

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401-7906

MONITORING AND REPORTING PROGRAM ORDER NO. R3-2005-0035
NPDES NO. CA0048267
Revised May 9, 2008
Waste Discharger Identification No. 3 440800001

For

CALIFORNIA DEPARTMENT OF PARKS AND RECREATION,
BIG BASIN REDWOODS STATE PARK,
Santa Cruz County

I. COLLECTION SYSTEM MONITORING

The Discharger shall:

1. Annually inspect the ground surface overlying the collection system, except inspect the ground surface monthly above collection system sections that have not been renovated for 15 years.
2. Videotape and smoke test, at least once every five years, the entire collection system to identify damaged pipelines, intruding roots, stagnant areas, and areas of inflow/infiltration.
3. Assess collection system inflow/infiltration during the 2009/2010 wet season.

II. INFLUENT MONITORING

The Discharger shall establish a sampling station upstream of influent return flows where representative influent samples can be obtained. The following shall constitute the influent monitoring program:

Constituent	Units	Type of Sample	Minimum Frequency of Analysis
Flow	MGD	Metered Continuously	Daily
B.O.D., 5-Day	mg/L	24-hr. Composite	Weekly
Suspended Solids	mg/L	24-hr. Composite	Weekly

III. EFFLUENT MONITORING

The Discharger shall establish an effluent sampling station at the clearwell shown on Attachment "B". The following shall constitute the effluent monitoring program:

Item No. 19 Attachment 1
May 9, 2008 Meeting
Revised M&RP Order No. R3-
2005-0035 for Big Basin State Park,
Santa Cruz County

TABLE B				
Constituent	Units	Type of Sample	Minimum Frequency of Analysis	
			Apr-Oct	Nov-Mar
Daily Maximum Instantaneous Rate	MGD	Metered Daily	Daily	Daily
Daily Flow	MG	Calculated	Monthly	Monthly
Maximum Daily Volume	MG	Calculated	Monthly	Monthly
Average Daily Volume	NTU	Metered	Continuous	Continuous
Turbidity	MPN/100 mL	Grab	Daily	Weekly
Total & Fecal Coliform	MPN/100	Grab	Weekly	Monthly
Enterococci Organisms	mL	Metered	Continuous	Continuous
Total Chlorine Residual ⁴	mg/L	Grab	Weekly	Monthly
Settleable Solids	mL/L	Metered	Continuous	Continuous
pH ¹	pH units	Grab	Daily	Weekly
Temperature ¹	°F	24-hr composite	Daily	Weekly
Suspended Solids	mg/L	24-hr. Composite	Daily	Weekly
BOD	mg/L	Grab	Weekly	Monthly
Grease and Oil ²	mg/L	Grab	August	February
Acute and Chronic Toxicity ³	TU	Grab	Weekly	Weekly
Dissolved Oxygen	mg/L	Grab	Weekly	Monthly
Total Ammonia (as N)	mg/L	Calculated	Weekly	Monthly
Un-ionized Ammonia (as N) ¹	mg/L	Grab	Weekly	Monthly
Kjeldahl Nitrogen (as N)	mg/L	Grab	Weekly	Monthly
Nitrate Nitrogen (as N)	mg/L	Grab	Weekly	Monthly
Nitrite Nitrogen (as N)	mg/L	Grab	Monthly	Monthly
MBAS	mg/L	Grab	August	February
Hardness as CaCO ₃	µg/L	Grab	August	February
Dichlorobromomethane ⁴	µg/L	Grab	August	February
Dibromochloromethane ⁴	µg/L	Grab	August	February
Aluminum	mg/L	Grab	August	February
Arsenic	mg/L	Grab	August	February
Barium	mg/L	Grab	August	February
Cadmium	mg/L	Grab	August	February
Chromium (total)	mg/L	Grab	August	February
Copper	mg/L	Grab	August	February
Lead	mg/L	Grab	August	February
Mercury	mg/L	Grab	August	February
Nickel	mg/L	Grab	August	February
Selenium	mg/L	Grab	August	February
Silver	mg/L	Grab	August	February
Zinc	µg/L	Grab	August	February
Toxics Rule Pollutants ⁵			August 2007	

1. The Discharger shall measure temperature and pH concurrently with Total Ammonia sampling, and shall use the data to calculate and report the un-ionized ammonia concentration.
2. After collecting the Grease and Oil sample, the Discharger shall immediately inspect the downstream receiving water station (W3) for a floating oil sheen. If a sheen is observed, the Discharger shall immediately inspect the upstream receiving water station (W 1). The Discharger shall maintain a log of the observations and report them with the grease and oil data.
3. The Discharger shall determine compliance with the **acute toxicity** limit in accordance with *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition (EPA-821-R-02-012), or subsequent editions. *Oncorhynchus mykiss* (rainbow trout) is the recommended acute toxicity test species. The Discharger shall conduct semi-annual effluent monitoring for **chronic toxicity** with *Cerodaphnia dubia*. Up to five (5) concentrations of effluent (one effluent test must utilize 100% effluent), plus a control shall be tested. The effluent tests shall be conducted with concurrent reference toxicant tests and both shall meet all test acceptability criteria as specified in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA-821-R-02-013)*, or subsequent editions. If the test acceptability criteria are not achieved, then the Discharger shall resample and re-test within 14 days.
4. The Discharger may cease sampling after analysis detects no pollutants in three successive samples and after the ultraviolet-light disinfection system is fully operational.
5. The Discharger shall analyze a representative sample of plant effluent for Toxics Rule pollutants, listed in the Water Quality Standards at 40CFR131.38 and in the May 18, 2000 Federal Register (Volume 65, Number 97). Analytical methods shall be as described in 40CFR136. The Discharger shall use the Minimum Levels listed in Appendix 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, which is at www.waterboards.ca.gov/iswp/index.html. The Discharger shall employ the lowest Minimum Level available for each pollutant.

V. RECEIVING WATER MONITORING

Receiving water sampling stations shall be established at Waddell Creek upstream and downstream of the point of discharge as shown on this Order's Attachment "B" and described as follows:

Station Number	Description
W 1	East Branch of Waddell Creek 145 feet upstream of outfall.
W3	East Branch of Waddell Creek 100 feet downstream from outfall.

The following constituents shall be measured at both receiving water stations.

Constituent	Units	Sample Type	Minimum Frequency	
			Apr-Oct	Nov-Mar
⁵ Total Ammonia (as N)	mg/L	Grab	Monthly ¹	Monthly ¹
Un-ionized Ammonia (as N)	mg/L	Calculated	Monthly ¹	Monthly ¹
⁵ pH	pH units	Grab	Weekly ¹	Monthly ¹
⁵ Temperature	°F	Grab	Weekly ¹	Monthly ¹
Dissolved Oxygen	mg/L	Grab	Weekly	Monthly
³ Turbidity	NTU	Grab	Weekly	Monthly

Constituent	Units	Sample Type	Minimum Frequency	
			Apr-Oct	Nov-Mar
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
² Total & Fecal Coliform	MPN/100 mL	Grab	Quarterly ⁴	Quarterly
Enterococcus	MPN/100 mL	Grab	Quarterly ⁴	Quarterly
Rapid Bio-Assessment				Annually

1. To be sampled if effluent Un-ionized Ammonia (as N) limitation is exceeded. Sampling shall continue until two (2) effluent samples collected at the specified frequency show compliance.
2. If Total & Fecal Coliform exceed effluent limitations, receiving water shall be sampled within 24 hours of knowing the result.
3. If effluent turbidity limits are complied with, then receiving water sampling for turbidity is not required.
4. If the disinfection system is malfunctioning or if the plant's effluent violates effluent standards for Total Coliform, then the monitoring shall be increased to daily until the plant's effluent returns to compliance.
5. 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.

At the time of receiving water sampling, the Discharger shall keep a log of receiving water conditions, and shall note the presence or absence, as appropriate, of:

- | | | |
|---------------------------------|-----------------|--------------------|
| 1. Floating or suspended matter | 3. Foaming | 5. Bottom deposits |
| 2. Discoloration | 4. Aquatic Life | 6. Oil sheen |
| 7. Algal growth | | |

The Discharger shall summarize receiving water conditions in notes entered into the monitoring report.

IV. BIOSOLIDS MONITORING

Annually, the Discharger shall obtain a representative sample of biosolids from the treatment process before disposal. Each drying bed shall be partitioned into quadrants. The sample shall consist of a composite of 4 sub-samples taken from a randomly selected site in each quadrant.

Biosolids shall be disposed of in accordance with Section A.12. of the "Standard Provisions". The biosolids monitoring program follows:

Constituent	Units	Type of Sample	Minimum Frequency
Quantity & Disposal Location	Tons (or yd ³)	Measured	During removal, min. annually
Moisture	Percent	Composite	During removal, min. annually
Paint Filter Test	Per SW-846,	Composite	During removal, min. annually

TABLE D			
Constituent	Units	Type of Sample	Minimum Frequency
	Method 8095		
Antimony	mg/kg	Composite	During removal, min. annually
Arsenic	mg/kg	Composite	During removal, min. annually
Beryllium	mg/kg	Composite	During removal, min. annually
Cadmium	mg/kg	Composite	During removal, min. annually
Chromium	mg/kg	Composite	During removal, min. annually
Copper	mg/kg	Composite	During removal, min. annually
Lead	mg/kg	Composite	During removal, min. annually
Mercury	mg/kg	Composite	During removal, min. annually
Nickel	mg/kg	Composite	During removal, min. annually
Selenium	mg/kg	Composite	During removal, min. annually
Silver	mg/kg	Composite	During removal, min. annually
Thallium	mg/kg	Composite	During removal, min. annually
Zinc	mg/kg	Composite	During removal, min. annually

VI. REPORTING

Data collected in accordance with Tables A, B, C and D shall be submitted in accordance with Table E below and shall include the following.

I Results of toxicity testing shall include the following:

a. Physical, chemical, and raw toxicity data in tabular form as shown on:

Pages 72 and 73 or its equivalent of *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition* (EPA-821-R-02-012)

Pages 31 and 32 or its equivalent of *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA-821-R-02-013).

b. Pass/fail endpoint and indicate statistical method used to calculate endpoint.

c. Quality Assurance data.

II. Fecal Coliform Contamination:

When the receiving water limit of 200 MPN/100mL for fecal coliform is exceeded in the effluent or receiving water, Provision No. F.8 requires the Discharger to post public warnings. The Discharger shall state in the monthly report if there is receiving water contamination and if so, include the location and number of warning signs posted, and the posting duration.

III. Annual Report

In addition to the items in Standard Provisions C.16., the Discharger shall tabulate all sewage spills from January 1 to December 31 of the reporting year. The report shall summarize the spill location, the number of times sewage spills occurred there in the prior five years, spill volume, the affected surface water, and cleanup or corrective steps taken.

TABLE E

<u>Monitoring Period</u>	<u>Report Due</u>
Daily, Weekly, Monthly	Monthly on the 30 th day of the following month.
Annual	February 15 th of each year.
Annual (Biosolids)	Attached to the next available monthly report

ORDERED BY _____

Roger W. Briggs
Executive Officer_____
Date