California Regional Water Quality Control Board
Lahontan Region

Linda S. Adams
Secretary for
Environmental Protection

Victorville Office
14440 Civic Drive, Suite 200, Victorville, California 92392
(760) 241-6583 • Fax (760) 241-7308
http://www.swrcb.ca.gov/rwqcb6

Arnold Schwarzenegger
Governor

December 10, 2009

TO: ATTACHED MAILING LIST

TENTATIVE REVISED WASTE DISCHARGE REQUIREMENTS FOR LAKE ARROWHEAD COMMUNITY SERVICES DISTRICT, SAN BERNARDINO COUNTY

Enclosed are tentative Waste Discharge Requirements (WDRs) for the above subject.

The California Regional Water Quality Control Board requests that you review the enclosed documents and provide us with your written comments no later than **January 14, 2010**. Comments received after that date cannot be given full consideration in preparation of the recommended Board Order to be presented to the Regional Board for adoption at the meeting scheduled for **March 10 and 11, 2010**.

If you need further information, please contact me at (760) 241-7306.
Sincerely,

Robin Coale

for Rebecca Phillips
Office Technician

Enclosures: Tentative Board Order
Comment form

cc: Mailing List

Notice

Submittal of Written Material for Regional Board Consideration

In order to ensure that the State of California Lahontan Regional Water Quality Control Board has the opportunity to fully study and consider written material, it is necessary to submit it at least ten (10) days before the Regional Board Meeting. Pursuant to Title 23 of the California Code of Regulations, Section 648.2, the Regional Board may refuse to admit written testimony into evidence unless the proponent can demonstrate why he or she was unable to submit the material on time or that compliance with the deadline would otherwise create a hardship. If any other party demonstrates prejudice resulting from admission of the written testimony, the Regional Board may refuse to admit it.

COMPLETE FORM AND RETURN

- -

To: CA Regional Water Quality Control Board, Lahontan Region
14440 Civic Drive, Suite 200
Victorville, CA 92392
ATTN: Mike Coony

Comments TENTATIVE REVISED WASTE DISCHARGE REQUIREMENTS FOR LAKE ARROWHEAD CSD

_______We concur with proposed requirements

_______We concur; comments attached

_______We do not concur; comments attached

____(Sign)

____(Type or print name)

____(Organization)

____(Address)

____(City and State)

____(Telephone)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

LAHONTAN REGION

14440 Civic Drive, Suite 200, Victorville, California 92392
(760) 241-6583 • Fax (760) 241-7308
http://www.waterboards.ca.gov/lahontan

ORDER NO. R6V-2010-XXXX
NPDES NO. CAXXXXXXX

WASTE DISCHARGE REQUIREMENTS FOR THE LAKE ARROWHEAD COMMUNITY SERVICES DISTRICT DOMESTIC WASTEWATER TREATMENT FACILITIES

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

Table 1. Discharger Information

Discharger	Lake Arrowhead Community Services District
Name of Facility	Grass Valley Domestic Wastewater Treatment Plant
Facility Address	27000 Pilot Rock Road
	Lake Arrowhead, CA 92352
	San Bernardino County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge.	

Discharge by the Lake Arrowhead Community Services District at Discharge Point 001 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	Treated Municipal Wastewater	34° 17' 19.68" N	117° 13' 14.05" W	Unnamed Stream (tributary to Grass Valley Creek)

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**<Adoption Date>**
This Order shall become effective on:	**<Effective Date>**
This Order shall expire on:	**<Expiration Date>**
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>**

I, Harold J. Singer, 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, Lahontan Region, on **<Adoption Date>**.

Harold J. Singer, Executive Officer

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DRAFT

I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	Lake Arrowhead Community Services District
Name of Facility	Grass Valley Domestic Wastewater Treatment Plant
Facility Address	27000 Pilot Rock Road
	Lake Arrowhead, CA 92352
	San Bernardino County
Facility Contact, Title, and Phone	Ryan Gross, District Engineer, (909) 336-7137
Mailing Address	PO Box 700
	Lake Arrowhead, CA 92352
Type of Facility	Publicly Owned Treatment Works (POTW)
Facility Design Flow	Grass Valley Wastewater Treatment Plant (WWTP) - An average of 2.7 million gallons per day (MGD) during a 24-hour period (dry-weather design flow).

DRAFT

II. FINDINGS

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

A. Background. Lake Arrowhead Community Services District (hereinafter Discharger) submitted a Report of Waste Discharge, dated August 23, 2006, and applied for a National Pollutant Discharge Elimination System (NPDES) permit to obtain authorization for intermittent discharges (hereinafter "Treated Wet Weather Discharges" as defined in Finding II.B) from the Grass Valley Wastewater Treatment Plant to an unnamed creek. The unnamed stream is a water of the United States and a tributary to Grass Valley Creek. Prior to issuance of these Waste Discharge Requirements, the Treated Wet Weather Discharges were not authorized. The Discharger also applied for revision of Board Order No. R6V-2002-0008, which formerly prescribed Waste Discharge Requirements for treatment facilities and the Hesperia Disposal Site.

The application is not complete. Additional information is needed to complete the application for the Treated Wet Weather Discharges to the unnamed creek. The information needed consists of an analysis of the concentrations of constituents in the Discharges.

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. Facility Description. The Discharger owns and operates an extensive wastewater collection, treatment, and effluent disposal system (see Figure 1 of Attachment B). Facilities for wastewater collection and treatment are located in the San Bernardino Mountains between elevations of 4,890 and 5,800 feet above mean sea level (amsl). The collection system consists of approximately 200 miles of sewers and 21 lift stations. The Grass Valley WWTP produces a secondary-treated effluent with nitrogen removed. Treated effluent is transported downgradient in a 10-mile outfall pipeline to the Discharger's Hesperia Disposal Site (see Figure 2 of Attachment B) located in the Mojave Desert at an elevation of approximately 3,000 feet amsl. Effluent is currently disposed in percolation ponds located on the 350-acre site. The Discharger also owns and operates the Willow Creek WWTP, which produces secondary treated effluent, which is also transported through the outfall pipeline to the Hesperia Disposal Site. As a component of the Discharger's planned improvements to their wastewater collection, treatment, and effluent disposal system, the Discharger is planning to eliminate secondary treatment at the Willow Creek WWTP, which would then be converted for use as a flow equalization facility.

The Grass Valley WWTP consists of aerated grit chambers, primary clarifiers, high-rate plastic media trickling filters, secondary clarifiers, an effluent equalization pond, denitrification bioreactors, chlorine contact tanks, sludge gravity thickeners, and a sludge belt filter press. Biosolids are hauled offsite to an authorized facility for recycling/diposal.

For the purposes of this Order, the term "Treated Wet Weather Discharges" refers to releases of treated effluent initiated by the Discharger when sustained flows from the Discharger's the sewer system (and through treatment facilities) exceed a value of 4.0 MGD. This value is the hydraulic capacity of the 10-mile outfall pipeline network that conveys treated effluent to the Discharger's primary disposal site (Hesperia Disposal Site). Flows exceeding the value of 4.0 MGD are associated with inflow of ground and surface water into the Discharger's sewer system. This Order allows Treated Wet Weather Discharges to be initiated only on "Significant Wet Weather Days;" defined as those days during the winter when flow in Grass Valley Creek at the Brentwood-Road crossing is equal to or greater than 40 MGD (62 cfs). The term "Treated Wet Weather Discharges" refers to only those releases of treated effluent initiated by the Discharger at the following discharge points:

Grass Valley Creek Watershed - Discharge Point 001 from the Grass Valley WWTP to the unnamed tributary to Grass Valley Creek. (The Discharger began using this discharge point in the winter of 1992/1993 and is authorized to initiate future discharges at this point provided the discharges meet the requirements in this Order.)

Deep Creek Watershed - Point of release from the Willow Creek WWTP to the pipeline that conveys effluent to the Hillside Pond Disposal Site. (This discharge point was used in the past. The Discharger is not authorized to use the point under this Order.)

During the period of 1992 through 2008, Treated Wet Weather Discharges comprised less than 2% of the total volume of treatment-facility flow. The Discharger initiated Treated Wet Weather Discharges during approximately one out of every four winters. In the winters where the Discharges were initiated the: (1) Number of Significant Wet Weather Days ranged from 1 to 35 days, and (2) Annual rain/snowfall amounts exceeded the long-term annual average (42 inches) by 12% or more.

During Significant Wet Weather Days in the winter of 2004/2005, inflow of ground and surface water into the Discharger's sewer system resulted in flows from the system to 8.0 million gallons per 24-hour period. The flow in the unnamed creek up gradient of Discharge Point 001 is approximately 4 MGD (6.2 cfs) when winter storm water runoff in Grass Valley Creek at the Brentwood Road crossing is 40 MGD (62 cfs).

The confluence of the unnamed creek to Grass Valley Creek is located approximately 0.5 miles downstream of Grass Valley WWTP (see Figures 1 and 3 of Attachment B). A process flow diagram is provided in Attachment C.

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

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

E. California Environmental Quality Act (CEQA). Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.

F. Technology-based Effluent Limitations. Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations (40 CFR 122.44), require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR Part 133. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).

G. Water Quality-Based Effluent Limitations. Section 301(b) of the CWA and 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.

40 CFR 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

H. Water Quality Control Plans. The Regional Water Board adopted a Water Quality Control Plan for the Lahontan Region (hereinafter Basin Plan) which became effective on March 31, 1995 and has been subsequently amended. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan in Table 2-1 on page 2-41 establishes beneficial uses for minor surface waters in the Upper Mojave Hydrologic Area (Hydrologic Unit No. 628.20). These beneficial uses include municipal and domestic supply (MUN), agricultural supply (AGR), ground water recharge (GWR), hydropower generation (POW), water contact

recreation (REC-1), non-contact water recreation (REC-2), warm freshwater habitat (WARM), cold freshwater habitat (COLD), and wildlife habitat (WILD). The Basin Plan in Table 2-1 on page 2-41 also establishes beneficial uses for Grass Valley Lake Creek in the Upper Mojave Hydrologic Area (Hydrologic Unit No. 628.20) of MUN, AGR, GWR, REC-1, REC-2, commercial and sportfishing (COMM), WARM, COLD, and WILD. The Basin Plan at page 2-3 specifies that beneficial uses also apply to all tributaries of surface waters identified in Table 2-1 (i.e., specific surface waters which are not listed have the same beneficial uses as the streams, lakes, wetlands, or reservoirs to which they are tributary). Therefore, the Regional Water Board finds that the beneficial uses of Grass Valley Creek are also applicable to the unnamed stream. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Thus, as discussed in detail in the Fact Sheet, beneficial uses applicable to the unnamed stream and Grass Valley Creek are as follows:

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Unnamed stream	Existing: MUN, AGR, GWR, POW, REC-1, REC-2, COMM, WARM, COLD, and WILD
	Grass Valley Creek	MUN, AGR, GWR, REC-1, REC-2, COMM, WARM, COLD, and WILD

To protect beneficial uses and achieve water quality objectives for the waters of the Upper Mojave Hydrologic Area, the Basin Plan specifies the following discharge prohibitions:

1. The discharge of waste to surface water in the Mojave Hydrologic Unit, which is tributary to the West Fork Mojave River or Deep Creek above elevation 3,200 feet (approximate elevation of Mojave Forks Dam), is prohibited. This prohibition does not apply to stormwater discharges unless such discharges create a condition of pollution or nuisance. (Figure 4.1-23).

2. The discharge of waste to land or water within the following areas is prohibited (Figure 4.1-23):

   a. The Silverwood Lake watershed
   b. The Deep Creek watershed above elevation 3,200 feet
   c. The Grass Valley Creek watershed above elevation 3,200 feet
   This prohibition does not apply to stormwater discharges unless such discharges create a condition of pollution or nuisance.

3. The discharge of wastes of sewage-bearing origin to surface waters in the Mojave Hydrologic Unit upstream of the Lower Narrows at Victorville is prohibited. (Figure 4.1-24).

Discharge Point No. 001 as defined in Finding B, above, is located within the areas subject to the three above-referenced discharge prohibitions. The Treated Wet Weather Discharges are therefore subject to the above-referenced discharge prohibitions. The Basin Plan allows for exemption to the discharge prohibitions and includes the following exemption criteria for each of the prohibitions:

> "An exemption to this prohibition may be granted by the Regional Board whenever the Regional Board finds that the discharge of waste will not, individually or collectively, directly or indirectly, result in exceeding the water quality objectives or unreasonably affect the water for its beneficial uses."

The Discharger concluded in a September 18, 2008 letter that it can meet effluent limits/WQOs contained in this Order for the Treated Wet Weather Discharges. The Discharger, however, has not provided a technical analysis to support this conclusion. A satisfactory technical analysis supporting this conclusion is needed, before the Board can consider granting exemptions to each of the above discharge prohibitions.

The beneficial uses of the ground waters of the Upper Mojave Hydrologic Area of the Mojave Hydrologic Unit as set forth and defined in the Basin Plan are:

a. Municipal and domestic supply (MUN)
b. Agricultural supply (AGR)
c. Industrial service supply (IND)
d. Freshwater replenishment (FRSH).

Requirements have been included in this Order for implementing 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.

J. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

K. Compliance Schedules and Interim Requirements. 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 and interim effluent limitations and/or discharge specifications

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. (40 CFR 131.21; 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

M. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on 5-day biochemical oxygen demand (BOD_5) and total suspended solids (TSS). Restrictions on BOD_5 and TSS are discussed in section IV.B.2 of the Fact Sheet (Attachment F). This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum, federal technology-based requirements that are necessary to meet water quality standards. These limitations are not more stringent than required by the CWA.

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 40 CFR 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 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. 40 CFR 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies.

With implementation of the Planned Changes described in the attached Fact Sheet, the permitted discharges to the unnamed tributary to Grass Valley Creek and the Hesperia Disposal Site are consistent with the antidegradation policies because the changes in water quality from the discharges:

1. **Are consistent with maximum benefit to people of the state** in that best practicable treatment or control technology will be implemented to meet final effluent limitations;

2. **Will not unreasonably affect present and anticipated beneficial use of such water** in that the final effluent limitations are protective of receiving water quality objectives (WQOs);

3. **Will not result in water quality less than prescribed in policies** in that the final effluent limitations will not unreasonably affect present and anticipated beneficial uses and not result in a water quality less than prescribed in the Basin Plan; and

4. **Best practicable treatment or control of the discharges are used to assure that (1) a pollution or nuisance will not occur and (2) the highest water quality consistent with maximum benefit to people of the state will be maintained**. This condition is met because best practicable treatment or control technology is necessary to meet final effluent limitations.

The Regional Water Board concludes that the Planned Changes results in the highest water quality consistent with maximum benefit to the people of the state and State Board Resolution 68-16 conditions are satisfied.

O. Anti-Backsliding Requirements. Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed.

P. Endangered Species Act. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act

(Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

Q. **Monitoring and Reporting.** 40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

R. **Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with 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 under 40 CFR 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.

S. **Provisions and Requirements Implementing State Law.** The provisions/requirements in subsection VI.C.4.a of this Order (plant operator certification) are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

T. **Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.

U. **Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

THEREFORE, IT IS HEREBY ORDERED, that 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 Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

TENTATIVE

III. DISCHARGE PROHIBITIONS

A. In accordance with the Region-wide Prohibitions in section 4.1 of the Basin Plan:

1. The discharge of waste[1] that causes violation of any narrative water quality objective contained in the Basin Plan, including the Nondegradation Objective, is prohibited.

2. The discharge of waste that causes violation of any numeric water quality objective contained in the Basin Plan is prohibited.

3. Where any numeric or narrative water quality objective contained in the Basin Plan is already being violated, the discharge of waste that causes further degradation or pollution is prohibited.

4. The discharge of untreated sewage, garbage, or other solid wastes, or industrial wastes into surface waters of the Region is prohibited.

B. The discharge of treated wastewater at Discharge Point 001 is prohibited except under the following conditions:

a. The flow rate in Grass Valley Creek (upgradient of the discharge point) is greater than or equal to 40 MGD (62 cfs); and

b. The discharge flow rate to the unnamed stream does not exceed 4.0 MGD.

C. There shall be no discharge, bypass, or diversion of raw or partially treated wastewater, wastewater biosolids, grease, or oils from the collection, transport, treatment, wet weather storage, or disposal facilities to adjacent land areas, or surface waters except as in compliance with Standard Provisions for bypass (Attachment D).

D. The discharge shall not cause pollution as defined in section 13050 of the California Water Code, or a threatened pollution.

E. The collection, transport, treatment, storage, or discharge of waste shall not cause a nuisance as defined by section 13050(m) of the California Water Code.

F. Discharge of wastewater into the Willow Creek branch of the outfall pipeline is prohibited once the Discharger has decommissioned the secondary treatment facilities located at the Willow Creek WWTP.

G. The flow of untreated wastewater to the Grass Valley WWTP must not exceed the following:

1. Dry Weather

[1] "Waste" is defined to include any waste or deleterious material including, but not limited to, waste earthen materials (such as soil, silt, sand, clay, rock, or other organic or mineral material) and any other waste was defined in the section 13050(d) of the California Water Code.

a. Average of 3.75 MGD during a 72-hour period (holiday weekend)

2. Wet Weather

a. Average of 6.0 MGD during a 24-hour period
b. Average of 8.0 MGD during a 72-hour period (holiday weekend)
c. Maximum instantaneous of 12.0 MGD

H. The total effluent flow to the Outfall Pipeline System pipelines during a 24-hour period shall not exceed 4.0 MG.

TENTATIVE

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point No. 001

1. Final Effluent Limitations – Discharge Point No. 001

a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 001, with compliance measured at Monitoring Location EFF-001 as described in the attached MRP:

Table 6. Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Conventional Pollutants						
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	20	25	30	--	--
pH	standard units	--	--	--	6.5	8.5
Total Suspended Solids	mg/L	20	25	30	--	--
Priority Pollutants						
Bis (2-ethylhexyl) phthalate	µg/L	1.8	--	3.6	--	--
Chlorodibromomethane	µg/L	0.41	--	0.82	--	--
Chloroform	µg/L	5.7	--	11.4	--	--
Copper, Total Recoverable	µg/L	3.1	--	6.3	--	--
Dichlorobromomethane	µg/L	0.56	--	1.12	--	--
Non-Conventional Pollutants						
Total Ammonia (as N)	mg/L	1.7	--	3.9	--	--
Chlorine, Total Residual	mg/L	--	--	0.003	--	--
Total Haloacetic Acids[1]	µg/L	30	--	60	--	--
Methylene Blue Active Substances	mg/L	0.5	--	0.9	--	--
Total Nitrogen (as N)	mg/L	8	--	10	--	--

[1] Total haloacetic acids include monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid.

b. Percent Removal: The average monthly percent removal of BOD_5 and TSS shall not be less than 85 percent.

c. Acute Whole Effluent Toxicity. The effluent shall not exhibit acute toxicity, defined as:

i. Less than 90 percent survival of *Pimephales promelas* in undiluted effluent in ≥50 percent of the samples in a calendar year; or

ii. Less than 70 percent survival of *Pimephales promelas* in undiluted effluent in ≥10 percent of the samples in a calendar year.

d. **Total Residual Chlorine.** Effluent total residual chlorine shall not exceed 0.002 mg/L as a 6-month median.

e. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed:

i. 2.2 most probable number (MPN) per 100 mL, as a median concentration during the last 7 days on which a discharge occurred; and

ii. 23 MPN/100 mL, more than once during the last 30-day period on which a discharge occurred.

2. **Interim Effluent Limitations – Not Applicable**

B. Land Discharge Specifications – Not Applicable

C. Reclamation Specifications

1. Pursuant to Water Code section 13523.1, subdivision (b)(2), the Discharger must comply with the Uniform Statewide Reclamation Criteria, which are contained in California Code of Regulations, title 22, sections 60301 through 60355 and are established pursuant to Water Code section 13521.

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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. The discharge shall not cause the following in the unnamed stream or Grass Valley Creek:

1. This Discharger shall not cause a violation of any applicable water quality standard for receiving water adopted by the Regional Water Board or the State Water Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the Federal Clean Water Act or amendments thereto, the Regional Water Board may revise and modify this Order in accordance with such more stringent standards.

2. **Ammonia.** The neutral, unionized ammonia species ($NH_3°$) is highly toxic to freshwater fish. The fraction of toxic $NH_3°$ to total ammonia species ($NH_4° + NH_3°$) is a function of temperature and pH. Tables 3-1 to 3-4 of the Basin Plan, contained in Attachment I of this Order, were derived from USEPA ammonia criteria for freshwater. Ammonia concentrations shall not exceed the values listed for the corresponding conditions in these tables. For temperature and pH values not explicitly in these tables, the most conservative value neighboring the actual value may be used or criteria can be calculated from numerical formulas available on page 3-4 of the Basin Plan.

2. **Bacteria, Coliform.** Waters shall not contain concentrations of coliform organisms attributable to anthropogenic sources, including human and livestock wastes. The fecal coliform concentration during any 30-day period shall not exceed a log mean of 20 MPN/100 mL, nor shall more than 10 percent of all samples collected during any 30-day period exceed 40 MPN/100 mL. The USEPA recommends that the log mean should ideally be based on a minimum of not less than five samples collected as evenly spaced as practicable during any 30-day period. [Reference: Ambient Water Quality Criteria for Bacteria – 1986, EPA 440/5-84-002, page 2.] However, a log mean concentration exceeding 20 MPN/100 mL for any 30-day period shall indicate violation of this objective even if fewer than five samples were collected.

3. **Biostimulatory Substances.** Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect the water for beneficial uses.

4. **Chemical Constituents.** Waters designated as MUN shall not contain concentrations of chemical constituents in excess of the maximum contaminant level (MCL) or secondary maximum contaminant level (SMCL) based upon drinking water standards specified in the following provisions of Title 22 of the California Code of Regulations. Waters designated as AGR shall not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses

(i.e., agricultural purposes). Waters shall not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses.

5. **Chlorine, Total Residual.** For the protection of aquatic life, total chlorine residual shall not exceed either a median value of 0.002 mg/L or a maximum value of 0.003 mg/L. Median values shall be based on daily measurements taken within a 6-month period.

6. **Color.** Waters shall be free of coloration that causes nuisance or adversely affects the water for beneficial uses.

7. **Dissolved Oxygen.** The dissolved oxygen concentration, as percent saturation, shall not be depressed by more than 10 percent, nor shall the minimum dissolved oxygen concentration be less than 80 percent of saturation. The minimum dissolved oxygen concentration shall not be less than that specified in Table 3-6 of Attachment J of this Order.

8. **Floating Materials.** Waters shall not contain floating materials, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect the water for beneficial uses. For natural high quality waters, the concentrations of floating material shall not be altered to the extent that such alterations are discernible at the 10 percent significance level.

9. **Oil and Grease.** Waters shall not contain oils, greases, waxes or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect the water for beneficial uses. For natural high quality waters, the concentration of oils, greases, or other film or coat generating substances shall not be altered.

10. **Nondegradation of Aquatic Communities and Populations.** All waters shall be free of substances attributable to wastewater or other discharges that produce adverse physiological responses in humans, animals, or plants; or which lead to the presence of undesirable or nuisance aquatic life. All waters shall be free from activities that would substantially impair the biological community as it naturally occurs due to physical, chemical and hydrologic processes.

11. **Pesticides.** According to the Basin Plan, pesticides are defined to include insecticides, herbicides, rodenticides, fungicides, pesticides and all other economic poisons. An economic poison is any substance intended to prevent, repel, destroy, or mitigate the damage from insects, rodents, predatory animals, bacteria, fungi or weeds capable of infesting or harming vegetation, humans, or animals (CA Agricultural Code section 12753). Pesticide concentrations, individually or collectively, shall not exceed the lowest detectable levels, using the most recent detection procedures available. There shall not be an increase in pesticide concentrations found in bottom sediments. There shall be no detectable increase in bioaccumulation of pesticides in aquatic life. Waters designated as MUN shall not contain concentrations of pesticides or herbicides in excess of the limiting concentrations specified in Title 22 of the California Code of Regulations.

12. **pH.** Changes in normal ambient pH levels shall not exceed 0.5 pH units. The pH shall not be depressed below 6.5 nor raised above 8.5. Compliance with the pH objective for these waters will be determined on a case-by-case basis.

13. **Radioactivity.** Radionuclides shall not be present in concentrations which are deleterious to human, plant, animal, or aquatic life nor which result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plan, animal, or aquatic life. Waters designated as MUN shall not contain concentrations of radionuclides in excess of the limits specified in Title 22 of the California Code of Regulations.

14. **Sediment.** The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect the water for beneficial uses.

15. **Settleable Materials.** Waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or that adversely affects the water for beneficial uses. For natural high quality waters, the concentration of settleable materials shall not be raised by more than 0.1 ml/L.

16. **Suspended Materials.** Waters shall not contain suspended materials in concentrations that cause nuisance or that adversely affect the water for beneficial uses. For natural high quality waters, the concentration of total suspended materials shall not be altered to the extent that such alterations are discernible at the 10 percent significance level.

17. **Taste and Odor.** Waters shall not contain taste or odor-producing substances in concentrations that impart undesirable tastes or odors to fish or other edible products of aquatic origin, that cause nuisance, or that adversely affect the water for beneficial uses. For naturally high quality waters, the taste and odor shall not be altered.

18. **Temperature.** The natural receiving water temperature of all waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such an alteration in temperature does not adversely affect the water for beneficial uses. For waters designated WARM, water temperature shall not be altered by more than 5 degrees Fahrenheit (5°F) above or below the natural temperature. For waters designated COLD, the temperature shall not be altered. [Note: The Basin Plan does not specify which reaches of Grass Valley Creek have a COLD and which have a WARM beneficial use. Therefore, the most restrictive standard (e.g., no alteration of temperature for the COLD use) applies. However, for purposes of compliance and enforcement, the Regional Water Board will consider historical data and the impact of temperature alterations upon the beneficial uses of Grass Valley Creek below Discharge Point No. 001.]

19. **Toxicity.** All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by

use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration and/or other appropriate methods as specified by the Regional Water Board [or the Executive Officer or his/her designee]. The survival of aquatic life in surface waters subjected to a waste discharge, or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge, or when necessary, for other control water that is consistent with the requirements for "experimental water" as defined in Standard Methods for the Examination of Water and Wastewater (American Public Health Association, et al. 1992).

20. **Turbidity.** Waters shall be free of changes in turbidity that cause nuisance or adversely affect the water for beneficial uses. Increases in turbidity shall not exceed natural levels by more than 10 percent.

B. Groundwater Limitations – Not Applicable

TENTATIVE

VI. PROVISIONS

A. Standard Provisions

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

2. The Discharger shall comply with all Standard Provisions for WDRs included in Attachment L of this Order.

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

a. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the Federal Water Pollution Control Act or amendments thereto, the Regional Water Board may revise and modify this Order in accordance with such more stringent standards.

b. The Regional Water Board may reopen this Order to establish new conditions or effluent limitations should monitoring data, toxicity-testing data, or other new information indicate that a constituent is discharged at a level that will do any of the following:

i. Cause, have reasonable potential to cause, or contribute to an in-stream excursion above any water quality criteria or objective, or

ii. Cause, have reasonable potential to cause, or contribute to a violation of any narrative water quality objective from the Basin Plan.

c. This Order includes final effluent limitations at Discharge Point No. 001 (discharge to the unnamed stream). This Order requires the Discharger to conduct effluent and receiving water monitoring for many constituents. After review and analysis of new or additional data, the Regional Water Board may reopen this Order to modify the final effluent limitations for Discharge Point No. 001 to ensure that the discharge is in compliance with the Basin Plan. New effluent limitations may be established to attain all beneficial uses, water quality objectives, and nondegradation of water quality, as specified in the Basin Plan.

d. This Order includes a provision in section VI.C.2.b permitting the Discharger to complete and submit optional studies for consideration by the Regional Water Board. One optional study is development of a proposed metals translator for copper. A second optional study involves collection of additional, reliable effluent

and receiving water monitoring data for bis (2-ethylhexyl) phthalate. Upon submission of a metals translator or additional effluent and receiving water data for bis (2-ethylhexyl) phthalate, the Regional Water Board may review the final effluent limitations at Discharge Point No. 001 for copper and the reasonable potential determination and final effluent limitations for bis (2-ethylhexyl) phthalate. Based on the results of this review, the Regional Water Board may reopen this Order and modify the final effluent limitations for copper or remove or modify, if appropriate, the final effluent limitations for bis (2-ethylhexyl) phthalate established in this Order.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Toxicity Identification Evaluations or Toxicity Reduction Evaluations

By November 9, 2011, the Discharger shall submit to the Water Board an initial investigation Toxicity Reduction Evaluation (TRE) work plan. This plan shall generally describe the steps the Discharger intends to follow if acute or chronic toxicity is detected during accelerated acute WET testing or chronic WET testing as specified in the Monitoring and Reporting Program (Attachment E). The plan should include at least a description of the investigation and evaluation techniques that would be used to identify' potential causes and sources of toxicity, effluent variability, and treatment system efficiency and, if a Toxicity Identification Evaluation (TIE) is necessary, an indication of the person who would conduct the TIE.

If acute or chronic toxicity is detected during accelerated acute WET testing or chronic WET testing as specified in the Monitoring and Reporting Program (Attachment E), the Discharger shall, in accordance with its initial investigation TRE work plan, initiate a TRE within 15 days of receipt of the final acute or chronic toxicity test results in order to reduce the cause(s) of toxicity. At a minimum, the Discharger shall use the USEPA manual EPA/833B-99/002 as guidance. The Discharger shall expeditiously develop and implement a more detailed TRE work plan that includes:

i. Further actions to investigate and identify the cause(s) of toxicity;

ii. Actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and

iii. A schedule for these actions.

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

Results of a TRE/TIE shall be submitted to the Regional Water Board **within two months of study completion** when such a study is required based on the conditions stated above.

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

b. Optional Studies

The Discharger may develop and submit to the Regional Water Board for its consideration a translator study for copper. Any such study shall be conducted in accordance with the requirements of the SIP and USEPA's *The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion* (EPA-823-B-96-007). The Discharger shall submit the study plan for any such study to the Regional Water Board Executive Officer or his/her designee to review and accept, which is required prior to initiation of the study. Upon completion of the study and submission of the study results, the Regional Water Board may, based on the results, reopen this Order to modify the final effluent limitations for copper in accordance with the provisions in section VI.C.1.d of this Order.

In addition, the Discharger may conduct and submit to the Regional Water Board for its consideration a study involving collection of additional, reliable ambient and effluent monitoring data for bis (2-ethylhexyl) phthalate. The Discharger shall submit the study plan for any such study to the Regional Water Board Executive Officer or his/her designee to review and accept, which is required prior to initiation of the study. Upon completion of the study and submission of the study results, the Regional Water Board may, based on the results and in accordance with the provisions in section VI.C.1.d of this Order, reconsider the reasonable potential determination or modify the final effluent limitations for bis (2-ethylhexyl) phthalate.

3. Best Management Practices and Pollution Prevention

a. Pollutant Minimization Program

The Discharger shall develop and conduct a Pollutant Minimization Program (PMP) as further described below when there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either:

i. A sample result is reported as DNQ and the effluent limitation is less than the RL; or

ii. A sample result is reported as ND and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in MRP section X.B.4.

The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

i. An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;

ii. Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;

iii. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;

iv. Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and

v. An annual status report that shall be sent to the Regional Water Board including:

(a) All PMP monitoring results for the previous year;

(b) A list of potential sources of the reportable priority pollutant(s);

(c) A summary of all actions undertaken pursuant to the control strategy; and

(d) A description of actions to be taken in the following year.

4. Construction, Operation and Maintenance Specifications

a. The Discharger's wastewater treatment facilities shall be supervised by people who possess a wastewater treatment plant operator certificate of appropriate grade pursuant to Chapter 26, Title 23, of the California Code of Regulations.

b. All facilities used for collection, transportation, treatment, or disposal of waste shall be adequately protected against overflow, washout, inundation, structural damage or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.

c. Waste biosolids shall be discharged only at a legal point of disposal in accordance with the provisions of Title 27, California Code of Regulations and in accordance with 40 CFR Part 503.

d. The California Water Code (sections 13350 and 13385) provides that any person who violates a waste discharge requirement or a provision of the California Water Code, is subject to civil penalties stated therein.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. The Discharger is required to comply with the Statewide General Waste Discharge Requirements (as amended) for Sanitary Sewer Systems.

b. The Discharger shall comply with USEPA standards for collection system infiltration, which is 120 gallons per capita per day (gpcd). During any 7-day period, which has no measurable rainfall but follows a day with measurable rainfall, the average daily influent flowrates ($Q_{gpcd,\ infiltration}$) to the treatment facilities shall not exceed 120 gpcd. [$Q_{gpcd,\ infiltration} = Q_{gpd,\ infiltration} / P$, where:

i. $Q_{gpd,\ infiltration}$ is the average daily influent flowrate (gallons per day) for the 7-day period; and

ii. P equals the estimated population, which is determined by dividing the average monthly dry weather influent flow ($Q_{gpd,\ dw}$) to the treatment facilities by 80 gpcd[1]. $Q_{gpd,\ dw}$ is the average influent flowrate during dry weather (e.g., a period during the previous summer when there is no rainfall).]

c. The Discharger shall comply with USEPA standards for collection system inflow, which is 275 gpcd. The daily flow ($Q_{gpcd,\ inflow}$) on any day shall not exceed 275 gpcd. [$Q_{gpcd,\ inflow} = Q_{gpd,\ inflow} / P$, where:

i. $Q_{gpd,\ inflow}$ is the flow for the day in GPD; and

ii. P equals the estimated population, which is calculated as described in section VI.C.5.b.ii above.]

6. Other Special Provisions

a. Order Continuation After Expiration Date

If this Order is not revised and renewed prior to expiration, then the Order shall be continued until revised and renewed, provided that compliance with the requirements contained herein is maintained and that the Discharger has applied for renewal of the Order at least 180 days prior to the expiration date.

b. Land Ownership Change or Control

In the event of a change in control or ownership of land or waste discharge facilities presently owned and or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by

[1] The Discharger developed the value of 80 gpcd in its 1983 Sewer Master Plan (*LKACSD, 1998)*

letter, a copy of which shall be immediately forwarded to the Regional Water Board.

c. Succeeding Owner or Operator

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, address and telephone number of the persons responsible for contact with the signatory and certification requirements in the Federal Standard Provisions (Attachment D, section V.B) and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge with requirements and a violation of the California Water Code. Transfer shall be approved in writing by the Executive Officer.

d. Cease and Desist Orders

Cease and Desist Orders No. 6-93-44 and 6-93-44A1 shall remain in effect.

e. Waste Discharge Requirements (Board Order 6-89-110)

Discharge Specifications No. I.D.1, I.D.3 and I.D.5 of Board Order No. 6-89-110 shall remain in effect and unchanged. All other Discharge Specifications and Findings of Board Order No. 6-89-110, and all Provisions of Board Order No. 6-89-110 are no longer in effect.

f. Waste Discharge Requirements (Board Order R6V-2002-0008)

Board Order No. R6V-2002-0008 is hereby rescinded.

7. Compliance Schedules – 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

1. Compliance with Priority Pollutant Limitations

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 Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

2. Compliance with Total Residual Chlorine (TRC) Limitations

As noted above in section IV.A.1.a, concentration-based effluent limitations for TRC are below the expected minimum level (ML) for this constituent. Non-compliance with a TRC limitation is defined by exceeding both the limitation and the Reporting Level (RL). The Discharger must achieve the lowest possible RL for TRC but, in no case, may the RL be greater than 0.1 mg/L.

B. Multiple Sample Data

When determining compliance with an annual average effluent limitation, average monthly effluent limitation, average weekly effluent limitation, or maximum daily effluent limitation 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 the 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.

C. Average Monthly Effluent Limitation (AMEL)

If the average (or when applicable, the median determined by section VII.B above for the multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

D. Average Weekly Effluent Limitation (AWEL)

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

E. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge (or when applicable, the median determined by section VII.B above for multiple sample data) exceeds the MDEL for a given parameter, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which not sample is taken, no compliance determination can be made for that calendar day.

F. Instantaneous Minimum Effluent Limitation

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

G. Instantaneous Maximum Effluent Limitation

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample

will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

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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 Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

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

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

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

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

Standard Deviation (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;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

Toxicity Reduction Evaluation (TRE)

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

TENTATIVE

ATTACHMENT B – MAPS

Figure B-1. Facilities Location Map

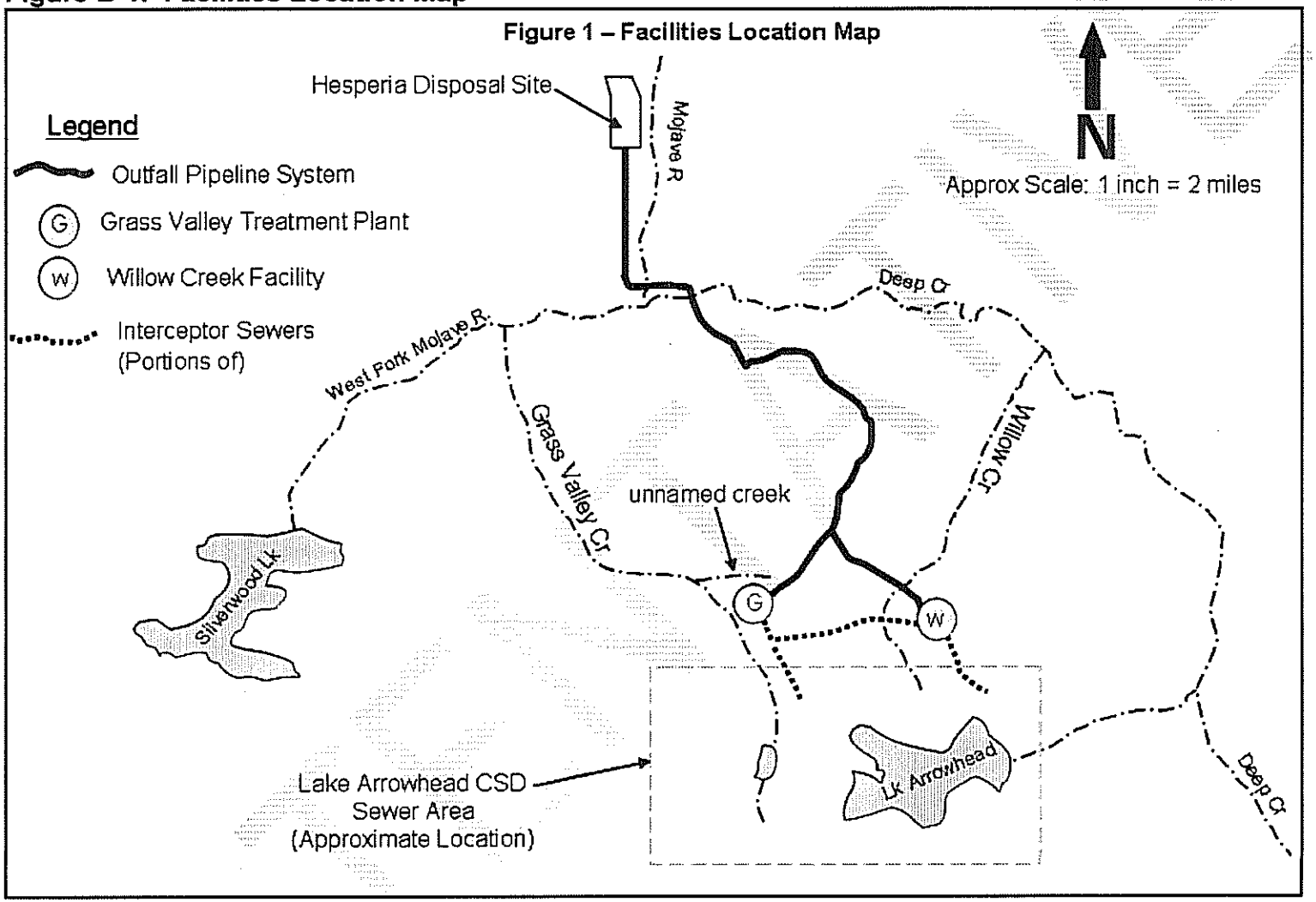


Figure B-2. Lake Arrowhead CSD - Hesperia Disposal Site

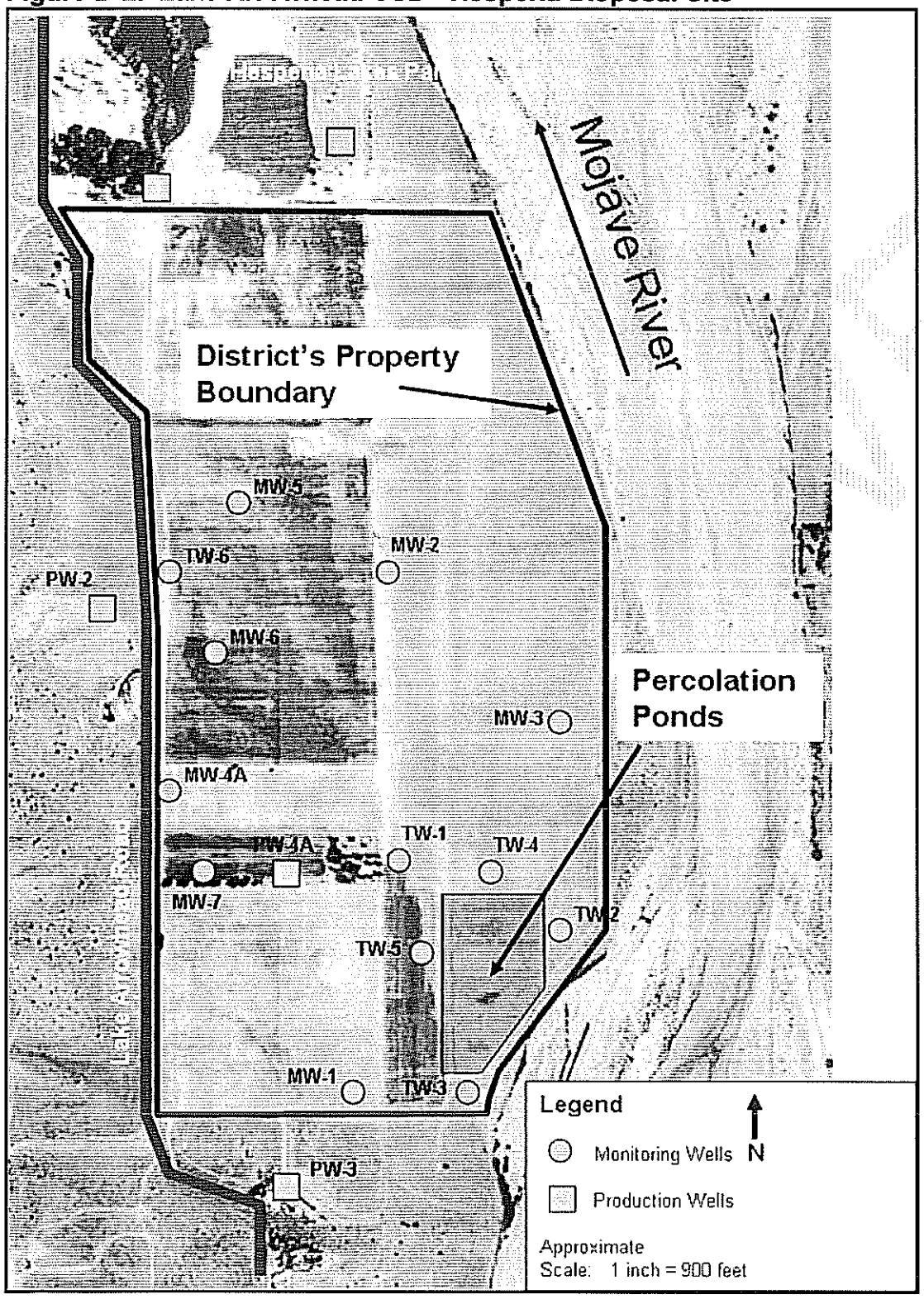
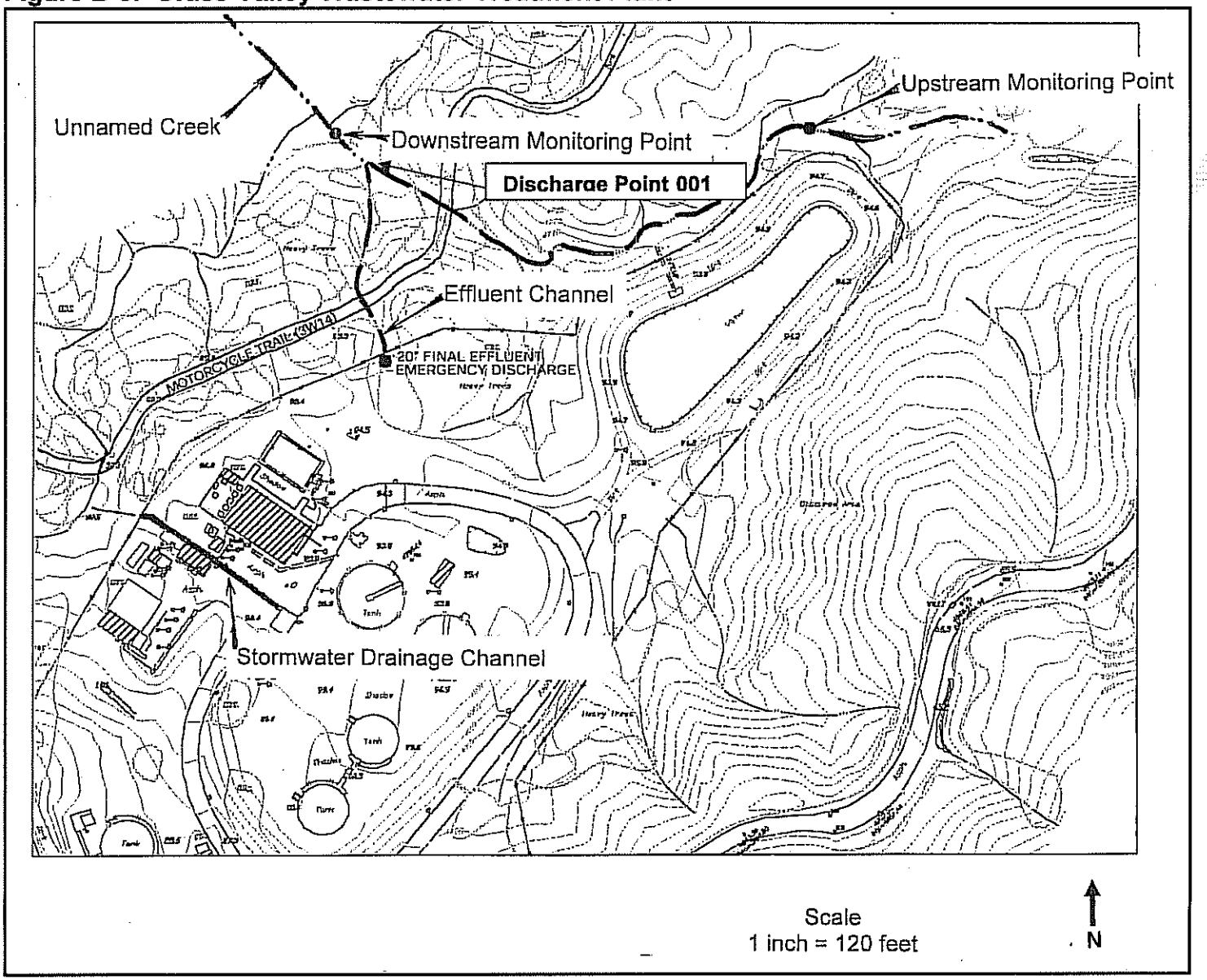
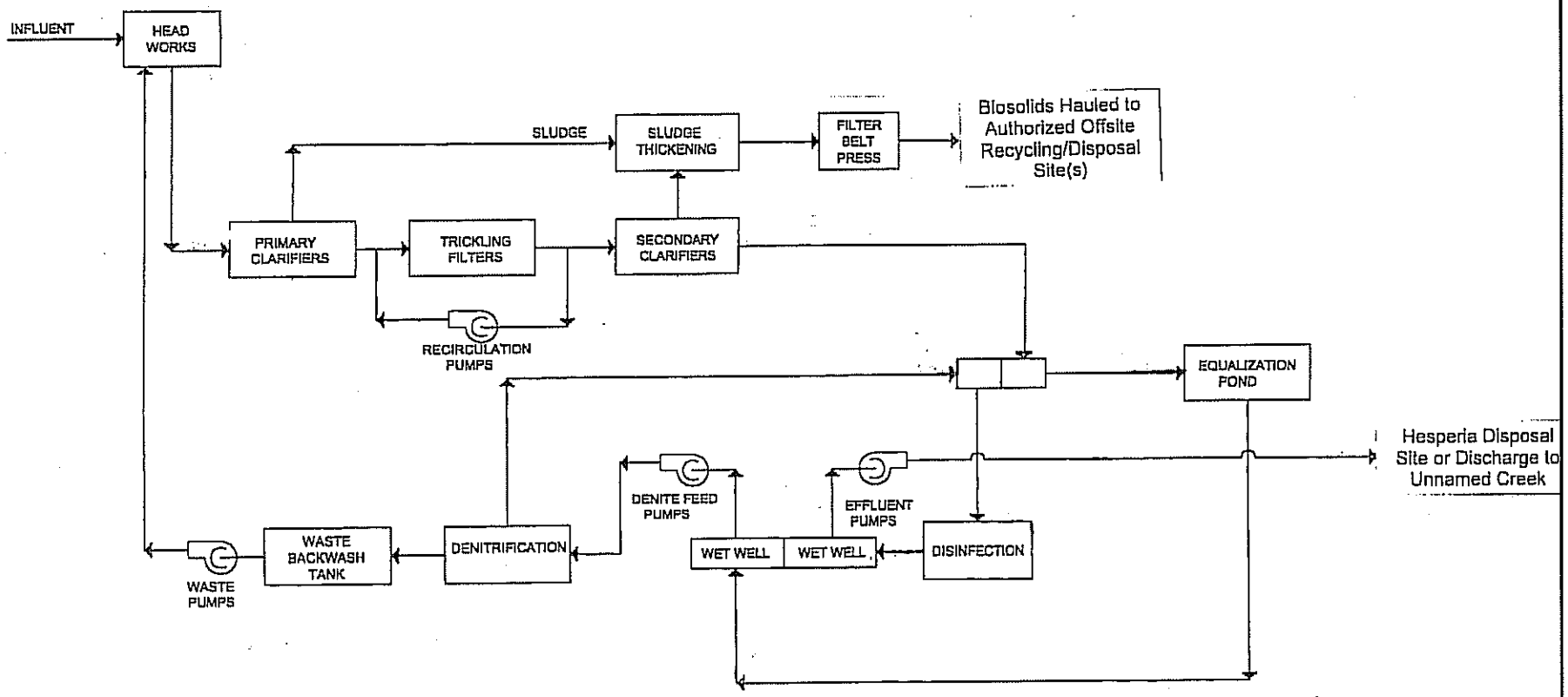


Figure B-3. Grass Valley Wastewater Treatment Plant



ATTACHMENT C – FLOW SCHEMATIC



Adapted from: Figure 4 of *Initial Study for the Recycled Water Program Improvements Lake Arrowhead CSD*, Tom Dodson and Associates, October 2004

ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 CFR 122.41(a).)

2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (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 Regional Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 CFR122.41(i); Wat. Code, § 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (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 Water Code, 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. (40 CFR 122.41(m)(1)(ii).)

2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 CFR 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (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));

   a. 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

   b. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 CFR 122.41(m)(4)(i)(C).)

4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (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).)

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)):

   a. 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. 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 Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 CFR 122.41(l)(3); 122.61.)

III. 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).)

A. Monitoring results must be conducted according to test procedures under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order. (40 CFR 122.41(j)(4); 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

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

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR 122.41(h); Wat. Code, § 13267.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (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 Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (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 Regional 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 Regional 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 CFR122.22(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(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 CFR 122.41(l)(4)(i).)

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 CFR 122.41(l)(4)(ii).)

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR 122.41(l)(4)(iii).)

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall

also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 CFR 122.41(l)(6)(i).)

2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 CFR 122.41(l)(6)(ii)):

   a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR 122.41(l)(6)(ii)(A).)

   b. Any upset that exceeds any effluent limitation in this Order. (40 CFR 122.41(l)(6)(ii)(B).)

3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR 122.41(l)(6)(iii).)

F. Planned Changes

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

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 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 not subject to effluent limitations in this Order. (40 CFR 122.41(l)(1)(ii).)

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 CFR 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

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

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 CFR 122.41(l)(7).)

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 CFR 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

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

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional 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 E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

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

I. GENERAL MONITORING PROVISIONS

A. The following provisions are applicable to monitoring conducted pursuant to sections III, IV, V, and VIII.A of this MRP:

1. 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 the approval of this Regional Water Board.

2. 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.

3. Laboratories analyzing monitoring samples shall be certified by the Department of Health Services, in accordance with the provision of Water Code section 13176, and must include quality assurance/quality control data with their reports.

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. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.

5. Monitoring results, including non-compliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program.

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude when available)
--	INF-001 (G)	A location where a representative sample of the influent into the Grass Valley WWTP can be collected.
--	INF-002 (W)	A location where a representative sample of the influent into the Willow Creek WWTP can be collected.
001	EFF-001	Between the outlet of the outfall pipeline and the unnamed creek tributary to Grass Valley Creek (See Attachment B, Figure 3).
--	RSW-001	Unnamed creek, approximately 300 feet upstream of its confluence with the effluent channel (See Attachment B, Figure 3).
--	RSW-002	Unnamed creek, approximately 40 feet downstream of its confluence with the effluent channel (See Attachment B, Figure 3).
--	RSW-003	Grass Valley Creek at the Brentwood Road crossing

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001 and INF-002

1. The Discharger shall monitor influent to the Grass Valley WWTP at INF-001 and the Willow Creek WWTP at INF-002 as follows:

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency[1]	Required Analytical Test Method
Conventional Pollutants				
Biochemical Oxygen Demand (5-day @ 20°C)[2]	mg/L	Grab	1/Day[3] 1/Week[4]	40 CFR Part 136 Methods
Total Suspended Solids	mg/L	Grab	1/Day[3] 1/Week[4]	40 CFR Part 136 Methods
Methylene Blue Active Substances	mg/L	Grab	1/Week	40 CFR Part 136 Methods

1 Samples shall be collected at a time during the day when the flowrate is at a maximum. At least one half of the samples that are collected on a weekly frequency shall be collected on weekends.
2 Shall be conducted on an unfiltered sample.
3 When discharging to surface water.
4 When discharging to Hesperia Disposal Site.

2. The following shall be recorded for the flows from the collection system to each treatment facility (Grass Valley WWTP and Willow Creek WWTP):

   a. Maximum instantaneous flow rate (MGD) for each day;
   b. Total volume (million gallons) for each day;

c. Total volume (million gallons) for each month; and
d. Average flow rate (MGD) for each month.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor secondary treated municipal wastewater discharged to the unnamed stream from the Grass Valley WWTP at 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:

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency[1]	Required Analytical Test Method
Flow	MGD	Estimate	1/Day	--
Conventional Pollutants				
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	Grab	1/Day	40 CFR Part 136 Methods
Fecal Coliform Organisms	MPN/100 ML	Grab	1/Day	40 CFR Part 136 Methods
pH	standard units	Grab	1/Day	40 CFR Part 136 Methods
Temperature	degrees C	Grab	1/Day	40 CFR Part 136 Methods
Total Suspended Solids	mg/L	Grab	1/Day	40 CFR Part 136 Methods
Priority Pollutants				
Bis (2-ethylhexyl) Phthalate	µg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Copper, Total Recoverable	µg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Chlorodibromomethane	µg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Chloroform	µg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Dichlorobromomethane	µg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Bromoform	µg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Priority Pollutants[3]	µg/L	Grab	1/Winter[4]	40 CFR Part 136 Methods
Non-Conventional Pollutants				
Boron, Total Recoverable	µg/L	Grab	1/Winter[4]	40 CFR Part 136 Methods
Chlorine, Total Residual	mg/L	Grab	1/Day	40 CFR Part 136 Methods
Total Coliform Organisms	MPN/100 ML	Grab	1/Day	40 CFR Part 136 Methods
Monochloroacetic Acid	µg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Trichloroacetic Acid	µg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods

Parameter	Units	Sample Type	Minimum Sampling Frequency[1]	Required Analytical Test Method
Monobromoacetic Acid	µg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Dibromoacetic Acid	µg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Dichloroacetic Acid	µg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Total Dissolved Solids	mg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Sodium	mg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Chloride	mg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Sulfate	mg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Fluoride	mg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Kjeldahl Nitrogen as N	mg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Nitrate as N	mg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Total Ammonia as N	mg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Total Nitrogen as N	mg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Dissolved Oxygen	mg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Total Organic Carbon	mg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Methylene Blue Active Substances	mg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods

[1] A "Day" consists of any Significant Wet Weather Day as defined in the attached permit.
[2] A "Minimum Sampling Frequency" of "1/4 Days" means to sample on: Day 1, Day 5, Day 9, Day 13, Day 17, Day 21, Day 25, Day 29, etc.
[3] Priority pollutants include those pollutants listed in the California Toxics Rule [40 CFR 131.38(b)(1)].
[4] Priority pollutants and boron shall be monitored on the first significant wet weather day during a winter.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute WET Testing – Monitoring Location EFF-001

1. The presence of acute toxicity shall be determined as specified in USEPA's acute toxicity test methods in 40 CFR Part 136 for the *Pimephales promelas* survival test.

2. The Discharger shall conduct acute WET tests on grab samples of undiluted effluent and an appropriate control water, as specified in the test method once per discharge event, but no more than once per year.

3. Where possible, the Discharger shall perform both acute WET testing and chemical-specific testing for parameters limited by this Order for which a grab sample is required using a split sample.

4. Acute WET results shall be reported in percent survival.

5. Concurrent testing with reference toxicants shall be conducted using the same test conditions as the effluent toxicity test (i.e., same test duration, etc.).

6. If either the reference toxicant tests or the effluent tests do not meet all test acceptability criteria as specified in the test methods manual, the Discharger must re-sample and re-test within 14 days of receiving the results of the failed test.

7. The Discharger shall submit with the monthly report in which WET test results are due, a full, report of acute WET testing that includes: (1) the toxicity test results; (2) the dates of sample collection and initiation of each toxicity test; and (3) the flow rate at the time of sample collection.

8. If survival is less than 90 percent in two consecutive quarterly samples, the discharger shall increase the frequency of acute WET testing to one time per month. When three consecutive monthly tests demonstrate a survival rate of greater than 90 percent of the test organisms, the Discharger may resume acute WET testing at a frequency of one time per calendar quarter.

9. If any of the accelerated (monthly) tests demonstrate a survival rate of less than 70 percent, the Discharger shall initiate a Toxicity Reduction Evaluation in accordance with the requirements of Section VI.C.2 of the Order.

B. Chronic WET Testing – Monitoring Location EFF-001

1. The presence of chronic toxicity shall be determined as specified in USEPA's short-term chronic toxicity test methods in 40 CFR Part 136 for *Ceriodaphnia dubia* survival and reproduction and *Pimephales promelas* larval survival and growth.

2. The Discharger shall conduct chronic WET tests on undiluted (100% effluent) grab samples once per discharge event, but more than once per year, and shall use an appropriate control water, as specified in the test method.

3. Where possible, the Discharger shall perform both chronic WET testing and chemical-specific testing for parameters limited by this Order for which a grab sample is required using a split sample.

4. For routine testing, Analysis of Variance (ANOVA) with $\alpha = 0.05$ shall be used to determine whether differences between control and effluent data are significant.

5. If a chronic toxicity test indicates a statistically significant difference between a sample of 100% effluent and a control, the discharger shall initiate accelerated chronic WET testing at a frequency of one time per month.

6. Accelerated chronic WET results shall be reported in TUc where:

   $$TUc = 100 / NOEC$$

NOEC = No Observed Effect Concentration: the highest concentration of effluent to which organisms are exposed in a chronic, test that causes no observable adverse effect on the test organisms (e.g., the highest concentration of effluent to which the values for the observed response show no statistically significant difference from a control).

Accelerated chronic WET testing shall use a series of five dilutions and a control. The dilutions shall be 12.5, 25, 50, 75, and 100 percent effluent, along with the control (0 percent effluent). Concurrent testing with reference toxicants shall be conducted using the same test conditions as the effluent toxicity test (i.e., same test duration, etc.).

7. When three consecutive accelerated monthly tests demonstrate no chronic toxicity, .which is defined as WET test results not exceeding 1.0 TUc, the Discharger may resume routine chronic WET testing at a frequency of one time per calendar year.

8. If either the reference toxicant tests or the effluent tests do not meet all test acceptability criteria as specified in the test methods manual, the Discharger must re-sample and re-test within 14 days of receiving the results of the failed test.

9. The Discharger shall submit with the monthly report in which WET test results are due, a full report of chronic WET testing that includes: (1) the toxicity test results; (2) the dates of sample collection and initiation of each toxicity test; and (3) the flow rate at the time of sample collection.

10. If any of the accelerated (monthly) tests demonstrate chronic toxicity (TUc > 1.0), the Discharger shall initiate a Toxicity Reduction Evaluation in 'accordance with the requirements of Section VI.C.2 of the Order.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECLAMATION MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Monitoring Location RSW-001, RSW-002, and RSW-003

1. The Discharger shall monitor the unnamed stream at RSW-001, RSW-002, and RSW-003 as follows:

Table E-4. Receiving Water Monitoring Requirements – RSW-001 and RSW-002

Parameter	Units	Sample Type	Minimum Sampling Frequency[1]	Required Analytical Test Method
Flow in the unnamed creek at RSW-001 (Upstream of Discharge Point 001)	MGD	--	1/Day	--
Flow in Grass Valley Creek at RSW-003 (Brentwood Road crossing)	MGD	--	1/Day	--

Parameter	Units	Sample Type	Minimum Sampling Frequency[1]	Required Analytical Test Method
Conventional Pollutants				
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	Grab	1/Day	40 CFR Part 136 Methods
Fecal Coliform Organisms	MPN/100 ML	Grab	1/Day	40 CFR Part 136 Methods
pH	standard units	Grab	1/Day	40 CFR Part 136 Methods
Temperature	degrees C	Grab	1/Day	40 CFR Part 136 Methods
Total Suspended Solids	mg/L	Grab	1/Day	40 CFR Part 136 Methods
Priority Pollutants				
Bis (2-ethylhexyl) Phthalate	µg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Copper, Total Recoverable	µg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Chlorodibromomethane	µg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Chloroform	µg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Dichlorobromomethane	µg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Bromoform	µg/L	Grab	1/4 Days[2]	40 CFR Part 136 Methods
Priority Pollutants[3]	µg/L	Grab	1/Winter[4]	40 CFR Part 136 Methods
Non-Conventional Pollutants				
Boron, Total Recoverable	µg/L	Grab	1/Winter[4]	40 CFR Part 136 Methods
Chlorine, Total Residual	mg/L	Grab	1/Day	40 CFR Part 136 Methods
Total Coliform Organisms	MPN/100 ML	Grab	1/Day	40 CFR Part 136 Methods
Monochloroacetic Acid	µg/L	Grab	1/4 Days	40 CFR Part 136 Methods
Trichloroacetic Acid	µg/L	Grab	1/4 Days	40 CFR Part 136 Methods
Monobromoacetic Acid	µg/L	Grab	1/4 Days	40 CFR Part 136 Methods
Dibromoacetic Acid	µg/L	Grab	1/4 Days	40 CFR Part 136 Methods
Dichloroacetic Acid	µg/L	Grab	1/4 Days	40 CFR Part 136 Methods
Total Dissolved Solids	mg/L	Grab	1/4 Days	40 CFR Part 136 Methods
Sodium	mg/L	Grab	1/4 Days	40 CFR Part 136 Methods
Chloride	mg/L	Grab	1/4 Days	40 CFR Part 136 Methods
Sulfate	mg/L	Grab	1/4 Days	40 CFR Part 136 Methods

Parameter	Units	Sample Type	Minimum Sampling Frequency[1]	Required Analytical Test Method
Fluoride	mg/L	Grab	1/4 Days	40 CFR Part 136 Methods
Kjeldahl Nitrogen as N	mg/L	Grab	1/4 Days	40 CFR Part 136 Methods
Nitrate as N	mg/L	Grab	1/4 Days	40 CFR Part 136 Methods
Total Ammonia as N	mg/L	Grab	1/4 Days	40 CFR Part 136 Methods
Total Nitrogen as N	mg/L	Grab	1/4 Days	40 CFR Part 136 Methods
Dissolved Oxygen	mg/L	Grab	1/4 Days	40 CFR Part 136 Methods
Total Organic Carbon	mg/L	Grab	1/4 Days	40 CFR Part 136 Methods
Methylene Blue Active Substances	mg/L	Grab	1/4 Days	40 CFR Part 136 Methods

1 A "Day" consists of any Significant Wet Weather Day as defined in the attached Permit.
2 A "Minimum Sampling Frequency" of "1/4 Days" means to sample on: Day 1, Day 5, Day 9, Day 13, Day 17, Day 21, Day 25, Day 29, etc.
3 Priority pollutants include those pollutants listed in the California Toxics Rule [40 CFR 131.38(b)(1)].
4 Priority pollutants and boron shall be monitored on the first Significant Wet Weather Day during a winter.

IX. OTHER MONITORING REQUIREMENTS

A. Total Coliform Organisms – Monitoring Location EFF-001

The median MPN of coliform organisms shall be determined for the last 7 days for which coliform results have been obtained. This 7-day running median value shall be computed and recorded for each day of the monthly reporting period along with the results from each individual sample.

B. Sludge Monitoring

1. The Discharger shall submit an annual report summarizing the disposal of sludge in accordance with their existing Sludge Management Plan with the last quarterly report of the calendar year.

2. The Discharger shall report to the Regional Water Board all information necessary to comply with USEPA Sludge Management Regulations contained in Section 503 of the Federal Clean Water Act.

C. Water Supply Monitoring

For each semi-annual period, a report shall be submitted to the Regional Water Board detailing a chemical analysis that is representative of the average supply water used within the pertaining sewered areas. Supply water samples for this analysis shall be collected concurrently with effluent samples.

D. Operation and Maintenance

A brief summary of any operational problems and maintenance activities shall be submitted to the Regional Water Board with each monitoring report. This summary shall discuss:

1. Any modifications or additions to the wastewater conveyance system, treatment facilities, or disposal facilities;
2. Any major maintenance conducted on the wastewater conveyance system, treatment facilities, or disposal facilities;
3. Any major problems occurring in the wastewater conveyance system, treatment facilities, or disposal facilities; and
4. The calibration of any wastewater flow measuring devices.

E. Infiltration and Inflow

The Discharger shall submit quarterly status reports describing sewer investigation and corrective action tasks completed to maintain manageable levels of groundwater and surface water inflow into its sewers. Each quarterly status report must include a list of sewer investigation and corrective action tasks described in its 2007 Master Plan, including the tasks completed and scheduled for completing remaining tasks.

F. Rainfall

The Discharger shall record and report the total rainfall (inches) for each day in the collection system area. The Discharger may report data generated by the existing Lake Arrowhead precipitation station, which is maintained by the San Bernardino County Flood Control District.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to 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). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit quarterly 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. All annual reports shall be due on March 1 following each calendar year.

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

Table E-5. Monitoring Periods and Reporting Schedule

Reporting Frequency	Period(s) Covered	SMR Due Date(s)
Annually	January – December	February 1
Quarterly	January – March	May 1
	April – June	August 1
	July – September	November 1
	October – December	February 1

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 40 CFR Part 136.

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

   a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

   b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

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

   c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

   d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the

Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

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 Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

6. 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. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

   b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify 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 Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

      California Regional Water Quality Control Board
      Lahontan Region
      14440 Civic Drive, Suite 200
      Victorville, CA 92392

C. Discharge Monitoring Reports (DMRs)

1. As described in Section X.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, the 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 Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15th Floor Sacramento, CA 95814

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

4. A copy of the DMR shall also be submitted to the Regional Water Board's Victorville office.

D. Other Reports – Not Applicable

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ATTACHMENT F – FACT SHEET

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	
Discharger	Lake Arrowhead Community Services District
Name of Facility	Grass Valley Domestic Wastewater Treatment Plant
Facility Address	27000 Pilot Rock Road
	Lake Arrowhead, CA 92352
	San Bernardino County
Facility Contact, Title and Phone	Ryan Goss, District Engineer, (909) 336-7137
Authorized Person to Sign and Submit Reports	John Hoagland, General Manager, (909) 336-7102
Mailing Address	PO Box 700
	Lake Arrowhead, CA 92352
Billing Address	Same as Mailing Address
Type of Facility	Publicly Owned Treatment Works (POTW)
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	A
Pretreatment Program	Not Applicable
Reclamation Requirements	In October 2001, the Discharger stopped applying treated effluent to grow fodder crops at the Hesperia Disposal Site. Since that time, all treated effluent conveyed to the Site has been discharged to the Percolation Ponds located at the Site.
Facility Permitted Flow	Same as below

Facility Design Flow	Grass Valley WWTP (Secondary Treatment with Nitrogen Removed): • Dry Weather Average of 3.75 MGD during a 72-hour period (holiday weekend) • Wet Weather Average of 6.0 MGD during a 24-hour period Average of 8.0 MGD during a 72-hour period (holiday weekend) Maximum instantaneous of 12.0 MGD Filtration/Ultraviolet Disinfection Facility (Tertiary Treatment) 1.0 MG per 24-hour period
Watershed	Mojave Watershed
Receiving Water (Receiving Water Type)	Unnamed stream, tributary to Grass Valley Creek (Inland surface water)

A. Lake Arrowhead Community Services District (hereinafter Discharger) is the owner and operator an extensive wastewater collection, treatment, and effluent disposal system which includes the Grass Valley Wastewater Treatment Plant, a POTW.

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. The Grass Valley WWTP discharges wastewater to an unnamed stream, a tributary to Grass Valley Creek, both waters of the United States. The discharge from the Grass Valley WWTP is an existing discharge that has not been previously regulated by a National Pollutant Discharge Elimination (NPDES) permit.

C. The Discharger filed a report of waste discharge (ROWD) and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and NPDES permit.

II. FACILITY DESCRIPTION

Please refer to the Permit, Facility Description and the Fact Sheet, Planned Changes.

A. Description of Wastewater and Biosolids Treatment or Controls

Please refer to the Permit, Facility Description, and the Fact Sheet, Planned Changes.

B. Discharge Points and Receiving Waters

This Order regulates discharges by the Lake Arrowhead Community Services District at Discharge Point No. 001 (identified below).

Table F-2. Discharge Points and Receiving Waters

Discharge Location	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
Discharge Point 001	Treated Municipal Wastewater	34° 17' 19.68" N	117 ° 13' 14.05" W	Unnamed Stream (tributary to Grass Valley Creek)

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data – Not Applicable

D. Compliance Summary

1. Treated Wet Weather Discharges (Following Adoption of this Order)

This Order includes new WDRs for Treated Wet Weather Discharges to the unnamed tributary to Grass Valley Creek. Prior to adoption of this Order, the Treated Wet Weather Discharges were not regulated under WDRs. This Order includes effluent limits necessary for meeting WQOs and protecting of beneficial uses in the receiving surface waters.

The Lahontan Regional Water Board issued Cease and Desist Order (CDO) No. 6-93-44 on May 13, 1993. On May 7, 1998 the Lahontan Water Board issued Amended CDO No. 6-93-44A1.The existing CDOs No. 6-93-44 and 6-93-44A1 remain in effect. The CDOs were adopted because of intermittent Treated Wet Weather Discharges to unauthorized locations in violation of Waste Discharge Requirements (Board Order 6-89-110), prohibitions contained in the Water Quality Control Plan for the Lahontan Region (Basin Plan), and Water Code section 13376. A final compliance date was not included because of the nature of actions needed to prevent violations of requirements. Amendment of the Basin Plan was needed to provide conditions under which it would be appropriate to allow an exemption to area-specific discharge prohibitions contained in the Basin Plan. These WDRs authorize the Treated Wet Weather Discharges to Discharge Point 001 and bring the Discharger into compliance with Water Code section 13376.

2. Ongoing Sewer System Rehabilitation Since 1993

Since 1993, the District has had an ongoing sewer replacement/rehabilitation program to minimize both: (1) the flow of ground and surface water into sewers, and (2) the flow of Treated Wet Weather Discharges; including the frequency, duration and volume of these Discharges. The Discharger has included annual funding to replace and rehabilitate deteriorating sewers. Using current technologies, nearly zero inflow can be achieved initially in new (or rehabilitated) sewer segments. The Discharger's Sewer System Management Plan (SSMP) is currently under development as required by the Statewide General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems (Board Order No. 2006-0003-DWQ). The Discharger completed a plan and schedule for developing a SSMP by the due date (November 2, 2007) in the Statewide General WDRs. The Discharger is expected to meet the remainder of the SSMP requirements according schedule in the General WDRs.

A 20-year Wastewater Facilities Master Plan was completed in March 2008. It includes recommendations for improvements to the Discharger's Sewer System through the next 20 years. An initial 5-year Capital Improvement Program (CIP) is included in the Facilities Master Plan. To assist with managing sewer system

rehabilitation, the District began using an asset management database in the late 1990's. In 2007, this was supplemented with GIS-based hydraulic modeling software. Together these tools will continue to improve management of sewer system rehabilitation.

Since 1993, the District has completed a series of projects that include manhole rehabilitation and replacement, collection system pipeline slip-lining and collection system pipeline replacement. The District completes the rehabilitation of an average of 100 manholes per year. The total number of manholes rehabilitated to date is approximately 980. The District has also slip-lined or replaced approximately 30,000 linear feet of sewer pipeline since 1993. The District plans to continue completion of similar projects on an on-going basis as budget allows. In 2005, the District rehabilitated 62 manholes and 4,200 feet of sewer pipeline. In May 2008 the District completed its most recent project which included slip-lining of approximately one mile of twelve inch sewer pipeline and rehabilitation of 30 manholes. The next sewer rehabilitation project is currently in design and expected to be complete by the end of 2008.

3. Treated Wet Weather Discharges (Actions Before Adoption of this Order)

May 13, 1993 through May 7, 1998: By January 1995, the Discharger had constructed and begun operating a two-mile pipeline (Intertie Pipeline) increasing its capabilities to adequately convey, treat and dispose of wastewater during Major Wet Weather Periods. The Intertie Pipeline extends between the GVWWTP and WCWWTP, and allows the Discharger to convey all of its collected wastewater to one facility, the GVWWTP. The Pipeline eliminated the need for the Hillside Ponds Disposal Site and the east branch of the Outfall Pipeline Network. The east branch did not have sufficient hydraulic capacity during the Major Wet Weather Periods that occurred in the 1993 water year. Because of this lack of capacity, the Discharger initiated Treated Wet Weather Discharges to the Hillside Ponds. The discharge volume exceeded the capacity of the Ponds and there were treated effluent releases over the emergency overflow structure for the on January 21 and February 25, 1993. Treated effluent that overflowed traveled overland to Willow Creek, which is tributary to Deep Creek. Overflows to Willow Creek have not occurred since the Discharger completed the Intertie Pipeline. In 1995, the Discharger also constructed and began operating nitrogen removal facilities at the GVWWTP. This plus the capability to convey wastewater to the GVWWTP allows the Discharger to adequate control of nitrogen levels in all treated effluent.

May 7, 1998 through the Effective Date for this Order: Amendment of the Basin Plan was needed to provide conditions under which it would be appropriate to allow the Discharger to implement its proposal described in this Fact Sheet under Planned Changes. Once the Basin Plan Amendment became effective on March 24, 2004, the Discharger set up meetings with the landownder (USFS) in 2004/2005 and other interested parties. A need for collection of additional data was expressed, mainly for Grass Valley Creek. From May 2005 through January 2008, the Discharger completed steam bed surveys including macro-invertebrates sampling, discussed in more detail in this Fact Sheet under Satisfaction of Antidegradation Policy.

Collection of representative data for the Treated Wet Weather Discharges is complicated by the infrequent nature of the Discharges. The Discharges have not occurred since January and February 2005, with the exception of a short-duration Discharge on January 27, 2008 that lasted 3.3 hours. Data was needed to complete an application for an NPDES permit for the Discharger's proposal described in this Fact Sheet (Planned Changes).

Following the Basin Plan amendment, the Discharger increased data collection efforts in May 2005, which is after the Wet Weather Discharges in January and February 2005. The Discharger completed sampling for approximately 250 constituents from 2005 through 2007 (See Attachment K). One to three sampling rounds were completed for each of the constituents. The Discharger sampled effluent (disinfected secondary-treated effluent w/N removed) and Grass Valley Creek (background sampling). These sampling rounds were not completed on Significant Wet Weather Days. Results for this sampling may not be representative of concentrations during wet weather when sewer inflow is higher.

In addition, the Discharger has routinely sampled for 20 constituents during the Treated Wet Weather Discharges that occurred during the water years of 1995, 1998, 2005 and 2008. During this routine sampling, the Discharger sampled the Treated Wet Weather Discharges (disinfected secondary-treated effluent w/N removed) and the unnamed creek, both upgradient and downgradient of the discharge point (See Figure B-3).

E. Planned Changes

General: The Discharger proposes to construct facilities at the Grass Valley WWTP (See Table F-3), including new secondary treatment units to replace old deteriorating units located at the Willow Creek WWTP. This will increase the dry-weather treatment capacity (secondary treatment with nitrogen removal) at the Grass Valley WWTP to 2.7 million gallons during a 24-hour period. The Willow Creek WWTP will be converted to a flow equalization facility. There will be no net increase in the Discharger's overall secondary-treatment capacity. Table F-1 summarizes design-flow values for the Grass Valley WWTP following completion of the improvements described in Table F-3.

Table F-3. Summary of Existing and Proposed Treatment Units

Treatment Units	Existing Number of Units	Proposed Number of Units
Wastewater		
Aerated grit chamber	2	2
Primary clarifiers	2	3
High-rate plastic media trickling filters	2	3
Secondary Clarifiers	2	3
Effluent equalization ponds	1	1
Nitrogen Removal Bioreactors	3	4
Chlorine contact tanks	2	2
1.0 MGD Membrane Filtration and UV Disinfection Facility	0	1

Treatment Units	Existing Number of Units	Proposed Number of Units
Sludge		
Gravity thickener	1	1
Belt filter press	1	2
The quality of effluent generated by the 1.0 MGD Membrane Filtration and UV Disinfection Facility is regulated under a separate Order.		

Treated Wet Weather Discharges: The Discharger's proposal includes changes at the Grass Valley Wastewater Treatment Plant (GVWWTP) to improve the quality of Treated Wet Weather Discharges to the unnamed creek. The proposal includes use of the 1.0 MGD Filtration/UV Treatment Facility currently being constructed at the GVWWTP. The Discharger expects to limit the flow of Treated Wet Weather Discharges to a maximum of 4.0 million gallons per 24-hour period. Starting with the winter of 2009-2010 and all subsequent winters, the Treated Wet Weather Discharges would consist of:

1. UV disinfected tertiary-treated effluent w/N removed for discharge flows from 0.0 MGD through 1.0 MGD; and
2. Disinfected secondary-treated effluent w/N removed for discharge flows from 1.0 MGD through 4.0 MGD.

Under the Discharger's proposal, it would retain the existing chlorination facility for disinfection of secondary-treated effluent. There will be upgrades to disinfection facilities (and/or changes to operational procedures) in order to meet new effluent limits for Total Coliform Organisms. A dechlorination facility would be installed following chlorination in order to meet new limits for Total Residual Chlorine.

The District will continue its ongoing sewer replacement/rehabilitation program to minimize both: (1) the flow of ground and surface water into sewers, and (2) the flow of Treated Wet Weather Discharges; including the frequency, duration and volume of these Discharges. The District's ongoing Program for minimizing sewer inflow is described in more detail under the Compliance Summary section in this Fact Sheet.

A site-specific limit on ground and surface water inflow into sewers is included in this Order. The limit is equal to the maximum-instantaneous design flow rate (12 MGD) for the Grass Valley Wastewater Treatment Plant. This site-specific sewer inflow limit replaces a previous limit, based on a nation-wide guidance level published by the USEPA in 1986 for evaluating grant funding requests. Throughout the United States, there is wide variation in site characteristics that affect inflow into sewers. The same inflow limit for every location in the United States, therefore, may not be appropriate.

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

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100 through 21177.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Board adopted a Water Quality Control Plan for the Lahontan Region (hereinafter Basin Plan) which became effective on March 31, 1995 that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan in Table 2-1 on page 2-41 establishes beneficial uses for minor surface waters in the Upper Mojave Hydrologic Area (Hydrologic Unit No. 628.20). These beneficial uses include municipal and domestic supply (MUN), agricultural supply (AGR), ground water recharge (GWR), hydropower generation (POW), water contact recreation (REC-1), non-contact water recreation (REC-2), warm freshwater habitat (WARM), cold freshwater habitat (COLD), and wildlife habitat (WILD). The Basin Plan in Table 2-1 on page 2-41 also establishes beneficial uses for Grass Valley Lake Creek in the Upper Mojave Hydrologic Area (Hydrologic Unit No. 628.20) of MUN, AGR, GWR, REC-1, REC-2, commercial and sportfishing (COMM), WARM, COLD, and WILD. The Basin Plan at page 2-3 specifies that beneficial uses also apply to all tributaries of surface waters identified in Table 2-1 (i.e., specific surface waters which are not listed have the same beneficial uses as the streams, lakes, wetlands, or reservoirs to which they are tributary). Therefore, the Regional Water Board finds that the beneficial uses of Grass Valley Creek are also applicable to the unnamed stream. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Thus, as discussed in detail in the Fact Sheet, beneficial uses applicable to the unnamed stream and Grass Valley Creek are as follows:

Table F-4. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Unnamed stream	Existing: MUN, AGR, GWR, POW, REC-1, REC-2, COMM, WARM, COLD, and WILD
	Grass Valley Creek	MUN, AGR, GWR, REC-1, REC-2, COMM, WARM, COLD, and WILD

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.

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 Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

4. **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 (40 CFR 131.21, 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

5. **Antidegradation Policy.** 40 CFR 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal

antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

6. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

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

Neither the unnamed stream nor Grass Valley Creek is listed as an impaired water body on the CWA 303(d) List.

E. Other Plans, Polices and Regulations – Not Applicable

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 CFR 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR 122.44(d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs may be established: (1) using USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) on an indicator parameter for the pollutant of concern; or (3) using a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

A. Discharge Prohibitions

1. The discharge prohibitions established in this Order are from waste discharge prohibitions in the Basin Plan that apply to the entire Lahontan Region (section 4.1) or based on discharge prohibitions specified in the California Water Code.

2. Prohibition III.B contains a prohibition of discharge to surface waters unless certain conditions are met. These conditions were outlined in Order No. R6V-2002-0008 as criteria for the authorization of the Treated Wet Weather Discharges from the Grass Valley WWTP to Grass Valley Creek. Discharge under these conditions will ensure that the beneficial uses of the surface waters are maintained. Consequently, these criteria are established as conditions for authorization to discharge pursuant to this Order.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at 40 CFR 122.44, require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR Part 133.

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

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

Based on this statutory requirement, USEPA developed secondary treatment regulations, which are specified in 40 CFR Part 133. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of biochemical oxygen demand (BOD_5), total suspended solids (TSS), and pH.

2. Applicable Technology-Based Effluent Limitations

a. **BOD_5 and TSS.** Federal regulations at 40 CFR Part 133, establish the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for BOD_5 and TSS. However, historical monitoring data indicates that the Discharger is capable of meeting more stringent effluent limitations for BOD_5 and TSS. Therefore, this Order includes an average monthly effluent limitation of 20 mg/L and an average weekly effluent limitation of 25 mg/L. A daily maximum effluent limitation for BOD_5 and TSS is also included in the Order to ensure that the treatment works are not organically overloaded and operate in accordance with design capabilities. In addition, 40 CFR 133.102, in describing the minimum level of effluent quality attainable by secondary treatment, states that the 30-day average percent removal shall not be less than 85 percent. This Order contains a limitation requiring an average of 85 percent removal of BOD_5 and TSS over each calendar month.

b. **pH.** The secondary treatment regulations at 40 CFR Part 133 also require that pH be maintained between 6.0 and 9.0 standard units.

Summary of Technology-based Effluent Limitations
Discharge Point No. 001

Table F-5. Summary of Technology-based Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	20	25	30	–	–
	% Removal	85	–	–	–	–
Total Suspended Solids	mg/L	20	25	30	–	–
	% Removal	85	–	–	–	–
pH	standard units	–	–	–	6.0	9.0

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and 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.

40 CFR 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

a. **Beneficial Uses.** As noted in section III.C.1 of this Fact Sheet, the beneficial uses of the unnamed stream are MUN, AGR, GWR, POW, REC-1, REC-2, COMM, WARM, COLD, and WILD. The beneficial uses of Grass Valley Creek are MUN, AGR, GWR, REC-1, REC-2, COMM, WARM, COLD, and WILD.

b. **Water Quality Criteria and Objectives.** The Basin Plan includes both narrative and numeric water quality objectives applicable to all water bodies in the Lahontan Region. The Basin Plan also includes specific numeric water quality objectives applicable to the Mojave River (at Forks) in the San Bernardino Mountains Area, Mojave Hydrologic Unit. The specific water quality objectives for the Mojave River (at Forks) are applicable to the discharge because Grass Valley Creek is a wet-season runoff tributary to the Mojave River (at Forks), and the water quality objectives for this waterbody are based on the same type of surface water (wet-season runoff). In addition to the Basin Plan objectives, priority pollutant criteria in the CTR apply to the discharge.

c. **Assimilative Capacity/Mixing Zones.** Grass Valley Creek is a perennial stream, but the unnamed stream is a naturally non-perennial stream. The unnamed stream flows after storm events and during snowmelt periods. Water flow is also dependent on springs. The Basin Plan does not contain provisions for calculating dilution credits. Therefore, the worst-case dilution is assumed to be zero to provide protection for the receiving water beneficial uses. The impact of assuming zero assimilative capacity within the receiving water is that discharge limitations are end-of-pipe limits with no allowance for dilution within the receiving water.

3. Determining the Need for WQBELs

a. California Toxics Rule (CTR) Parameters (Priority Pollutants)

In accordance with section 1.3 of the SIP, the Regional Water Board conducted a reasonable potential analysis (RPA) for each priority pollutant with an applicable criterion or objective to determine reasonable potential to cause or contribute to an excursion above a water quality standard. For all parameters that have reasonable potential to cause or contribute to an excursion above a water quality standard, numeric WQBELs are established. The RPA considers water quality criteria and objectives outlined in the CTR, NTR, and Basin Plan for protection of freshwater aquatic life and for human health for consumption of water and organisms.

Some CTR criteria are hardness- or pH-dependent. The Discharger provided hardness and pH data as part of their application. The hardness value of 42.8 mg/L as $CaCO_3$ and a pH of 6.71, the lowest measured hardness and pH, representing the most conservative approach, were used in the RPA to calculate certain freshwater criteria.

To conduct the RPA, the Regional Water Board identified the maximum observed effluent concentration (MEC) and maximum background concentration (B) in the receiving water for each constituent, based on data provided by the Discharger.

Section 1.3 of the SIP provides the procedures for determining reasonable potential to exceed applicable water quality criteria and objectives. The SIP specifies three triggers to complete the RPA:

i. Trigger 1 – If the MEC is greater than or equal to the CTR water quality criterion or applicable objective (C), a limit is needed.

ii. Trigger 2 – If background water quality (B) > C and the pollutant is detected in the effluent, a limit is needed.

iii. If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, etc. indicates that a WQBEL is required.

Sufficient effluent and ambient data are needed to conduct a complete RPA. If data are not sufficient, the Discharger is required to gather the appropriate data for the Regional Water Board to conduct the RPA. Upon review of the data, and if the Regional Water Board determines that WQBELs are needed to protect the beneficial uses, this Order will be reopened for appropriate modification.

The Discharger conducted effluent and receiving water monitoring for priority pollutants on March 7, 2006; April 6, 2007; and December 27, 2007 and submitted the analytical results with the *Initial Study for the Lake Arrowhead Community Services District Emergency Discharge Permit for Discharge of Treated Effluent from the Grass Valley Wastewater Treatment Plant to Grass Valley Creek, March 2008* (Initial Study). An RPA for the wet-weather discharges was conducted using all of the available information. A summary of the RPA is included in Table G-1 of Attachment G.

Based on the available information, the discharge from the Grass Valley WWTP has the reasonable potential to cause or contribute to an excursion of applicable water quality criteria for the following priority pollutants: copper, chlorodibromomethane, chloroform, dichlorobromomethane, and bis (2-ethylhexyl) phthalate.

Other priority pollutants detected in the effluent, but not triggering reasonable potential, include the following: chromium (total), nickel, zinc, chloromethane, and toluene.

The Discharger is required to analyze effluent samples for CTR priority pollutants once per discharge event, but no more than once per year to determine the presence of these pollutants in the discharge and provide data for future reasonable potential assessments. Some priority pollutants (e.g., bis (2-ethylhexyl) phthalate, copper, chlorodibromomethane, chloroform, and dichlorobromomethane) must be monitored more frequently to demonstrate compliance with the effluent limitations established in this Order.

b. Non-CTR Pollutants

The procedures in the SIP for determining reasonable potential and calculating WQBELs specifically apply only to priority pollutant criteria promulgated through the NTR and CTR and to priority pollutant objectives established by the Regional Water Board in the Basin Plan. For other constituents, the Regional Water Board

must determine what procedures to use to evaluate reasonable potential and calculate effluent limitations. In order to maintain consistency in methodology for permitting discharges of various constituents, the Regional Water Board proposes to use the same procedures required by the SIP for CTR constituents to evaluate reasonable potential and, where necessary, develop WQBELs for non-CTR pollutants.

For constituents with no promulgated numeric water quality criteria or objectives, the Regional Water Board also must interpret narrative objectives from the Basin Plan to establish the basis for reasonable potential and effluent limitation calculations. In addition to USEPA National Recommended Water Quality Criteria, the Central Valley Regional Water Board has developed *A Compilation of Water Quality Goals* to help select the appropriate basis for interpreting narrative criteria in WQBEL calculations. These goals include USEPA-recommended criteria for protection of aquatic life, drinking water MCLs, agricultural water quality limits, and other water quality goals designed to protect various beneficial uses. Appropriate selection of criteria or goals to interpret narrative criteria depends on the specific beneficial uses of the receiving water. For example, Primary and Secondary MCLs are used to interpret the narrative chemical constituents objective if the receiving water is a source of municipal drinking water (MUN). The Regional Water Board proposes to use *A Compilation of Water Quality Goals*, where appropriate, to help select numerical water quality goals to interpret narrative water quality objectives from the Basin Plan.

Table 3-21 of the Basin Plan contains site-specific water quality objectives for boron and sulfate in the Mojave River (at Forks) in the San Bernardino Mountains Area, Mojave Hydrologic Unit of 200 µg/L and 35 mg/L, respectively, as an annual average value and 300 µg/L and 100 mg/L as a 90th percentile value, respectively. The specific water quality objectives for boron and sulfate for the Mojave River (at Forks) are applicable to the discharge because Grass Valley Creek is a wet-season runoff tributary to the Mojave River (at Forks), and the water quality objectives for this waterbody are based on the same type of surface water (wet-season runoff). However, the water quality objectives in the Basin Plan are designed to be protective of beneficial uses over long periods of exposure (i.e., annual averages for the protection of human health). The discharges authorized by this Order are infrequent in nature and are short in duration, ranging from 1 to 12 days and averaging just over 4 days. Due to nature of these discharges and a limited data set of only five data points, the Regional Water Board cannot determine reasonable potential for boron and sulfate in the discharge to exceed water quality objectives at this time. This Order requires the Discharger to monitor boron and sulfate once per discharge event. Should monitoring results indicate that the discharge has the reasonable potential to cause or contribute to an exceedance of a water quality standard, then this Order may be reopened and modified by adding an appropriate effluent limitation.

Table G-2 of Attachment G summarizes the RPA for non-CTR parameters at Discharge Point No. 001. The table includes data for non-CTR constituents detected and quantified in the Discharger's effluent based on monitoring data submitted during three Treated Wet-Weather Discharges on January 8-12, 2005; February 20-27, 2005; and January 27-28, 2008 and for monitoring data submitted for sampling conducted on March 7, 2006; April 6, 2007; and December 27, 2007. The table includes the maximum concentration of each parameter present in the Discharger's effluent at quantifiable levels, the background concentrations (concentrations in receiving water upstream of the discharge), and the most stringent applicable recommended water quality criterion, objective, or goal along with the basis of that criterion, objective, or goal.

4. WQBEL Calculations

As specified in 40 CFR 122.44(d)(1)(i), NPDES permits are required to include WQBELs for pollutants that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an excursion above an State water quality standard. The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses for the receiving water as specified in the Basin Plan and achieve applicable water quality objectives and criteria (that are contained in the Basin Plan and other State plans and policies) or USEPA water quality criteria contained in the CTR and NTR.

a. WQBEL Calculations for CTR Parameters (Priority Pollutants)

i. The specific procedures for calculating WQBELs for CTR parameters are contained in section 1.4 of the SIP. These procedures include:

(a) If applicable and available, use of wasteload allocation (WLA) established as part of a total maximum daily load (TMDL).

(b) Use of a steady-state model to derive an effluent concentration allowance (ECA) and use of statistical procedures based on a lognormal distribution of effluent pollutant concentrations to develop maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).

(c) Where sufficient effluent and receiving water data exist, use of a dynamic model that has been approved by the Regional Water Board.

(d) Establishing effluent limitations that consider intake pollutants using procedures in the SIP.

Because there are no TMDLs for the unnamed stream or Grass Valley Creek and there is no dynamic model approved by the Regional Water Board for modeling the effects of this discharge, and consideration of intake pollutants is not appropriate for this discharge, the Regional Water Board has used the procedure described in section IV.C.4.a.i.(b) above to develop effluent

limitations. Using a simple mass-balance equation, the Regional Water Board calculated ECAs as follows:

ECA = C + D (C – B) when C > B, and
ECA = C when C ≤ B

Where:
C = the priority pollutant criterion/objective, adjusted for hardness, pH, and translators
D = the dilution credit; and
B = the ambient background concentration.

The ambient background concentration is the observed maximum concentration with the exception that an ECA calculated from a priority pollutant criterion/objective that is intended to protect human health from carcinogenic effects is the ambient background concentration as an arithmetic mean.

As determined in section IV.C.2.c, no dilution credit is applied in calculations of WQBELs for the discharge to the unnamed stream. Thus:

$$\begin{aligned} ECA &= C + D\,(C - B) \\ &= C + 0\,(C - B) \\ &= C \end{aligned}$$

As noted above, some CTR criteria are hardness- or pH-dependent. The Discharger provided receiving water hardness data as part of its required monitoring for priority pollutants with criteria in the CTR. The Discharger also provided pH data. A hardness value of 42.80 and a pH of 6.71, the lowest measured receiving water hardness and pH, were used in all calculations. Since a site-specific translator has not been developed for any CTR constituent, as described in section 1.4.1 of the SIP, the USEPA conversion factors for copper were used for translating the dissolved copper criteria into total recoverable ECAs with no dilution.

ii. Aquatic Life Criterion or Objective

For each ECA based on an aquatic life criterion or objective (i.e., acute or chronic aquatic life criterion), the long-term average discharge condition (LTA) is calculated by multiplying the ECA by a factor (multiplier) that adjusts for effluent variability based on the coefficient of variation (CV) for the effluent pollutant concentration data. If (a) the number of effluent data points is less than 10, or (b) at least 80 percent of the data are reported as not detected, the CV is set equal to 0.6.

ECA Equations

$$\text{ECA multiplier}_{acute99} = e^{\wedge}(0.5\sigma^2 - z\sigma)$$

$ECA\ multiplier_{chronic99} = e^{\wedge}(0.5\sigma_4^2 - z\sigma_4)$

Where:
σ = standard deviation
$\sigma = [ln(CV^2 + 1)]^{0.5}$
$\sigma^2 = ln(CV^2 + 1)$
$\sigma_4 = [ln(CV^2/4 + 1)]^{0.5}$
$\sigma_4^2 = ln(CV^2/4 + 1)$
z = 2.326 for 99th percentile probability basis

LTA Equations

$LTA_{acute} = ECA_{acute} \times ECA\ multiplier_{acute99}$
$LTA_{chronic} = ECA_{chronic} \times ECA\ multiplier_{chronic99}$

Using the lowest (most limiting) of the LTAs for the pollutant, an AMEL and MDEL are calculated by multiplying the most limiting LTA by a factor (multiplier) that adjusts for the averaging periods and exceedance frequencies of the criteria or objectives and the effluent limitations, and the effluent monitoring frequency as follows:

$AMEL_{aquatic\ life} = LTA \times AMEL_{multiplier\ 95}$
$MDEL_{aquatic\ life} = LTA \times MDEL_{multiplier99}$

The AMEL and MDEL multipliers are calculated as described below using the previously calculated CV and the anticipated monthly sampling frequency (n) of the pollutant in the effluent. If the sampling frequency is four times per month or less, n is set equal to 4.

$AMEL_{multipler95} = e^{\wedge}(z\sigma_n - 0.5\sigma_n^2)$

Where:
$\sigma_n = [ln(CV^2/n + 1)]^{0.5}$
$\sigma_n^2 = ln(CV^2/n + 1)$
z = 1.645 for 95th percentile probability basis
n = number of samples per month

$MDEL_{multiplier99} = e^{\wedge}(z\sigma - 0.5\sigma^2)$

Where:

$\sigma_n = [ln(CV^2 + 1)]^{0.5}$
$\sigma_n^2 = ln(CV^2 + 1)$
z = 2.326 for 99th percentile probability basis

Sample Calculations for Copper based on Aquatic Life Criteria

Acute ECA with no dilution

ECA_a = C = 6.29 µg/L

Chronic ECA with no dilution

ECA_c = C = 4.52

LTA concentration based on Acute ECA

LTA_a = 6.29 µg/L x 0.32 = 2.0 µg/L
(where 0.32 = acute ECA multiplier at 99% occurrence probability; CV = 0.6)

LTA concentration based on Chronic ECA

LTA_c = 4.52 µg/L x 0.53 = 2.4 µg/L
(where 0.53 = chronic ECA multiplier at 99% occurrence probability; CV = 0.6)

Most Limiting LTA concentration: LTA = 2.0 µg/L

AMEL Calculation

AMEL = LTA x 1.6
(where 1.6 = AMEL multiplier at 95% occurrence probability; n =4; CV = 0.6)

AMEL = 2.0 x 1.55 = **3.1 µg/L**

MDEL Calculation

MDEL = LTA x 3.11
(where 3.1 = MDEL multiplier at 99% occurrence probability; CV = 0.6)

MDEL = 2.0 x 3.1 = **6.3 µg/L**

iii. Human Health Criterion or Objective

For the applicable human health criterion or objective, the AMEL is set equal to the ECA.

$AMEL_{human\ health}$ = ECA

To calculate the MDEL for a human health criterion or objective, the ECA is multiplied by the ratio of the MDEL multiplier to the AMEL multiplier as specified in the SIP.

Sample Calculations for Chlorodibromomethane based on Human Health Criteria

ECA with no dilution

ECA = C = 0.41 µg/L

AMEL = ECA = **0.41 µg/L**

MDEL = AMEL x (MDEL multiplier / AMEL multiplier)
= 0.41 µg/L x 2.01
= **0.82 µg/L**

Attachment H summarizes the factors used in the equations above to calculate WQBELs for the CTR parameters where the RPA determined that the discharge would cause, have reasonable potential to cause, or contribute to an excursion above water quality standards.

Because the Treated Wet Weather Discharges authorized by this Order are infrequent, the Regional Water Board finds that mass-based effluent limitations are not applicable to the discharge.

b. WQBEL Calculations for Non-CTR Parameters

As determined in section IV.C.2.c, no dilution credit is applied in calculations of WQBELs for the discharge to the unnamed stream. For ammonia and methylene blue active substances, the Regional Water Board used the statistical procedures based on the procedures in USEPA's *1991 Technical Support Document for Water Quality-based Toxics Control* to translate water quality objectives into an MDEL and an AMEL. To ensure the protection of human health for certain disinfection by-products, the ECA used to calculate effluent limitations for total haloacetic acids was established as one-half the applicable human health criterion.

Where necessary, the Regional Water Board reviewed data submitted by the Discharger to determine a CV for calculating effluent limitations. Because there were less than 10 data points for all parameters, a CV of 0.6 was selected. For some non-CTR parameters (e.g., pH and turbidity), the water quality objectives are applied directly as effluent limitations.

Because the discharges authorized by this Order are related to severe wet-weather events, the Regional Water Board finds that mass-based effluent limitations are not applicable to the discharge.

i. Conventional Pollutants

(a) pH

The Basin Plan contains a water quality objective that requires that pH shall not be depressed below 6.5 nor raised above 8.5. WQBELs for pH of an instantaneous maximum of 8.5 and instantaneous minimum of 6.5 are established using the Basin Plan objective. Technology-based effluent limitations derived from secondary treatment standards require pH to be maintained within the range of 6.0 to 9.0. To maintain consistency with the Basin Plan, the final effluent limitations established in this Order

are based on the Basin Plan objective which are more stringent than the technology-based effluent limitations.

ii. Non-Conventional Pollutants

(a) Ammonia

Water quality objectives for total ammonia nitrogen (as N) were calculated from Basin Plan Tables 3-1 and 3-3. These tables provide 1-hour and 4-day average criteria based on pH and temperature for waters designated as COLD. The Regional Water Board used a median pH (7.36 standard units) and an average temperature (11.2 °C) to calculate applicable ammonia water quality objectives. The median pH and average temperature were determined from data provided by the Discharger. The pH data consisted of results for 15 samples collected at a point in the unnamed creek, which is 300 feet downstream of Discharge Point No. 001. The samples were collected while wet weather discharges were occurring in the winters of 2005 and 2008. Temperature data consisted of results for three samples collected from Grass Valley Creek during the dry season in May 2006 and April 2007 when no effluent was being released at Discharge Point No. 001. The resulting 1-hour average and 4-day average criteria are 14.9 mg/L and 2.17 mg/L, respectively. Using the equations for determining the AMEL and MDEL discussed in section IV.C.4.a.ii, the Regional Water Board calculated the following effluent limitations for ammonia:

AMEL = 1.7 mg/L
MDEL = 3.9 mg/L

(b) Chlorine, Total Residual

The Basin Plan contains an objective for total residual chlorine that states, "*For the protection of aquatic life, total chlorine residual shall not exceed either a median value of 0.002 mg/L or a maximum value of 0.003 mg/L. Median values shall be based on daily measurements taken within any six-month period.*" This Order establishes an MDEL of 0.003 mg/L and a 6-month median effluent limitation of 0.002 mg/L based on the Basin Plan water quality objectives for chlorine. As discussed in Provision VII.A.2 of this Order, effluent limitations for total residual chlorine are below the expected minimum level (ML) for this constituent. Non-compliance with a total residual chlorine limitation is defined by exceeding both the limitation and the Reporting Level (RL). The Discharger must achieve the lowest possible RL for total residual chlorine but, in no case, may the RL be greater than 0.1 mg/L.

(c) Total Coliform Organisms

Title 22 of the California Code of Regulations establishes requirements for disinfected tertiary recycled water use when applying water for landscaping and unrestricted access to golf courses. These requirements also protect the beneficial uses of the unnamed stream and Grass Valley Creek [e.g., Agricultural Supply (AGR) and Non-Contact Recreational Water (REC-2)]. Based on Title 22, limitations for total coliform organisms have been established in this Order as follows: the median concentration of total coliform organisms shall not exceed 2.2 MPN/100 mL based on the results of the last 7 days for which analyses have been completed and the number of total coliform organisms shall not exceed 23 MPN/100 mL in more than one sample in any 30-day period.

(d) Total Haloacetic Acids

The Basin Plan contains a water quality objective for chemical constituents that states "*Waters designated as MUN shall not contain concentrations of chemical constituents in excess of the maximum contaminant level (MCL) or secondary maximum contaminant level (SMCL)…*" The Primary MCL for total haloacetic acids is 60 µg/L. Haloacetic acids include monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid.

To ensure the protection of human health, the ECA used to calculate human health-based effluent limitations was established as one-half of the Primary MCL for total haloacetic acids, or 30 µg/L. The Regional Water Board then used the same procedures used for CTR human health criteria to calculate WQBELs for total haloacetic acids. Using the equations for determining the AMEL and MDEL discussed in section IV.C.4.a.iii, the Regional Water Board calculated the following effluent limitations for total haloacetic acids:

AMEL = 30 µg/L
MDEL = 60 µg/L

(e) Methylene Blue Active Substances (MBAS)

The Basin Plan contains a water quality objective for chemical constituents that states "*Waters designated as MUN shall not contain concentrations of chemical constituents in excess of the maximum contaminant level (MCL) or secondary maximum contaminant level (SMCL)…*" The Secondary MCL for MBAS is 0.5 mg/L.

The Regional Water Board used the same procedures used for CTR human health criteria to calculate WQBELs based on the Secondary MCL for MBAS. Using the equations for determining the AMEL and MDEL

discussed in section IV.C.4.a.iii, the Regional Water Board calculated the following effluent limitations for MBAS:

AMEL = 0.5 mg/L
MDEL = 0.9 mg/L

(f) Total Nitrogen (as N)

Previous WDRs established discharge specifications for the effluent discharged to the Hesperia Disposal Site for total nitrogen as N of 8 mg/L as a 30-day average and 10 mg/L as a daily maximum. These specifications are applied as effluent limitations for the wet-weather discharges to the unnamed stream for the protection of the MUN beneficial use.

Summary of Water Quality-based Effluent Limitations
Discharge Point No. 001

Table F-6. Summary of Water Quality-based Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Conventional Pollutants						
pH	standard units	--	--	--	6.5	8.5
Priority Pollutants						
Bis (2-ethylhexyl) Phthalate	µg/L	1.8	--	3.6	--	--
Copper, Total Recoverable	µg/L	3.1	--	6.3	--	--
Chlorodibromomethane	µg/L	0.41	--	0.82	--	--
Chloroform	µg/L	5.7	--	11.4	--	--
Dichlorobromomethane	µg/L	0.56	--	1.12	--	--
Non-Conventional Pollutants						
Ammonia Nitrogen, Total (as N)	mg/L	1.7	--	3.9	--	--
Chlorine, Total Residual[1]	mg/L	0.002[2]	--	0.003	--	--
Total Coliform Organisms	MPN/100 mL	--	2.2[3]	23[4]	--	--
Total Haloacetic Acids[5]	µg/L	30	--	60	--	--
Methylene Blue Active Substances	mg/L	0.5	--	0.9	--	--
Total Nitrogen (as N)	mg/L	8	--	10	--	--

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum

[1] Total Residual Chlorine
[2] Applied as a 6-month median effluent limitation.
[3] Applied as a 7-day median effluent limitation.
[4] The number of total coliform organisms shall not exceed 23 MPN/100 mL in more than one sample in any 30-day period.
[5] Total haloacetic acids include monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid.

5. Whole Effluent Toxicity (WET)

WET tests measure the degree of response of exposed aquatic test organisms to an effluent to determine the aggregate toxic effect of a mixture of pollutants in the effluent. The WET approach allows for protection of narrative toxicity objectives or implementation of 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 generally is conducted over a longer period of time or during a critical life phase and may measure mortality, reproduction, growth, or other sub-lethal responses.

The Basin Plan specifies a narrative objective for toxicity, requiring that: "*All waters shall be maintained free of toxic substances in concentrations that are toxic to, or produce detrimental physiological responses in, human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration and/or other appropriate methods as specified by the Regional Board. The survival of aquatic life in surface waters subject to a waste discharge, or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge or, when necessary, for other control water…*"

In addition, section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters.

The Discharger submitted the results of WET testing with the Initial Study, which was sampled on December 27, 2007. Acute toxicity testing showed 100 percent survival for *Ceriodaphnia dubia* in undiluted effluent. However, monitoring data indicates that pollutants are present in the effluent that exhibit reasonable potential to cause or contribute to acute and chronic toxicity in the receiving water. Therefore, this Order includes effluent limitations for acute toxicity which specify that the effluent shall not exhibit acute toxicity, defined as less than 90 percent survival of *Pimephales promelas* in undiluted effluent in greater than or equal to 50 percent of the samples in a calendar year or less than 70 percent survival of *Pimephales promelas* in undiluted effluent in greater than or equal to 10 percent of the samples in a calendar year. Chronic toxicity requirements are also included in this Order

which are expressed as Provisions and serve as triggers for accelerated testing and initiation of a toxicity reduction evaluation (TRE).

D. Final Effluent Limitations

1. Satisfaction of Anti-Backsliding Requirements – Not Applicable

2. Satisfaction of Antidegradation Policy

Description of Receiving Surface Waters: Under the Discharger's proposal, the receiving waters for the Treated Wet Weather Discharges are portions of the unnamed creek, Grass Valley Creek, West Fork of the Mojave River and Mojave River (See Figure C-2). The top of the Grass Valley Creek watershed is located at the crest of the San Bernardino Mountains. The distance from the crest to the West Fork of the Mojave River is roughly 12 miles. Approximately 2 miles downstream of the crest, Grass Valley Creek is dammed to form Grass Valley Lake. The confluence of Grass Valley Creek and the unnamed stream is located approximately 1.5 miles downstream of the dam. The distance from Discharge Point No. 001 on the unnamed stream to Grass Valley Creek is approximately 0.5 miles. From the confluence of the unnamed stream and Grass Valley Creek the West Fork of the Mojave River is approximately 8 miles.

The unnamed creek is an ephemeral stream, except for a perennial-segment near the confluence with Grass Valley Creek, which is fed by spring flow. There is typically flow throughout the entire length of the unnamed stream during storm events and snowmelt periods. Grass Valley Creek is a perennial stream. Seven wildlife habitats exist along Grass Valley Creek including shrub lands, mountain hardwood and conifer forest, seasonal emergent wetland, rock outcrops, aquatic fish habitat, and mountain riparian woodland. The stream channels within the unnamed creek and Grass Valley Creek are confined to the bottoms of large, v-shaped canyons. The channels slopes generally range from 4 to 10 percent.

With one exception, human access to affected segments of the unnamed creek and Grass Valley Creek is difficult, because of: (a) Steep canyon slopes, (b) Relatively thick vegetation growth, (c) Lack of dedicated trails or roads, and/or (d) Private property (farm land in Summit Valley) that is fenced and posted "no trespassing." This one exception consists of a 200-foot segment of Grass Valley Creek in Summit Valley where the Creek crosses under Highway 173. Access upstream and downstream of the 200-foot segment is restricted by fencing and posting.
Factors Minimizing Affects on Water Quality: Factors minimizing affects of Treated Wet Weather Discharges on receiving surface water quality include:

- The Discharges are intermittent and infrequent, occurring less than 2% of the time.
- The trend for Discharge volume from 1993 through 2008 indicates a decline in volume with time.
- Reduction in concentrations of chlorine disinfection by-products in the Discharges as a result of the use of the new 1.0 MGD membrane filtration/UV

disinfection facilty during any Discharges occurring during and after the 2010 water year.

- Results of a bioassessment survey show no adverse affects on the COLD and WARM beneficial uses for Grass Valley Creek as a result of Treated Wet Weather Discharges from the GVWWTP to the unnamed creek, tributary to the Grass Valley Creek. The GVWWTP began operating on April 4, 1988, and Discharges from the GVWWTP to the unnamed tributary occurred in water years of 1993, 1995, 1998, 2005 and 2008 (See Satisfaction of Antidegradation Policy, Page F-27).
- Improved treatment N removal, UV facility

MUN Beneficial Use: Beneficial uses designated in the Basin Plan for the receiving surface waters include MUN. Sampling results and evaluation of the Discharger's proposal indicate that constituents in the Treated Wet Weather Discharges most likely to affect the MUN beneficial use are Trihalomethane and Total Haloacetic Acid Constituents. Concentrations, however, will not exceed Drinking Water MCLs applicable to these constituents (The MCLs are listed in Table F-8, Column 5). The MCLs for the constituents are also Basin Plan WQOs for protection of the MUN beneficial use.

Table F-7. Water Quality Objectives, MUN Beneficial Use

Constituent Group	Applicable WQO (µg/L)	Source
Total Trihalomethane Constituents (THMs)[1]	80	Basin Plan (MCL)[2]
Total Haloacetic Acids (HAA5s)[3]	60	Basin Plan (MCL)

[1] Sum of Dichlorobromomethane, Chlorodibromomethane, Chloroform, and Bromoform.
[2] Drinking Water Maximum Contaminant Level (MCL)
[3] Sum of Dichloroacetic Acid, Trichloroacetic Acid, Monochloroacetic Acid, Monobromoacetic Acid and Dibromoacetic Acid.

REC-1 and REC-2 Beneficial Uses: The Discharger will disinfect treated effluent before releasing it at Discharge Point 001 in order to meet effluent limits for total coliform organisms contained in this Order. The effluent limits are for protection of human health and are in conformance with California Code of Regulations, title 22.

COLD and WARM Beneficial Uses: A dechlorination facility will be installed in order to meet effluent limits for Total Residual Chlorine, which can be toxic to aquatic life. Thereafter, there will not be constituents present in the effluent at concentrations toxic to aquatic life, based on evaluation of sampling results completed for the effluent.

The Discharger completed sampling and survey work for the unnamed stream and Grass Valley Creek between May 2005 and January 2008. The survey included sampling to determine whether streambed macro-invertebrates have been affected by Treated Wet Weather Discharges that occurred during the water years of 1993,

1995, 1998, 2005 and 2008. The Discharger conducted the survey in the segment of Grass Valley Creek from 300 feet upstream through 300 feet downstream of its confluence with the unnamed stream. The assessment showed no impairment in the downstream streambed habit of Grass Valley Creek as compared to the upstream habitat in the Creek.

Records indicate that both Grass Valley Lake and Grass Valley Creek were stocked with trout before 1985. Trout are presumed to be present in Grass Valley Creek.

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD_5 and TSS. Restrictions on BOD_5 and TSS are discussed in section IV.B.2 of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations 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.

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 40 CFR 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 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.

Summary of Final Effluent Limitations
Discharge Point No. 001

Table F-8. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations					Basis[1]
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Conventional Pollutants							
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	20	25	30	--	--	EO/BPJ
	% Removal	85	--	--	--	--	CFR

Parameter	Units	Effluent Limitations					Basis[1]
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
pH	standard units	--	--	--	6.5	8.5	BP
Total Suspended Solids	mg/L	20	25	30	--	--	BPJ
	% Removal	85	--	--	--	--	CFR
Priority Pollutants							
Bis (2-ethylhexyl) Phthalate	µg/L	1.8	--	3.6	--	--	CTR
Copper, Total Recoverable	µg/L	3.1	--	6.3	--	--	CTR
Chlorodibromomethane	µg/L	0.41	--	0.82	--	--	CTR
Chloroform	µg/L	5.7	--	11.4	--	--	NAWQC
Dichlorobromomethane	µg/L	0.56	--	1.12	--	--	CTR
Non-Conventional Pollutants							
Acute Toxicity	% Survival	[2]	--	--	--	--	BP
Ammonia Nitrogen, Total (as N)	mg/L	1.7	--	3.9	--	--	BP
Chlorine, Total Residual[3]	mg/L	0.002[4]	--	0.003	--	--	BP
Total Coliform Organisms	MPN/100 mL	--	2.2[5]	23[6]	--	--	Title 22
Total Haloacetic Acids[7]	µg/L	30	--	60	--	--	MCL
Methylene Blue Active Substances	mg/L	0.5	--	0.9	--	--	SEC MCL
Total Nitrogen (as N)	mg/L	8	--	10	--	--	EO/MCL

Parameter	Units	Effluent Limitations					Basis[1]
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	

[1] EO – Based on the effluent limitations for BOD_5 contained in the Discharger's existing Order No. R6V-2002-0008.
BPJ – Based on Best Professional Judgment.
CFR – Based on the secondary treatment standards contained at 40 CFR Part 133.
BP – Based on water quality objectives contained in the Basin Plan.
CTR – Based on water quality criteria contained in the California Toxics Rule, and applied as specified in the SIP.
NAWQC – Based on the USEPA National Ambient Water Quality Criteria for Human Health and Welfare Protection, One-in-a-Million Cancer Risk Estimate for Sources of Drinking Water.
0_3 – Based on the potential presence of bromate in the effluent as a disinfection by-product from the ozonation disinfection process.
Title 22 – Based on CA Dept. of Health Services Reclamation Criteria, CCR, Division 4, Chapter 3 (Title 22).
IRIS – Based on USEPA Integrated Risk Information System (IRIS) One-in-a-Million Incremental Cancer Risk Estimate for Drinking Water.
MCL – Based on California Primary Maximum Contaminant Level.
SEC MCL – Based on California Secondary Maximum Contaminant Level.
MCLG – Based on USEPA Maximum Contaminant Level Goal.

[2] The effluent shall not exhibit acute toxicity, defined as:
- Less than 90 percent survival of *Pimephales promelas* in undiluted effluent in ≥50 percent of the samples in a calendar year; or
- Less than 70 percent survival of *Pimephales promelas* in undiluted effluent in ≥10 percent of the samples in a calendar year.

[3] Total Residual Chlorine.

[4] Applied as a 6-month median effluent limitation.

[5] Applied as a 7-day median effluent limitation.

[6] The number of total coliform organisms shall not exceed 23 MPN/100 mL in more than one sample in any 30-day period.

[7] Total haloacetic acids include monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid.

E. Interim Effluent Limitations – Not Applicable

F. Land Discharge Specifications – Not Applicable

G. Reclamation Specifications

Order No. R6V-2002-0008 included reclamation requirements for the Discharger's use of recycled water for the irrigation of fodder crops. The Discharger discontinued the use of recycled water for the irrigation of fodder crops at the Hesperia Disposal Site in October 2001. Since that time, all treated effluent conveyed to the Hesperia Disposal Site has been discharged to the Percolation Ponds. This Order requires that any recycled water discharged in the future comply with the Uniform Statewide Reclamation Criteria contained in Title 22, sections 60301 through 60355 of the California Code of Regulations.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

The Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the Lahontan Region. Water quality objectives include an

objective to maintain the high quality waters pursuant to federal regulations (40 CFR 131.12) and State Water Board Resolution No. 68-16. Surface water limitations in this Order are included to ensure protection of background water quality and beneficial uses of the receiving water.

B. Groundwater

1. Prohibition III.B of this Order prohibits discharge to receiving waters except in wet weather situations when certain conditions are met. Among others, these conditions include the requirement that the flowrate of storm water runoff in Grass Valley Creek be equal to or greater than 40 MGD (62 cfs) and the requirement that the discharge flow rate shall not exceed 4.0 MGD. Unlike effluent dominated stream situations, under these discharge conditions, it is improbable that pollutants in the effluent will percolate into the groundwater in concentrations that would affect background water quality or beneficial uses. Therefore, this Order does not establish groundwater limitations for the wet weather discharges authorized by this Order.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this Facility.

A. Influent Monitoring

1. Influent monitoring is required to collect data on the characteristics of the wastewater and to assess compliance with effluent limitations (e.g., BOD_5 and TSS reduction requirements). This Order retains weekly influent monitoring requirements from Order No. R6V-2002-0008 for BOD_5, TSS, and MBAS which are applicable when the Discharger discharges effluent to the Hesperia Disposal Site. Daily monitoring is required for BOD_5 and TSS when discharging to surface water.

B. Effluent Monitoring

1. Pursuant to the requirements of 40 CFR 122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to assess the impacts of the discharge on the receiving stream and groundwater.

2. Effluent flow monitoring is required to determine compliance with Discharge Prohibition III.B.b of this Order.

3. Monitoring data indicates that the discharge has reasonable potential to exceed water quality objectives and effluent limitations have been established for pH, bis (2-ethylhexyl) phthalate, copper, chlorodibromomethane, chloroform, dichlorobromomethane, total haloacetic acids, and total trihalomethanes. This Order requires the Discharger to monitor for these parameters once per discharge event in order to determine compliance with effluent limitations for these parameters. In addition, daily monitoring has been established for chlorine residual and total coliform organisms to determine compliance with the applicable effluent limitations.

4. As discussed in section IV.C.3 of this Fact Sheet, reasonable potential for boron and sulfate in the discharge to exceed water quality objectives cannot be definitively determined. This Order requires the Discharger to monitor once per discharge event for boron and once every 4 days during a discharge event for sulfate in the discharge to collect additional information in order to make a reasonable potential determination for these constituents.

5. Technology-based effluent limitations for BOD_5 and TSS have been established in this Order. This Order requires the Discharger to monitor for these parameters daily when discharging to a surface water in order to determine compliance with effluent limitations for these parameters.

6. Fecal coliform organisms are a component of total coliform organisms and may be present in the discharge. This Order requires effluent monitoring for fecal coliform organisms daily during a discharge event.

7. Section 1.3 of the SIP requires period monitoring for pollutants for which criteria or objectives apply and for which no effluent limitations have been established. This Order requires priority pollutant monitoring once per discharge event, but no more than once per year to determine the presence of these pollutants in the discharge and provide data for future reasonable potential assessments.

C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity.** 96-hour bioassay testing is required once per discharge event, but no more than once per year to demonstrate compliance with the effluent limitation for acute toxicity.

2. **Chronic Toxicity.** Chronic whole effluent toxicity testing is required once per discharge event, but no more than once per year in order to demonstrate compliance with the Basin Plan's narrative toxicity objective.

D. Receiving Water Monitoring

1. Surface Water

a. Receiving water monitoring is necessary to assess compliance with receiving water limitations and to assess the impacts of the discharge on the receiving

stream. Upstream and downstream monitoring stations have been established at RSW-001 and RSW-002 within Grass Valley Creek.

b. For RSW-001, this Order requires priority pollutant monitoring once per discharge event, but no more than once per year to determine the presence of these pollutants in the ambient receiving water and provide data for future reasonable potential assessments.

2. Groundwater – Not Applicable

E. Other Monitoring Requirements

1. **Sludge Monitoring.** Sludge monitoring requirements are retained from Order No. R6V-2002-0008 and are based on regulations contained in 40 CFR Part 503.

2. **Water Supply Monitoring.** Water supply monitoring requirements are retained from Order No. R6V-2002-0008 and are necessary to evaluate the source of constituents in the wastewater.

3. **Operation and Maintenance.** Operation and maintenance requirements are retained from Order No. R6V-2002-0008.

4. **Infiltration and Inflow (I/I).** Quarterly status reports describing sewer investigation and corrective action tasks completed and scheduled for completion are necessary to ensure proper maintenance of the sewer is being conducted and that appropriate levels of I/I are being achieved.

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. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42.

40 CFR 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 CFR 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR 123.25, 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 Water Code section 13387(e).

B. Special Provisions

1. Reopener Provisions

Conditions that necessitate a major modification of a permit are described in 40 CFR 122.62, which include the following:

a. *When standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision.* Therefore, if more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the federal Water Pollution Control Act or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

b. *When new information that would justify different permit conditions becomes available*, the Regional Water Board may reopen this Order and modify the effluent limitations or add final WQBELs as appropriate. The Discharger is required by this Order to conduct effluent and receiving water monitoring. The Regional Water Board may reopen this Order to evaluate the impact of any past or potential future operations on receiving waters. In addition, this Order includes provisions allowing the Discharger to conduct an optional metals translator study for copper. Upon submission of and based on the results of this study, the Regional Water Board may reopen this Order to reconsider and modify, if appropriate, the final effluent limitations established in this Order for copper. This Order also includes a provision for an optional monitoring study for bis (2-ethylhexyl) phthalate. Upon submission of and based on the results of the study, the Regional Water Board may reopen this Order to reconsider the reasonable potential determination and remove or modify, if appropriate, the final effluent limitations established in this Order for bis (2-ethylhexyl) phthalate.

c. *When Facility alterations or changes in operations justify new conditions that are different from the existing permit.* This Order may be modified to include appropriate conditions or limitations to address demonstrated effluent toxicity based on newly available information. In addition, the discharge of a new chemical that is found to have reasonable potential to cause, or contribute to an in-stream excursion above any chemical-specific water quality criteria, narrative water quality objective for chemical constituents from the Basin Plan, or narrative water quality objective for toxicity from the Basin Plan, would be considered a change in Facility operations that requires reopening this Order to establish new effluent limitations.

2. Special Studies and Additional Monitoring Requirements

a. Toxicity Identification Evaluation (TIE) or Toxicity Reduction Evaluations (TRE). By Novembe 9, 2011, the Discharger is required to submit to the Regional Water Board an initial investigative TRE Work Plan. The TRE Work Plan generally describes the steps the Discharger intends to follow if acute toxicity is observed during accelerated acute WET testing as specified in the

MRP (Attachment E). The TRE Work Plan is required in order to ensure continued compliance with WET limitations and requirements in the Order; to ensure attainment of the toxicity objective in the Basin Plan; and to ensure protection of the beneficial uses of the unnamed stream and Grass Valley Creek.

b. Optional Studies. The Discharger may develop and submit to the Regional Water Board for its consideration a translator study for copper. Upon completion of the study and submission of the study results, the Regional Water Board may, based on the results, reopen this Order to modify the final effluent limitations for copper in accordance with the provision contain in section VI.C.1.d of this Order.

In addition, the Discharger may conduct and submit to the Regional Water Board for its consideration a study involving collection of additional, reliable ambient and effluent monitoring data for bis (2-ethylhexyl) phthalate. Upon completion of the study and submission of the study results, the Regional Water Board may, based on the results, reconsider the reasonable potential determination or modify the effluent limitations for bis (2-ethylhexyl) phthalate in accordance with the provision contained in section VI.C.1.d of this Order.

These studies are optional and may be initiated at the Discharger's discretion.

3. Best Management Practices and Pollution Prevention

a. Pollutant Minimization Program (PMP). The PMP required in this Order is necessary to address pollutants for which there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either:

i. A sample result is reported as "detected, but not quantified" (DNQ) and the effluent limitation is less than the Reporting Limit (RL); or

ii. A sample result is reported as "not detected" (ND) and the effluent limitation is less than the Method Detection Limit (MDL), using definitions described in Attachment A and reporting protocols described in section X.B.4 of the MRP.

4. Construction, Operation, and Maintenance Specifications

a. These specifications are based on the requirements of 40 CFR 122.41(e).

5. Special Provisions for Municipal Facilities (POTWs Only)

a. The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ (General Order) on May 2, 2006. The General Order requires public agencies that own or operate sanitary sewer systems with greater than 1 mile of pipes or sewer lines

to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans (SSMPs) and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions.

Furthermore, the General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. Inasmuch that the Discharger's collection system is part of the system that is subject to this Order, certain standard provisions are applicable as specified in Provisions, section VI.C.5. For instance, the 24-hour reporting requirements in this Order are not included in the General Order. The Discharger must comply with both the General Order and this Order. The Discharger and public agencies that are discharging wastewater into the Grass Valley WWTP and Willow Creek WWTP were required to obtain enrollment for regulation under the General Order by December 1, 2006.

Order No. R6V-2002-0008 required the Discharger to establish and implement programs that include, but are not limited to, the Sewer System Capacity, Management, Operation and Maintenance Programs (CMOM Programs) described in the most current version of the USEPA CMOM regulations. Compliance with the General Order will ensure compliance with the CMOM regulations and therefore those requirements have not been retained in this Order.

6. Other Special Provisions

a. **Order Continuation After Expiration Date.** This provision is common in California NPDES permits and is authorized under 40 CFR 122.6(d).

7. Compliance Schedules – Not Applicable

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Lahontan Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the Grass Valley Wastewater Treatment Plant. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the following **<Describe Notification Process (e.g., newspaper name and date)>**

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 Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on **<Date>**.

C. Public Hearing

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

Date: March 10 and 11, 2010
Time:
Location:

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

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

D. Waste Discharge Requirements Petitions

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

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

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m.,

Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (760) 241-6583.

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 Regional Water Board, reference this Facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Mike Coony at (760) 241-7365.

DRAFT

ATTACHMENT G – SUMMARY OF REASONABLE POTENTIAL ANALYSIS

Table G-1. Reasonable Potential Analysis for Priority Pollutants

Constituent, Unit CTR #	Antimony, µg/L #1	Arsenic, µg/L #2	Be, µg/L #3	Cadmium, µg/L #4	Cr (III), µg/L # 5a	Cr (VI), µg/L # 5b	Cu, µg/L #6	Lead, µg/L #7	Hg, µg/L #8	Nickel, µg/L #9	Se, µg/L #10	Silver, µg/L #11	Thallium, µg/L #12	Zinc, µg/L #13	Cyanide, µg/L #14	Asb, MFL #15
LEC, µg/L	<0.5	<1.0	<0.5	<0.25	--	<1.0	18	<0.5	< 0.20	1.8	<1.0	<0.25	<1.0	47	<0.005	--
MEC, µg/L	<0.5	<1.0	<0.5	<0.25	--	<1.0	18	<0.5	<0.20	1.8	<1.0	<0.25	<1.0	47	<0.005	--
Maximum Background, µg/L	<0.5	<1.0	<0.5	<0.25	--	3	0.7	<0.5	<0.20	<1.0	<1.0	<0.25	<1.0	<1.0	<0.005	--
Numeric Basin Plan Objective, µg/L (MCL, Site Spec if applicable)	MCL 6	MCL 10	MCL 4	MCL 5	MCL 50	MCL 50	MCL 1,000	--	MCL 2	MCL 100	MCL 50	MCL 50	MCL 2	MCL 5,000	MCL 200	MCL 7 MFL
Narrative Basin Plan Objective, µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CMC (µg/L) Freshwater, Total @ 42.80 mg/l Hardness (as $CaCO_3$)	--	340 i,m,w	--	1.73	866.62	16 i,m,w	6.29	27.72	--	228.84		0.94	--	58.38	22 o	--
CCC (µg/L) Freshwater, Total @ 42.80 mg/l Hardness (as $CaCO_3$)	--	150 i,m,w	--	1.26	103.30	11 i,m,w	4.52	1.08	--	25.44	5 q	--	--	58.38	5.2 o	--
Human Health, Total µg/L Water + Org.	14 a,s	--	n	n	n	n	1,300	n	0.050 a	610 a	n	--	1.7 a,s	--	700 a	7 MFL k,s
Human Health, Total µg/L Organisms Only	4300 a,t	--	n	n	n	n	--	n	0.051 a	4,600 a	n	--	6.3 a,t	--	220,000 a,j	--
Other factors (303d listing, bioaccum, etc.)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Reasonable Potential	N	N	N	N	I	N	Y	N	N	N	N	N	N	N	N	I

Table G-1. Summary of Reasonable Potential Analysis for Priority Pollutants (continued)

Constituent, Unit CTR #	2, 3, 7, 8-TCDD (Dioxin), µg/L # 16	Acrolein, µg/L # 17	Acrylonitrile, µg/L # 18	Benzene, µg/L # 19	Bromoform, µg/L # 20	Carbon Tetrachloride, µg/L # 21	Chlorobenzene (Monochlorobenzene), µg/L # 22	Chlorodibromo-methane, µg/L # 23	Chloroethane, µg/L # 24	2-Chloroethylvinyl Ether, (chloroalkylether), µg/L # 25
LEC, µg/L	–	<2.0	<2.0	<0.50	<0.50	<0.50	<0.50	0.64	<0.50	<1.0
MEC, µg/L	–	<2.0	<2.0	<0.50	<0.50	<0.50	<0.50	1.1	<0.50	<1.0
Maximum Background, µg/L	–	<2.0	<2.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0
Numeric Basin Plan Objective, µg/L (MCL, Site Spec if applicable)	MCL 3.0E-08	–	–	MCL 1	MCL THMs 80	MCL 0.5	MCL 70	MCL THMs 80	–	–
Narrative Basin Plan Objective, µg/L	–	–	–	–	–	–	–	–	–	–
CMC Freshwater, Total µg/L	–	–	–	–	–	–	–	–	–	–
CCC Freshwater, Total µg/L	–	–	–	–	–	–	–	–	–	–
Human Health, Total µg/L Water +Org Only	1.3E-08 c	320 s	0.059 a,c,s	1.2 a,c	4.3 a,c	0.25 a,c,s	680 a,s	0.41 a,c	–	–
Human Health, Total µg/L Org Only	1.4E-08 c	780 t	0.66 a,c,t	71 a,c	360 a,c	4.4 a,c,t	21,000 a,j,t	34 a,c	–	–
Other factors (303d listing, bioaccum, etc.)	–	–	–	–	–	–	–	–	–	–
Reasonable Potential	I	N	N	N	N	N	N	Y	N	N

Constituent, Unit CTR #	Chloroform, µg/L # 26	Dichlorobromo-methane, µg/L # 27	1,1-Dichloroethane, µg/L # 28	1,2-Dichloro-ethane, µg/L # 29	1,1-Dichloro-ethylene, µg/L # 30	1,2-Dichloro-propane, µg/L #31	1,3-Dichloro-propylene, µg/L # 32	Ethylbenzene, µg/L # 33	Methyl Bromide (Bromomethane), µg/L # 34	Methyl Chloride (Chloromethane), µg/L # 35
LEC, µg/L	18	5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.53
MEC, µg/L	20	6.3	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.67
Maximum Background, µg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Numeric Basin Plan Objective, µg/L (MCL, Site Spec if applicable)	MCL THMs 80	MCL THMs 80	MCL 5	MCL 0.5	MCL 6	MCL 5	MCL 0.5	MCL 700	–	–
Narrative Basin Plan Objective, µg/L	–	–	–	–	–	–	–	–	–	–
CMC Freshwater, Total µg/L	–	–	–	–	–	–	–	–	–	–
CCC Freshwater, Total µg/L	–	–	–	–	–	–	–	–	–	–
Human Health, Total µg/L Water +Org Only	(CTR reserved)USEPA 5.7	0.56 a,c	–	0.38 a,c,s	0.057 a,c,s	0.52 a	10 a,s	3,100 a,s	48 a	n
Human Health, Total µg/L Org Only	(CTR reserved)USEPA 470	46 a,c	–	99 a,c,t	3.2 a,c,t	39 a	1,700 a,t	29,000 a,t	4,000 a	n
Other factors (303d listing, bioaccum, etc.)	–	–	–	–	–	–	–	–	–	–
Reasonable Potential	Y	Y	N	N	N	N	N	N	N	N

Table G-1. Summary of Reasonable Potential Analysis for Priority Pollutants (continued)

Constituent, Unit CTR #	Methylene Chloride, µg/L # 36	1,1,2,2-Tetra-chloroethane, µg/L # 37	Tetrachloro-ethylene, µg/L # 38	Toluene, µg/L # 39	1,2-Trans-Dichloro-ethylene, µg/L # 40	1,1,1 -Trichloro-ethane, µg/L # 41	1,1,2-Trichloro-ethane, µg/L # 42	Trichloroethylene, µg/L # 43	Vinyl Chloride, µg/L # 44	2-Chlorophenol, µg/L # 45
LEC, µg/L	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.0**
MEC, µg/L	**<0.50**	**<0.50**	**<0.50**	**0.55**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.0**
Maximum Background, µg/L	**<0.50**	**<0.50**	**<0.50**	**< 0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.0**
Numeric Basin Plan Objective, µg/L (MCL, Site Spec if applicable)	MCL 5	MCL 1	MCL 5	MCL 150	MCL 10	MCL 200	MCL 5	MCL 5	MCL 0.5	--
Narrative Basin Plan Objective, µg/L	--	--	--	--	--	--	--	--	--	--
CMC Freshwater, Total µg/L	--	--	--	--	--	--	--	--	--	--
CCC Freshwater, Total µg/L	--	--	--	--	--	--	--	--	--	--
Human Health, Total µg/L Water +Org Only	4.7 a,c	0.17 a,c,s	0.8 c,s	6,800 a	700 a	n	0.60 a,c,s	2.7 c,s	2 c,s	120 a
Human Health, Total µg/L Org Only	1,600 a,c	11 a,c,t	8.85 c,t	200,000 a	140,000 a	n	42 a,c,t	81 c,t	525 c,t	400 a
Other factors (303d list, bioaccum, etc.)	--	--	--	--	--	--	--	--	--	--
Reasonable Potential	N	N	N	N	N	N	N	N	N	N

Constituent, Unit CTR #	2,4-Dichlorophenol, µg/L # 46	2,4-Dimethylphenol, µg/L # 47	2-Methyl-4,6-Dinitrophenol, µg/L # 48	2,4-Dinitrophenol, µg/L # 49	2-Nitrophenol, µg/L # 50	4-Nitrophenol, µg/L # 51	4-chloro-3-methylphenol, µg/L # 52	Pentachloro-phenol, µg/L # 53	Phenol, µg/L # 54
LEC, µg/L	**<1.0**	**<1.0**	**<5.0**	**<5.0**	**<10**	**<5.0**	**<1.0**	**<0.20**	**<1.0**
MEC, µg/L	**<1.0**	**<1.0**	**<5.0**	**<5.0**	**<10**	**<5.0**	**<1.0**	**<1.0**	**<1.0**
Maximum Background, µg/L	**<1.0**	**<1.0**	**<5.0**	**<5.0**	**<10**	**<5.0**	**<1.0**	**<0.20**	**<1.0**
Numeric BP Objective, µg/L (MCL, Site Spec if applicable)	--	--	--	--	--	--	--	MCL 1	--
Narrative Basin Plan Objective, µg/L	--	--	--	--	--	--	--	--	--
CMC Freshwater, Total µg/L At pH=6.5	--	--	--	--	--	--	--	30 f,w	--
CCC Freshwater, Total µg/L At pH=6.5	--	--	--	--	--	--	--	39 f,w	--
Human Health, Total µg/L Water +Org Only	93 a,s	540 a	13.4 s	70 a,s	--	--	--	0.28 a,c	21,000 a
Human Health, Total µg/L Org Only	790 a,t	2,300 a	765 t	14,000 a,t	--	--	--	8.2 a,c,j	4,600,000 a,j,t
Other factors (303d list, bioaccum, etc.)	--	--	--	--	--	--	--	--	--
Reasonable Potential	N	N	N	N	N	N	N	N	N

Table G-1. Summary of Reasonable Potential Analysis for Priority Pollutants (continued)

Constituent, Unit CTR #	2, 4, 6 Trichloro-phenol, µg/L # 55	Acenaphthene, µg/L # 56	Acenaphthylene, µg/L # 57	Anthracene, µg/L # 58	Benzidine, µg/L # 59	Benzo(a) anthracene, µg/L # 60	Benzo(a) Pyrene, µg/L # 61	Benzo(b) fluoranthene, µg/L # 62	Benzo(ghi) perylene, µg/L # 63
LEC, µg/L	**<10**	**<0.05**	**<0.05**	**<0.05**	**<5.0**	**<0.05**	**<0.05**	**<0.05**	**<0.05**
MEC, µg/L	**<10**	**<0.05**	**<0.05**	**<0.05**	**<5.0**	**<0.05**	**<0.14**	**<0.05**	**<0.05**
Maximum Background, µg/L	**<10**	**<0.05**	**<0.05**	**<0.05**	**<5.0**	**<0.05**	**<0.05**	**<0.05**	**<0.05**
Numeric BP Objective, µg/L (MCL, Site Spec if applicable)	--	--	--	--	--	--	MCL 0.2	--	--
Narrative Basin Plan Objective, µg/L	--	--	--	--	--	--	--	--	--
CMC Freshwater, Total µg/L	--	--	--	--	--	--	--	--	--
CCC Freshwater, Total µg/L	--	--	--	--	--	--	--	--	--
Human Health, Total µg/L Water +Org Only	2.1 a,c	1,200 A	--	9,600 a	0.00012 a,c,s	0.0044 a,c	0.0044 a,c	0.0044 a,c	--
Human Health, Total µg/L Org Only	6.5 a,c	2,700 A	--	110,000 a	0.00054 a,c,t	0.049 a,c	0.049 a,c	0.049 a,c	--
Other factors (303d list, bioaccum, etc.)	--	--	--	--	--	--	--	--	--
Reasonable Potential	N	N	N	N	N	N	N	N	N

Constituent, Unit CTR #	Benzo(k) fluoranthene, µg/L # 64	Bis (2-Chloro-ethoxy) Methane, µg/L # 65	Bis (2-Chloroethyl) Ether, µg/L # 66	Bis (2-Chloroiso-propyl) Ether, µg/L # 67	Bis (2-Ethylhexyl) Phthalate, µg/L # 68	4-Bromophenyl Phenyl Ether, µg/L # 69	Butylbenzyl Phthalate, µg/L # 70	2-Chloro-naphthalene, µg/L # 71	4-Chlorophenyl Phenyl Ether, µg/L # 72
LEC, µg/L	**<0.05**	**<5.0**	**<1.0**	**<2.0**	**<5.0**	**<5.0**	**<10**	**<10**	**<5.0**
MEC, µg/L	**<0.05**	**<5.0**	**<1.0**	**<2.0**	**6.0**	**<5.0**	**<10**	**<10**	**<5.0**
Maximum Background, µg/L	**<0.05**	**<5.0**	**<1.0**	**<2.0**	**<3.0**	**<5.0**	**<10**	**<10**	**<5.0**
Numeric BP Objective, µg/L (MCL, Site Spec if applicable)	--	--	--	--	MCL 4	--	--	--	--
Narrative Basin Plan Objective, µg/L	--	--	--	--	--	--	--	--	--
CMC Freshwater, Total µg/L	--	--	--	--	--	--	--	--	--
CCC Freshwater, Total µg/L	--	--	--	--	--	--	--	--	--
Human Health, Total µg/L Water +Org Only	0.0044 a,c	--	0.031 a,c,s	1,400 a	1.8 a,c,s	--	3,000 a	1,700 a	--
Human Health, Total µg/L Org Only	0.049 a,c	--	1.4 a,c,t	170,000 a,t	5.9 a,c,t	--	5,200 a	4,300 a	--
Other factors (303d list, bioaccum, etc.)	--	--	--	--	--	--	--	--	--
Reasonable Potential	N	N	N	N	Y	N	N	N	N

Table G-1. Summary of Reasonable Potential Analysis for Priority Pollutants (continued)

Constituent, Unit CTR #	Chrysene, µg/L # 73	Dibenzo (ah) anthracene, µg/L # 74	1,2 Dichloro-benzene, µg/L # 75	1, 3 Dichloro-benzene, µg/L # 76	1, 4 Dichloro-benzene, µg/L # 77	3,3-Dichloro-benzidine, µg/L # 78	Diethyl Phthalate, µg/L # 79	Dimethyl Phthalate, µg/L # 80	Di-n-Butyl Phthalate, µg/L # 81
LEC, µg/L	**<0.05**	**<0.05**	**<0.50**	**<0.50**	**<0.50**	**<5.0**	**<2.0**	**<2.0**	**<10**
MEC, µg/L	**<0.05**	**<0.05**	**<2.0**	**<1.0**	**<1.0**	**<5.0**	**<2.0**	**<2.0**	**<10**
Maximum Background, µg/L	**<0.05**	**<0.05**	**<0.50**	**<0.50**	**<0.50**	**<5.0**	**<2.0**	**<2.0**	**<10**
Numeric BP Objective, µg/L (MCL, Site Spec if applicable)	--	--	MCL 600	--	MCL 5	--	--	--	--
Narrative Basin Plan Objective, µg/L	--	--	--	--	--	--	--	--	--
CMC Freshwater, Total µg/L	--	--	--	--	--	--	--	--	--
CCC Freshwater, Total µg/L	--	--	--	--	--	--	--	--	--
Human Health, Total µg/L Water +Org Only	0.0044 A,c	0.0044 a,c	2,700 a	400	400	0.04 a,c,s	23,000 a,s	313,000 s	2,700 a,s
Human Health, Total µg/L Org Only	0.049 A,c	0.049 a,c	17,000 a	2,600	2,600	0.077 a,c,t	120,000 a,t	2,900,000 t	12,000 a,t
Other factors (303d list, bioaccum, etc.)	--	--	--	--	--	--	--	--	--
Reasonable Potential	N	N	N	N	N	N	N	N	N

Constituent, Unit CTR #	2,4-Dinitro-toluene, µg/L # 82	2,6-Dinitro-toluene, µg/L # 83	Di-n-Octyl Phthalate, µg/L # 84	1,2-Diphenyl – hydrazine, µg/L # 85	Fluoranthene, µg/L # 86	Fluorene, µg/L # 87	Hexachloro-benzene, µg/L # 88	Hexachloro – butadiene, µg/L # 89	Hexachloro – cyclopentadiene, µg/L # 90
LEC, µg/L	**<5.0**	**<5.0**	**<10**	**<1.0**	**<0.05**	**<0.05**	**<0.50**	**<0.50**	**<1.0**
MEC, µg/L	**<5.0**	**<5.0**	**<10**	**<1.0**	**<0.05**	**<0.05**	**<1.0**	**<0.50**	**<5.0**
Maximum Background, µg/L	**<5.0**	**<5.0**	**<10**	**<1.0**	**<0.05**	**<0.05**	**<0.50**	**<1.0**	**<1.0**
Numeric BP Objective, µg/L (MCL, Site Spec if applicable)	--	--	--	--	--	--	MCL 1	--	MCL 50
Narrative Basin Plan Objective, µg/L									
CMC Freshwater, Total µg/L	--	--	--	--	--	--	--	--	--
CCC Freshwater, Total µg/L	--	--	--	--	--	--	--	--	--
Human Health, Total µg/L Water +Org Only	0.11 c,s	--	--	0.040 a,c,s	300 a	1,300 a	0.00075 a,c	0.44 a,c,s	240 a,s
Human Health, Total µg/L Org Only	9.1 c,t	--	--	0.54 a,c,t	370 a	14,000 a	0.00077 a,c	50 a,c,t	17,000 a,j,t
Other factors (303d list, bioaccum, etc.)	--	--	--	--	--	--	--	--	--
Reasonable Potential	N	N	N	N	N	N	N	N	N

Table G-1. Summary of Reasonable Potential Analysis for Priority Pollutants (continued)

Constituent, Unit CTR #	Hexachloroethane, µg/L # 91	Indeno (1,2,3-cd) pyrene, µg/L # 92	Isophorone, µg/L # 93	Naphthalene, µg/L # 94	Nitrobenzene, µg/L # 95	N-Nitrosodimethyl-amine, µg/L # 96	N-Nitrosodi-n-Propylamine, µg/L # 97	N-Nitrosodiphenyl-amine, µg/L # 98
LEC, µg/L	**<1.0**	**<0.05**	**<1.0**	**<0.05**	**<1.0**	**<5.0**	**<5.0**	**<1.0**
MEC, µg/L	**<1.0**	**<0.05**	**<1.0**	**<0.05**	**<1.0**	**<5.0**	**<5.0**	**<1.0**
Maximum Background, µg/L	**<1.0**	**<0.05**	**<1.0**	**<0.05**	**<1.0**	**<5.0**	**<5.0**	**<1.0**
Numeric BP Objective, µg/L (MCL, Site Spec if applicable)	--	--	--	--	--	--	--	--
Narrative Basin Plan Objective, µg/L	--	--	--	--	--	--	--	--
CMC Freshwater, Total µg/L	--	--	--	--	--	--	--	--
CCC Freshwater, Total µg/L	--	--	--	--	--	--	--	--
Human Health, Total µg/L Water +Org Only	1.9 A,c,s	0.0044 a,c	8.4 c,s	--	17 a,s	0.00069 a,c,s	0.005 a	5.0 a,c,s
Human Health, Total µg/L Org Only	8.9 A,c,t	0.049 a,c	600 c,t	--	1,900 a,j,t	8.1 a,c,t	1.4 a	16 a,c,t
Other factors (303d list, bioaccum, etc.)	--	--	--	--	--	--	--	--
Reasonable Potential	N	N	N	N	N	N	N	N

Constituent, Unit CTR #	Phenanthrene, µg/L # 99	Pyrene, µg/L # 100	1,2,4-Trichlorobenzene, µg/L # 101	Aldrin, µg/L # 102	α-BHC, µg/L # 103	β-BHC, µg/L # 104	γ-BHC (Lindane), µg/L # 105	δ-BHC, µg/L # 106	Chlordane, µg/L # 107	4,4' DDT, µg/L # 108
LEC, µg/L	**<0.05**	**<0.05**	**<1.0**	**<0.0050**	**<0.010**	**<0.0050**	**<0.020**	**<0.0050**	**<0.10**	**<0.010**
MEC, µg/L	**<0.05**	**<0.05**	**<1.0**	**<0.0050**	**<0.010**	**<0.0050**	**<0.20**	**<0.0050**	**<0.10**	**<0.010**
Maximum Background, µg/L	**<0.05**	**<0.05**	**<1.0**	**<0.0050**	**<0.010**	**<0.0050**	**<0.020**	**<0.0050**	**<0.10**	**<0.010**
Numeric BP Objective, µg/L (MCL, Site Spec if applicable)	--	--	MCL 5	--	--	--	MCL 0.2	--	MCL 0.1	--
Narrative Basin Plan Objective, µg/L	--	--	--	ND	ND	ND	ND	ND	ND	ND
CMC Freshwater, Total µg/L	--	--	--	3 g	--	--	0.95 w	--	2.4 g	1.1 g
CCC Freshwater, Total µg/L	--	--	--	--	--	--	--	--	0.0043 g	0.001 g
Human Health, Total µg/L Water +Org Only	--	960 a	--	0.00013 a,c	0.0039 a,c	0.014 a,c	0.019 c	--	0.00057 a,c	0.00059 A,c
Human Health, Total µg/L Org Only	--	11,000 a	--	0.00014 a,c	0.013 a,c	0.046 a,c	0.063 c	--	0.00059 a,c	0.00059 A,c
Other factors (303d list...)	--		--	Pesticide	Pesticide	Pesticide	Pesticide	Pesticide	Pesticide	Pesticide
Reasonable Potential	N	N	N	N	N	N	N	N	N	N

Table G-1. Summary of Reasonable Potential Analysis for Priority Pollutants (continued)

Constituent, Unit CTR #	4, 4'-DDE, µg/L # 109	4,4'-DDD, µg/L # 110	Dieldrin, µg/L # 111	alpha-Endo-sulfan, µg/L # 112	beta-Endo-sulfan, µg/L # 113	Endosulfan Sulfate, µg/L # 114	Endrin, µg/L # 115	Endrin Aldehyde, µg/L # 116	Heptachlor, µg/L # 117	Heptachlor Epoxide, µg/L # 118	PCBs, µg/L # 119-125	Toxaphene, µg/L # 126
LEC, µg/L	**<0.050**	**<0.050**	**<0.010**	**<0.020**	**<0.010**	**<0.050**	**<0.010**	**<0.010**	**<0.010**	**<0.010**	**<0.50**	**<0.50**
MEC, µg/L	**<0.050**	**<0.050**	**<0.010**	**<0.020**	**<0.010**	**<0.050**	**<0.10**	**<0.010**	**<0.010**	**<0.010**	**<0.50**	**<1.0**
Maximum Background, µg/L	**<0.050**	**<0.050**	**<0.010**	**<0.020**	**<0.010**	**<0.050**	**<0.010**	**<0.010**	**<0.010**	**<0.010**	**<0.50**	**<0.50**
Numeric BP Objective, µg/L (MCL, Site Spec if applicable)	--	--	--	--	--	--	MCL 2	--	MCL 0.01	MCL 0.01	MCL 0.5	MCL 3
Narrative Basin Plan Objective, µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--
CMC Freshwater, Total µg/L	--	--	0.24 w	0.22 g	0.22 g	--	0.086 w	--	0.52 g	0.52 g	--	0.73
CCC Freshwater, Total µg/L	--	--	0.056 w	0.056 g	0.056 g	--	0.036 w	--	0.0038 g	0.0038 g	0.014u	0.0002
Human Health, Total µg/L Water +Org Only	0.00059 A,c	0.00083 a,c	0.00014 a,c	110 a	110 a	110 a	0.76 a	0.76 a	0.00021 a,c	0.00010 a,c	0.00017c,v	0.00073a,c
Human Health, Total µg/L Org Only	0.00059 A,c	0.00084 a,c	0.00014 a,c	240 a	240 a	240 a	0.81 a,j	0.81 a,j	0.00021 a,c	0.00011 a,c	0.00017c,v	0.00075a,c
Other factors (303d list, bioaccum, etc.)	Pesticide	Pesticide	Pesticide	Pesticide	Pesticide	Pesticide	Pesticide	Pesticide	Pesticide	Pesticide		
Reasonable Potential	N	N	N	N	N	N	N	N	N	N	N	N

Notes: Footnotes, abbreviations, and other notations from Final Rule, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California, 40 CFR Part 131, FR/Vol. 65, No. 97, May 18, 2000/Rules and Regulations. **MFL**= Million fibers per Liter, **LEC**= Lowest Effluent concentration; **MEC**= Maximum effluent concentration.
Reasonable Potential: (Y) when MEC>most stringent criterion or Max Background concentration >most stringent criterion (and the pollutant is detected in the effluent).
Reasonable Potential: (I) when there is no available/adequate effluent and background data.
Reasonable Potential: (N) when both MEC and Max Background concentration are < most stringent criterion.

Table G-2. Summary of Reasonable Potential Analysis for Other Pollutants of Concern

Constituent, Unit	Aluminum, µg/L	Ammonia as N, mg/L	Barium, µg/L	Boron, µg/L	Chloride, mg/L	Electrical Conductivity, µmhos/cm	Fluoride, µg/L	Iron, µg/L	Mn, µg/L	Nitrate as N, mg/L	Nitrite as N, mg/L	Sodium, mg/L	Sulfate, mg/L	TDS, mg/L	Tributyltin, µg/L
LEC, µg/L	**<100**	**<0.50**	**<20**	**<100**	**23.80**	**680**	**<100**	**140**	**<10**	**0.724**	**<0.10**	**81**	**15**	**340**	**--**
MEC, µg/L	**<100**	**3.680**	**<20**	**210**	**50.6**	**680**	**103**	**140**	**<10**	**4.4**	**<0.10**	**81**	**78.6**	**340**	**--**
Average Background, µg/L	**<100**	**0.071**	**22**	**20.027**	**4**	**212.5**	**97**	**<50**	**<10**	**1.6**	**<0.02**	**13.6**	**0.9225**	**126.5**	**--**
Maximum Background, µg/L	**<100**	**0.150**	**22**	**64**	**10.70**	**310**	**160**	**<50**	**<10**	**3.10**	**<0.02**	**19**	**1.84**	**170**	**--**
Numeric Basin Plan Objective, µg/L (MCL, Site Spec if applicable)	MCL 200	CMC 11.37[1] CCC 3.98[1]	MCL 1,000	Annual Average 200 90th %ile 300	Annual Average 55 90th %ile 100	MCL 900	Annual Average 1,500 90th %ile 2,500 MCL 1,000	MCL 300	MCL 50	MCL 10	MCL 1	--	Annual Average 35 90th %ile 100 MCL 250	MCL 500	--
Narrative Basin Plan Objective, µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other factors (303d listing, bioaccum)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Reasonable Potential	N	N	N	Y	N	N	N	N	N	N	N	N	Y	N	N

Constituent, Unit	Alachlor, µg/L	Atrazine, µg/L	Bentazon, µg/L	Carbofuran, µg/L	Chlorpyrifos, µg/L	Cis-1,2-dichloro-ethene, µg/L	Dalapon, µg/L	Di(2-ethylhexyl) adipate, µg/L	Diazinon, µg/L	1,2-Dibromo-3-chloropropane (DBCP), µg/L	Dinoseb, µg/L	Diquat, µg/L	Endothal, µg/L	Ethylene Dibromide, µg/L
LEC, µg/L	**<1.0**	**<0.50**	**<2.0**	**--**	**--**	**--**	**<10**	**<7.0**	**<0.25**	**--**	**<2.0**	**--**	**<45**	**<0.02**
MEC, µg/L	**<1.0**	**<0.50**	**<2.0**	**--**	**--**	**--**	**<10**	**<7.0**	**<0.25**	**--**	**<2.0**	**--**	**<45**	**<0.02**
Average Background, µg/L	**<5.0**	**<2.5**	**<2.0**	**--**	**--**	**--**	**<10**	**<5.0**	**<1.2**	**--**	**<2.0**	**--**	**<45**	**<0.02**
Maximum Background, µg/L	**<5.0**	**<2.5**	**<2.0**	**--**	**--**	**--**	**<10**	**<5.0**	**<1.2**	**--**	**<2.0**	**--**	**<45**	**<0.02**
Numeric BP Objective, µg/L (MCL, Site Spec if applicable)	MCL 2	MCL 1	MCL 18	MCL 18	--	MCL 6	MCL 200	MCL 400	--	MCL 0.2	MCL 7	MCL 20	MCL 100	MCL 0.05
Narrative Basin Plan Objective, µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other factors (303d list, bioaccum, etc.)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Reasonable Potential	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Table G-2. Summary of Reasonable Potential Analysis for Other Pollutants of Concern (continued)

Constituent, Unit	Foaming Agents (MBAS), µg/L	Glyphosate, µg/L	Methoxychlor, µg/L	Methyl-tert-butyl ether (MTBE), µg/L	Molinate (Ordram), µg/L	Oxamyl, µg/L	Picloram, µg/L	Simazine, µg/L	Styrene, µg/L	Trichloro-fluoro-methane, µg/L	1,1,2-Trichloro-1,2,2-Trifluorethane, µg/L	2,4,5-TP (Silvex), µg/L	2,4-D, µg/L	Thiobencarb, µg/L	Xylenes, µg/L
LEC, µg/L	**320**	**<10**	**<10**	**<5.0**	**<0.90**	**--**	**<1.0**	**<1.0**	**<0.50**	**<0.50**	**--**	**<1.0**	**<10**	**<1.0**	**<0.50**
MEC, µg/L	**740**	**<10**	**<10**	**<5.0**	**<0.90**	**--**	**<1.0**	**<1.0**	**<0.50**	**<0.50**	**--**	**<1.0**	**<10**	**<1.0**	**<0.50**
Average Background, µg/L	**<50**	**--**	**<10**	**--**	**<4.5**	**--**	**<1.0**	**<5.0**	**--**	**--**	**--**	**<1.0**	**<10**	**<5.0**	**--**
Maximum Background, µg/L	**<50**	**--**	**<10**	**--**	**<4.5**	**--**	**<1.0**	**<5.0**	**--**	**--**	**--**	**<1.0**	**<10**	**<5.0**	**--**
Numeric BP Objective, µg/L (MCL, Site Spec if applicable)	MCL 500	MCL 700	MCL 30	MCL 5	MCL 20	MCL 50	MCL 500	MCL 4	MCL 100	MCL 150	MCL 1,200	MCL 50	MCL 70	MCL 1	MCL 1,750
Narrative Basin Plan Objective, µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other factors (303d list, bioaccum, etc.)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Reasonable Potential	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Constituent, Unit	Chlorine Residual (Total), mg/L	Color, Color Units	Dibromo-acetic Acid, µg/L	Dichloro-acetic Acid, µg/L	Dissolved Oxygen, mg/L	Haloacetic Acid (Total), µg/L	Monobromo-acetic Acid, µg/L	Monochlor-acetic acid, µg/L	pH, standard units	Temperature, °C	Turbidity, NTU	Total Trihalomethane µg/L	Total Coliform Organisms, MPN/100 mL	Fecal Coliform Organisms, MPN/100 mL
LEC, µg/L	**1.5**	**10**	**<1**	**30**	**8.8**	**108**	**2.8**	**21**	**6.5**	**6.5**	**4.9**	**26**	**2**	**<2**
MEC, µg/L	**8.8**	**10**	**<1**	**30**	**9.2**	**108**	**2.8**	**21**	**6.5**	**6.5**	**4.9**	**26**	**9,200**	**350**
Average Background, µg/L	**--**	**5**	**<1.00**	**1.775**	**9.6**	**<5.0**	**<1.00**	**<2.00**	**6.7**	**6.8**	**5.06**	**--**	**7,793 (Downstream)**	**1,997 (Downstream)**
Maximum Background, µg/L	**--**	**5**	**<1.00**	**3.05**	**10**	**<5.0**	**<1.00**	**<2.00**	**6.8**	**6.8**	**14.7**	**--**	**24,000 (Downstream)**	**16,000 (Downstream)**
Numeric Basin Plan Objective, µg/L (MCL, Site Spec if applicable)	6-Month Median 0.002 Maximum 0.003	MCL 15	--	--	30-Day Average Less Than 6.5	MCL 60	--	--	6.5 – 8.5	Shall not be altered by more than 5°F	Shall not exceed levels by 10%	80	Title 22 23 as a 7-day median 240 not to be exceeded more than once in a 30-day period	[2]
Narrative Basin Plan Objective, µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Other factors (303d listing, bioaccum, etc)	Chlorinated Effluent	--	--	--	--	--	--	--	--	--	--	--	WWTP	--
Reasonable Potential	Y	N	N	N	N	Y	N	N	Y	N	N	N	Y	Y[3]

LEC= Lowest Effluent concentration; **MEC**= Maximum effluent concentration.

Reasonable Potential: (Y) when MEC or projected MEC>most stringent criterion.

Reasonable Potential: (I) when there is no available/adequate effluent data.

Reasonable Potential: (N) when MEC and projected MEC < most stringent criterion

[1] THE REGIONAL WATER BOARD CALCULATED THE APPLICABLE AMMONIA CRITERIA BASED ON AN OBSERVED MAXIMUM UPSTREAM pH OF 7.6 AND AN OBSERVED MAXIMUM UPSTREAM TEMPERATURE OF 6.8°C.

[2] The fecal coliform concentration during any 30-day period shall not exceed a log mean of 20/100 mL, nor shall more than 10 percent of all samples collected during any 30-day period exceed 40/100 mL. The log mean shall ideally be based on a minimum of not less than five samples collected as evenly spaced as practicable during any 30-day period. However, a log mean concentration exceeding 20/100 mL for any 30-day period shall indicate violation of this objective even if fewer than five samples were collected.

[3] Although fecal coliform organisms exhibit reasonable potential to exceed water quality objectives, effluent limitations are not established in this Order. Effluent limitations for total coliform organisms are established in this Order. Because fecal coliform organisms are a component of total coliform organisms, compliance with the effluent limitations for total coliform organisms should be protective of water quality objectives for fecal coliform organisms.

ATTACHMENT H – SUMMARY OF WATER QUALITY-BASED EFFLUENT LIMITATION CALCULATIONS

Description	Copper		Chlorodibromomethane		Chloroform
Effluent Concentrations					
Sample Dates - Begin	April 6, 2007		April 6, 2007		April 6, 2007
Sample Dates - End	December 27, 2007		December 27, 2007		December 27, 2007
At least 80% of the data ND?	No		No		No
Sample Count	1		2		2
MEC (µg/l)	18		1.1		20.0
Mean (µg/l)					
Std. Deviation (µg/l)					
Coeff of Variation (CV) (µg/l)	0.6		0.6		0.6
Background Concentrations					
Sample Dates - Begin	March 7, 2006		March 7, 2006		April 6, 2007
Sample Dates - End	April 6, 2007		April 6, 2007		April 6, 2007
Sample Count	2		1		1
Max Background (µg/l)	0.7		<0.50		<0.50
Avg Background (µg/l)	3.4		<0.50		<0.50
Criteria	Acute	Chronic	Basin Plan	HH(w+org)	Basin Plan
Hardness (mg/l as $CaCO_3$)	42.8	42.8	N/A	N/A	N/A
NTR/CTR Criteria[1] (µg/l)	6.04	4.34		0.41	
Basin Plan Objective (µg/l)[2]			80		5.7
Translator [3]	0.960	0.960			
Criteria (µg/l)	6.29[4]	4.52[4]	80.0	0.41	5.7
Effluent Limit Calculations					
Dilution Credit	0	0	0	0	0.0
ECA [5] (µg/l)	6.3	4.5	80.0	0.41	5.7
s^2	0.31	0.31	0.31	0.31	0.31
s_4^2	0.09	0.09	0.09	0.09	0.09
ECA Multiplier [6]	0.321	0.527	N/A	N/A	N/A
Long-Term Average	2.0	2.4	N/A	N/A	N/A
AMEL Multiplier [7][8]	1.6	*	1.55	1.55	1.55
Average Monthly Effluent Limit	**3.1**	*	**80**	**0.41**	**5.7**
MDEL Multiplier [9]	3.1	*	3.11	3.11	3.11
Max. Daily Effluent Limit	**6.3**	*	**161**	**0.82**	**11.4**

Description	Dichlorobromomethane		Bis (2-Ethylhexyl) Phthalate		Total Haloacetic Acids
Effluent Concentrations					
Sample Dates - Begin	April 6, 2007		April 6, 2007		April 6, 2007
Sample Dates - End	December 27, 2007		April 6, 2007		April 6, 2007
At least 80% of the data ND?	No		No		No
Sample Count	2		2		1
MEC (µg/l)	6		6.0		107.8
Mean (µg/l)					
Std. Deviation (µg/l)					
Coeff of Variation (CV) (µg/l)	0.6		0.6		0.6
Background Concentrations					
Sample Dates - Begin	April 6, 2007		April 6, 2007		April 6, 2007
Sample Dates - End	April 6, 2007		April 6, 2007		April 6, 2007
Sample Count	1		1		2
Max Background (µg/l)	<0.50		<0.50		3.05
Avg Background (µg/l)	<0.50		<0.50		1.775
Criteria	Basin Plan	HH(w+org)	Basin Plan	HH(w+org)	Basin Plan
Hardness (mg/l as $CaCO_3$)	N/A	N/A	N/A	N/A	N/A
NTR/CTR Criteria[1] (µg/l)		0.56		1.8	
Basin Plan Objective (µg/l)[2]	80		4.0		60
Translator [3]					
Criteria (µg/l)[4]	80.0	0.56	4.0	1.8	30
Effluent Limit Calculations					
Dilution Credit	0	0.0	0	1.1	0
ECA [5] (µg/l)	80.0	0.6	4.0	1.8	30
σ^2	0.31	0.31	0.31	0.31	0.31
σ_4^2	0.09	0.09	0.09	0.09	0.09
ECA Multiplier [6]	N/A	N/A	N/A	N/A	N/A
Long-Term Average	N/A	N/A	N/A	N/A	N/A
AMEL Multiplier [7][8]	1.55	1.55	1.55	1.55	1.55
Average Monthly Effluent Limit	**80.0**	**0.6**	**4.0**	**1.8**	**30**
MDEL Multiplier [9]	3.11	3.11	3.11	3.11	3.11
Max. Daily Effluent Limit	**160.5**	**1.1**	**8**	**4**	**60**

Description	MBAS	Ammonia	
Effluent Concentrations			
Sample Dates - Begin	April 6, 2007	January 8, 2005	
Sample Dates - End	April 6, 2007	January 28, 2008	
At least 80% of the data ND?	No	No	
Sample Count	15	14	
MEC (mg/l)	0.74	3.7	
Mean (mg/l)	0.44	1.516	
Std. Deviation (mg/l)	0.19	1.3	
Coeff of Variation (CV) (mg/l)	0.44255	0.84	
Background Concentrations			
Sample Dates - Begin	April 6, 2007	January 8, 2005	
Sample Dates - End	April 6, 2007	January 28, 2008	
Sample Count	15	14	
Max Background (mg/l)	0.06	0.15	
Avg Background (mg/l)	0.04	0.084	
Criteria	Basin Plan	acute	chronic
Hardness (mg/l as $CaCO_3$)	N/A		
NTR/CTR Criteria[1] (mg/l)			
Basin Plan Objective (mg/l)[2]	0. 5	14.93	2.17
Translator [3]			
Criteria (mg/l)[4]	0.5		
Effluent Limit Calculations			
Dilution Credit	0	0	0
ECA [5] (mg/l)	0.5	14.9	2.2
σ^2	0.18	0.53	0.53
σ_4^2	0.05	0.16	0.16
ECA Multiplier [6]	N/A	0.239	0.426
Long-Term Average	N/A	3.6	0.9
AMEL Multiplier [7][8]	1.40	*	1.79
Average Monthly Effluent Limit	**0.50**	*	**1.65**
MDEL Multiplier [9]	2.45	*	4.18
Max. Daily Effluent Limit	**0.9**	*	**3.86**

General Note: Unless noted otherwise, all concentrations given as total recoverable.
(1) Metal's criteria are dissolved concentrations.
(2) MCL or USEPA National Ambient Water Quality Criteria One-in-a-Million Cancer Risk Estimate for Sources of Drinking Water.
(3) EPA Translators used as default.
(4) Expressed as total recoverable. The total recoverable criteria is calculated by dividing dissolved criterion by translator.
(5) ECA calculated per Section 1.4.B, Step 2 of SIP.
(6) Acute and Chronic ECA Multiplier calculated at 99th percentile per Section 1.4.B, Step 3 of SIP or per Sections 5.4.1 and 5.5.4 of the TSD.
(7) Assumes sampling frequency n is equal or less than 4.
(8) The probability basis for AMEL is 95th percentile per Section 1.4.B, Step 5 of SIP or Section 5.5.4 of the TSD.
(9) The probability basis for MDEL is 99th percentile per Section 1.4.B, Step 5 of SIP or Section 5.5.4 of the TSD.
* = Not applicable as other criteria LTA is more stringent.
N/A= Not applicable

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ATTACHMENT I – BASIN PLAN AMMONIA WATER QUALITY OBJECTIVES

Table 3-1
ONE-HOUR AVERAGE CONCENTRATION FOR AMMONIA[1,2]

Waters Designated as COLD, COLD with SPWN, COLD with MIGR (Salmonids or other sensitive coldwater species present)

	Temperature, C						
pH	0	5	10	15	20	25	30
Un-ionized Ammonia (mg/liter NH_3)							
6.50	0.0091	0.0129	0.0182	0.026	0.036	0.036	0.036
6.75	0.0149	0.021	0.030	0.042	0.059	0.059	0.059
7.00	0.023	0.033	0.046	0.066	0.093	0.093	0.093
7.25	0.034	0.048	0.068	0.095	0.135	0.135	0.135
7.50	0.045	0.064	0.091	0.128	0.181	0.181	0.181
7.75	0.056	0.080	0.113	0.159	0.22	0.22	0.22
8.00	0.065	0.092	0.130	0.184	0.26	0.26	0.26
8.25	0.065	0.092	0.130	0.184	0.26	0.26	0.26
8.50	0.065	0.092	0.130	0.184	0.26	0.26	0.26
8.75	0.065	0.092	0.130	0.184	0.26	0.26	0.26
9.00	0.065	0.092	0.130	0.184	0.26	0.26	0.26
Total Ammonia (mg/liter NH_3)							
6.50	35	33	31	30	29	20	14.3
6.75	32	30	28	27	27	18.6	13.2
7.00	28	26	25	24	23	16.4	11.6
7.25	23	22	20	19.7	19.2	13.4	9.5
7.50	17.4	16.3	15.5	14.9	14.6	10.2	7.3
7.75	12.2	11.4	10.9	10.5	10.3	7.2	5.2
8.00	8.0	7.5	7.1	6.9	6.8	4.8	3.5
8.25	4.5	4.2	4.1	4.0	3.9	2.8	2.1
8.50	2.6	2.4	2.3	2.3	2.3	1.71	1.28
8.75	1.47	1.40	1.37	1.38	1.42	1.07	0.83
9.00	0.86	0.83	0.83	0.86	0.91	0.72	0.58

[1] To convert these values to mg/liter N, multiply by 0.822

[2] Source: U. S. Environmental Protection Agency. 1986. Quality criteria for water, 1986. EPA 440/5-86-001.

Table 3-2
ONE-HOUR AVERAGE CONCENTRATION FOR AMMONIA[1,2]

Waters designated WARM, WARM with SPWN, WARM with MIGR (Salmonids or other sensitive coldwater species absent)[3]

	Temperature, °C						
pH	0	5	10	15	20	25	30
Un-ionized Ammonia (mg/liter NH_3)							
6.50	0.0091	0.0129	0.0182	0.026	0.036	0.051	0.051
6.75	0.0149	0.021	0.030	0.042	0.059	0.084	0.084
7.00	0.023	0.033	0.046	0.066	0.093	0.131	0.093
7.25	0.034	0.048	0.068	0.095	0.135	0.190	0.190
7.50	0.045	0.064	0.091	0.128	0.181	0.26	0.26
7.75	0.056	0.080	0.113	0.159	0.22	0.32	0.32
8.00	0.065	0.092	0.130	0.184	0.26	0.37	0.37
8.25	0.065	0.092	0.130	0.184	0.26	0.37	0.37
8.50	0.065	0.092	0.130	0.184	0.26	0.37	0.37
8.75	0.065	0.092	0.130	0.184	0.26	0.37	0.37
9.00	0.065	0.092	0.130	0.184	0.26	0.37	0.37
Total Ammonia (mg/liter NH_3)							
6.50	35	33	31	30	29	29	20
6.75	32	30	28	27	27	26	18.6
7.00	28	26	25	24	23	23	16.4
7.25	23	22	20	19.7	19.2	19.0	13.5
7.50	17.4	16.3	15.5	14.9	14.6	14.5	10.3
7.75	12.2	11.4	10.9	10.5	10.3	10.2	7.3
8.00	8.0	7.5	7.1	6.9	6.8	6.8	4.9
8.25	4.5	4.2	4.1	4.0	3.9	4.0	2.9
8.50	2.6	2.4	2.3	2.3	2.3	2.4	1.81
8.75	1.47	1.40	1.37	1.38	1.42	1.52	1.18
9.00	0.86	0.83	0.83	0.86	0.91	1.01	0.82

1 To convert these values to mg/liter, multiply by 0.822

2 Source: U. S. Environmental Protection Agency. 1986. Quality criteria for water, 1986. EPA 440/5-86-001.

3 These values may be conservative, however, if a more refined criterion is desired, USEPA recommends a site-specific criteria modification.

Table 3-3
FOUR DAY AVERAGE CONCENTRATION FOR AMMONIA[1,2]

Waters Designated as COLD, COLD with SPWN, COLD with MIGR (Salmonids or other sensitive coldwater species present)

	Temperature, °C						
pH	0	5	10	15	20	25	30
Un-ionized Ammonia (mg/liter NH_3)							
6.50	0.0008	0.0011	0.0016	0.0022	0.0022	0.0022	0.0022
6.75	0.0014	0.0020	0.0028	0.0039	0.0039	0.0039	0.0039
7.00	0.0025	0.0035	0.0049	0.0070	0.0070	0.0070	0.0070
7.25	0.0044	0.0062	0.0088	0.0124	0.0124	0.0124	0.0124
7.50	0.0078	0.0111	0.0156	0.022	0.022	0.022	0.022
7.75	0.0129	0.0182	0.026	0.036	0.036	0.036	0.036
8.00	0.0149	0.021	0.030	0.042	0.042	0.042	0.042
8.25	0.0149	0.021	0.030	0.042	0.042	0.042	0.042
8.50	0.0149	0.021	0.030	0.042	0.042	0.042	0.042
8.75	0.0149	0.021	0.030	0.042	0.042	0.042	0.042
9.00	0.0149	0.021	0.030	0.042	0.042	0.042	0.042
Total Ammonia (mg/liter NH_3)							
6.50	3.0	2.8	2.7	2.5	1.76	1.23	0.87
6.75	3.0	2.8	2.7	2.6	1.76	1.23	0.87
7.00	3.0	2.8	2.7	2.6	1.76	1.23	0.87
7.25	3.0	2.8	2.7	2.6	1.77	1.24	0.88
7.50	3.0	2.8	2.7	2.6	1.78	1.25	0.89
7.75	2.8	2.6	2.5	2.4	1.66	1.17	0.84
8.00	1.82	1.70	1.62	1.57	1.10	0.78	0.56
8.25	1.03	0.97	0.93	0.90	0.64	0.46	0.33
8.50	0.58	0.55	0.53	0.53	0.38	0.28	0.21
8.75	0.34	0.32	0.31	0.31	0.23	0.173	0.135
9.00	0.195	0.189	0.189	0.195	0.148	0.116	0.094

1 To convert these values to mg/liter N, multiply by 0.822.

2 Source: U. S. Environmental Protection Agency. 1992. Revised tables for determining average freshwater ammonia concentrations. USEPA Office of Water Memorandum, July 30, 1992.

Table 3-4
FOUR DAY AVERAGE CONCENTRATION FOR AMMONIA[1,2]

Waters designated WARM, WARM with SPWN, WARM with MIGR (Salmonids or other sensitive coldwater species absent)[3]

	Temperature, °C						
pH	0	5	10	15	20	25	30
Un-ionized Ammonia (mg/liter NH_3)							
6.50	0.0008	0.0011	0.0016	0.0022	0.0031	0.0031	0.0031
6.75	0.0014	0.0020	0.0028	0.0039	0.0055	0.0055	0.0055
7.00	0.0025	0.0035	0.0049	0.0070	0.0099	0.0099	0.0099
7.25	0.0044	0.0062	0.0088	0.0124	0.0175	0.0175	0.0175
7.00	0.0078	0.0111	0.0156	0.022	0.031	0031	0.031
7.75	0.0129	0.0182	0.026	0.036	0.051	0.051	0.051
8.00	0.0149	0.021	0.030	0.042	0.059	0.059	0.059
8.25	0.0149	0.021	0.030	0.042	0.059	0.059	0.059
8.50	0.0149	0.021	0.030	0.042	0.059	0.059	0.059
8.75	0.0149	0.021	0.030	0.042	0.059	0.059	0.059
9.00	0.0149	0.021	0.030	0.042	0.059	0.059	0.059
Total Ammonia (mg/liter NH_3)							
6.50	3.0	2.8	2.7	2.5	2.5	1.73	1.23
6.75	3.0	2.8	2.7	2.6	2.5	1.74	1.23
7.00	3.0	2.8	2.7	2.6	2.5	1.74	1.23
7.25	3.0	2.8	2.7	2.6	2.5	1.75	1.24
7.50	3.0	2.8	2.7	2.6	2.5	1.76	1.25
7.75	2.8	2.6	2.5	2.4	2.3	1.65	1.18
8.00	1.82	1.70	1.62	1.57	1.55	1.10	0.79
8.25	1.03	0.97	0.93	0.90	0.90	0.64	0.47
8.50	0.58	0.55	0.53	0.53	0.53	0.39	0.29
8.75	0.34	0.32	0.31	0.31	0.32	0.24	0.190
9.00	0.195	0.189	0.189	0.195	0.21	0.163	0.133

1 To convert these values to mg/liter N, multiply by 0.822.

2 Source: U. S. Environmental Protection Agency. 1992. Revised tables for determining average freshwater ammonia concentrations. USEPA Office of Water Memorandum, July 30, 1992.

3 These values may be conservative, however, if a more refined criterion is desired, USEPA recommends a site-specific criteria modification.

ATTACHMENT J – BASIN PLAN DISSOLVED OXYGEN WATER QUALITY OBJECTIVES

Table 3-6
WATER QUALITY CRITERIA FOR AMBIENT DISSOLVED OXYGEN CONCENTRATION[1,2]

	Beneficial Use Class			
	COLD & SPWN[3]	COLD	WARM & SPWN[3]	WARM
30 Day Mean	NA[4]	6.5	NA	5.5
7 Day Mean	9.5 (6.5)	NA	6.0	NA
7 Day Mean Minimum	NA	5.0	NA	4.0
1 Day Minimum[5,6]	8.0 (5.0)	4.0	5.0	3.0

1 From: USEPA. 1986. Ambient water quality criteria for dissolved oxygen. Values are in mg/L.

2 These are water column concentrations recommended to achieve the required intergravel dissolved oxygen concentrations shown in parentheses. For species that have early life stages exposed directly to the water column (SPWN), the figures in parentheses apply.

3 Includes all embryonic and larval stages and all juvenile forms to 30-days following hatching (SPWN).

4 NA (Not Applicable).

5 For highly manipulatable discharges, further restrictions apply.

6 All minima should be considered as instantaneous concentrations to be achieved at all times.

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ATTACHMENT K – WATER QUALITY DATA

Table K-1. Hesperia Disposal Site - Average Concentrations

Constituents	TDS	Nitrate (as N)	Total Nitrogen (as N)
Units	mg/L	mg/L	mg/L
Groundwater (Up Gradient of Percolation Ponds)	209	2.4	--
Treated Effluent	297	1.5	4
Groundwater (Downgradient and Less Than 500 feet from Percolation Ponds)	222	2.7	--
Groundwater (Downgradient and from 500 to 3000 feet from Percolation Ponds)	232	3.3	--
Constituent Concentration Increases in Groundwater Underlying the Site	25 to 35	0.3 to 0.9	--

Table K-2. Hesperia Disposal Site - Concentrations for Groundwater and Effluent

	Constituents	BOD_5	TSS	TDS	Nitrate (as N)	Total Nitrogen (as N)
	Units	mg/L	mg/L	mg/L	mg/L	mg/L
	Footnotes	a	a			b
Groundwater (Upgradient of Percolation Ponds) TW-3, PW-3	Number of Samples	--	--	9	9	--
	Average	--	--	209	2.4	--
	Maximum	--	--	316	2.6	--
	Minimum	--	--	158	0.3	--
	Footnotes	--	--	c	c	--
Treated Effluent	Number of Samples	50+	50+	13	50+	50+
	Average	8	15	297	1.5	4
	Maximum	11	19	370	3.3	5
	Minimum	5	11	196	0.5	2
	Footnotes	d	d	e	d	d
Effluent Limits	--	--	--	--	--	AMEL = 8 MDEL = 10
Groundwater (Downgradient and < 500 feet from Percolation Ponds) TW-1, 2, 4 and 5	Number of Samples	--	--	23	22	--
	Average	--	--	222	2.7	--
	Maximum	--	--	343	4.5	--
	Minimum	--	--	118	0.1	--
	Footnotes	--	--	f	f	--
Groundwater (Downgradient and from 500 to 3,000 feet from Percolation Ponds) MW-2, 3, 4A, 5, 6 and 7; TW-6; and PW-2 and 4A	Number of Samples	--	--	44	37	--
	Average	--	--	232	3.3	--
	Maximum	--	--	336	6.1	--
	Minimum	--	--	124	0.1	--
	Footnotes	--	--	g	g	--
Water Quality Objectives (Maximum Contaminant Levels (MCLs))	--	--	--	500	10	--

a "--" means sampling for BOD and TSS in groundwater not required.
b "--" indicates total nitrogen in groundwater was not calculated. Nitrogen in groundwater is generally in the form of nitrate rather than nitrite, ammonia and organic nitrogen.
c Based on SMR data for January 2006 through April 2007 for wells PW-3 and TW-3.
d 2007 Annual SMR, App A bar graphs.
e Based on SMR data for January 2006 through April 2007.
f Based on SMR data for January 2006 through April 2007 for wells TW-1, 2, 4 & 5.
g Based on SMR data for January 2006 through April 2007 for wells MW-2, 3, 4A, 5, 6 & 7, PW-2, and TW-6.

Table K-3. Discharge to Unnamed Stream – Summary of Average Concentrations[a]

Constituents	Units	Upgradient (Unnamed Stream)	Treated Effluent (Sampled at Grass Valley WWTP)	Downgradient (Unnamed Stream)	Increases in Concentrations (Downgradient of Discharge Point)
TDS	mg/L	68	159	114	47
Nitrate as N	mg/L	0.69	2.04	1.17	0.49
Total Ammonia (as N)	mg/L	0.071	1.52	0.58	0.51
Total Nitrogen (as N)	mg/L	1.05	5.31	2.98	1.93

a Samples were collected on the days when wet weather discharges occurred during January and February 2005, and January 2008.

TENTATIVE

ATTACHMENT L – STANDARD PROVISIONS FOR WASTE DISCHARGE REQUIREMENTS

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

STANDARD PROVISIONS
FOR WASTE DISCHARGE REQUIREMENTS

1. Inspection and Entry

The Discharger shall permit Regional Water staff:

a. to enter upon premises in which an effluent source is located or in which any required records are kept;

b. to copy any records relating to the discharge or relating to compliance with the Waste Discharge Requirements (WDRs);

c. to inspect monitoring equipment or records; and

d. to sample any discharge.

2. Reporting Requirements

a. Pursuant to California Water Code 13267(b), the Discharger shall immediately notify the Regional Board by telephone whenever an adverse condition occurred as a result of this discharge; written confirmation shall follow within two weeks. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance.

b. Pursuant to California Water Code Section 13260(c), any proposed material change in the character of waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Regional Board at least 120 days in advance of implementation of any such proposal. This shall include, but not be limited to, all significant soil disturbances.

c. The Owners/Discharger of property subject to WDRs shall be considered to have a continuing responsibility for ensuring compliance with applicable WDRs in the operations or use of the owned property. Pursuant to California Water Code Section 13260(c), any change in the ownership and/or operation of property subject to the WDRs shall be reported to the Regional Board. Notification of applicable WDRs shall be furnished in writing to the new owners and/or operators and a copy of such notification shall be sent to the Regional Board.

d. If a Discharger becomes aware that any information submitted to the Regional Board is incorrect, the Discharger shall immediately notify the Regional Board, in writing, and correct that information.

e. Reports required by the WDRs, and other information requested by the Regional Board; must be signed by a duly authorized representative of the Discharger.

Under Section 13268 of the California Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided .therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars ($1,000) for each day of violation.

f. If the Discharger becomes aware that their WDRs (or permit) are no longer needed (because the .project will not be built or the discharge will cease) the Discharger shall notify the Regional Board in writing and request that their WDRs (or permit) be rescinded.

3. Right to Revise WDRs

The Regional Board reserves the privilege of changing all or any portion of the WDRs upon legal notice to and after opportunity to be heard is given to all concerned parties.

4. Duty to Comply

Failure to comply with the WDRs may constitute a violation of the California Water Code and is grounds for enforcement action or for permit termination, revocation and reissuance, or modification.

5. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of the WDRs which has a reasonable likelihood of adversely affecting human health or the environment.

6. 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) that are installed or used by the Discharger to achieve compliance with the WDRs. Proper operation and maintenance includes adequate laboratory control, where appropriate, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Discharger, when necessary to achieve compliance with the conditions of the WDRs.

7. Waste Discharge Requirement Actions

The WDRs may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for waste discharge requirement modification, revocation and re-issuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any of the WDRs conditions.

8. Property Rights

The WDRs do not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

9. Enforcement

The California Water Code provides for civil liability and criminal penalties for violations or threatened violations of the WDRs including imposition of civil liability or referral to the Attorney General.

10. Availability

A copy of the WDRs shall be kept and maintained by the Discharger and be available at all times to operating personnel.

11. Severability

Provisions of the WDRs are severable. If any provision of the requirements is found invalid, the remainder of the requirements shall not be affected.

12. Public Access

General public access shall be effectively excluded from treatment and disposal facilities.

13. Transfers

Providing there is no material change in the operation of the facility, this Order may be transferred to a new owner or operation. The owner/operator must request the transfer in writing and receive written approval from the Regional Board's Executive Officer.

14. Definitions

a. "Surface waters" as used in this Order, include, but are not limited to, live streams, either perennial or ephemeral, which flow in natural or artificial water courses and natural lakes and artificial impoundments of waters. "Surface waters" does not include artificial water courses or impoundments used exclusively for wastewater disposal.

b. "Ground waters" as used in this Order, include, but are not limited to, all subsurface waters being above atmospheric pressure and the capillary fringe of these waters.

15. Storm Protection

All facilities used for collection, transport, treatment, storage, or disposal of waste shall be adequately protected against overflow, washout, inundation, structural damage or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.

Table K-4. Discharge to Unnamed Stream - Concentrations for Surface Water, Effluent, Effluent Limits and WQOs[a]

Constituents	Units	Weather	Upgradient (Unnamed Stream/Grass Valley Creek)				Treated Effluent (Sampled at Grass Valley WWTP)				Probable Effluent Limits				Downgradient (Unnamed Stream)				Water Quality Objectives (or Criteria)		
			N	Ave	Max	Min	N	Ave	Max	Min	AMEL	AWEL	MDEL	Other EL	N	Ave	Max	Min	Lower	Higher	Ref.[b]
BOD	mg/L	Wet	15	<2.4	<2.4	<2.4	15	13	24	5	20	25	---	---	15	7	15	<2.07	---	---	---
pH	pH	Wet	15	7.3	7.8	7.0	13	7.1	7.3	6.7	---	---	---	6.5 to 8.5	15	7.4	7.6	7.1	6.5	8.5	BP
Total Suspended Solids	mg/L	Wet	13	69	556	1	15	10.1	28	1.1	20	25	30	---	13	56	367	2.1	10%	---	BP
Bis(2-ethylhexyl) phthalate (#68)	µg/L	Dry	2	ncalc	<5.0	<3.0	2	ncalc	6	<5.0	1.8	---	3.6	---	ns	ns	ns	ns	1.8	---	SIP
Copper (#6)	µg/L	Dry	1	0.7	0.7	0.7	1	ncalc	18	18	3.1	---	6.3	---	ns	ns	ns	ns	6.29	---	SIP
Total Trihalomethanes	µg/L	Dry	1	<0.5	<0.5	<0.5	2	26	26	26	---	---	---	---	ns	ns	ns	ns	80	---	MCL
-Chlorodibromomethane (#23)	µg/L	Dry	1	<0.5	<0.5	<0.5	2	0.87	1.1	0.64	0.41	---	0.82	---	ns	ns	ns	ns	0.41	---	SIP
-Chloroform (#26)	µg/L	Dry	1	<0.5	<0.5	<0.5	2	19	20	18	5.7	---	11.4	---	ns	ns	ns	ns	5.7	---	SIP
-Dichlorobromomethane (#27)	µg/L	Dry	1	<0.5	<0.5	<0.5	2	5.7	6.3	5	0.56	---	1.12	---	ns	ns	ns	ns	0.56	---	SIP
-Bromoform (#20)	µg/L	Dry	1	<0.5	<0.5	<0.5	2	0.87	1.1	0.64	---	---	---	---	ns	ns	ns	ns	4.3	---	SIP
Total Haloacetic Acids	µg/L	Dry	2	1.8	3.05	<1.0	1	108	108	108	30	---	60	---	ns	ns	ns	ns	60	---	BP (MCL)
-Monochloroacetic Acid	µg/L	Dry	2	<2.0	<2.0	<2.0	1	21.0	21.0	21.0	---	---	---	---	ns	ns	ns	ns	---	---	---
-Dichloroacetic Acid	µg/L	Dry	2	1.8	3.05	<1.0	1	30.0	30.0	30.0	0.7	---	1.4	---	ns	ns	ns	ns	0.7	---	IRIS
-Trichloroacetic Acid	µg/L	Dry	2	<1.0	<1.0	<1.0	1	54.0	54.0	54.0	10	---	20	---	ns	ns	ns	ns	20	---	MCLG
-Monobromoacetic Acid	µg/L	Dry	2	<1.0	<1.0	<1.0	1	2.8	2.8	2.8	---	---	---	---	ns	ns	ns	ns	---	---	---
-Dibromoacetic Acid	µg/L	Dry	2	<1.0	<1.0	<1.0	1	<1.0	<1.0	<1.0	---	---	---	---	ns	ns	ns	ns	---	---	---
Total Residual Chlorine	mg/L	Wet	ns	ns	ns	ns	13	4.7	8.8	1.5	---	---	0.003	0.002	ns	ns	ns	ns	0.002	0.003	BP
Total Residual Chlorine	mg/L	Dry	2	<0.8	0.16	<0.1	14	4.0	8.8	1.6	---	---	---	---	ns	ns	ns	ns	---	---	---
Total Coliform Organisms	MPN/ 100 mL	Wet	13	4,940	>24,000	920	12	12	9,200	2	---	---	---	2.2 and 23	11	7,793	24,000	2	10,000	---	CCR, T17
Fecal Coliform Organisms	MPN/ 100 mL	Wet	13	19	110	<2	13	35	350	<2	---	---	---	---	11	1,997	16,000	<2	20	40	BP
TDS	mg/L	Wet	15	68	90	31.5	15	159	256	118	---	---	---	---	15	114	157	67	500	1,000	BP (MCL)
Sodium	mg/L	Wet	4	5	5.7	4.4	4	32	51	22	---	---	---	---	4	13	21	6.5	30	---	T & O[c]
Chloride	mg/L	Wet	8	4	10.7	1.86	9	33	51	24	---	---	---	---	9	19	31.7	5.52	55	100	BP
Sulfate	mg/L	Wet	4	0.92	1.84	<0.50	4	33	79	15	---	---	---	---	4	9	14	3.72	35	100	BP
Fluoride	mg/L	Wet	4	0.10	0.16	<0.10	4	0.07	0.10	0.05	---	---	---	---	4	0.08	0.11	<0.10	1.5	2.5	BP
Boron (B)	mg/L	Wet	5	0.05	0.06	<0.10	5	0.14	0.21	<0.100	---	---	---	---	4	0.06	0.13	<0.10	0.2	0.3	BP
Kjeldahl Nitrogen as N	mg/L	Wet	14	0.60	1.50	0.23	14	3.23	6.30	0.75	---	---	---	---	13	1.93	5.30	0.20	---	---	---

Constituents	Units	Weather	Upgradient (Unnamed Stream/Grass Valley Creek)				Treated Effluent (Sampled at Grass Valley WWTP)				Probable Effluent Limits				Downgradient (Unnamed Stream)				Water Quality Objectives (or Criteria)		
			N	Ave	Max	Min	N	Ave	Max	Min	AMEL	AWEL	MDEL	Other EL	N	Ave	Max	Min	Lower	Higher	Ref.[b]
Nitrate as N	mg/L	Wet	8	0.69	0.22	0.12	10	2.04	2.80	0.72	---	---	---	---	10	1.17	2.70	0.30	10	---	BP (MCL)
Total Ammonia as N	mg/L	Wet	13	0.071	0.15	<0.020	14	1.52	3.70	<0.500	1.65	---	3.86	---	13	0.58	1.59	0.08	2.2	---	BP
Total Nitrogen as N	mg/L	Wet	8	1.05	0.58	0.35	10	5.31	8.60	1.47	8	---	10	---	10	2.98	7.10	0.50	---	---	---
Dissolved Oxygen	mg/L	Wet	2	9.55	10	9.1	2	9.0	9.2	8.8	---	---	---	---	2	9.35	9.9	8.8	10%	---	BP
Temperature	°C	Wet	---	ns	ns	ns	4	10	11	9	---	---	---	---	ns	ns	ns	ns	ns	ns	ns
TOC	mg/L	Wet	3	7.14	9.82	5.7	2	11	11	11	---	---	---	---	2	8.85	9.9	7.8	---	---	---
TOC	mg/L	Dry	2	1.6	1.7	1.5	4	22	23	20	---	---	---	---	ns	ns	ns	ns	---	---	---
MBAS	mg/L	Wet	15	0.04	0.06	<0.020	15	0.44	0.74	0.19	0.5	---	0.9	---	15	0.25	0.56	<0.100	---	---	---

a Wet weather samples were collected on the days when wet weather discharges occurred during January and February 2005, and January 2008. Dry weather data for effluent total organic carbon and total residual chlorine are from the Discharger's quarterly SMR for the period of April 1, 2007 through April 14, 2007. All other dry weather data is for effluent and upgradient surface water samples collected on March 7, 2006, April 6, 2007, and December 27, 2007. Dry weather surface water samples were collected from Grass Valley Creek upgradient of its confluence with the unnamed stream.

b SIP:State Water Resources Control Board, 2005, Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (aka, State Implementation Plan or SIP)

c T & O:USEPA advisory for taste & odor threshold for sodium

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