

**STATE OF CALIFORNIA
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
Waste Discharger Identification No. 3 440800001
Prepared on March 22, 2005**

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 during the last 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. Conduct a collection system inflow/infiltration assessment during the 2007/2008 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:

| TABLE A | | | |
|--------------------|--------------|-----------------------|--------------------------------------|
| 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. 20 Attachment No. 2
May 12-13, 2005 Meeting
Big Basin State Park WWTP**

| TABLE B | | | | |
|---|------------|------------------|-------------------------------|------------|
| Constituent | Units | Type of Sample | Minimum Frequency of Analysis | |
| | | | Apr-Oct | Nov-Mar |
| Flow | MGD | Metered Daily | Daily | Daily |
| Daily Maximum Instantaneous Rate | MGD | Metered Daily | Daily | Daily |
| Daily Volume | MGD | Calculated | Monthly | Monthly |
| Maximum Daily Volume | MGD | Calculated | Monthly | Monthly |
| Average Daily Volume | MGD | Metered | Continuous | Continuous |
| Turbidity | NTU | Grab | Daily | Weekly |
| Total & Fecal Coliform | MPN/100 mL | Grab | Weekly | Monthly |
| Enterococci Organisms | MPN/100 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 | Weekly | Monthly |
| BOD | mg/L | Grab | August | February |
| Grease and Oil ² | mg/L | Grab | Weekly | Weekly |
| Acute and Chronic Toxicity ³ | TU | Grab | Weekly | Monthly |
| 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 | Monthly | Monthly |
| Hardness as CaCO ₃ | mg/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 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 | mg/L | Grab | August | February |
| Toxics Rule Pollutants ⁵ | µg/L | Grab | 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 (W1). 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 |
| 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 | Monthly |
| 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, a log should be kept of receiving water conditions. Attention should be given to the presence or absence of:

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

Notes on receiving water conditions shall be summarized in the monitoring report.

IV. BIOSOLIDS MONITORING

Annually, the Discharger shall obtain a representative sample of biosolids from the treatment process before disposal (annual basis). 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:

| TABLE D | | | |
|------------------------------|----------------------------|-----------------------|-------------------------------|
| 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, Method 8095 | Composite | During removal, min. annually |
| 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