled with the combined raw influent does not overcome break point chlorination to leave a residual in the final effluent. In addition, during low influent flow periods the Plant's measured influent biological oxygen demand (BOD) can be less than 170 mg/L. The Plant can experience difficulty meeting the 85 percent removal efficiency requirement for BOD when influent BOD is less than 170 mg/L.

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

C. Legal Authorities. This Order is issued pursuant to CWA §402 and implementing regulations adopted by the USEPA and Chapter 5.5, Division 7 of the California Water Code (CWC), commencing with §13370. It shall serve as an NPDES permit for point source discharges from the Plant to surface waters. This Order also serves as waste

discharge requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the CWC, commencing with §13260.

- **D. Background and Rationale for Requirements.** The Central Coast Water Board developed the requirements in this Order based on information submitted in of the application, in monitoring and reporting programs, and other available information, including a site visit on April 26, 2011. The Fact Sheet (Attachment F), which contains background information and rationale for this Order's requirements, is hereby incorporated into this Order and constitutes part of its Findings. Attachments A through E are also incorporated into this Order.
- E. California Environmental Quality Act (CEQA). Pursuant to CWC §13389, this action to adopt an NPDES permit is exempt from the provisions of the CEQA, Public Resources Code §21100 through §21177.
- F. Technology-Based Effluent Limitations. CWA §301(b) and USEPA's NPDES regulations at 40 CFR 122.44 require that permits include, at a minimum, conditions meeting applicable technology-based requirements and any more stringent effluent limitations necessary to meet applicable water quality standards. Discharges authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards established at 40 CFR Part 133 and Best Professional Judgment (BPJ) in accordance with 40 CFR 125.3. Discussion regarding development of technology-based effluent limitations is included in the Fact Sheet (Attachment F).
- **G. Water Quality-Based Effluent Limitations.** CWA §301(b) and NPDES regulations at 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

NPDES regulations at 40 CFR 122.44(d)(1)(i) mandate 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 is established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under CWA 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 at 40 CFR 122.44(d)(1)(vi).

H. Water Quality Control Plans. The Central Coast Water Board has adopted the *Water Quality Control Plan for the Central Coastal Basin* (the Basin Plan), which designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for receiving waters within the Region. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses established by the Basin Plan for the East Branch of Waddell Creek are presented in Table 5, below.

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Waddell Creek, East Branch	 Municipal and Domestic Supply (MUN) Groundwater Recharge (GWR) Water Contact (REC-1)Recreation (REC-1) Non-contact Water Recreation (REC-2) Wildlife Habitat (WILD) Cold Fresh Water Habitat (COLD) Migration of Aquatic Organisms (MIGR) Spawning, Reproduction, and/or Early Development (SPWN) Preservation of Biological Habitats of Special Significance (BIOL) Rare, Threatened, or Endangered Species (RARE) Freshwater Replenishment (FRESH) Commercial and Sport Fishing (COMM)

 Table 5. Basin Plan Beneficial Uses

Requirements of this Order implement the Basin Plan.

- I. National Toxics Rule (NTR) and California Toxics Rule (CTR). USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995, and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the State. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants that are applicable to discharges from the Plant.
- 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 Central Coast 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.** Section 2.1 of the SIP provides that, based on a Discharger's request and demonstration that it is infeasible for an existing Discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend

beyond 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. 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 [65 Fed. Reg. 24641 (April 27, 2000) (codified at 40 CFR 131.21)]. 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 and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions for biochemical oxygen demand (BOD₅) and total suspended solids (TSS), and are discussed in section IV.B of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum applicable federal technology-based requirements.

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 NPDES regulations at 40 CFR 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR and the SIP, which was approved by USEPA on May 18, 2000. 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 NPDES regulations at 40 CFR 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. NPDES regulations at 40 CFR 131.12 require 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 No. 68-16, which incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that the existing quality of waters be maintained unless degradation is justified based on specific findings. The Basin Plan implements and incorporates by reference both the State and federal antidegradation policies. As discussed in Section III.C.5 of the Fact Sheet, the permitted

discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

- **O. Anti-Backsliding Requirements.** CWA §402(o)(2) and §303(d)(4) and NPDES regulations at 40 CFR 122.44(I) prohibit backsliding in NPDES permits. These antibacksliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.
- P. Endangered Species Act. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code §2050 to §2097) or the federal Endangered Species Act (16 U.S.C.A. §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 State and federal law regarding threatened and endangered species.
- **Q. Monitoring and Reporting.** NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. CWC §13267 and §13383 also authorize the Central Coast Water Board to require technical and monitoring reports. The Monitoring and Reporting Program, provided as Attachment E to the Order, establishes monitoring and reporting requirements to implement federal and State requirements.
- **R. Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable pursuant to 40 CFR 122.42. The Central Coast 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 and requirements in subsections IV.B, IV.C, and V.B of this Order are included to implement State law only. These provisions and requirements are not required or authorized under the federal CWA; consequently, violations of these provisions and requirements are not subject to the enforcement remedies that are available for NPDES violations.
- **T. Notification of Interested Parties.** The Central Coast Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.
- **U. Consideration of Public Comment.** The Central Coast 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.** Discharge of treated wastewater at a location or in a manner other than as described by this Order at Discharge Point 001 is prohibited.
- **B.** The discharge of any waste not specifically regulated by this Order is prohibited.
- **C.** Creation of a condition of pollution, contamination, or nuisance, as defined by CWC §13050, is prohibited.
- **D.** The overflow or bypass of wastewater from the Discharger's collection, treatment, or disposal facilities and the subsequent discharge of untreated or partially treated wastewater, except as provided for in Attachment D, Standard Provision I. G (Bypass), is prohibited.
- **E.** Discharges of sludge, residues or any other wastes into surface waters or into any area where it may enter surface water are prohibited.
- **F.** Daily dry weather flow, averaged monthly (the average daily flow in the three driest months of each year) shall not exceed a dry weather monthly average of 0.09 MGD.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

- 1. Final Effluent Limitations
 - **a. Conventional and Non-Conventional Pollutants**. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001 (discharge to the East Branch of Waddell Creek) with compliance measured at Monitoring Location EFF-001, as described in the attached Monitoring and Reporting Program (MRP).

		Effluent Limits		
Constituent	Units	Average Monthly	Average Weekly	Maximum Daily
ROD	mg/L	10	15	25
BOD₅	lbs/day ^[1]	7.5	11.3	18.8
TSS	mg/L	10	15	25
155	lbs/day ^[1]	7.5	11.3	18.8
рН	standard units	6.0 – 8.3 at all times		
Oil and Grease	mg/L	25	40	75
	lbs/day	18.8	30.0	56.3
Settleable Solids	mL/L			0.1
Un-ionized Ammonia	mg/L N			0.025
Turbidity	NTU	Turbidity shall not exceed an average of 2 NTU over a 30-day period;		

Table 6. Effluent Limitations for Conventional and Non-Conventional Pollutants

		Effluent Limits		
Constituent Units		Average Monthly	Average Weekly	Maximum Daily
		percent of the period; and	all not exceed 5 N ne time during any	y 24-hour
		 Turbidity sha time. 	all not exceed 10	NTU at any
Total Coliform Bacteria	MPN/ 100 mL	• The 7-day median concentration shall be less than 2.2 MPN/100 mL;		
		MPN/100 m	ncentrations shall L in more than or ay period; and	
		 No sample s 	hall exceed 240 l	MPN/100 mL.
Acute Toxicity	Pass/Fail	There shall be no acute toxicity as determined by the survival of test organisms at 100 percent effluent compared to a control using a statistical t-test.		
Chronic Toxicity	TUc			1.0

Table Notes:

- [1] Mass loading limits calculated as the limit in mg/L multiplied by 8.34 multiplied by a maximum permitted flowrate of 0.09 MGD.
 - **b.** Percent Removal. The average monthly percent removal of BOD₅ and TSS shall not be less than 85 percent.
 - **c. Dissolved Oxygen.** Dissolved oxygen in treated wastewater discharged at Discharge Point 001 shall not be below 5.0 mg/L.
 - **d.** Toxic Pollutants. The Discharger shall maintain compliance with the following effluent limitations for toxic pollutants at Discharge Point 001, with compliance measured at Monitoring Location EFF-001, as described in the attached MRP.

Constituent	Unito	Effluent Limits		
Constituent	Units	Average Monthly	Maximum Daily	
Aluminum	µg/L	1000	2638	
Chromium (VI)	µg/L	7.1	16	
Copper	µg/L	7.8	14	
Mercury	µg/L	0.05	0.10	
Zinc	µg/L	60	120	

Table 7. Effluent Limitations for Toxic Pollutants – Discharge Point 001

B. Land Discharge Specifications

This section of the standardized permit template is not applicable.

C. Reclamation Specifications

Production and use of reclaimed water shall comply with all applicable requirements of California Code of Regulations (CCR), title 22, division 3, chapter 3, article 5 for recycled water.

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. Discharges from the Plant shall not cause the following conditions in the East Branch of Waddell Creek.

- 1. Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses. Coloration attributable to materials of waste origin shall not be greater than 15 units or 10 percent above natural background color, whichever is greater.
- 2. Waters shall not 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.
- 3. Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.
- 4. Waters shall not contain suspended material in concentrations that causes nuisance or adversely affects beneficial uses.
- 5. Waters shall not contain settleable material in concentrations that result in deposition of material that causes nuisance or adversely affects beneficial uses.
- 6. Waters shall not contain oils, greases, waxes, or other similar 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.
- 7. Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
- 8. The suspended sediment load and suspended sediment discharge rate to surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
- 9. Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increase in turbidity attributable to controllable water quality factors shall not exceed the following limits.

- a. Where natural turbidity is between 0 and 50 Jackson Turbidity Units (JTU), increases shall not exceed 20 percent.
- b. Where natural turbidity is between 50 and 100 JTU, increases shall not exceed 10 JTU.
- c. Where natural turbidity is greater than 100 JTU, increases shall not exceed 10 percent.
- 10. The pH value shall not be depressed below 7.0 nor raised above 8.3. The change in normal ambient pH levels shall not exceed 0.5 in fresh water.
- 11. Dissolved oxygen concentrations in receiving waters shall not be reduced below 7.0 mg/L at any time.
- 12. At no time or place shall the temperature of any water be increased by more than 5° F above the natural receiving water temperature.
- 13. All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in, human, plant, animal, or aquatic life. Survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality conditions shall not be less than that for the same water body in areas unaffected by the waste discharge.
- 14. No individual pesticide or combination of pesticides shall reach concentrations that adversely affect the beneficial uses of the receiving water. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life. For waters where existing concentrations are presently nondetectable or where beneficial uses would be impaired by concentrations in excess of nondetectable levels, total identifiable chlorinated hydrocarbon pesticides shall not be present at concentrations detectable within the accuracy of analytical methods as prescribed in *Standard Methods for the Examination of Water and Wastewater*, latest edition, or other equivalent methods approved by the Executive Officer.
- 16. Waters shall not contain organic substances in concentrations greater than the following.

Phenols	1.0 µg/L
PCBs	0.00017 μg/L
Phthalate Esters	0.002 µg/L

17. Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life; or result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal, or aquatic life. For protection of the municipal and domestic supply beneficial use, in no circumstance shall receiving waters contain concentrations of radionuclides in excess of the maximum contaminant levels (MCLs) for radioactivity presented in Table 4 of Title 22 CCR, Division 4, Chapter 15, Article 5.

- 18. Receiving waters shall not contain concentrations of chemical constituents in excess of the primary maximum contaminant levels (MCLs) specified for drinking water in Table 64431-A (Primary MCLs for Inorganic Chemicals) and Table 64444-A (Primary MCLs for Organic Chemicals) of Title 22 CCR, Division 4, Chapter 15.
- 19. Fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200 per 100 mL, nor shall more than 10 percent of samples collected during any 30-day period exceed 400 per 100 mL.
- 20. Receiving waters shall not contain metals in excess of the following concentrations, established by Table 3-5 of the Basin Plan.

Metal	Receiving Water Hardness > 100 mg/L CaCO ₃	Receiving Water Hardness < 100 mg/L CaCO ₃				
Cadmium ^[1]	0.03 mg/L	0.004 mg/L				
Chromium	0.05 mg/L	0.05 mg/L				
Copper	0.03 mg/L	0.01 mg/L				
Lead	0.03 mg/L	0.03 mg/L				
Mercury ^[2]	0.0002 mg/L	0.0002 mg/L				
Nickel ^[3]	0.4 mg/L	0.1 mg/L				
Zinc	0.2 mg/L	0.004 mg/L				

^[1] Lower cadmium values not to be exceeded for crustaceans and waters designated SPWN are 0.003 mg/L in hard water and 0.0004 mg/L in soft water.

^[2] Total mercury values should not exceed 0.05 mg/L as an average value; maximum acceptable concentration of total mercury in any aquatic organism is a total B.O.D. burden of 0.5 mg/L wet weight.

^[3] Value cited as objective pertains to nickel salts (not pure metallic nickel).

B. Groundwater Limitations

Activities at and discharges from the Plant shall not cause exceedances or deviation from the following water quality objectives for groundwater established by the Basin Plan.

- 1. Groundwater shall not contain taste- or odor-producing substances in concentrations that adversely affect beneficial uses.
- 2. Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life; or result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life. For protection of the municipal and domestic supply beneficial use, in no circumstance shall receiving waters contain concentrations of radionuclides in excess of the maximum contaminant levels (MCLs) for radioactivity presented in Table 4 of Title 22 CCR, Division 4, Chapter 15, Article 5.
- 3. For protection of the municipal and domestic supply beneficial use, the median concentration of coliform organisms in groundwater, over any seven-day period, shall be less than 2.2 organisms per 100 milliliters.

4. For protection of the municipal and domestic supply beneficial use, groundwater shall not contain concentrations of chemical constituents in excess of the primary maximum contaminant levels (MCLs) specified for drinking water in Table 64431-A (Primary MCLs for Inorganic Chemicals) and Table 64444-A (Primary MCLs for Organic Chemicals) of Title 22 CCR, Division 4, Chapter 15. Note that the MCL for nitrate is 10 mg/L expressed as N.

VI. PROVISIONS

A. Standard Provisions

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

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the Monitoring and Reporting Program, and future revisions thereto, in Attachment E of this Order. All monitoring shall be conducted according to 40 CFR Part 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants*.

C. Special Provisions

1. Reopener Provisions

a. This permit may be reopened and modified in accordance with NPDES regulations at 40 CFR 122 and 124, as necessary, to include additional conditions or limitations based on newly available information or to implement any USEPA approved, new, State water quality objective.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Toxicity Reduction Requirements

As indicated in Section V.D. of the MRP, accelerated monitoring for toxicity is required upon the detection of acute toxicity or the chronic toxicity limitation of 1 TUC is exceeded. The Discharger shall conduct a Toxicity Reduction Evaluation (TRE) in accordance with the Discharger's TRE Workplan upon consistent detection of toxicity in the effluent during accelerated testing.

A 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 Plant 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. The TRE shall include all reasonable steps to identify the source of toxicity. The Discharger shall take all reasonable steps to reduce toxicity to the required level once the source of toxicity is identified.

The Discharger shall maintain a Toxicity Reduction Evaluation (TRE) Workplan, which describes steps that the Discharger intends to follow in the event that a toxicity effluent limitation established by this Order is exceeded in the discharge. The workplan shall be prepared in accordance with current technical guidance and reference material, including EPA/600/2-88-070 (for industrial discharges) or EPA/600/2-88/062 (for municipal discharges), and shall include, at a minimum:

- i. Actions that will be taken to investigate/identify the causes/sources of toxicity,
- ii. Actions that will be evaluated to mitigate the impact of the discharge, to correct the non-compliance, and/or to prevent the recurrence of acute or chronic toxicity (this list of action steps may be expanded, if a TRE is undertaken), and
- iii. A schedule under which these actions will be implemented.

When monitoring measures toxicity in the effluent above a limitation established by this Order, the Discharger shall resample immediately, if the discharge is continuing, and retest for whole effluent toxicity. Results of an initial failed test and results of subsequent monitoring shall be reported to the Executive Officer (EO) as soon as possible following receipt of monitoring results. The EO will determine whether to initiate enforcement action, whether to require the Discharger to implement a Toxicity Reduction Evaluation, or to implement other measures. The Discharger shall conduct a TRE giving due consideration to guidance provided by the U.S. EPA's Toxicity Reduction Evaluation Procedures, Phases 1, 2, and 3 (EPA document nos. EPA 600/3-88/034, 600/3-88/035, and 600/3-88/036, respectively). A TRE, if necessary, shall be conducted in accordance with the following schedule.

Action Step	When Required							
Take all reasonable measures necessary to immediately reduce toxicity, where the source is known.								
Initiate the TRE in accordance to the Workplan.	Within 7 days of notification by the EO							
Conduct the TRE following the procedures in the Workplan.	Within the period specified in the Workplan (not to exceed one year, without an approved Workplan)							
Submit the results of the TRE, including summary of findings, required corrective action, and all results and data.	Within 60 days of completion of the TRE							
Implement corrective actions to meet Permit limits and conditions.	To be determined by the EO							

Table 8. Toxicity Reduction Evaluation—Schedule

3. Best Management Practices and Pollution Prevention

This section of the standardized permit template is not applicable.

4. Construction, Operation and Maintenance Specifications

This section of the standardized permit template is not applicable.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. Biosolids Management. The handling, management, and disposal of sludge and solids derived from wastewater treatment must comply with applicable provisions of USEPA regulations at 40 CFR 257, 258, 501, and 503, including all monitoring, record keeping, and reporting requirements.

Solids and sludge treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, and shall not result in groundwater contamination. Sites for solids and sludge treatment and storage shall have adequate facilities to divert surface water runoff from adjacent areas to protect the boundaries of such sites from erosion, and to prevent drainage from treatment and storage sites.

The treatment, storage, disposal, or reuse of sewage sludge and solids shall not cause waste material to be in a position where it is, or can be, conveyed from the treatment and storage sites and deposited into waters of the State. The Discharger is responsible for assuring that all biosolids produced at the Plant are used or disposed of in accordance with the above rules, whether the Discharger uses or disposes of the biosolids itself, or transfers them to another party for further treatment, use, or disposal. The Discharger is responsible for informing subsequent preparers, appliers, and disposers of the requirements that they must adhere to under these rules.

6. Other Special Provisions

- a. Discharges of Stormwater. For the control of stormwater discharged from the site of the wastewater treatment facilities, if applicable, the Discharger shall seek authorization to discharge under and meet the requirements of the State Water Board's Water Quality Order 97-03-DWQ, NPDES General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities.
- b. Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (State Water Board Order No. 2006-0003-DWQ). This General Permit, adopted on May 2, 2006, 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 Plant 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. On August 10, 2006, the Discharger enrolled under the General Permit.

c. Public Signage. The Discharger shall post warnings in park brochures and at Waddell Creek Trail heads and access points to warn the public of the hazards of drinking from Waddell Creek. When receiving water monitoring indicates that concentrations of fecal bacteria exceed the receiving water limit (200 MPN/100 mL), the Discharger shall post signs at Waddell Creek and shall notify downstream residents and/or the residential committee, of bacterial contamination and warn the public to not drink or swim in the creek. The Discharger shall include in the applicable monthly report, the location and number of warning signs posted, and the duration of posting, when the Discharger determines that the receiving water exceeds the receiving water limitation.

7. Compliance Schedules

This section of the standardized permit template 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 and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Central Coast and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

B. Multiple Sample Data

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

- 1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
- 2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an

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

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (µ)

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

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

Average Monthly Effluent Limitation (AMEL)

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

Average Weekly Effluent Limitation (AWEL)

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

Bioaccumulative

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

Carcinogenic

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

Coefficient of Variation (CV)

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.

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.

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).

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).

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, 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 Central Coast 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 CWC §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 CWC §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 Central Coast Water Board.

Reporting Level (RL)

RL is the ML (and its associated analytical method) chosen by the Discharger 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 Central Coast 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 Central Coast Water Board Basin Plan.

Standard Deviation (σ)

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

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

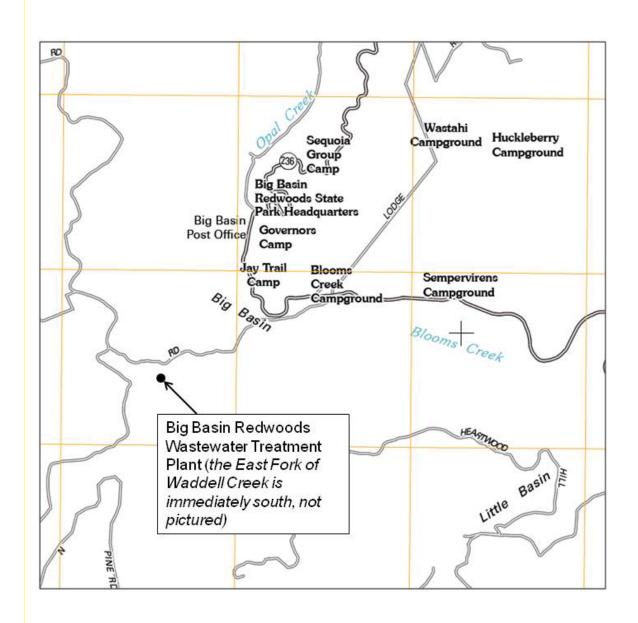
where:

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

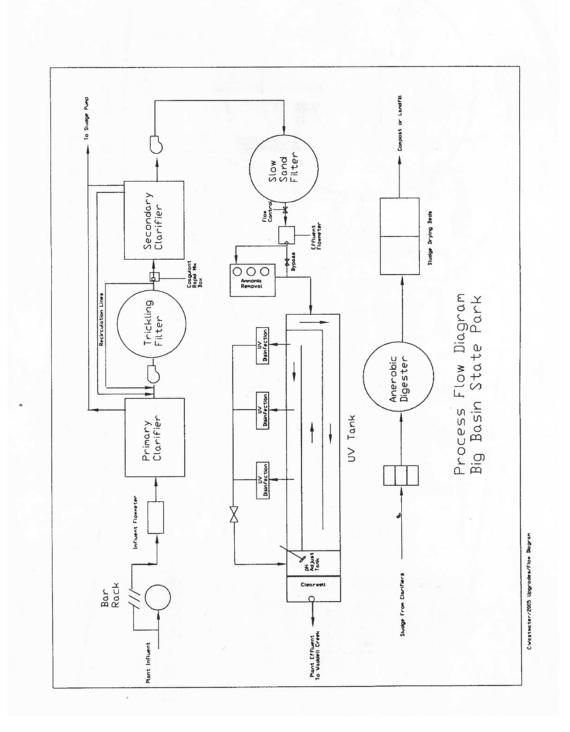
Toxicity Reduction Evaluation (TRE)

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 Plant operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

ATTACHMENT B – MAP



ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – STANDARD PROVISIONS

I. FEDERAL 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 (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 CFR §122.41(a).)
- 2. The Discharger shall comply with effluent standards or prohibitions established under CWA §307(a) for toxic pollutants and with standards for sewage sludge use or disposal established under CWA §405(d) within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 CFR §122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

- **1.** This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR §122.41(g).)
- 2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations. (40 CFR §122.5(c).)

F. Inspection and Entry

The Discharger shall allow the Central Coast Water Board, State Water Board, 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); CWC §13383):

- Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 CFR §122.41(i)(1));
- 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 CFR §122.41(i)(2));
- **3.** Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 CFR §122.41(i)(3)); and
- **4.** Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location. (40 CFR §122.41(i)(4).)

G. Bypass

- 1. Definitions
 - **a.** "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR §122.41(m)(1)(i).)
 - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40CFR § 122.41(m)(1)(ii).)
- Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 CFR §122.41(m)(2).)
- Prohibition of bypass. Bypass is prohibited, and the Central Coast Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR §122.41(m)(4)(i)):
 - **a.** Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR §122.41(m)(4)(i)(A));

- b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR §122.41(m)(4)(i)(B)); and
- **c.** The Discharger submitted notice to the Central Coast Water Board as required under Standard Provisions Permit Compliance I.G.5 below. (40 CFR §122.41(m)(4)(i)(C).)
- 4. The Central Coast Water Board may approve an anticipated bypass, after considering its adverse effects, if the Central Coast Water Board determines that it will meet the three conditions listed in Standard Provisions Permit Compliance I.G.3 above. (40 CFR §122.41(m)(4)(ii).)
- 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. (40 CFR §122.41(m)(3)(i).)
 - b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 CFR §122.41(m)(3)(ii).)

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 CFR §122.41(n)(1).)

- Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR §122.41(n)(2).)
- 2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR §122.41(n)(3)):

- An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR §122.41(n)(3)(i));
- **b.** The permitted facility was, at the time, being properly operated (40 CFR §122.41(n)(3)(ii));
- **c.** The Discharger submitted notice of the upset as required in Standard Provisions Reporting V.E.2.b below (24-hour notice) (40 CFR §122.41(n)(3)(iii)); and
- d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 CFR §122.41(n)(3)(iv).)
- **3.** Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 CFR §122.41(n)(4).)

II. FEDERAL STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

This Order is not transferable to any person except after notice to the Central Coast Water Board. The Central Coast 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 CWC. (40 CFR § 122.41(I)(3); §122.61.)

III. FEDERAL STANDARD PROVISIONS – MONITORING

- **A.** Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR §122.41(j)(1).)
- B. Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order. (40 CFR §122.41(j)(4); §122.44(i)(1)(iv).)

IV. FEDERAL STANDARD PROVISIONS – RECORDS

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

B. Records of monitoring information shall include:

- 1. The date, exact place, and time of sampling or measurements (40 CFR §122.41(j)(3)(i));
- The individual(s) who performed the sampling or measurements (40 CFR §122.41(j)(3)(ii));
- 3. The date(s) analyses were performed (40 CFR §122.41(j)(3)(iii));
- 4. The individual(s) who performed the analyses (40 CFR §122.41(j)(3)(iv));
- 5. The analytical techniques or methods used (40 CFR §122.41(j)(3)(v)); and
- **6.** The results of such analyses. (40 CFR §122.41(j)(3)(vi).)

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

- 1. The name and address of any permit applicant or Discharger (40 CFR §122.7(b)(1)); and
- 2. Permit applications and attachments, permits and effluent data. (40 CFR §122.7(b)(2).)

V. FEDERAL STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Central Coast Water Board, State Water Board, or USEPA within a reasonable time, any information which the Central Coast 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 Central Coast Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR § 122.41(h); CWC §13267.)

B. Signatory and Certification Requirements

- All applications, reports, or information submitted to the Central Coast Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 CFR §122.41(k).)
- 2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR §122.22(a)(3).).
- **3.** All reports required by this Order and other information requested by the Central Coast Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - **a.** The authorization is made in writing by a person described in Standard Provisions Reporting V.B.2 above (40 CFR §122.22(b)(1));
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR §122.22(b)(2)); and
 - **c.** The written authorization is submitted to the Central Coast Water Board and State Water Board. (40 CFR §122.22(b)(3).)
- 4. If an authorization under Standard Provisions Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions Reporting V.B.3 above must be submitted to the Central Coast Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR §122.22(c).)
- **5.** Any person signing a document under Standard Provisions Reporting V.B.2 or V.B.3 above shall make the following certification:

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

C. Monitoring Reports

- **1.** Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR §122.22(I)(4).)
- Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Central Coast Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 CFR §122.41(I)(4)(i).)
- **3.** If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Central Coast Water Board. (40 CFR §122.41(I)(4)(ii).)
- 4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR §122.41(I)(4)(iii).)

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

- 1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 CFR §122.41(I)(6)(i).)
- **2.** The following shall be included as information that must be reported within 24 hours under this paragraph (40 CFR §122.41(I)(6)(ii)):
 - **a.** Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR §122.41(I)(6)(ii)(A).)

- **b.** Any upset that exceeds any effluent limitation in this Order. (40 CFR §122.41(I)(6)(ii)(B).)
- The Central Coast Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR §122.41(I)(6)(iii).)

F. Planned Changes

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

- The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 CFR §122.41(l)(1)(i)); or
- 2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (40 CFR §122.41(I)(1)(ii).)
- **3.** The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 CFR§122.41(I)(1)(iii).)

G. Anticipated Noncompliance

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

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 CFR §122.41(I)(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 Central Coast Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 CFR §122.41(I)(8).)

VI. FEDERAL STANDARD PROVISIONS – ENFORCEMENT

A. The Central Coast Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, §13385, §13386, and §13387

VII. FEDERAL ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly Owned Treatment Works (POTWs)

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

- **1.** Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 CFR §122.42(b)(1)); and
- 2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order. (40 CFR §122.42(b)(2).)
- **3.** Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 CFR §122.42(b)(3).)

ATTACHMENT D-1 - CENTRAL COAST WATER BOARD STANDARD PROVISIONS (JANUARY 1985)

I. Central Coast General Permit Conditions

A. Central Coast Standard Provisions – Prohibitions

- 1. Introduction of "incompatible wastes" to the treatment system is prohibited.
- 2. Discharge of high-level radiological waste and of radiological, chemical, and biological warfare agents is prohibited.
- 3. Discharge of "toxic pollutants" in violation of effluent standards and prohibitions established under §307(a) of the Clean Water Act (CWA) is prohibited.
- 4. Discharge of sludge, sludge digester or thickener supernatant, and sludge drying bed leachate to drainageways, surface waters, or the ocean is prohibited.
- 5. Introduction of pollutants into the collection, treatment, or disposal system by an "indirect discharger" that:
 - a. Inhibit or disrupt the treatment process, system operation, or the eventual use or disposal of sludge; or,
 - b. Flow through the system to the receiving water untreated; and,
 - c. Cause or "significantly contribute" to a violation of any requirement of this Order, is prohibited.
- 6. Introduction of "pollutant free" wastewater to the collection, treatment, and disposal system in amounts that threaten compliance with this order is prohibited.

B. Central Coast Standard Provisions – Provisions

- 1. Collection, treatment, and discharge of waste shall not create a nuisance or pollution, as defined by California Water Code (CWC) §13050.
- 2. All facilities used for transport or treatment of wastes shall be adequately protected from inundation and washout as the result of a 100-year frequency flood.
- 3. Operation of collection, treatment, and disposal systems shall be in a manner that precludes public contact with wastewater.
- 4. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed in a manner approved by the Executive Officer.
- 5. Publicly owned wastewater treatment plants shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Title 23 of the California Administrative Code.

- 6. After notice and opportunity for a hearing, this order may be terminated for cause, including, but not limited to:
 - a. violation of any term or condition contained in this order;
 - b. obtaining this order by misrepresentation, or by failure to disclose fully all relevant facts;
 - c. a change in any condition or endangerment to human health or environment that requires a temporary or permanent reduction or elimination of the authorized discharge; and,
 - d. a substantial change in character, location, or volume of the discharge.
- 7. Provisions of this permit are severable. If any provision of the permit is found invalid, the remainder of the permit shall not be affected.
- 8. After notice and opportunity for hearing, this order may be modified or revoked and reissued for cause, including:
 - a. Promulgation of a new or revised effluent standard or limitation;
 - b. A material change in character, location, or volume of the discharge;
 - c. Access to new information that affects the terms of the permit, including applicable schedules;
 - d. Correction of technical mistakes or mistaken interpretations of law; and,
 - e. Other causes set forth under Sub-part D of 40 CFR Part 122.
- 9. Safeguards shall be provided to assure maximal compliance with all terms and conditions of this permit. Safeguards shall include preventative and contingency plans and may also include alternative power sources, stand-by generators, retention capacity, operating procedures, or other precautions. Preventative and contingency plans for controlling and minimizing the affect of accidental discharges shall:
 - a. identify possible situations that could cause "upset", "overflow" or "bypass", or other noncompliance. (Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.)
 - b. evaluate the effectiveness of present facilities and procedures and describe procedures and steps to minimize or correct any adverse environmental impact resulting from noncompliance with the permit.
- 10. Physical Facilities shall be designed and constructed according to accepted engineering practice and shall be capable of full compliance with this order when properly operated and maintained. Proper operation and maintenance shall be

described in an Operation and Maintenance Manual. Facilities shall be accessible during the wet-weather season.

11. Production and use of reclaimed water is subject to the approval of the Central Coast Board. Production and use of reclaimed water shall be in conformance with reclamation criteria established in Chapter 3, Title 22, of the California Administrative Code and Chapter 7, Division 7, of the CWC An engineering report pursuant to section 60323, Title 22, of the California Administrative Code is required and a waiver or water reclamation requirements from the Central Coast Board is required before reclaimed water is supplied for any use, or to any user, not specifically identified and approved either in this Order or another order issued by this Board.

C. Central Coast Standard Provisions – General Monitoring Requirements

1. If results of monitoring a pollutant appear to violate effluent limitations based on a weekly, monthly, 30-day, or six-month period, but compliance or non-compliance cannot be validated because sampling is too infrequent, the frequency of sampling shall be increased to validate the test within the next monitoring period. The increased frequency shall be maintained until the Executive Officer agrees the original monitoring frequency may be resumed.

For example, if copper is monitored annually and results exceed the six-month median numerical effluent limitation in the permit, monitoring of copper must be increased to a frequency of at least once every two months (Central Coast Standard Provisions – Definitions I.G.13.). If suspended solids are monitored weekly and results exceed the weekly average numerical limit in the permit, monitoring of suspended solids must be increased to at least four (4) samples every week (Central Coast Standard Provisions – Definitions – Definitions I.G.14.).

- 2. Water quality analyses performed in order to monitor compliance with this permit shall be by a laboratory certified by the State Department of Health Services (DHS) for the constituent(s) being analyzed. Bioassay(s) performed in order to monitor compliance with this permit shall be in accord with guidelines approved by the State Water Resources Control Board (State Water Board) and the State Department of Fish and Game. If the laboratory used or proposed for use by the discharger is not certified by the DHS or, where appropriate, the Department of Fish and Game due to restrictions in the State's laboratory certification program, the discharger shall be considered in compliance with this provision provided:
 - a. Data results remain consistent with results of samples analyzed by the Central Coast Water Board;
 - b. A quality assurance program is used at the laboratory, including a manual containing steps followed in this program that is available for inspections by the staff of the Central Coast Water Board; and,
 - c. Certification is pursued in good faith and obtained as soon as possible after the program is reinstated.

- 3. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Samples shall be taken during periods of peak loading conditions. Influent samples shall be samples collected from the combined flows of all incoming wastes, excluding recycled wastes. Effluent samples shall be samples collected downstream of the last treatment unit and tributary flow and upstream of any mixing with receiving waters.
- 4. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.

E. Central Coast Standard Provisions – General Reporting Requirements

- 1. Reports of marine monitoring surveys conducted to meet receiving water monitoring requirements of the Monitoring and Reporting Program shall include at least the following information:
 - a. A description of climatic and receiving water characteristics at the time of sampling (weather observations, floating debris, discoloration, wind speed and direction, swell or wave action, time of sampling, tide height, etc.).
 - b. A description of sampling stations, including differences unique to each station (e.g., station location, grain size, rocks, shell litter, calcareous worm tubes, evident life, etc.).
 - c. A description of the sampling procedures and preservation sequence used in the survey.
 - d. A description of the exact method used for laboratory analysis. In general, analysis shall be conducted according to Central Coast Standard Provisions C.1 above, and Federal Standard Provision Monitoring III.B. However, variations in procedure are acceptable to accommodate the special requirements of sediment analysis. All such variations must be reported with the test results.
 - e. A brief discussion of the results of the survey. The discussion shall compare data from the control station with data from the outfall stations. All tabulations and computations shall be explained.
- 2. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule shall be submitted within 14 days following each scheduled date unless otherwise specified within the permit. If reporting noncompliance, the report shall include a description of the reason, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance. A second report shall be submitted within 14 days of full compliance.
- 3. The "Discharger" shall file a report of waste discharge or secure a waiver from the Executive Officer at least 180 days before making any material change or proposed change in the character, location, or plume of the discharge.

- 4. Within 120 days after the discharger discovers, or is notified by the Central Coast Water Board, that monthly average daily flow will or may reach design capacity of waste treatment and/or disposal facilities within four (4) years, the discharger shall file a written report with the Central Coast Water Board. The report shall include:
 - a. the best estimate of when the monthly average daily dry weather flow rate will equal or exceed design capacity; and,
 - b. a schedule for studies, design, and other steps needed to provide additional capacity for waste treatment and/or disposal facilities before the waste flow rate equals the capacity of present units.

In addition to complying with Federal Standard Provision – Reporting V.B., the required technical report shall be prepared with public participation and reviewed, approved and jointly submitted by all planning and building departments having jurisdiction in the area served by the waste collection, treatment, or disposal facilities.

5. All "Dischargers" shall submit reports to the:

California Regional Water Quality Control Board Central Coast Region <u>centralcoast@waterboards.ca.gov</u> 895 Aerovista Place, Suite 101 San Luis Obispo, CA 93401-7906

In addition, "Dischargers" with designated major discharges shall submit a copy of each document to:

Regional Administrator USEPA, Region 9 Attention: CWA Standards and Permits Office (WTR-5) 75 Hawthorne Street San Francisco, California 94105

- 6. Transfer of control or ownership of a waste discharge facility must be preceded by a notice to the Central Coast Water Board at least 30 days in advance of the proposed transfer date. The notice must include a written agreement between the existing "Discharger" and proposed "Discharger" containing specific date for transfer of responsibility, coverage, and liability between them. Whether a permit may be transferred without modification or revocation and reissuance is at the discretion of the Board. If permit modification or revocation and reissuance is necessary, transfer may be delayed 180 days after the Central Coast Water Board's receipt of a complete permit application. Please also see Federal Standard Provision Permit Action II.C.
- 7. Except for data determined to be confidential under CWA §308 (excludes effluent data and permit applications), all reports prepared in accordance with this permit shall be available for public inspection at the office of the Central Coast Water Board

or Regional Administrator of USEPA. Please also see Federal Standard Provision – Records IV.C.

8. By February 15th of each year, the discharger shall submit an annual report to the Central Coast Water Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. The discharger shall discuss the compliance record and corrective actions taken, or which may be needed, to bring the discharge into full compliance. The report shall address operator certification and provide a list of current operating personnel and their grade of certification. The report shall inform the Central Coast Water Board of the date of the Plant's Operation and Maintenance Manual (including contingency plans as described Central Coast Standard Provision – Provision B.9., above), of the date the manual was last reviewed, and whether the manual is complete and valid for the discharger to monitor compliance with effluent limits and provide a summary of performance relative to Section C above, General Monitoring Requirements.

If the facility treats industrial or domestic wastewater and there is no provision for periodic sludge monitoring in the Monitoring and Reporting Program, the report shall include a summary of sludge quantities, analyses of its chemical and moisture content, and its ultimate destination.

If applicable, the report shall also evaluate the effectiveness of the local source control or pretreatment program using the State Water Board's "Guidelines for Determining the Effectiveness of Local Pretreatment Programs."

F. Central Coast Standard Provisions – General Pretreatment Provisions

- 1. Discharge of pollutants by "indirect dischargers" in specific industrial sub-categories (appendix C, 40 CFR Part 403), where categorical pretreatment standards have been established, or are to be established, (according to 40 CFR Chapter 1, Subchapter N), shall comply with the appropriate pretreatment standards:
 - a. By the date specified therein;
 - b. Within three (3) years of the effective date specified therein, but in no case later than July 1, 1984; or,
 - c. If a new indirect discharger, upon commencement of discharge.

G. Central Coast Standard Provisions – Enforcement

- 1. Any person failing to file a report of waste discharge or other report as required by this permit shall be subject to a civil penalty not to exceed \$5,000 per day.
- 2. Upon reduction, loss, or failure of the treatment facility, the "Discharger" shall, to the extent necessary to maintain compliance with this permit, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided.

H. Central Coast Standard Provisions – Definitions

(Not otherwise included in Attachment A to this Order)

- 1. A "composite sample" is a combination of no fewer than eight (8) individual samples obtained at equal time intervals (usually hourly) over the specified sampling (composite) period. The volume of each individual sample is proportional to the flow rate at the time of sampling. The period shall be specified in the Monitoring and Reporting Program ordered by the Executive Officer.
- 2. "Daily Maximum" limit means the maximum acceptable concentration or mass emission rate of a pollutant measured during a calendar day or during any 24-hour period reasonably representative of the calendar day for purposes of sampling. It is normally compared with results based on "composite samples" except for ammonia, total chlorine, phenolic compounds, and toxicity concentration. For all exceptions, comparisons will be made with results from a "grab sample".
- 3. "Discharger", as used herein, means, as appropriate: (1) the Discharger, (2) the local sewering entity (when the collection system is not owned and operated by the Discharger), or (3) "indirect discharger" (where "Discharger" appears in the same paragraph as "indirect discharger", it refers to the discharger.)
- 4. "Duly Authorized Representative" is one where:
 - a. the authorization is made in writing by a person described in the signatory paragraph of Federal Standard Provision V.B.;
 - b. the authorization specifies either an individual or the occupant of a position having either responsibility for the overall operation of the regulated facility, such as the plant manager, or overall responsibility for environmental matters of the company; and,
 - c. the written authorization was submitted to the Central Coast Water Board.
- 5. A "grab sample" is defined as any individual sample collected in less than 15 minutes. "Grab samples" shall be collected during peak loading conditions, which may or may not be during hydraulic peaks. It is used primarily in determining compliance with the daily maximum limits identified in Central Coast Standard Provision Provision G.2. and instantaneous maximum limits.
- 6. "Hazardous substance" means any substance designated under 40 CFR Part 116 pursuant to Section 311 of the Clean Water Act.
- 7. "Incompatible wastes" are:
 - a. Wastes which create a fire or explosion hazard in the treatment works;

- b. Wastes which will cause corrosive structural damage to treatment works, but in no case wastes with a pH lower than 5.0 unless the works is specifically designed to accommodate such wastes;
- c. Solid or viscous wastes in amounts which cause obstruction to flow in sewers, or which cause other interference with proper operation of treatment works;
- d. Any waste, including oxygen demanding pollutants (BOD, etc), released in such volume or strength as to cause inhibition or disruption in the treatment works and subsequent treatment process upset and loss of treatment efficiency; and,
- e. Heat in amounts that inhibit or disrupt biological activity in the treatment works or that raise influent temperatures above 40°C (104°F) unless the treatment works is designed to accommodate such heat.
- 8. "Indirect Discharger" means a non-domestic discharger introducing pollutants into a publicly owned treatment and disposal system.
- 9. "Log Mean" is the geometric mean. Used for determining compliance of fecal or total coliform populations, it is calculated with the following equation:

$$Log Mean = (C1 x C2 x...x Cn)1/n,$$

in which "n" is the number of days samples were analyzed during the period and any "C" is the concentration of bacteria (MPN/100 ml) found on each day of sampling. "n" should be five or more.

10. "Mass emission rate" is a daily rate defined by the following equations:

mass emission rate (lbs/day) = $8.34 \times Q \times C$; and,

mass emission rate $(kg/day) = 3.79 \times Q \times C$,

where "C" (in mg/L) is the measured daily constituent concentration or the average of measured daily constituent concentrations and "Q" (in MGD) is the measured daily flowrate or the average of measured daily flowrates over the period of interest.

- 11. The "Maximum Allowable Mass Emission Rate," whether for a month, week, day, or six-month period, is a daily rate determined with the formulas in paragraph G.10, above, using the effluent concentration limit specified in the permit for the period and the average of measured daily flows (up to the allowable flow) over the period.
- 12. "Maximum Allowable Six-Month Median Mass Emission Rate" is a daily rate determined with the formulas in Central Coast Standard Provision Provision G.10, above, using the "six-month Median" effluent limit specified in the permit, and the average of measured daily flows (up to the allowable flow) over a 180-day period.
- 13. "Median" is the value below which half the samples (ranked progressively by increasing value) fall. It may be considered the middle value, or the average of two middle values.

14. "Monthly Average" (or "Weekly Average", as the case may be) is the arithmetic mean of daily concentrations or of daily mass emission rates over the specified 30-day (or 7-day) period.

Average = (X1 + X2 + ... + Xn) / n

in which "n" is the number of days samples were analyzed during the period and "X" is either the constituent concentration (mg/l) or mass emission rate (kg/day or lbs/day) for each sampled day. "n" should be four or greater.

- 15. "Municipality" means a city, town, borough, county, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial waste, or other waste.
- 16. "Overflow" means the intentional or unintentional diversion of flow from the collection and transport systems, including pumping facilities.
- 17. "Pollutant-free wastewater" means inflow and infiltration, stormwaters, and cooling waters and condensates which are essentially free of pollutants.
- 18. "Primary Industry Category" means any industry category listed in 40 CFR Part 122, Appendix A.
- 19. "Removal Efficiency" is the ratio of pollutants removed by the treatment unit to pollutants entering the treatment unit. Removal efficiencies of a treatment plant shall be determined using "Monthly averages" of pollutant concentrations (C, in mg/l) of influent and effluent samples collected about the same time and the following equation (or its equivalent):

 $C_{Effluent}$ Removal Efficiency (%) = 100 x (1 – $C_{effluent}$ / $C_{influent}$)

- 20. "Severe property damage" means substantial physical damage to property, damage to treatment facilities which causes them to become inoperable, or substantial and permanent loss to natural resources which can reasonably be expected to occur in the absence of a "bypass". It does not mean economic loss caused by delays in production.
- 21. "Sludge" means the solids, residues, and precipitates separated from, or created in, wastewater by the unit processes of a treatment system.
- 22. To "significantly contribute" to a permit violation means an "indirect discharger" must:
 - a. Discharge a daily pollutant loading in excess of that allowed by contract with the "Discharger" or by Federal, State, or Local law;
 - b. Discharge wastewater which substantially differs in nature or constituents from its average discharge;

- c. Discharge pollutants, either alone or in conjunction with discharges from other sources, which results in a permit violation or prevents sewage sludge use or disposal; or
- d. Discharge pollutants, either alone or in conjunction with pollutants from other sources that increase the magnitude or duration of permit violations.
- 23. "Toxic Pollutant" means any pollutant listed as toxic under Section 307 (a) (1) of the Clean Water Act or under 40 CFR Part 122, Appendix D. Violation of maximum daily discharge limitations are subject to 24-hour reporting (Federal Standard Provisions V.E.).
- 24. "Zone of Initial Dilution" means the region surrounding or adjacent to the end of an outfall pipe or diffuser ports whose boundaries are defined through calculation of a plume model verified by the State Water Board.

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations at 40 CFR 122.48 require that all NPDES permits specify monitoring and reporting requirements. California Water Code (CWC) §13267 and §13383 also authorize the Central Coast Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

- **A.** Laboratories analyzing monitoring samples shall be certified by the Department of Health Services, in accordance with CWC §13176, and must include quality assurance/quality control data with their reports.
- **B.** Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and approval of the Central Coast Water Board.
- C. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ±10 percent from true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration, and operation of acceptable flow measurement devices can be obtained from the following references.
 - 1. A Guide to Methods and Standards for the Measurement of Water Flow, U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 96 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD Catalog No. C13.10:421.)
 - Water Measurement Manual, U.S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U.S. Government Printing Office, Washington D.C. 20402. Order by Catalog No. 172.19/2:W29/2, Stock No. S/N 24003-0027.)
 - Flow Measurement in Open Channels and Closed Conduits, U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy or microfiche from National Technical Information Services (NTIS) Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST.)
 - **4.** NPDES Compliance Sampling Manual, U.S. Environmental Protection Agency, Office of Water Enforcement, Publication MCD-51, 1977, 140 pp. (Available from the

General Services Administration (8FFS), Centralized Mailing Lists Services, Building 41, Denver Federal Center, CO 80225.)

- **D.** All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.
- E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this MRP.
- F. Unless otherwise specified by this MRP, all monitoring shall be conducted according to test procedures established at 40 CFR 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants*. All analyses shall be conducted using the lowest practical quantitation limit achievable using the specified methodology. Where effluent limitations are set below the lowest achievable quantitation limits, pollutants not detected at the lowest practical quantitation limits will be considered in compliance with effluent limitations. Analysis for toxics listed by the California Toxics Rule shall also adhere to guidance and requirements contained in the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (2005).

II. MONITORING LOCATIONS

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

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
INF-001		Influent wastewater at the plant headworks, prior to treatment and following all significant input of wastewater to the treatment system
001	EFF-001	Tertiary-treated wastewater at a point located following all treatment and prior to discharge to Waddell Creek
	RSW-001	East Branch of Waddell Creek 145 feet upstream of outfall (previously W1)
	RSW-002	East Branch of Waddell Creek 100 feet downstream from outfall (previously W3)
	BIO-001	Biosolids at the last point in the biosolids handling process where representative samples of residual solids from the treatment process can be obtained.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

1. The Discharger shall monitor influent to the facility at INF-001 as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency
Daily Flow	MG	Metered	Continuously
Mean Daily Flow	MGD	Metered	Continuously
Maximum Daily Flow	MGD	Metered	Continuously
TSS ^[1]	mg/L	24-hr Composite	Weekly
BOD ₅ ^[1]	mg/L	24-hr Composite	Weekly

 Table E-2. Influent Monitoring

[1] Collection of TSS and BOD₅ influent samples shall occur on days that effluent samples are collected.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor effluent at monitoring location EFF-001, as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level. Discrete discharge periods shall be defined by lapses in discharge flow of 24 hours or more. When discrete discharges occur at Discharge Point 001, monitoring shall occur at least once during the first discrete discharge period of the sampling period. Monitoring for CTR and Title 22 pollutants shall occur once during the permit term, during discharge to Waddell Creek, in the 12 months period before application is made to renew WDRs for the Plant.

Parameter	Units	Sample Type	Minimum Sampling Frequency	
			Apr - Oct	Nov - Mar
Daily Flow	MG	Metered	Continuous	Continuous
Mean Daily Flow	MGD	Metered	Continuous	Continuous
Maximum Daily Flow	MGD	Metered	Continuous	Continuous
Turbidity	NTU	Metered	Continuous	Continuous
Total Coliform Bacteria	MPN/100mL	Grab	Weekly	Monthly
Fecal Coliform Bacteria	MPN/100 mL	Grab	Weekly	Monthly
Enterococci Organisms	MPN/100 mL	Grab	Weekly	Monthly
Settleable Solids	mL/L	Grab	Weekly	Monthly
pH ^[1]	standard units	Metered	Continuous	Continuous
Temperature ^[1]	°F	Grab	Daily	Weekly
TSS	mg/L	24-hour Composite	Daily	Weekly
BOD ₅	mg/L	24-hour Composite	Weekly	Monthly
Oil and Grease	mg/L	Grab	August	February
Acute Toxicity ^[2]	Pass/Fail	24-hr Composite	August	February
Chronic Toxicity ^[3]	TUc	24-hr Composite	August	February
Dissolved Oxygen	mg/L	Grab	Weekly	Monthly
Total Ammonia	mg/L as N	Grab	Weekly	Monthly

Table E-3. Effluent Monitoring – EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	
			Apr - Oct	Nov - Mar
Un-ionized Ammonia ^[1]	mg/L as N	Calculate	Weekly	Monthly
Total Kjeldahl Nitrogen	mg/L as N	Grab	Weekly	Monthly
Nitrate Nitrogen (as N)	mg/L as N	Grab	Weekly	Monthly
Nitrite Nitrogen (as N)	mg/L as N	Grab	Weekly	Monthly
Hardness as CaCO ₃	mg/L	Grab	August	February
Aluminum	μg/L	Grab	August	February
Cadmium ^[4]	μg/L	Grab	August	February
Chromium ^[4]	μg/L	Grab	August	February
Copper ^[4]	µg/L	Grab	August	February
Lead ^[4]	μg/L	Grab	August	February
Mercury ^[4]	μg/L	Grab	August	February
Silver ^[4]	µg/L	Grab	August	February
Zinc ^[4]	µg/L	Grab	August	February
CTR Pollutants ^{[4][5][6]}	µg/L	24-hr composite	Once per	permit term
Title 22 Pollutants ^{[6][7][8]}	µg/L	24-hr composite	Once per	permit term

[1] Temperature and pH are to be measured at the same time the Total Ammonia sample is collected. Results shall be used to calculate and report Un-ionized Ammonia concentrations.

- [2] Whole effluent acute toxicity monitoring shall be conducted according to the requirements established in Section V.A of this Monitoring and Reporting Plan.
- [3] Whole effluent chronic toxicity monitoring shall be conducted according to the requirements established in Section V.B of this Monitoring and Reporting Plan.
- [4] Analyses, compliance determination, and reporting for these pollutants shall adhere to applicable provisions of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP). The Discharger shall instruct its analytical laboratory to establish calibration standards so that the Minimum Levels (MLs) presented in Appendix 4 of the SIP are the lowest calibration standards. The Discharger and its analytical laboratory shall select MLs, which are below applicable water quality criteria of the CTR; and when applicable water quality criteria are below all MLs, the Discharger and its analytical laboratory shall select the lowest ML.
- [5] Those 126 pollutants with applicable water quality objectives established by the California Toxics Rule (CTR) at 40 CFR 131.38.
- [6] 24-hour composite samples shall be collected one time, during discharge, and within the twelve-month period before application is made to renew the Waste Discharge Requirements for the Plant.
- [7] The Title 22 pollutants are those pollutants for which the Department of Health Services has established Maximum Contaminant Levels (MCLs) at CCR Title 22, Division 4, Chapter 15, sections 64431 (Inorganic Chemicals) and 64444 (Organic Chemicals).
- [8] Analytical methods shall adhere to the Detection Limits for Purposes of Reporting (DLRs) established by Title 22 of the CCR, Division 4, Chapter 15, sections 64432 (Inorganics) and 64445.1 (Organics).

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Whole Effluent Acute Toxicity

1. Acute Toxicity Monitoring Requirements - EFF-001

a. Compliance with acute toxicity limitation shall be determined using a U.S. Environmental Protection Agency (USEPA) approved method protocol as provided in 40 CFR 136 (*Methods for Measuring the Acute Toxicity* of *Effluents*)

and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, USEPA Office of Water, EPA-821- R-02-012 (2002) or the latest edition).

- **b.** Bioassays shall be performed to evaluate the toxicity of the discharge in accordance with the following procedures unless otherwise specified by the Central Coast Water Board's Executive Officer or designee:
- **c.** The Discharger shall use the rainbow trout (*Oncorhynchus mykiss*) to measure acute toxicity.
- **d.** The presence of acute toxicity shall be determined as significantly reduced survival of test organisms at 100 percent effluent compared to a control using a statistical t-test. The Discharger shall include with the SMR the percent survival of the organisms for both the effluent and control, and the results of the t-test ("statistically different" or "not statistically different").

B. Whole Effluent Chronic Toxicity

1. Chronic Toxicity Monitoring Requirements – EFF-001

- **a.** *Sampling*. The Discharger shall collect 24-hour composite samples of the effluent at Discharge Point 001 for critical life stage toxicity testing as indicated below. For toxicity tests requiring renewals, 24-hour composite samples collected on consecutive days are required.
- **b.** *Test Species*. The Discharger shall utilize the water flea, *Ceriodaphnia dubia*, as test species. The Executive Officer may change to another test species if data suggest that another test species is more sensitive to the discharge.
- **c.** *Methodology*. Sample collection, handling and preservation shall be in accordance with USEPA protocols. In addition, bioassays shall be conducted in compliance with the most recently promulgated test methods, currently *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition (EPA-821-R-02-013), with exceptions granted the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP).
- **d.** *Dilution Series.* The Discharger shall conduct tests at 5%, 10%, 25%, 50%, and 100%. The "%" represents percent effluent as discharged. The Discharger may use a buffer only after obtaining written approval from the Executive Officer.

2. Chronic Toxicity Reporting Requirements

- **a.** *Routine Reporting*. Toxicity test results for the current reporting period shall include, at a minimum, for each test:
 - (1) Sample date(s)
 - (2) Test initiation date

- (3) Test species
- (4) End point values for each dilution (e.g., number of young, growth rate, percent survival)
- (5) NOEC value(s) in percent effluent
- (6) IC15, IC25, IC40, and IC50 values (or EC15, EC25 ... etc.) as percent effluent
- (7) TUc values (100/NOEC, 100/IC25, or 100/EC25)
- (8) Mean percent mortality (±s.d.) after 96 hours in 100% effluent (if applicable)
- (9) NOEC and LOEC values for reference toxicant test(s)
- (10) IC50 or EC50 value(s) for reference toxicant test(s)
- (11) Available water quality measurements for each test (pH, D.O., temperature, conductivity, hardness, salinity, ammonia)
- **b.** *Compliance Summary*. The results of the chronic toxicity testing shall be provided in the self-monitoring report and shall include a summary table of chronic toxicity data from at least eleven of the most recent samples. The information in the table shall include items listed above under 2.a, specifically item numbers 1, 3, 5, 6(IC25 or EC25), 7, and 8.

C. Quality Assurance

- **1.** For the acute toxicity testing using a t-test, two dilutions shall be used, i.e., 100 percent effluent and a control.
- 2. If organisms are not cultured in-house, concurrent testing with a referenced 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.).
- **3.** If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified in the toxicity test references, then the Discharger must re-sample and retest within 14 working days or as soon as possible. The retesting period begins when the Discharger collects the first sample required to complete the retest.
- 4. The reference toxicant and effluent tests must meet the upper and lower bounds on test sensitivity as determined by calculating the percent minimum significant difference (PMSD) for each test result. The test sensitivity bound is specified for each test method in the respective methods manuals.

D. Accelerated Monitoring Requirements

- 1. When acute toxicity is detected in the effluent, or when a chronic toxicity effluent limitation of 1 TUc is exceeded during regular toxicity monitoring, and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring to confirm the effluent toxicity.
- **2.** The Discharger shall implement an accelerated monitoring frequency consisting of performing three toxicity tests in a six-week period following the first test result that shows an exceedance of the effluent limitation.
- **3.** If implementation of the generic Toxicity Reduction Evaluation (TRE) work plan indicates the source of the exceedance of the toxicity limitation (for instance, a temporary plant upset), then only one additional test is necessary. If exceedance of the toxicity limitation is detected in this test, the Discharger will continue with accelerated monitoring requirements or implement the Toxicity Identification and Toxicity Reduction Evaluations.
- **4.** If none of the three tests indicated exceedance of the applicable toxicity limitation, then the Discharger may return to the normal toxicity testing frequency.

E. Conducting Toxicity Identification Evaluations and Toxicity Reduction Evaluations

- **1.** A Toxicity Identification Evaluation (TIE) shall be triggered if testing from the accelerated monitoring frequency indicates any of the following:
 - **a.** Two of the three accelerated toxicity tests are reported as failed tests meeting any of the conditions specified in Attachment E, Section V.D.
 - **b.** The TIE shall be initiated within 15 days following failure of the second accelerated monitoring test.
 - **c.** If a TIE is triggered prior to the completion of the accelerated testing, the accelerated testing schedule may be terminated, or used as necessary in performing the TIE.
- **2.** The TIE shall be conducted to identify and evaluate toxicity in accordance with procedures recommended by the USEPA which include the following:
 - **a.** Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I, (USEPA, 1992a);
 - **b.** Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures, Second Edition (USEPA, 1991a);
 - **c.** Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Sampling Exhibiting Acute and Chronic Toxicity (USEPA, 1993a); and

- **d.** Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity (USEPA, 1993b).
- **3.** As part of the TIE investigation, the Discharger shall be required to implement its TRE work plan. The Discharger shall take all reasonable steps to control toxicity once the source of the toxicity is identified. A failure to conduct required toxicity tests or a TRE within a designated period shall result in the establishment of numerical effluent limitations for chronic toxicity in a permit or appropriate enforcement action. Recommended guidance in conducting a TRE include the following:
 - **a.** Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, August 1999, EPA/833B-99/002; and
 - b. Clarifications Regarding Toxicity Reduction and Identification Evaluations in the National Pollutant Discharge Elimination System Program dated March 27, 2001, USEPA Office of Wastewater Management, Office of Regulatory Enforcement.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

This section of the standardized MRP is not applicable to the Discharger.

VII. RECLAMATION MONITORING REQUIREMENTS

This section of the standardized MRP is not applicable to the Discharger.

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Waddell Creek Monitoring Locations RSW-001 and RSW-002.

1. The Discharger shall monitor receiving at Monitoring Locations RSW-001 and RSW-002, as follows.

Table E-4.	Receiving	Water	Monitoring R	equirements -	– RS	W-001 and RSW-002

Parameter	Units	Sample Type	Minimum Sampling Frequency	
			Apr - Oct	Nov - Mar
Total Ammonia (as N) ^[1]	mg/L	Grab	Monthly	Monthly
Un-ionized Ammonia (as N) ^{[1][2]}	mg/L	Calculated	Monthly	Monthly
pH ^{[1] [2]}	s.u.	Grab	Weekly	Monthly
Temperature ^{[1][2]}	°F	Grab	Weekly	Monthly
Dissolved Oxygen	mg/L	Grab	Weekly	Monthly
Turbidity ^[3]	NTU	Grab	Weekly	Monthly
Kjeldahl Nitrogen (as N)	mg/L	Grab	Monthly	Quarterly
Nitrate Nitrogen (as N)	mg/L	Grab	Monthly	Quarterly
Nitrite Nitrogen (as N)	mg/L	Grab	Monthly	Quarterly

Parameter	Units	Sample Type	Minimum Sampling Frequency	
			Apr - Oct	Nov - Mar
Fecal Coliform Bacteria ^[4]	MPN/100mL	Grab	Quarterly	Quarterly
Total Coliform Bacteria ^[4]	MPN/100mL	Grab	Quarterly ^[5]	Quarterly
Enterococcus Bacteria	MPN/100mL	Grab	Quarterly	Quarterly
Hardness	standard units	Grab	Quarterly	Quarterly

[1] To be sampled at the frequency specified if effluent un-ionized ammonia limitation is exceeded. Sampling shall continue until two (2) effluent samples at the specified frequency show compliance.

[2] Temperature and pH are to be measured concurrently with the total ammonia sample, and the results shall be used to calculate and report un-ionized ammonia concentrations.

[3] To be sampled at the frequency specified if effluent turbidity limitations are exceeded.

[4] To be sampled within 24 hours of effluent limitation exceedance of limitations for total or fecal coliform.

[5] If the disinfection system is malfunctioning or if the plant effluent violates effluent standards for total coliform, the monitoring shall increase to daily until the plant effluent returns to compliance.

2. At the time of receiving water sampling, the Discharger shall keep a log of receiving water conditions, and shall note the presence or absence of floating or suspended matter, discoloration, foaming, aquatic life, bottom deposits, oils sheen, and algal growth. The Discharger shall summarize receiving water conditions in notes entered into the monitoring report.

IX. OTHER MONITORING REQUIREMENTS

A. Biosolids Monitoring, Reporting, and Notification – BIO-001

1. A representative sample of biosolids shall be obtained from the last point in the handling process (i.e., in the drying beds just prior to removal). All constituents shall be analyzed annually for total concentrations for comparison with Total Threshold Limit Concentration (TTLC) criteria. The Waste Extraction Test shall be performed on any constituent when the total concentration of the waste exceeds ten times the Soluble Threshold Limit Concentration Limit Concentration (STLC) limit for that substance. Twelve (12) discrete representative samples shall be collected at separate locations in the biosolids ready for disposal. These 12 samples shall be composited to form one (1) sample for constituent analysis. For accumulated, previously untested biosolids, the Discharger shall develop a representative sampling plan including number and location of sampling points, and collect representative samples. The analysis shall test for the metals required in 40 CFR 503.16 (for land application) or 503.26 (for surface disposal), using the methods in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (EPA Publication SW-846, all applicable editions and updates), as required in 40 CFR 503.8(b)(4), at the minimum frequencies established therein, provided in the table below.

Table E-5.	Amount of	Biosolids and	Frequenc	y for Analysis
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Amount ^{ات} (dry metric tons/ 365-day period)	Frequency ^[2]
Greater than zero, but less than 290	Once per year
Equal to or greater than 290 but less than 1500	Once per quarter (four times per year)

Equal to or greater than 1500 but less than 15,000	Once per sixty days (six times per year)
Greater than 15,000	Once per month (twelve times per year)

^[1] For land application, either the amount of bulk biosolids applied to the land or the amount prepared for sale or give-away in a bag or other container for application to the land (dry weight basis). If the Discharger's biosolids are directly land applied without further treatment by another preparer, biosolids shall also be tested for organic-N, ammonium-N, and nitrate-N at the frequencies required. For surface disposal, the amount of biosolids placed on an active sludge unit (dry weight basis).

^[2] Test results shall be expressed in mg pollutant per kg biosolids on a 100% dry weight basis.

Biosolids shall be analyzed for the constituents in the following table.

Constituent	Units	Type of Sample	Sampling/Analysis Frequency
Quantity Removed	Tons or yds ³	Measured during Removal	Continual
Location of Reuse/Disposal	General Public or Specific Site		
Moisture Content	%	Composite	Per Table E-5, above
Paint Filter Test	Per SW-846	Composite	Per Table E-5, above
Arsenic	mg/kg	Grab	Per Table E-5, above
Antimony	mg/kg	Grab	Per Table E-5, above
Beryllium	mg/kg	Grab	Per Table E-5, above
Cadmium	mg/kg	Grab	Per Table E-5, above
Copper	mg/kg	Grab	Per Table E-5, above
Chromium (total)	mg/kg	Grab	Per Table E-5, above
Lead	mg/kg	Grab	Per Table E-5, above
Mercury	mg/kg	Grab	Per Table E-5, above
Nickel	mg/kg	Grab	Per Table E-5, above
Selenium	mg/kg	Grab	Per Table E-5, above
Silver	mg/kg	Grab	Per Table E-5, above
Thallium	mg/kg	Grab	Per Table E-5, above
Zinc	mg/kg	Grab	Per Table E-5, above

Table E-6. Biosolids Monitoring

2. Prior to land application, the Discharger shall demonstrate that the biosolids meet Class A or Class B pathogen reduction levels by one of the methods listed in 40 CFR 503.32 (unless transferred to another preparer who demonstrates pathogen reduction.) Prior to disposal in a surface disposal site, the Discharger shall demonstrate that the biosolids meet Class B levels or shall ensure that the site is covered at the end of each operating day. If pathogen reduction is demonstrated using a "Process to Significantly/Further Reduce Pathogens "(PFRP), the Discharger shall maintain daily records of the operating parameters to achieve this reduction.

The following applies when biosolids from the Discharger are directly land applied as Class B, without further treatment by a second preparer. If the Discharger demonstrates pathogen reduction by direct testing for fecal coliforms and/or pathogens, samples must be drawn at the frequency in the Amount/Frequency table above. If the Discharger demonstrates Class B pathogen reduction by testing for fecal coliform, at least seven grab samples must be drawn and analyzed during each monitoring event, and a geometric mean calculated from these seven samples. If the Discharger demonstrates Class A pathogen reduction by testing for fecal coliform and/or salmonella, plus one of the PFRP processes or testing for enteric viruses and helminth ova at least four samples of fecal coliform or salmonella must be drawn during each monitoring event. All four samples must meet the limits specified in 40 CFR 503.32(a).

- **3.** For biosolids that are land applied or placed in a surface disposal site, the Discharger shall track and keep records of the operational parameters used to achieve Vector Attraction Reduction requirements in 40 CFR 503.33(b).
- 4. Class 1 facilities (facilities with pretreatment programs or others designated as Class1 by the Regional Administrator) and Federal facilities with greater than five million gallons per day (MGD) influent flow shall sample biosolids for pollutants listed under CWA §307(a) (as required in the pretreatment section of the permit for POTWs with pretreatment programs). Class 1 facilities and Federal facilities greater than 5 MGD shall test dioxins/dibenzofurans using a detection limit of less than one pg/g at the time of their next priority pollutant scan if they have not done so within the past five years, and once per five years thereafter.
- 5. The biosolids shall be tested annually, or more frequently if necessary, to determine hazardousness. All constituents regulated under CA Title 22, division 5, chapter 11, article 3 shall be analyzed for comparison with TTLC criteria. The Waste Extraction Test shall be performed on any constituent when the total concentration of the waste exceeds ten times the STLC limit for that substance.
- 6. If biosolids are placed in a surface disposal site (dedicated land disposal site or monofill), a qualified groundwater scientist shall develop a groundwater monitoring program for the site, or shall certify that the placement of biosolids on the site will not contaminate an aquifer.
- 7. Biosolids placed in a municipal landfill shall be tested by the Paint Filter Liquids Test (USEPA Method 9095) at the frequency determined by Table E-9, or more often if necessary to demonstrate that there are no free liquids.
- **8.** The Discharger, either directly or through contractual agreements with their biosolids management contractors, shall comply with the following notification requirements:
 - a. Notification of non-compliance. The Discharger shall notify USEPA Region 9, the Central Coast Water Board, and the Regional Board located in the region where the biosolids are used or disposed, of any non-compliance within 24 hours if the non-compliance may seriously endanger health or the environment. For other instances of non-compliance, the Discharger shall notify USEPA Region 9 and the affected Regional Boards of any non-compliance in writing within five working days of becoming aware of the non-compliance. The Discharger shall require their biosolids management contractors to notify USEPA Region 9 and

the affected Regional Boards of any non-compliance within the same time frames.

- **b.** If biosolids are shipped to another State or Indian lands, the Discharger must send notice at least 60 days prior to the shipment to the permitting authorities in the receiving State or Indian land (the USEPA, Regional Office for that area and the State/Indian authorities).
- **c.** For land application (in cases where Class B biosolids are directly applied without further treatment): Prior to reuse of any biosolids from the Discharger's facility to a new or previously unreported site, the Discharger shall notify USEPA, the Central Coast Water Board, and any other affected Regional Board. The notification shall include description of the crops or vegetation to be grown, proposed loading rates and determination of agronomic rates.

If any biosolids within a given monitoring period do not meet 40 CFR 503.13 metals concentrations limits, the Discharger (or its contractor) must pre-notify USEPA, and determine the cumulative metals loading to that site to date, as required in 40 CFR 503.12. The Discharger shall notify the applier of all the applier's requirements under 40 CFR 503, including the requirement that the applier certify that the management practices, site restrictions, and any applicable vector attraction reduction requirements have been met. The Discharger shall require the applier to certify at the end of 38 months following application of Class B biosolids that the harvesting restrictions in effect for up to 38 months have been met.

- **d.** *For surface disposal:* Prior to disposal to a new or previously unreported site, the Discharger shall notify USEPA and the Central Coast Water Board. The notice shall include a description and a topographic map of the proposed site, depth to groundwater, whether the site is lined or unlined, site operator, site owner, and any State or local permits. The notice shall describe procedures for ensuring public access and grazing restrictions for three years following site closure. The notice shall include a groundwater monitoring plan or description of why groundwater monitoring is not required.
- **9.** The Discharger shall submit an annual biosolids report to USEPA Region 9 Biosolids Coordinator and the Central Coast Board by February 19th of each year (per USEPA guidance and 40 CFR 503) for the period covering the previous calendar year. This report shall include:
 - a. Annual biosolids removed in dry tons and percent solids.
 - **b.** If appropriate, a narrative description of biosolids dewatering and other treatment processes, including process parameters, including a schematic diagram showing biosolids handling facilities. For example, if drying beds are used, report depth of application and drying time. If composting is used, report the temperature achieved and duration.

- **c.** A description of disposal methods, including the following information as applicable related to the disposal methods used at the facility. If more than one method is used, include the percentage and tonnage of annual biosolids production disposed by each method.
 - (1) For landfill disposal include: 1) the Central Coast Water Board WDR numbers that regulate the landfills used, 2) the present classifications of the landfills used, 3) the results of any groundwater monitoring, 4) certifications of management practices, and 5) the names and locations of the facilities receiving biosolids.
 - (2) For land application include: 1) the location of the site(s), 2) the Central Coast Water Board's WDR numbers that regulate the site(s), 3) the application rate in lbs/acre/year (specify wet or dry), 4) certifications of management practices and site restrictions, and 5) subsequent uses of the land.
 - (3) For offsite application by a licensed hauler and composter include: 1) the name, address and USEPA license number of the hauler and composter.
- **d.** Copies of analytical data required by other agencies (i.e. USEPA or County Health Department) and licensed disposal facilities (i.e. landfill, land application, or composting facility) for the previous year.
- e. Descriptions of pathogen reduction methods and vector attraction reduction methods. Including supporting time and temperature data, and certifications, as required in 40 CFR 503.17 and 503.27.
- f. Names, mailing address, and street addresses of persons who received biosolids for storage, further treatment, disposal in a municipal waste landfill, or for other use or disposal methods not covered above, and amounts delivered to each.
- **g.** For all biosolids used or disposed at the Discharger's facility, the site and management practice information and certification required in 40 CFR 503.17 and 503.27.
- **h.** For all biosolids temporarily stored, the information required in 40 CFR 503.20 is required to demonstrate temporary storage.
- i. Reports shall be submitted to:

Regional Biosolids Coordinator USEPA (WTR-7) 75 Hawthorne St. San Francisco, CA 94105-3901

Executive Officer Central Coast Water Control Board 895 Aerovista Place, Suite 101 San Luis Obispo, CA 93401-7906

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

B. Self-Monitoring Reports (SMRs)

- The Discharger must electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.
- 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, quarterly, and annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
- **3.** Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule.

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date	
Continuous	Permit effective date	All		
Daily Permit effective date o Daily Sunday following permit effective date o		(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	1 st day of second calendar month	
		Sunday through Saturday	following month of sampling	
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1 st day of calendar month through last day of calendar month		
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1	
Annually	January 1 following (or on) permit effective date	January 1 through December 31	February 15	
1X/Permit term	January 1 following (or on) permit effective date	Permit term	180 days prior to permit expiration	

 Table E-7. Monitoring Periods and Reporting Schedule

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

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

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

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

- **c.** Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
- **d.** Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.
- **5. Compliance Determination**. Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Central Coast Water Board 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).
- 6. Multiple Sample Data. When determining compliance with an AMEL, AWEL, or MDEL 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:

- **a.** 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.
- **b.** 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.
- 7. The Discharger shall submit SMRs in accordance with the following requirements:
- a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. The Discharger shall submit Self-Monitoring Reports (SMRs) electronically using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.
- **b.** The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.
- **c.** SMRs must be submitted to the Central Coast Water Board via the California Integrated Water Quality system (CIWQS) internet database, signed and certified as required by the Standard Provisions (Attachment D). If an electronic submittal is not available, a hard copy SMR must be submitted, to the address listed below:

Central Coast Water Board <u>Centralcoast@waterboards.ca.gov</u> 895 Aerovista Place, Suite 101 San Luis Obispo, CA 93401

C. Discharge Monitoring Reports (DMRs)

- 1. As described in Section X.B.1 above, the Discharger must electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). If the DMR website is inoperable, Discharger shall submit DMRs in accordance with the requirements described below.
- 2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharger shall submit the original DMR and one copy of the DMR to the address listed below:

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

3. Unless DMRs are submitted electronically through CWIQS, discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated will not be accepted unless they follow the exact same format of EPA Form 3320-1.

D. Other Reports

1. The Discharger shall report the results of any special monitoring, TREs, or other data or information that results from section VI.C. (Special Provisions) of the Order. The Discharger shall submit such reports with the first monthly SMR scheduled to be submitted on or immediately following the report due date.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Plant.

3 440800001		
California Department of Parks and Recreation		
Big Basin Redwoods SP Wastewater Treatment Plant		
21600 Big Basin Way		
Boulder Creek, CA 95006		
Sana Cruz County		
Daniel Carroll, Chief Plant Operator, (831) 338-8875		
Daniel Carroll, Chief Plant Operator		
21600 Big Basin Way, Boulder Creek, CA 95006		
303 N. Big Trees Road, Felton, CA 95018		
Publicly Owned Treatment Works (POTW)		
Minor		
1		
В		
N		
N		
0.09 million gallons per day (MGD) (monthly average dry weather flow)		
0.03 MGD (average daily dry weather treatment capacity) 0.13 MGD (peak wet weather treatment capacity)		
Big Basin Watershed		
East Branch of Waddell Creek		
Inland Surface Water		

Table F-1. Plant Information

- **A.** California Department of Parks and Recreation is the owner and operator of the Big Basin Redwoods Wastewater Treatment Plant, a municipal wastewater treatment plant.
- **B.** For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and State laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

- **C.** This Order authorizes the discharge of tertiary-treated wastewater to the East Branch of Waddell Creek, a water of the United States. The terms and conditions of the current Order (Order No. R3-2005-0035) have been automatically continued past its expiration date of May12, 2010 and remain in effect until new Waste Discharge Requirements are adopted pursuant to this Order.
- D. The Discharger filed a Report of Waste Discharge and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on February 17, 2010.

II. PLANT DESCRIPTION

A. Description of Wastewater and Biosolids Treatment

The Big Basin Wastewater Treatment Plant (Plant) provides primary clarification, biological secondary treatment, secondary clarification, tertiary treatment, ammonia removal, ultraviolet (UV) disinfection, and pH control.

The Plant receives raw, domestic wastewater generated by Big Basin Redwood State Park's (Park) camper and day-user population, 23 permanent residences for Park employees, and minor infiltration during and following storm events. The wastewater collection system consists of 5.2 miles of sewer mains and two lift stations. In 2005, the Discharger lined the collection system and sealed manholes to reduce inflow and infiltration.

At the Plant headworks, raw influent enters the comminutor for grinding of large solids before wastewater gravity flows into the primary clarifier. Effluent from the primary clarifier is pumped to the trickling filter. The trickling filter uses an attached growth system to biologically treat primary effluent and convert ammonia to nitrate. Trickling filter effluent is mixed with polymer at the coagulant rapid mix basin prior to entering the secondary clarifier.

Secondary effluent is pumped to the slow sand filter to remove any remaining fine particles. Sand filter effluent is pumped to the ammonia removal system where ammonia is removed with clinoptolite using an ion-exchange process. Following ammonia removal, water enters the UV tank. The UV tank discharges through the UV disinfection units and into the pH mixing and control tank, which uses sodium hydroxide to adjust pH prior to discharge to the East Branch of Waddell Creek.

The Plant does not maintain chlorination/dechlorination equipment or chemicals for backup disinfection. When the final effluent does not meet pH, turbidity, or UV requirements for discharge, or flow is too low to be treated by the UV equipment, the automatic valve on the sand filter discharge line closes, and flow is stored in the sand filter until pH or turbidity limits are achieved.

Solids are treated and stabilized using anaerobic digestion. Settled and floating material from the primary clarifier is collected in hoppers and pumped to the anaerobic digester for solids handling. Settled secondary clarifier sludge is also pumped into the

anaerobic digester to mix with sludge from the primary clarifier. Solids stabilization occurs in the anaerobic digester without heating or mixing. After approximately one year of retention in the digester, digested sludge is pumped to drying beds. Dried sludge is used as a soil conditioner or delivered to a local landfill.

The Plant can experience reduced influent flowrates during low visitation months, typically in the fall. The Plant's 2005 through 2009 annual reports report recorded influent flows as low as 0.000 MGD. During low influent flow periods Plant staff may augment raw influent flow with potable water to keep water flowing through the Plant and minimize ammonia build up. Potable water comes into the Plant through a dedicated one and one-half (1 1/2) inch pipe. Chlorine residuals when potable water enters the Plant generally range up to 0.02 milligram per liter (mg/L). The maximum chlorine residual in the potable water (0.05 mg/L) commingled with the combined raw influent does not overcome break point chlorination to leave a residual in the final effluent. In addition, during low influent flow periods the Plant's measured influent biological oxygen demand (BOD) can be below 170 mg/L. In 2009, for example, the Plant reported four months when the highest recorded influent BOD was less than 170 mg/L: February (35 mg/L maximum, 16 mg/L average); October (68 mg/L maximum, 44 mg/L average); November (153 mg/L maximum, 93 mg/L average); and December (133 mg/L maximum, 64 mg/L average). The Plant can experience difficulty meeting the 85 percent removal efficiency requirement for BOD when influent BOD is less than 170 mg/L.

B. Discharge Points and Receiving Waters

Tertiary treated effluent is discharged at Discharge Point 001 (37° 09' 52.29" N, 122° 13' 43.42" W) to the East Branch of Waddell Creek. Waddell Creek is located approximately 35 feet from the Plant clearwell for discharge monitoring. The design capacity of the Plant is 0.03 MGD as a dry weather design flow. Actual flows range from 3 to 90 gallons per minute (4,320 to 129,600 gallons per day).

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

Effluent limitations and land discharge specifications contained in the previous Order for secondary and tertiary effluent, and monitoring data collected during the permit term, are summarized in the table below.

Parameter Units		Effluent Limitation			Monitoring Data (Jan 2005 – Dec 2010)
Falanetei	Parameter Onits		Weekly Mean	Maximum Daily	Maximum Reported Value
BOD₅	mg/L	10	15	25	13.3
	lbs/day	7.5	11.3	18.8	Not Reported
TSS	mg/L	10	15	25	133
	lbs/day	7.5	11.3	25	Not Reported
Oil and Grease	mg/L	25	40	75	15.9
	lbs/day	18.8	30.0	56.3	Not Reported
Settleable Solids	mL/L			0.1	3.0

Table F-2. Historic Effluent Limitations and Monitoring Data

CALIFORNIA DEPARTMENT OF PARKS AND RECREATION BIG BASIN REDWOODS WASTEWATER TREATMENT PLANT

Denemator	Unite	Effluent Limitation			Monitoring Data (Jan 2005 – Dec 2010)
Parameter	Units	Monthly Average	Weekly Mean	Maximum Daily	Maximum Reported Value
Dissolved Oxygen	mg/L			> 5.0	8.6 (minimum)
Methylene Blue	mg/L			0.2	0.5
Activated Substances	lbs/day			0.15	Not Reported
рН	s.u.	Betv	veen 6.0 – 8.3 at :	all times	6.1 – 7.8
Un-ionized Ammonia as	mg/L			0.025	0.024
Ν	lbs/day			0.019	Not Reported
Total Residual Chlorine	mg/L			[1]	<0.01
Total Coliform Bacteria	Organisms/ 100 mL	2.2		23	350
Acute Toxicity	TUa			Pass	Pass
Chronic Toxicity	TUc			1	Pass
Aluminum	mg/L			1.0	1.44
Arsenic	mg/L			0.05	<0.010
Barium	mg/L			1.0	<0.010
Cadmium (> 100 mg/L Hardness)	mg/L			0.03	<0.005
Cadmium (< 100 mg/L Hardness)	mg/L			0.0011	<0.005
Chromium, Total	mg/L			0.05	0.0554
Copper (> 100 mg/L Hardness)	mg/L			0.03	0.031
Copper (< 100 mg/L Hardness)	mg/L			0.01	0.031
Lead	mg/L			0.03	<0.005
Mercury	mg/L			0.0002	0.00021
Nickel (> 100 mg/L Hardness)	mg/L			0.4	10.4
Nickel (< 100 mg/L Hardness)	mg/L			0.1	10.4
Selenium	mg/L			0.01	<0.005
Silver	mg/L			0.0041	<0.005
Zinc (> 100 mg/L Hardness)	mg/L			0.2	0.121
Zinc (< 100 mg/L Hardness)	mg/L			0.004	0.121

Table Notes:

[1] The total time during which total chlorine residual values are above 0.02 mg/L (instantaneous maximum value) shall not exceed 7 hours and 26 minutes in any calendar month; no individual excursion from 0.02 mg/L shall exceed 30 minutes; and no individual excursion shall exceed 0.1 mg/L.

D. Compliance Summary

There were 26 permit violations that occurred during the term of the previous permit (R3-2005-0035), as determined through a review of the CIWQS violation report for the Plant. The majority of violations were the result of failure to conduct the applicable receiving water monitoring. No Mandatory Minimum Penalties were assessed due to these identified violations.

Plant inspections were conducted 5/12/06, 8/10/06, 5/3/07, and 7/15/08. No permit violations were identified during these inspections.

E. Planned Changes

Not applicable. The Discharger does not anticipate any changes during the permit term.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This Order is issued pursuant to the federal Clean Water Act (CWA) §402 and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the California Water Code (CWC), commencing with §402 of the 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 CWC commencing with §402 of the 13260).

B. California Environmental Quality Act (CEQA)

Pursuant to CWC §13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code §21100 through §21177.

C. State and Federal Regulations, Policies, and Plans

1. Water Quality Control Plans. The Central Coast Water Board has adopted a *Water Quality Control Plan for the Central Coast Region* (the Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for receiving waters within the region. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses established by the Basin Plan for the East Branch of Waddell Creek are presented below.

Table F-3.	Basin	Plan	Beneficial	Uses
------------	-------	------	-------------------	------

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Waddell Creek, East Branch	 Municipal and Domestic Supply (MUN) Groundwater Recharge (GWR) Water Contact (REC-1)Recreation (REC-1) Non-contact Water Recreation (REC-2) Wildlife Habitat (WILD) Cold Fresh Water Habitat (COLD) Migration of Aquatic Organisms (MIGR) Spawning, Reproduction, and/or Early Development (SPWN) Preservation of Biological Habitats of Special Significance (BIOL) Rare, Threatened, or Endangered Species (RARE) Freshwater Replenishment (FRESH) Commercial and Sport Fishing (COMM)

Requirements of this Order implement the Basin Plan.

- 2. National Toxics Rule (NTR) and California Toxics Rule (CTR). USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the State. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants that are applicable to the receiving waters for discharges from the Plant.
- **3. State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Central Coast 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 that are applicable to discharges to the receiving waters for discharges from the Plant. Requirements of this Order implement the SIP.
- 4. Alaska Rule. On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes [65 Fed. Reg. 24641 (April 27, 2000) (codified at 40 CFR 131.21,)]. Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect

and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

- 5. Antidegradation Policy. NPDES regulations at 40 CFR 131.12 require 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 No. 68-16, which incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that the existing quality of waters be maintained unless degradation is justified based on specific findings. The Central Coast Water Board's Basin Plan implements and incorporates by reference both the State and federal antidegradation policies. As discussed in section IV.D.2 of this Fact Sheet, the permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16.
- 6. Anti-Backsliding Requirements. CWA §402(o)(2) and §303(d)(4) and NPDES regulations at 40 CFR 122.44 (I) prohibit backsliding in NPDES permits. These antibacksliding 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 section IV.D.1 of this Fact Sheet, effluent limitations and other requirements established by this Order satisfy applicable antibacksliding provisions of the CWA and NPDES regulations.

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

CWA §303 (d) requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology based limitations on point sources. For all §303 (d) listed water bodies, the Central Coast Water Board must develop and implement TMDLs (total maximum daily loads) that specify WLAs (waste load allocations) for point sources and load allocations for non-point sources.

The East Branch of Waddell Creek is not listed as impaired on the State's 2006 §303 (d) list of impaired water bodies, which was approved by USEPA in June 2007.

E. Other Plans, Polices and Regulations

1. Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (State Water Board Order No. 2006-0003-DWQ). This General Permit, adopted on May 2, 2006, 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 works 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. On August 10, 2006, the Discharger enrolled under the General Permit.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, nonconventional, 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. NPDES regulations establish two principal bases for effluent limitations. At 40 CFR 122.44(a) permits are required to include applicable technology-based limitations and standards; and at 40 CFR 122.44(d) permits are required to include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria (WQC) to protect the beneficial uses of the receiving water. When numeric water guality objectives (WQOs) have not been established, but a discharge has the reasonable potential to cause or contribute to an excursion above a narrative criterion, WQBELs may be established using one or more of three methods described at 40 CFR 122.44(d) - 1) WQBELs may be established using a calculated water quality criterion derived from a proposed State criterion or an explicit State policy or regulation interpreting its narrative criterion; 2) WQBELs may be established on a case-by-case basis using USEPA criteria guidance published under CWA Section 304(a); or 3) WQBELs may be established using an indicator parameter for the pollutant of concern.

A. Discharge Prohibitions

- 1. Discharge Prohibition III. A (No discharge at a location or in a manner except as described by the Order). The Order authorizes a single point of discharge of tertiary effluent to the East Branch of Waddell Creek. This prohibition is newly established in the Order and reflects CWA §402's prohibition against discharges of pollutants except in compliance with the Act's permit requirements, effluent limitations, and other enumerated provisions.
- 2. Discharge Prohibition III. B (The discharge of any waste not specifically regulated by this permit is prohibited.) Because limitations and conditions of the Order have been prepared based on specific information provided by the Discharger and specific wastes described by the Discharger, the limitations and conditions of the Order do not adequately address waste streams not contemplated during drafting of the Order. To prevent the discharge of such waste streams that may be inadequately regulated, the Order establishes this prohibition against the discharge of any waste that was not described to the Central Coast Water Board during the process of permit reissuance.
- **3. Discharge Prohibition III. C** (Creation of a condition of pollution, contamination, or nuisance, as defined by CWC §13050, is prohibited). This prohibition is newly established in the Order and is based on CWC §13050.
- 4. Discharge Prohibition III. D (Overflows and bypasses prohibited). The discharge of untreated or partially treated wastewater from the Discharger's collection, treatment, or disposal facilities represents an unauthorized bypass pursuant to 40 CFR 122.41 (m) or an unauthorized discharge, which poses a threat to human health and/or aquatic life, and therefore, is explicitly prohibited by the Order.

- 5. Discharge Prohibition III. E (Discharges of sludge to surface waters prohibited). This prohibition is retained from the previous permit, and is based on the solid waste discharge prohibition against the discharge of solids to surface waters contained in the Basin Plan at section VI.D.1 of Chapter 4.
- 6. Discharge Prohibition III. F (Daily dry weather daily flow shall not exceed the dry weather average monthly flowrate of 0.09 MGD). This prohibition is retained from the previous permit. The purpose of the prohibition is to assure efficient treatment of wastewater by assuring that flows do not exceed the treatment plant's dry weather design capacity.

B. Technology-Based Effluent Limitations

1. Scope and Authority

NPDES regulations at 40 CFR 122.44 (a) require that permits include applicable technology-based limitations and standards. Where the USEPA has not yet developed technology based standards for a particular industry or a particular pollutant, CWA Section 402(a)(1) and USEPA regulations at 40 CFR 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis. When BPJ is used, the permit writer must consider specific factors outlined at 40 CFR 125.3.

At 40 CFR 133 in the Secondary Treatment Regulations, USEPA has established the following minimum required level of effluent quality attainable by secondary treatment.

Parameter	30-Day Average	7-Day Average
BOD ^[1]	30 mg/L	45 mg/L
TSS ^[1]	30 mg/L	45 mg/L
рН	6.0 - 9	9.0 s.u.

Table F-4. Secondary Treatment Requirements

^[1] The 30-day average percent removal shall not be less than 85 percent.

2. Applicable Technology-Based Effluent Limitations

The following table summarizes technology-based effluent limitations established by the Order at Discharge Point 001.

Table F-5. Summary of Technology-Based Effluent Limitations – Discharge Point 001

Parameter	Units	Effluent Limitations				
Falameter	Units	Average Monthly	Average Weekly	Maximum Daily		
BOD ₅ ^[1]	mg/L	10	15	25		
	lbs/day	7.5	11.3	18.8		
TSS ^[1]	mg/L	10	15	25		
18814	lbs/day	7.5	11.3	18.8		

[1] The average monthly percent removal of BOD₅ and TSS, as measured at Monitoring Location EFF-001, shall not be less than 85 percent.

The technology-based effluent limitations for BOD and TSS for the discharge to the East Branch of Waddell Creek at Discharge Point 001 are more stringent than required by the Secondary Treatment Regulations and reflect effluent quality achievable through tertiary treatment. In addition, the Order establishes an effluent limitation for pH that is more stringent than required by the Secondary Treatment Regulations based on water quality objectives, as discussed in C., below.

The Order also retains mass-based limitations for BOD_5 and TSS, based on the requirement at 40 CFR 122.45(f) that all pollutants limited in a permit be expressed in terms of mass, when feasible. The mass-based limitations were calculated using the maximum permitted design flow (0.09 MGD) of the Plant, in accordance with 40 CFR 122.45(b).

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

NPDES regulations at 40 CFR 122.44 (d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards, including numeric and narrative objectives within a standard.

The process for determining "reasonable potential" and calculating WQBELs, when necessary, is intended to protect the designated uses of receiving waters as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in the Basin Plan and in other applicable State and federal rules, plans, and policies, including applicable water quality criteria from the CTR and the NTR.

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 40 CFR 122.44 (d) (1) (vi), using (1) USEPA criteria guidance under CWA §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.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

Beneficial uses described by the Basin Plan for the East Branch of Waddell Creek are presented in section II. H of the Order. Water quality criteria applicable to this receiving water are established by the CTR, the NTR, and by the Basin Plan.

3. Determining the Need for WQBELs

NPDES regulations at 40 CFR 122.44 (d) require effluent limitations to control all pollutants which are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard.

The SIP, statewide policy that became effective on May 22, 2000, establishes procedures to implement water quality criteria from the NTR and CTR and for priority, toxic pollutant objectives established in the Basin Plan. The implementation procedures of the SIP include methods to determine reasonable potential (for pollutants to cause or contribute to excursions above State water quality standards) and to establish numeric effluent limitations, if necessary, for those pollutants which show reasonable potential.

The SIP Section 1.3 requires the Central Coast Board to use all available valid, relevant, and representative receiving water and effluent data and information to conduct a reasonable potential analysis. The Central Coast Water Board analyzed the Discharger's data for priority pollutants and the nature of the discharge to determine if the discharge has Reasonable Potential. The RPA is based on effluent monitoring data collected by the Discharger August 28, 2007 and analyzed for all CTR pollutants, and additional metals data collected from August 2005 through September 2010.

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. The Discharger has not collected hardness data for the receiving water. Central Coast Water Board staff used a hardness value of 100 mg/L as a conservative estimate of the receiving water hardness to determine hardness-based criteria.

To conduct the reasonable potential analysis, the Central Coast Water Board identified the maximum observed effluent (MEC) from effluent data provided by the Discharger and compared these data to the most stringent applicable water quality criterion (C) for each pollutant from the NTR, CTR, and the Basin Plan. The Discharger did not collect background data (B) from the receiving water. Section 1.3 of the SIP establishes three triggers for a finding of reasonable potential.

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

Trigger 2. If B is greater than C, and the pollutant is detected in effluent (MEC > ND), there is reasonable potential, and an effluent limitation is required. In this case, the Discharger did not collect background (B) data, so reasonable potential cannot be found by Trigger 2.

Trigger 3. After reviewing 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.

Based on analysis of effluent data, the Central Coast Water Board, using methods presented in the SIP, finds that the discharge to Waddell Creek shows reasonable potential to cause or contribute to in-stream excursions above applicable water quality criteria for chromium (VI), copper, mercury, zinc, and aluminum.

The following table summarizes the RPA for each priority toxic pollutant that was detected in effluent collected for the period August 2005 to September 2010. No other pollutants with applicable numeric water quality criteria from the NTR, CTR, and the Basin Plan (including the Title 22 pollutants) were measured above detectable concentrations during that monitoring period.

Pollutant	Units	C (Basis)	MEC	В	RPA Result
Chromium (VI)	µg/L	11 (CTR freshwater chronic aquatic life)	55.4	Not Available	Yes
Copper	µg/L	9.3 (CTR freshwater chronic aquatic life)	30.7	Not Available	Yes
Mercury	µg/L	0.05 (CTR human health, water and organisms)	0.21	Not Available	Yes
Nickel	µg/L	52 (CTR freshwater chronic aquatic life)	10.4	Not Available	No
Zinc	µg/L	120 (CTR freshwater acute and chronic aquatic life)	121	Not Available	Yes
Aluminum	µg/L	1000 (Title 22 MCL)	1440	Not Available	Yes
Barium	µg/L	1000 (Title 22 MCL)	37.5	Not Available	No

Table F-6. RPA Results

4. WQBEL Calculations

Final WQBELs for chromium (VI), copper, mercury, zinc, and aluminum have been determined using the methods described in Section 1.4 of the SIP.

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

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

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

D = the dilution credit (here D = 0, as the Central Coast Water Board has no information with which to justify credit for dilution)

B = the background concentration

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

From Table 1 of the SIP, the ECA multipliers for calculating LTAs at the 99th percentile occurrence probability and the resulting LTAs are presented below.

		U				
Pollutant	ECA		ECA ECA Multiplier		LTA (µg/L)	
Follutant	Acute	Chronic	Acute	Chronic	Acute	Chronic
Chromium (VI)	16	11	0.25	0.44	4.1	5.0
Copper	14	9.3	0.39	0.60	5.5	5.6
Zinc	120	120	0.32	0.53	38.5	63.2

Table F-7. Calculation of Long-Term Averages

Step 3: WQBELs, including an average monthly effluent limitation (AMEL) and a maximum daily effluent limitation (MDEL) are calculated using the most limiting (the lowest) LTA. The LTA is multiplied times a factor that accounts for averaging periods and exceedance frequencies of the effluent limitations, and for the AMEL, the effluent monitoring frequency. Here, the sampling frequency is set equal to 4 (n = 4). The 99th percentile occurrence probability was used to determine the MDEL multiplier and a 95th percentile occurrence probability was used to determine the AMEL multiplier. Table 2 of the SIP presents the MDEL and AMEL multipliers as a function of the CV. When the data set contains less than 10 sample results, or when 80 percent or more of the data set is reported as non-detect (ND), the CV is set equal to 0.6. Otherwise, the CV is calculated as the standard deviation divided by the mean. Final WQBELs for chromium (VI), copper, and zinc are calculated as follows.

Pollutant	LTA	MDEL Multiplier	AMEL Multiplier	MDEL (µg/L)	AMEL (μg/L)
Chromium (VI)	4.1	4.02	1.75	16	7.1
Copper	5.5	2.54	1.42	14	7.8
Zinc	38.5	3.11	1.55	120	60

Table F-8. Calculation of Aquatic Life WQBELs

Step 4: When the most stringent water quality criterion is a human health criterion (i.e., mercury and aluminum), the AMEL is set equal to the ECA, and the MDEL is calculated by multiplying the ECA times the ratio of the MDEL multiplier to the AMEL multiplier. Final WQBELs for mercury and aluminum are determined as follows.

Pollutant	ECA	MDEL/AMEL Multiplier	MDEL (µg/L)	AMEL (µg/L)
Mercury	0.05	3.11/1.55 = 2.01	0.10	0.05
Aluminum	1000	5.45/2.07 = 2.64	2638	1000

Table F-9. Calculation of Human Health WQBELs

5. Whole Effluent Toxicity (WET)

Whole effluent toxicity (WET) limitations protect receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative "no toxics in toxic amounts" criterion while implementing numeric criteria for toxicity. 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 growth.

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are toxic to, or which produce detrimental physiological responses in human, plant, animal, or aquatic life. Survival of aquatic organisms in surface waters subjected to a waste discharge or other controllable water quality conditions shall not be less than that for the same water body in areas unaffected by the waste discharge or for another control water.

The previous permit included effluent limitations for whole effluent toxicity. The effluent limitation for acute toxicity specified there be no acute toxicity of the effluent as compared to a control. The Discharger's monitoring data for the previous permit term indicated that the results of each bi-annual test showed 100 percent test species survival. Chronic toxicity test results were not reported. The Order retains the effluent limitations for both acute and chronic toxicity to protect the receiving water against aggregate toxic effects that may result from the discharge.

- **6. pH.** Effluent limitations for pH are established by the Order for discharges at Discharge Point 001, and are based in the Basin Plan for protection of receiving water beneficial uses.
- 7. Oil and Grease. Effluent limitations, both concentration-based and mass-based, for oil and grease are retained from the previous permit. The limitations are based on the Basin Plan water quality objective for oil and grease, and are retained to ensure that the level of effluent quality at the Plant is maintained.

- 8. Settleable Solids. The effluent limitation for settleable solids is retained from the previous permit. The limitation reflects the level of effluent quality achievable through tertiary treatment and is retained to ensure that current levels of treatment are maintained.
- **9. Un-ionized Ammonia.** Effluent limitations for un-ionized ammonia at Discharge Point 001 are retained from the previous permit and reflect the WQO for ammonia established by section II.A.2 of the Basin Plan for all inland surface waters of the Region, applied as an end-of-pipe effluent limitation.
- **10.Dissolved Oxygen.** The effluent limitation for dissolved oxygen is retained from the previous permit and is based on the Basin Plan objective for dissolved oxygen for all inland surface waters.
- **11.Turbidity and Total Coliform Bacteria.** WQBELs for total coliform bacteria and turbidity at Discharge Point 001 are retained from the previous permit, and reflect Title 22 recycled water requirements for disinfected tertiary recycled water production. The Discharger may in the future recycle reclaimed effluent and reduce discharges to the East Branch of Waddell Creek.

A summary of all WQBELs applicable at Discharge Point 001 are presented in Table F-10 below.

			Effluent Limits	
Constituent	Units	Average Monthly	Average Weekly	Maximum Daily
	mg/L	10	15	25
BOD₅	lbs/day ^[1]	7.5	11.3	18.8
TSS	mg/L	10	15	25
100	lbs/day ^[1]	7.5	11.3	18.8
рН	standard units	6	.0 – 8.3 at all time	es
Oil and Grease	mg/L	25	40	75
Oil and Glease	lbs/day	18.8	30.0	56.3
Settleable Solids	mL/L			0.1
Un-ionized Ammonia	mg/L N			0.025
Dissolved Oxygen	mg/L			> 5.0
Aluminum	µg/L	1000		2638
Chromium (VI)	µg/L	7.1		16
Copper	µg/L	7.8		14
Mercury	µg/L	0.05		0.10
Zinc	µg/L	60		120
Turbidity	NTU	 NTU over a Turbidity sha percent of th period; and 	all not exceed an 24-hour period; all not exceed 5 N he time during any all not exceed 10	TU more than 5 y 24-hour

Table F-10. Summary of WQBELs – Discharge Point 001

		Effluent Limits				
Constituent	Units	Average Monthly	Average Weekly	Maximum Daily		
		time.				
Total Coliform Bacteria	MPN/ 100 mL	 The 7-day median concentration shall be less than 2.2 MPN/100 mL; Coliform concentrations shall not exceed 23 MPN/100 mL in more than one sample in any thirty day period; and No sample shall exceed 240 MPN/100 mL. 				
Acute Toxicity	Pass/Fail	There shall be no acute toxicity as determined by the survival of test organisms at 100 percent effluent compared to a control using a statistical t-test.				
Chronic Toxicity	TUc			1.0		

D. Final Effluent Limitations

Final, technology-based and water quality-based effluent limitations established by the Order are discussed in the preceding sections of the Fact Sheet.

1. Satisfaction of Anti-Backsliding Requirements

The Order satisfies applicable anti-backsliding provisions of the CWA, as all limitations and requirements of the Order are at least as stringent as those of the previous permit.

Effluent limitations for chlorodibromomethane, dichlorobromomethane, arsenic, barium, cadmium, lead, nickel, selenium, and silver are not retained, as these pollutants no longer demonstrate reasonable potential. Elimination of effluent limitations that do not show reasonable potential is consistent with the anti-backsliding exception at CWA §402(o)(2)(B)(i), where information is available which was not available at the time of permit issuance. Here, the effluent data generated during the term of the previous permit indicates that these pollutants are no longer discharged at concentrations that may cause or contribute to exceedances of applicable water quality criteria.

The effluent limitations for total chlorine residual are not retained because the Plant installed an ultraviolet (UV) disinfection system during the previous permit term and no longer uses chlorine for disinfection.

The effluent limitation for methylene blue activated substance is not retained; however, the Order establishes this water quality objective as a receiving water limitation.

2. Satisfaction of Antidegradation Policy

Provisions of the Order are consistent with applicable anti-degradation policy expressed by NPDES regulations at 40 CFR 131.12 and by State Water Board

Resolution No. 68-16. Limitations and conditions of the Order assure maintenance of the existing quality of receiving waters and do not authorize increased rates of discharge or increased pollutant loadings to the receiving water above that authorized by the previous Order.

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on TSS and BOD₅. Restrictions on these pollutants are discussed in Section IV.B of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum federal technology-based requirements that are necessary to meet water quality standards. These limitations are not more stringent than required by the CWA.

Final, technology and water quality based effluent limitations are summarized in sections IV.B and C of this Fact Sheet.

E. Interim Effluent Limitations

The Order does not establish interim effluent limitations and schedules for compliance with final effluent limitations.

F. Land Discharge Specifications

The Order does not establish land discharge specifications.

G. Reclamation Specifications

If applicable, reclamation use of tertiary treated wastewater shall adhere to applicable requirements of CWC §13500 through §13577 (Water Reclamation) and of CCR Title 22, §60301 through §60357 (Water Recycling Criteria).

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

Receiving water quality is a result of many factors, some unrelated to the discharge. This Order considers these factors and is designed to minimize the influence of the discharge on the receiving water. Specific water quality objectives established by the Basin Plan to meet this goal for all inland surface waters are included as Receiving Water Limitations in Section V.A of this Order.

B. Groundwater

Groundwater limitations established by the Order include general objectives for groundwater established by the Basin Plan.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 also authorize the Central Coast Water Board to require technical and monitoring reports. Rationale for the monitoring and reporting requirements contained in the Monitoring and Reporting Program (MRP), which is presented in Attachment E of this Order, is presented below.

A. Influent Monitoring

The influent monitoring requirements are unchanged and are retained from the previous Order.

B. Effluent Monitoring

At EFF-001, most effluent monitoring requirements remain unchanged and are retained from the previous Order. Changes in effluent monitoring are as summarized below:

- Monitoring frequencies that were labeled incorrectly in the previous permit have been corrected in the MRP.
- Monitoring for total residual chlorine is no longer required because the Discharger no longer uses chlorine for disinfection.
- Effluent monitoring for methylene blue activated substances is no longer required because the effluent limitation for this parameter is not retained. Instead, a receiving water objective for this parameter is established to be consistent with other recently adopted permits.
- Effluent monitoring once during the permit term has been established for the Title 22 pollutants because the receiving water has a MUN beneficial use.
- Routine effluent monitoring is established for aluminum, chromium, copper, mercury and zinc for determination of compliance with effluent limitations for these parameters. Routine effluent monitoring for cadmium, lead and silver is established in the MRP because monitoring data collected during the previous permit indicated that the minimum detection limits used for analyses of these metals were higher than the applicable criteria. Routine monitoring for these parameters at the lowest possible detection limit is necessary to generate data for future RPA.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) limitations protect receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. Acute toxicity testing measures mortality in 100 percent effluent over a short test period and chronic toxicity testing is conducted over a longer period of time and may measure mortality, reproduction, and or growth. This Order retains acute and chronic toxicity monitoring requirements for Discharge Point 001 from the previous permit.

D. Receiving Water Monitoring

1. Surface Water

Most receiving water and surface water monitoring requirements are unchanged and are retained from the previous Order.

The Rapid Bio-Assessment (RBA) monitoring requirement for aquatic life surveys has been eliminated. A report submitted by the Discharger summarizes the results of 11 annual assessments, which found insignificant changes in biologic indicators between downstream and upstream monitoring stations. These findings are consistent with the following factors:

- The Discharger upgraded the plant, replacing chlorine disinfection with ultraviolet disinfection, thereby eliminating any vestige of toxic chlorine from the discharge;
- The discharge has exhibited no acute toxicity since the plant upgrade was completed;
- The tertiary-treated discharge has maintained Waddell Creek's dissolved oxygen at high levels;
- The discharge has always complied with its effluent limitations, thereby protecting the Creek's beneficial uses; and
- The discharge, a small flowrate, mixes quickly with the Creek's natural flow, thereby eliminating any adverse effects that may have been possible in the undiluted discharge

The MRP establishes hardness monitoring in the receiving water for future RPA determinations.

Monitoring data collected in Waddell Creek upstream and downstream of the discharge are presented in the table below.

Parameter	Monitoring Data (2005-2010)					
		W1			W3	
	Units	Maximum Reported	Maximum Reported Monthly Average	Maximum Reported	Maximum Reported Monthly Average	
Total Ammonia (as N)	mg/L	1.60	1.60	2.00	2.00	
Un-ionized Ammonia (as N)	mg/L	0.01	0.01	0.009	0.009	
рН	s.u.	8.1	8.0	8.2	8.0	
Temperature	°F	66.0	61.0	66.0	61	
Dissolved Oxygen	mg/L	14.0	13.2	14.0	13.3	
Turbidity	NTU	39.7	20.4	35.5	18.9	
Kjeldahl Nitrogen (as N)	mg/L	5.90	5.90	42.00	42.00	

Table F-11. Receiving Water Monitoring Data

Parameter		Monitoring Data (2005-2010)					
			W1		W3		
	Units	Maximum Reported	Maximum Reported Monthly Average	Maximum Reported	Maximum Reported Monthly Average		
Nitrate Nitrogen (as N)	mg/L	1.30	1.30	85.00	85.00		
Nitrite Nitrogen (as N)	mg/L	0.10	0.10	0.25	0.25		
Fecal Coliform Bacteria	MPN/100mL	2400	2400	2400	2400		
Total Coliform Bacteria	MPN/100mL	1600	1600	920	2400		
Enterococcus	MPN/100mL	540	540	1600	1600		

Most maximum values were reported in 2006. The data indicate that water quality upstream and downstream of the discharge are generally consistent; however, nitrogen concentrations are increased downstream from the discharge. The Plant has an ammonia removal system, which eliminates toxicity from that source.

2. Groundwater

The MRP does not establish groundwater monitoring requirements.

E. Other Monitoring Requirements

1. Biosolids monitoring requirements are unchanged and are based on 40 CFR Part 503.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D to the Order.

NPDES regulations at 40 CFR 122.41(a)(1) and (b - n) establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 CFR 123.25(a)(12) allows the State to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 122.41(j)(5) and (k)(2), because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference CWC §13387(e).

B. Monitoring and Reporting Program (MRP) Requirements

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

C. Special Provisions

1. Reopener Provisions

The Order may be modified in accordance with the requirements set forth at 40 CFR 122 and 124, to include appropriate conditions or limits based on newly available information, or to implement any, new State water quality objectives that are approved by the USEPA. As effluent is further characterized through additional monitoring, and if a need for additional effluent limitations becomes apparent after additional effluent characterization, the Order will be reopened to incorporate such limitations.

2. Special Studies and Additional Monitoring Requirements

The Order includes the requirement to conduct accelerated whole effluent toxicity monitoring upon the detection of acute toxicity in the effluent, or upon the exceedance of the chronic toxicity effluent limitation.

3. Best Management Practices and Pollution Prevention

The Order does not establish requirements regarding best management practices and pollution prevention.

4. Construction, Operation, and Maintenance Specifications

The Order does not establish construction, operation, or maintenance specifications.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. Biosolids Management

Provisions regarding sludge handling and disposal ensure that such activities will comply with all applicable regulations.

40 CFR Part 503 sets forth USEPA's final rule for the use and disposal of biosolids, or sewage sludge, and governs the final use or disposal of biosolids. The intent of this federal program is to ensure that sewage sludge is used or disposed of in a way that protects both human health and the environment.

USEPA's regulations require that producers of sewage sludge meet certain reporting, handling, and disposal requirements. As the USEPA has not delegated the authority to implement the sludge program to the State of California, the enforcement of sludge requirements that apply to the Discharger remains under USEPA's jurisdiction at this time. USEPA, not the Central Coast Water Board, will oversee compliance with 40 CFR Part 503.

6. Other Special Provisions

a. Stormwater

The Order does not address discharges of stormwater from the treatment and disposal site, except to require coverage by and compliance with applicable provisions of General Permit No. CAS000001 - *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities*, if applicable.

The Plant is not required to seek coverage under Water Quality Order 97-03-DWQ, NPDES General Permit No. CAS000001 because the Plant design flow is less than 1.0 MGD.

b. Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (State Water Board Order No. 2006-0003-DWQ)

This General Permit, adopted on May 2, 2006, 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 works 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. On August 10, 2006, the Discharger enrolled under the General Permit.

c. Public Signage

This provision is retained from the previous permit. The provision requires the Discharger to alert the public using the park that a discharge of wastewater occurs to the East Branch of Waddell Creek through notices in park brochures and signs at park trail heads and access points. The provision also requires the Discharger to alert the public and downstream neighbors when concentrations of fecal bacteria exceed the water quality objective for the contact recreation beneficial use.

7. Compliance Schedules

The Order does not establish interim effluent limitations and schedules for compliance with final effluent limitations.

VIII. PUBLIC PARTICIPATION

The Central Coast Water Board is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the Big Basin Redwoods Wastewater Treatment Plant. As a step in

the WDR adoption process, the Central Coast Water Board staff has developed tentative WDRs. The Central Coast Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Central Coast Water Board notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the following: **Posting in the Santa Cruz Sentinel, a newspaper with regional circulation, beginning on September 13, 2011.**

B. Written Comments

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

To be fully responded to by staff and considered by the Central Coast Water Board, written comments were be received at the Central Coast Water Board offices by 5:00 p.m. on **October 13, 2011.** Central Coast Water Board staff did not receive any public comments on or before October 13, 2011.

C. Public Hearing

The Central Coast 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:	December 1, 2011
Time:	8:30 a.m.
Location:	Central Coast Water Board
	895 Aerovista Place, Suite 101
	San Luis Obispo, CA 93401

Interested persons are invited to attend. At the public hearing, the Central Coast 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 <u>http://www.waterboards.ca.gov/centralcoast/</u> where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

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

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

E. Information and Copying

The Report of Waste Discharge (ROWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Central Coast Water Board by calling 805-549-3147.

F. Register of Interested Persons

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

G. Additional Information

Requests for additional information or questions regarding this order should be directed to **Michael Higgins** at **(805)542-4649** or **MHiggins@waterboards.ca.gov**.