

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION**

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**ORDER NO. R5-2007-0171  
NPDES NO. CA0079430**

**WASTE DISCHARGE REQUIREMENTS  
FOR THE  
MARIPOSA PUBLIC UTILITY DISTRICT  
MARIPOSA WASTEWATER TREATMENT FACILITY  
MARIPOSA COUNTY**

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

**Table 1. Discharger Information**

<b>Discharger</b>	Mariposa Public Utility District
<b>Name of Facility</b>	Mariposa Wastewater Treatment Facility
<b>Facility Address</b>	4956 Miller Road, Mariposa, CA 95338
	Mariposa County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge.	

The discharge by the Mariposa Public Utility District from the discharge point identified below is subject to waste discharge requirements as set forth in this Order:

**Table 2. Discharge Location**

<b>Discharge Point</b>	<b>Effluent Description</b>	<b>Discharge Point Latitude</b>	<b>Discharge Point Longitude</b>	<b>Receiving Water</b>
001	Treatment Plant Effluent	37° 28' 49" N	119° 57' 39" W	Mariposa Creek

**Table 3. Administrative Information**

This Order was adopted by the Regional Water Quality Control Board on:	<b>6 December 2007</b>
This Order shall become effective on:	<b>25 January 2008</b>
This Order shall expire on:	<b>4 December 2012</b>
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:	<b>7 June 2012</b>

IT IS HEREBY ORDERED, that Order No. 5-00-122 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code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.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 6 December 2007.

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PAMELA C. CREEDON, Executive Officer

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**I. FACILITY INFORMATION**

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

**Table 4. Facility Information**

<b>Discharger</b>	Mariposa Public Utility District
<b>Name of Facility</b>	Mariposa Wastewater Treatment Facility
<b>Facility Address</b>	4956 Miller Road
	Mariposa, CA 95338
	Mariposa County
<b>Facility Contact, Title, and Phone</b>	Mark Rowney, General Manager, (209) 966-2515
<b>Mailing Address</b>	P.O. Box 494 Mariposa, CA 95338
<b>Type of Facility</b>	Publicly Owned Treatment Works
<b>Facility Design Flow</b>	0.61 million gallons per day (mgd)

**II. FINDINGS**

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

**A. Background.** The Mariposa Public Utility District (hereinafter Discharger) is currently discharging pursuant to Waste Discharge Requirements Order No. 5-00-122 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0079430. The Discharger submitted a Report of Waste Discharge, dated 13 December 2004, and applied for a NPDES permit renewal to discharge up to 0.61 mgd of treated municipal wastewater from the Mariposa Wastewater Treatment Facility, hereinafter Facility. The application was deemed complete on 12 January 2005.

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 a sanitary sewer collection system and the Facility. The sanitary sewer collection system and Facility are a publicly owned treatment works. The treatment system consists of headworks, two oxidation ditches, two secondary clarifiers, and a chlorine contact chamber. Prior to discharge, treated wastewater is dechlorinated. Wastewater is discharged from Discharge Point No. 001 (see table on cover page) to Mariposa Creek, a water of the United States and a tributary to Duck Slough, which flows into the Eastside Canal. Water from the Eastside Canal is distributed to a system of natural and manmade channels that drain to the San Joaquin River downstream of Mendota Pool. The discharge is within Mariposa

Hydrologic Unit (No. 538.00). Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

- 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 (CWC) (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 CWC (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 Attachment G are also incorporated into this Order.
- E. California Environmental Quality Act (CEQA).** Under CWC Section 13389, this action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resources Code Sections 21100-21177.
- F. Technology-based Effluent Limitations.** Section 301(b) of the CWA and implementing USEPA permit regulations at Title 40, Code of Federal Regulations (CFR), Part 122.44 (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 133 and Best Professional Judgment (BPJ) in accordance with 40 CFR 125.3. 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. This Order contains requirements, expressed as a technology equivalence requirement, more stringent than secondary treatment requirements that are necessary to meet applicable water quality standards. The Regional Water Board has considered the factors listed in CWC Section 13241 in establishing these requirements. The rationale for these requirements, which consist of tertiary treatment or equivalent requirements, is discussed in the Fact Sheet.

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 Sacramento and San Joaquin River Basins, Fourth Edition (Revised August 2006)* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan at page II-2.00 states that the “...beneficial uses of any specifically identified water body generally apply to its tributary streams.” Mariposa Creek flows into Duck Slough and then into Eastside Canal, which can discharge to the San Joaquin River in the reach from Sack Dam to the Mouth of the Merced River. However, the tributary rule cannot be applied to manmade conveyances, such as the Eastside Canal. As discussed in the Fact Sheet, the beneficial uses of Mariposa Creek are as follows: agricultural supply (AGR), water contact recreation (REC-1) and non-contact water recreation (REC-2), warm freshwater habitat (WARM), and wildlife habitat (WILD).

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 (MUN).

Thus, as discussed in detail in the Fact Sheet, beneficial uses to be protected in Mariposa Creek are as follows:

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Mariposa Creek	MUN; AGR; REC-1; REC-2; WARM; WILD.

Requirements of this Order specifically implement the applicable Water Quality Control Plans.

**I. National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on 22 December 1992, and later amended it on 4 May 1995 and 9 November 1999. About forty criteria in the NTR applied in California. On 18 May 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 13 February 2001. These rules contain water quality criteria for priority pollutants.

**J. State Implementation Policy.** On 2 March 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 28 April 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 18 May 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 24 February 2005 that became effective on 13 July 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.** In general, an NPDES permit must include final effluent limitations that are consistent with Clean Water Act Section 301 and with 40 CFR 122.44(d). There are exceptions to this general rule. The State Water Board has concluded that where the Regional Water Board's Basin Plan allows for schedules of compliance and the Regional Water Board is newly interpreting a narrative standard, it may include schedules of compliance in the permit to meet effluent limits that implement a narrative standard. See *In the Matter of Waste Discharge Requirements for Avon Refinery* (State Water Board Order WQ 2001-06 at pp. 53-55). See also *Communities for a Better Environment (CBE) et al. v. State Water Resources Control Board*, 34 Cal.Rptr.3d 396, 410 (2005). The Basin Plan for the Sacramento and San Joaquin Rivers includes a provision that authorizes the use of compliance schedules in NPDES permits for water quality objectives that are adopted after the date of adoption of the Basin Plan, which was 25 September 1995 (See Basin Plan at page IV-16). Consistent with the State Water Board's Order in the CBE matter, the Regional Water Board has the discretion to include compliance schedules in NPDES permits when it is including an effluent limitation that is a "new interpretation" of a narrative water quality objective. This conclusion is also consistent with the United States Environmental Protection Agency policies and administrative decisions. See, e.g., *Whole Effluent Toxicity (WET) Control Policy*. The Regional Water Board, however, is not required to include a schedule of compliance, but may issue a Time Schedule Order pursuant to CWC Section 13300 or a Cease and Desist Order pursuant to CWC Section 13301 where it finds that the discharger is violating or threatening to violate the permit. The Regional Water Board will consider the merits of each case in determining whether it is appropriate to include a compliance schedule in a permit, and, consistent with the Basin Plan, should consider feasibility of achieving compliance, and must impose a schedule that is as short as practicable to achieve compliance with the objectives, criteria, or effluent limit based on the objective or criteria.

For CTR constituents, 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 18 May 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 includes compliance schedules and interim effluent limitations. A detailed discussion of the basis for the compliance schedule(s) and interim effluent limitation(s) is included in the Fact Sheet.

**L. Alaska Rule.** On 30 March 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 30 May 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 30 May 2000 may be used for CWA purposes, whether or not approved by USEPA.

**M. Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on 5-day biochemical oxygen demand (BOD<sub>5</sub>) and total suspended solids (TSS). 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 more stringent than required by the CWA. Specifically, this Order includes effluent limitations for BOD<sub>5</sub>, TSS, turbidity and pathogens that are more stringent than applicable federal standards, but that are nonetheless necessary to meet numeric objectives or protect beneficial uses. The rationale for including these limitations is explained in the Fact Sheet. In addition, the Regional Water Board has considered the factors in CWC Section 13241 in establishing these requirements.

Water quality-based effluent limitations (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 are based on the CTR-SIP, which was approved by USEPA on 1 May 2001. 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 30 May 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to 30 May 2000, but not approved by USEPA before that date, are nonetheless "*applicable water quality standards for purposes of the [Clean Water] Act*" 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 technology-based requirements of the CWA and the applicable water quality standards for purposes 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 is consistent with the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet, the permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution No. 68-16.
- O. Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 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. Some effluent limitations in this Order are less stringent than those in the previous Order. As discussed in detail in the Fact Sheet this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.
- P. Monitoring and Reporting.** 40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC Sections 13267 and 13383 authorize 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.
- Q. 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.
- R. Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections VI.A.2.m. and VI.A.2.v. of this Order are included to implement State law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

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

### **III. DISCHARGE PROHIBITIONS**

- A. Discharge of wastewater at a location or in a manner different from that described in the Findings is prohibited.
- B. The by-pass or overflow of wastes is prohibited, except as allowed by Federal Standard Provisions I.G. and I.H. (Attachment D).
- C. Neither the discharge nor its treatment shall create a nuisance or pollution as defined in Section 13050 of the CWC.
- D. The discharge of pollutant-free wastewater into the collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Order is prohibited. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.
- E. Discharge of waste classifiable as 'hazardous', as defined in Section 2521(a) of Title 23, CCR, Section 2510 et seq., or of waste classifiable as 'designated', as defined in CWC Section 13173, such as water softener brine, is prohibited.

**IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

**A. Effluent Limitations – Discharge Point No. 001**

**1. Final Effluent Limitations – Discharge Point No. 001**

Except for interim periods when any of the following parameters have an interim effluent limitation in effect (see subsection 2.a and 2.b, below) 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 (Attachment E):

a. The effluent limitations specified in Table 5, below:

**Table 5. Final Effluent Limitations**

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
<i>Conventional Pollutants</i>						
Biochemical Oxygen Demand (BOD) (5-day @ 20°C)	mg/L	10	15	20	--	--
	Lbs/day <sup>1</sup>	51	76	102	--	--
pH	standard units	--	--	--	6.5	8.5
Total Suspended Solids (TSS)	mg/L	10	15	20	--	--
	Lbs/day <sup>1</sup>	51	76	102	--	--
<i>Priority Pollutants</i>						
Copper, Total Recoverable	µg/L	6.1	--	12.3	--	--
Dichlorobromomethane	µg/L	0.6	--	1.1	--	--
Zinc, Total Recoverable	µg/L	53	--	106	--	--
<i>Non-conventional Pollutants</i>						
Nitrate Nitrogen, Total (as N)	mg/L	10	--	--	--	--
Settleable Solids	mL/L	0.1	--	0.2	--	--
Total Coliform	MPN/100 mL	--	--	240	--	--
Turbidity	NTU	--	--	--	--	10

<sup>1</sup> Based on a design flow of 0.61 mgd.

b. **Percent Removal:** The average monthly percent removal of BOD 5-day 20°C and total suspended solids shall not be less than 90 percent.

c. **Acute Whole Effluent Toxicity.** Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

- i. 70% for any one bioassay; and
  - ii. 90% for the median of any three consecutive bioassays.
- d. **Total Residual Chlorine.** Effluent total residual chlorine shall not exceed:
- i. 0.011 mg/L, as a 4-day average; and
  - ii. 0.019 mg/L, as a 1-hour average.
- e. **Turbidity.** Effluent turbidity shall not exceed:
- i. 2 NTU, as a daily average; and
  - ii. 5 NTU more than 5% of the time within a 24-hour period.
- f. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed:
- i. 2.2 most probable number (MPN) per 100 mL, as a 7-day median; and
  - ii. 23 MPN/100 mL more than once in any 30-day period.
- g. **Average Daily Discharge Flow.** The Average Daily Discharge Flow shall not exceed 0.61 mgd.
- h. **Electrical Conductivity.** The annual average electrical conductivity concentration in the effluent shall not exceed 700 µmhos/cm.

**2. Interim Effluent Limitations**

From the Permit Effective Date until the applicable Compliance Dates, the Discharger shall maintain compliance at Discharge Point No. 001 with the following Interim Effluent Limitations (in lieu of the Final Effluent limitations in Table 5) for the following parameters. Compliance shall be measured at Monitoring Location EFF-001, as described in the attached MRP (Attachment E):

- a. The Interim Effluent Limitations in Table 6 below:

**Table 6. Interim Effluent Limitations – Copper, Dichlorobromomethane, Nitrate, and Zinc**

Parameter	Units	Effluent Limitations			
		Average Monthly	Average Weekly	Maximum Daily	Compliance Date
Copper, Total Recoverable	µg/L	--	--	31	<b>17 May 2010</b>
Dichlorobromomethane	µg/L	--	--	10	<b>17 May 2010</b>
Nitrate Nitrogen, Total (as N)	mg/L	--	--	68	<sup>1</sup>
Zinc, Total Recoverable	µg/L	--	--	373	<b>17 May 2010</b>

<sup>1</sup> In accordance with Special Provision VI.C.7.b.

b. The Interim Effluent Limitations in Table 7 below:

**Table 7. Interim Effluent Limitations – BOD<sub>5</sub>, TSS, Total Coliform, and Turbidity**

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum	Compliance Dates
BOD 5-day @ 20°C	mg/L	30	45	60	--	<sup>2</sup>
	lbs/day <sup>1</sup>	153	229	458	--	<sup>2</sup>
TSS	mg/L	30	45	60	--	<sup>2</sup>
	lbs/day <sup>1</sup>	153	229	458	--	<sup>2</sup>
Total Coliform	MPN/100 mL	--	--	240	--	<sup>2</sup>
Turbidity	NTU	--	--	--	10	<sup>2</sup>

<sup>1</sup> Based on a flow of 0.61 mgd.

<sup>2</sup> In accordance with Special Provision VI.C.7.c.

c. **Total Coliform.** The 7-day median of total coliform organisms shall not exceed 23 MPN/100 mL. (Compliance date as determined by Special Provision VI.C.7.c)

d. **Turbidity.** The discharge may not exceed a turbidity of 5 NTU more than 5% of the time during any 24-hour period. (Compliance date as determined by Special Provision VI.C.7.c)

**B. Land Discharge Specifications**

[Not Applicable]

**C. Reclamation Specifications**

[Not Applicable]

**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 Mariposa Creek:

1. **Bacteria.** The fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, to exceed a geometric mean of 200 MPN/100 mL, nor more than ten percent of the total number of fecal coliform samples taken during any 30-day period to exceed 400 MPN/100 mL.
2. **Biostimulatory Substances.** Water to contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.

3. **Chemical Constituents.** Chemical constituents to be present in concentrations that adversely affect beneficial uses.
4. **Color.** Discoloration that causes nuisance or adversely affects beneficial uses.
5. **Dissolved Oxygen:**
  - a. The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass;
  - b. The 95 percentile dissolved oxygen concentration to fall below 75 percent of saturation; nor
  - c. The dissolved oxygen concentration to be reduced below 5.0 mg/L at any time.
6. **Floating Material.** Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.
7. **Oil and Grease.** Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.
8. **pH.** The pH to be depressed below 6.5, raised above 8.5, nor changed by more than 0.5 units.
9. **Pesticides:**
  - a. Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses;
  - b. Pesticides to be present in bottom sediments or aquatic life in concentrations that adversely affect beneficial uses;
  - c. Total identifiable persistent chlorinated hydrocarbon pesticides to be present in the water column at concentrations detectable within the accuracy of analytical methods approved by USEPA or the Executive Officer/prescribed in *Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition*, or other equivalent methods approved by the Executive Officer;
  - d. Pesticide concentrations to exceed those allowable by applicable antidegradation policies (see State Water Board Resolution No. 68-16 and 40 CFR §131.12.);
  - e. Pesticide concentrations to exceed the lowest levels technically and economically achievable;
  - f. Pesticides to be present in concentration in excess of the maximum contaminant levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15, specified in Table 64444-A (Organic Chemicals) of Section 64444 of Title 22 of the California Code of Regulations; nor,
  - g. Thiobencarb to be present in excess of 1.0 µg/L.

## 10. Radioactivity:

- a. Radionuclides to be present in concentrations that are harmful to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life; and
- b. Radionuclides to be present in excess of the maximum contaminant levels specified in Table 4 (MCL Radioactivity) of Section 64443 of Title 22 of the California Code of Regulations.

11. **Suspended Sediments.** The suspended sediment load and suspended sediment discharge rate of surface waters to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

12. **Settleable Substances.** Substances to be present in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.

13. **Suspended Material.** Suspended material to be present in concentrations that cause nuisance or adversely affect beneficial uses.

14. **Taste and Odors.** Taste- or odor-producing substances to be present in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.

15. **Temperature.** The natural temperature to be increased by more than 5°F.

16. **Toxicity.** Toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.

17. **Turbidity.** The turbidity to increase as follows:

- a. More than 1 Nephelometric Turbidity Unit (NTU) where natural turbidity is between 0 and 5 NTUs;
- b. More than 20 percent where natural turbidity is between 5 and 50 NTUs;
- c. More than 10 NTU where natural turbidity is between 50 and 100 NTUs; nor
- d. More than 10 percent where natural turbidity is greater than 100 NTUs.

When wastewater is treated to a tertiary level (including coagulation) or equivalent, a 1-month averaging period may be used when determining compliance with this Receiving Surface Water Limitation for turbidity.

## B. Groundwater Limitations

[Not Applicable]

## 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 the following provisions:
  - a. If the Discharger's wastewater treatment facility is publicly owned or subject to regulation by California Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to Title 23, CCR, Division 3, Chapter 26.
  - b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
    - i. violation of any term or condition contained in this Order;
    - ii. obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;
    - iii. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and
    - iv. a material change in the character, location, or volume of discharge.

The causes for modification include:

- *New regulations.* New regulations have been promulgated under Section 405(d) of the Clean Water Act, or the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued.
- *Land application plans.* When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.
- *Change in sludge use or disposal practice.* Under 40 CFR 122.62(a)(1), a change in the Discharger's sludge use or disposal practice is a cause for modification of the permit. It is cause for revocation and reissuance if the Discharger requests or agrees.

The Regional Water Board may review and revise this Order at any time upon application of any affected person or the Regional Water Board's own motion.

- c. If a toxic effluent standard or prohibition (including any scheduled compliance specified in such effluent standard or prohibition) is established under Section

307(a) of the CWA, or amendments thereto, for a toxic pollutant that is present in the discharge authorized herein, and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the Regional Water Board will revise or modify this Order in accordance with such toxic effluent standard or prohibition.

The Discharger shall comply with effluent standards and prohibitions within the time provided in the regulations that establish those standards or prohibitions, even if this Order has not yet been modified.

- d. This Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:
  - i. contains different conditions or is otherwise more stringent than any effluent limitation in the Order; or
  - ii. controls any pollutant limited in the Order.

The Order, as modified or reissued under this paragraph, shall also contain any other requirements of the CWA then applicable.

- e. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.
- f. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.
- g. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by USEPA under Section 307 of the CWA, or amendment thereto, for any discharge to the municipal system.
- h. The discharge of any radiological, chemical or biological warfare agent or high-level, radiological waste is prohibited.
- i. A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.
- j. Safeguard to electric power failure:
  - i. The Discharger shall provide safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharge shall comply with the terms and conditions of this Order.

- ii. Upon written request by the Regional Water Board the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past five years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Regional Water Board.
  - iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Regional Water Board not approve the existing safeguards, the Discharger shall, within ninety days of having been advised in writing by the Regional Water Board that the existing safeguards are inadequate, provide to the Regional Water Board and USEPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. The schedule of compliance shall, upon approval of the Regional Water Board, become a condition of this Order.
- k. The Discharger, upon written request of the Regional Water Board, shall file with the Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. This report may be combined with that required under Regional Water Board Standard Provision VI.A.2.m.

The technical report shall:

- i. Identify the possible sources of spills, leaks, untreated waste by-pass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.
- ii. Evaluate the effectiveness of present facilities and procedures and state when they became operational.
- iii. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

The Regional Water Board, after review of the technical report, may establish conditions which it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions shall be incorporated as part of this Order, upon notice to the Discharger.

- I. A publicly owned treatment works (POTW) whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment and disposal facilities. The

- projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the Discharger shall notify the Regional Water Board by 31 January. A copy of the notification shall be sent to appropriate local elected officials, local permitting agencies and the press. Within 120 days of the notification, the Discharger shall submit a technical report showing how it will prevent flow volumes from exceeding capacity or how it will increase capacity to handle the larger flows. The Regional Water Board may extend the time for submitting the report.
- m. The Discharger shall submit technical reports as directed by the Executive Officer. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.
  - n. Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Regional Water Board and USEPA.
  - o. The Discharger shall conduct analysis on any sample provided by USEPA as part of the Discharge Monitoring Quality Assurance (DMQA) program. The results of any such analysis shall be submitted to USEPA's DMQA manager.
  - p. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.
  - q. All monitoring and analysis instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their continued accuracy.
  - r. The Discharger shall file with the Regional Water Board technical reports on self-monitoring performed according to the detailed specifications contained in the Monitoring and Reporting Program attached to this Order.
  - s. The results of all monitoring required by this Order shall be reported to the Regional Water Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. Unless otherwise

specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.

- t. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, sections 13385, 13386, and 13387.
- u. For POTWs, prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (CWC Section 1211).
- v. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, maximum daily effluent limitation, 1-hour average effluent limitation, or receiving water limitation contained in this Order, the Discharger shall notify the Regional Water Board by telephone (559) 445-5116 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within 5 days, unless the Regional Water Board waives confirmation. The written notification shall include the information required by Attachment D, Section V.E.1 [40 CFR 122.41(l)(6)(i)].

## **B. Monitoring and Reporting Program (MRP) Requirements**

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

## **C. Special Provisions**

### **1. Reopener Provisions**

- a. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.
- b. This Order may be reopened due to conditions that necessitate a major modification to the permit. Conditions that necessitate a major modification of a permit are described in 40 CFR 122.62, including:
  - i. If new or amended applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA, or amendments thereto, this permit may be reopened and modified in accordance with the new or amended standards.

- ii. When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.
- c. This Order will be reopened if legal precedent, statute, or regulation nullifies the policy by which MUN was applied to Mariposa Creek provided MUN has not yet been dedesignated by Basin Plan amendment.
- d. **Whole Effluent Toxicity.** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if the State Water Board revises the SIP's toxicity control provisions that would require the establishment of numeric chronic toxicity effluent limitations, this Order may be reopened to include a numeric chronic toxicity effluent limitation based on the new provisions.
- e. **Pollution Prevention.** This Order requires the Discharger prepare pollution prevention plans following CWC Section 13263.3(d)(3) in Special Provision VI.C.7.a. Based on a review of the pollution prevention plans, this Order may be reopened for addition and/or modification of effluent limitations and requirements for constituents based on a review of the pollution prevention plans.
- f. **Mixing Zone and Dilution Credits.** This permit may be reopened for the calculation of dilution credits and a mixing zone for the Facility, provided that the Discharger submits a mixing zone study that provides sufficient information/data to determine compliance with the mixing zone requirements contained in Section 1.4.2.2 of the SIP, or an equivalent study, as approved by the Regional Water Board.
- g. **Beneficial Use Dedesignation.** As allowed under Special Provision VI.C.2.c., if the Discharger chooses to complete a Use Attainability Analysis (UAA) and it results in adoption of a Basin Plan amendment that dedesignates the beneficial use of MUN for Mariposa Creek, this permit shall be reopened to implement the necessary changes.

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

- a. **Chronic Whole Effluent Toxicity.** For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct chronic whole effluent toxicity testing, as specified in the Monitoring and Reporting Program (Attachment E, Section V.). Furthermore, this Provision requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge exceeds the toxicity numeric monitoring trigger established in this Provision, the Discharger is required to initiate a Toxicity Reduction Evaluation (TRE), in accordance with an approved TRE Work Plan, and take actions to mitigate the impact of the discharge and prevent reoccurrence of toxicity. A TRE is a site-specific study conducted in a stepwise process to identify the source(s) of toxicity and the effective control measures for effluent toxicity. TREs are designed to identify the causative

agents and sources of whole effluent toxicity, evaluate the effectiveness of the toxicity control options, and confirm the reduction in effluent toxicity. This Provision includes requirements for the Discharger to develop and submit a TRE Work Plan and includes procedures for accelerated chronic toxicity monitoring and TRE initiation.

- i. **Initial Investigative Toxicity Reduction Evaluation (TRE) Work Plan.** **By 23 July 2008**, the Discharger shall submit to the Regional Water Board an Initial Investigative TRE Work Plan for approval by the Executive Officer. This should be a one to two page document including, at minimum:
  - a) A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of effluent toxicity, effluent variability, and treatment system efficiency;
  - b) A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility; and
  - c) A discussion of who will conduct the Toxicity Identification Evaluation, if necessary (i.e., an in-house expert or outside contractor).
- ii. **Accelerated Monitoring and TRE Initiation.** When the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity monitoring, and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring as required in the Accelerated Monitoring Specifications. WET testing results exceeding the monitoring trigger during accelerated monitoring demonstrates a pattern of toxicity and requires the Discharger to initiate a TRE to address the effluent toxicity.
- iii. **Numeric Monitoring Trigger.** The numeric toxicity monitoring trigger is  $> 1 \text{ TUc}$  (where  $\text{TUc} = 100/\text{NOEC}$ ). The monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to begin accelerated monitoring and initiate a TRE.
- iv. **Accelerated Monitoring Specifications.** If the monitoring trigger is exceeded during regular chronic toxicity testing, within 14-days of notification by the laboratory of the test results, the Discharger shall initiate accelerated monitoring. Accelerated monitoring shall consist of four (4) chronic toxicity tests in a 6-week period (i.e., one test every 2 weeks) using the species that exhibited toxicity. The following protocol shall be used for accelerated monitoring and TRE initiation:
  - a) If the results of four (4) consecutive accelerated monitoring tests do not exceed the monitoring trigger, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring. However, notwithstanding the accelerated monitoring results, if there is adequate

evidence of a pattern of effluent toxicity, the Executive Officer may require that the Discharger initiate a TRE.

- b) If the source(s) of the toxicity is easily identified (i.e., temporary plant upset), the Discharger shall make necessary corrections to the facility and shall continue accelerated monitoring until four (4) consecutive accelerated tests do not exceed the monitoring trigger. Upon confirmation that the effluent toxicity has been removed, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring.
- c) If the result of any accelerated toxicity test exceeds the monitoring trigger, the Discharger shall cease accelerated monitoring and initiate a TRE to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity. Within thirty (30) days of notification by the laboratory of the test results exceeding the monitoring trigger during accelerated monitoring, the Discharger shall submit a TRE Action Plan to the Regional Water Board including, at minimum:
  - 1) Specific actions the Discharger will take to investigate and identify the cause(s) of toxicity, including TRE WET monitoring schedule;
  - 2) Specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and
  - 3) A schedule for these actions.

Within sixty (60) days of notification by the laboratory of the test results, the Discharger shall submit to the Regional Water Board a TRE Work Plan for approval by the Executive Officer. The TRE Work Plan shall outline the procedures for identifying the source(s) of, and reducing or eliminating effluent toxicity. The TRE Work Plan must be developed in accordance with USEPA guidance<sup>1</sup>.

- b. **Dilution/Mixing Zone Study.** Section 1.4.2 of the SIP establishes procedures for granting mixing zones and dilution credits. Before establishing a mixing zone and a dilution credit for a discharge, it must first be determined if, and how much (if any), receiving water is available to dilute the discharge. In determining the appropriate available receiving water flow, the Regional Water Board may take into account actual and seasonal variations of the receiving water and the effluent. This permit may be reopened for the calculation of dilution credits and a mixing zone for the Facility, provided that the Discharger submits a mixing zone study that provides sufficient information/data to determine compliance with the mixing zone requirements contained in Section 1.4.2.2 of the SIP, or an equivalent study, as approved by the Regional Water Board.

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<sup>1</sup> See Attachment F (Fact Sheet) Section VII.B.2.a. for a list of USEPA guidance documents that must be considered in development of the TRE Workplan.

- c. **By 26 May 2008**, the Discharger shall submit written certification of its decision on whether it intends to provide the information/support necessary for the Regional Water Board to conduct a Use Attainability Analysis (UAA) for the MUN beneficial use designation for Mariposa Creek. If the Discharger chooses to pursue a UAA, it shall comply with the following schedule and further action by the Regional Water Board:

<u>Task</u>	<u>Compliance Date</u>
i. Submit a technical report in the form of a work plan and proposed time schedule to provide the information/support necessary to conduct a UAA for the MUN beneficial use designation for Mariposa Creek. The work plan must describe in detail the information/support the Discharger intends to provide the Regional Water Board and how this information/support will address the requirements of 40 CFR 131.3(g) and 131.10(g) and the criteria in State Water Board Resolution No. 88-63.	<b>26 August 2008</b>
ii. Implement approved work plan and time schedule.	Within 30 days of approval of the technical report by the Executive Officer
iii. Provide the results of Task i.	By the deadline approved by the Executive Officer but no later than <b>26 November 2010</b>

Technical reports submitted pursuant to this provision are subject to the requirements of Standard Provision VI.A.2.m. and approval by the Executive Officer. Upon completion of Task iii above, the Executive Officer will, consistent with State Board Order No. WQO-2002-0015, endeavor to expeditiously conduct a Use Attainability Analysis to consider dedesignation of MUN for Mariposa Creek. On or before **30 November 2009**, the Discharger may request Regional Water Board consideration of a time schedule order as a means of obtaining additional time for implementing measures necessary to achieve compliance with final effluent limits associated with MUN. Upon timely receipt of such request and depending on the justification explaining why the compliance schedules set forth herein cannot reasonably be met, the Executive Officer may propose the Regional Water Board consider such an order.

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

- a. **CWC Section 13263.3(d)(3) Pollution Prevention Plans.** The pollution prevention plans required in Section VI.C.7.a.ii. shall, at a minimum, meet the

requirements outlined in CWC Section 13263.3(d)(3). The minimum requirements for the pollution prevention plans include the following:

- i. An estimate of all of the sources of a pollutant contributing, or potentially contributing, to the loadings of a pollutant in the treatment plant influent.
- ii. An analysis of the methods that could be used to prevent the discharge of the pollutants into the Facility, including application of local limits to industrial or commercial dischargers regarding pollution prevention techniques, public education and outreach, or other innovative and alternative approaches to reduce discharges of the pollutant to the Facility. The analysis also shall identify sources, or potential sources, not within the ability or authority of the Discharger to control, such as pollutants in the potable water supply, airborne pollutants, pharmaceuticals, or pesticides, and estimate the magnitude of those sources, to the extent feasible.
- iii. An estimate of load reductions that may be attained through the methods identified in subparagraph ii.
- iv. A plan for monitoring the results of the pollution prevention program.
- v. A description of the tasks, cost, and time required to investigate and implement various elements in the pollution prevention plan.
- vi. A statement of the Discharger's pollution prevention goals and strategies, including priorities for short-term and long-term action, and a description of the Discharger's intended pollution prevention activities for the immediate future.
- vii. A description of the Discharger's existing pollution prevention programs.
- viii. An analysis, to the extent feasible, of any adverse environmental impacts, including cross-media impacts or substitute chemicals that may result from the implementation of the pollution prevention program.
- ix. An analysis, to the extent feasible, of the costs and benefits that may be incurred to implement the pollution prevention program.

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

##### **a. Wastewater Treatment Facility**

- i. The treatment and disposal facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

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

### a. Sludge/Biosolids Discharge Specifications

- i. Collected screenings, residual sludge, biosolids, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer, and consistent with *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste*, as set forth in Title 27, CCR, Division 2, Subdivision 1, Section 20005, et seq. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, composting sites, soil amendment sites) that are operated in accordance with valid waste discharge requirements issued by a Regional Water Board will satisfy these specifications.
- ii. Sludge and solid waste shall be removed from screens, sumps, ponds, clarifiers, etc. as needed to ensure optimal plant performance.
- iii. The treatment of sludge generated at the Facility shall be confined to the Facility property and conducted in a manner that precludes infiltration of waste constituents into soils in a mass or concentration that will violate the Basin Plan objectives for groundwater. In addition, the storage of residual sludge, solid waste, and biosolids on Facility property shall be temporary and controlled, and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate the Basin Plan objectives for groundwater.
- iv. The use and disposal of biosolids shall comply with existing Federal and State laws and regulations, including permitting requirements and technical standards included in 40 CFR 503. If the State Water Board and the Regional Water Board are given the authority to implement regulations contained in 40 CFR 503, this Order may be reopened to incorporate appropriate time schedules and technical standards. The Discharger must comply with the standards and time schedules contained in 40 CFR 503 whether or not they have been incorporated into this Order.

### b. Biosolids Disposal Requirements

- i. The Discharger shall comply with the MRP for biosolids disposal contained in Attachment E.
- ii. Any proposed change in biosolids use or disposal practice from a previously approved practice shall be reported to the Executive Officer and USEPA Regional Administrator at least **90 days** in advance of the change.
- iii. The Discharger is encouraged to comply with the "Manual of Good Practice for Agricultural Land Application of Biosolids" developed by the California Water Environment Association.

**c. Biosolids Storage Requirements**

- i. Facilities for the storage of Class B biosolids shall be located, designed and maintained to restrict public access to biosolids.
  - ii. Biosolids storage facilities shall be designed and maintained to prevent washout or inundation from a storm or flood with a return frequency of 100 years.
  - iii. Biosolids storage facilities, which contain biosolids, shall be designed and maintained to contain all storm water falling on the biosolids storage area during a rainfall year with a return frequency of 100 years.
  - iv. Biosolids storage facilities shall be designed, maintained and operated to minimize the generation of leachate.
- d. Collection System.** On 2 May 2006, the State Water Board adopted State Water Board Order 2006-0003, a Statewide General WDR for Sanitary Sewer Systems. The Discharger shall be subject to the requirements of Order 2006-0003 and any future revisions thereto. Order 2006-0003 requires that all public agencies that currently own or operate sanitary sewer systems apply for coverage under the General WDR. By 2 November 2006, the Discharger was required by that Order to apply for coverage under State Water Board Order 2006-0003 for operation of its wastewater collection system. The Discharger has enrolled for coverage under the State Water Board Order.

Regardless of the coverage obtained under Order 2006-0003, the Discharger's collection system is part of the publicly owned treatment works subject to this Order. As such, pursuant to federal regulations, the Discharger must properly operate and maintain its collection system [40 CFR 122.41(e)], report any non-compliance [40 CFR 122.41(l)(6) and (7)], and mitigate any discharge from the collection system in violation of this Order [40 CFR 122.41(d)].

- e. This permit, and the MRP which is a part of this permit, requires that certain parameters be monitored on a continuous basis. The wastewater treatment plant is not staffed on a full time basis. Permit violations or system upsets can go undetected during this period. The Discharger is required to establish an electronic system for operator notification for continuous recording device alarms. For existing continuous monitoring systems, the electronic notification system shall be installed **by 6 June 2008**. For systems installed following permit adoption, the notification system shall be installed simultaneously.

**6. Other Special Provisions**

- a. Wastewater shall be oxidized, coagulated, filtered, and adequately disinfected pursuant to the Department of Public Health (DPH) reclamation criteria, California Code of Regulations, Title 22, Division 4, Chapter 3, (Title 22), or

equivalent. Special Provision VI.C.7.c. establishes a compliance schedule to achieve compliance with the Title 22 tertiary treatment requirements.

- b. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Regional Water Board.

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 Regional Water Board and a statement. The statement shall comply 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 without requirements, a violation of the CWC. Transfer shall be approved or disapproved in writing by the Executive Officer.

## 7. Compliance Schedules

- a. **Compliance Schedules for Final Effluent Limitations for Copper, Zinc, and Dichlorobromomethane**
  - i. **By 18 May 2010**, the Discharger shall comply with the final effluent limitations for copper, zinc, and dichlorobromomethane. On 28 August 2007, the Discharger submitted a compliance schedule justification for copper, zinc, and dichlorobromomethane. The compliance schedule justification included all items specified in Paragraph 3, items (a) through (d), of section 2.1 of the SIP. As this compliance schedule is greater than 1 year, the Discharger shall submit semi-annual progress reports in accordance with the MRP (Attachment E, Section X.D.1).
  - ii. **Pollution Prevention Plan.** The Discharger shall prepare and implement a pollution prevention plan for copper, zinc, and dichlorobromomethane in accordance with CWC section 13263.3(d)(3). The minimum requirements for the pollution prevention plan are outlined in Special Provision VI.C.3.a. A work plan and time schedule for preparation of the pollution prevention plan shall be completed and submitted to the Regional Water Board **by 25 July 2008** for approval by the Executive Officer. The Pollution Prevention Plan shall be completed and submitted to the Regional Water Board **within two (2) years following work plan approval by the Executive Officer**, and progress reports shall be submitted in accordance with the MRP (Attachment E, Section X.D.1).
  - iii. **Treatment Feasibility Study.** The Discharger is required to perform an engineering treatment feasibility study examining the feasibility, costs and

benefits of different treatment options that may be required to remove copper and zinc, and dichlorobromomethane from the discharge. A work plan and time schedule for preparation of the treatment feasibility study shall be completed and submitted to the Regional Water Board **25 July 2008** for approval by the Executive Officer. The treatment feasibility study shall be completed and submitted to the Regional Water Board **within two (2) years following work plan approval by the Executive Officer**. A corrective action plan and an implementation schedule shall be included with the treatment feasibility study to assure compliance with the final effluent limitations for copper and zinc , and if appropriate dichlorobromomethane and nitrate. Progress reports shall be submitted in accordance with the MRP (Attachment E, Section X.D.1).

- iv. **On or before 30 November 2009**, the Discharger may request Regional Water Board consideration of a time schedule order as a means of obtaining additional time for implementing measures necessary to achieve compliance with final copper, zinc, and dichlorobromomethane limits. Upon timely receipt of such request and depending on the justification explaining why the compliance schedules set forth herein cannot reasonably be met, the Executive Officer may propose the Regional Water Board consider such an Order.

**b. Compliance Schedule for Nitrate**

The Discharger shall evaluate its options and shall comply in accordance with the following time schedule:

<u>Task</u>	<u>Compliance Date</u>
Submit technical report in the form of a work plan and proposed implementing schedule for complying with Final Effluent Limitation - Discharge Point No. 001, IV.A.1.a for Nitrate Nitrogen.	<b>3 June 2008</b>
Implement Executive Officer approved work plan	60 days following written Executive Officer approval of work plan and schedule.
Full Compliance	No later than <b>4 December 2017</b>

Technical reports submitted pursuant to this Provision are subject to the requirements of Section X of Attachment E and Executive Officer approval.

**c. Compliance Schedule for Tertiary Treatment**

The Discharger shall evaluate its options and shall comply in accordance with the following time schedule:

<u>Task</u>	<u>Compliance Date</u>
Submit technical report in the form of a work plan and proposed implementing schedule for complying with Special Provision VI.C.6.a., or for fully implementing an alternative treatment and disposal method.	<b>3 June 2008</b>
Implement Executive Officer approved work plan	60 days following written Executive Officer approval of work plan and schedule.
Full Compliance	No later than <b>4 December 2017</b>

Technical reports submitted pursuant to this Provision are subject to the requirements of Section X of Attachment E and Executive Officer approval.

**d. Compliance Schedule for Continuous Total Chlorine Residual Monitoring.**

The Discharger shall comply with the following time schedule to assure compliance with the monitoring requirements of Monitoring and Reporting Program No. R5-2007-0171:

<u>Task</u>	<u>Compliance Date</u>
Submit technical report in the form of a work plan and proposed implementing schedule for installation of continuous flow and chlorine residual meters.	<b>5 March 2008</b>
Implement Executive Officer approved work plan	60 days following written Executive Officer approval of work plan and schedule.
Full Compliance	No later than <b>4 December 2012</b>

Technical reports submitted pursuant to this Provision are subject to the requirements of Section X of Attachment E and Executive Officer approval.

## VII. COMPLIANCE DETERMINATION

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

- A. **BOD<sub>5</sub> and TSS Effluent Limitations (Sections IV.A.1.a. and IV.A.1.b.).** Compliance with the final effluent limitations for BOD<sub>5</sub> and TSS required in sections IV.A.1.a. shall be ascertained by 8-hour composite samples. Compliance with effluent limitations IV.A.1.b. for percent removal shall be calculated using the arithmetic mean of BOD<sub>5</sub> and TSS in effluent samples collected over a monthly period as a percentage of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.
- B. **Average Daily Discharge Flow Effluent Limitations (Section IV.A.1.g.).** The Average Daily Discharge Flow represents the daily average flow when groundwater is at or near normal and runoff is not occurring. Compliance with the Average Daily Discharge Flow effluent limitations will be measured at times when groundwater is at or near normal and runoff is not occurring.
- C. **Total Coliform Organisms Effluent Limitations (Section IV.A.1.f.).** For each day that an effluent sample is collected and analyzed for total coliform organisms, the 7-day median shall be determined by calculating the median concentration of total coliform bacteria in the effluent utilizing the bacteriological results of the last seven days for which analyses have been completed. If the 7-day median of total coliform organisms exceeds a most probable number (MPN) of 2.2 per 100 milliliters, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period.
- D. **Total Residual Chlorine Effluent Limitations.** Until Provision VI.C.7.d is satisfied, compliance shall be determined using the analytical results of daily grab samples. The method used for analysis during this period shall have a minimum detection limit of 0.1 mg/L. Non-detect results from this method shall be considered in compliance. Results that equal or exceed 0.1 mg/L shall be considered violations unless the Discharger can demonstrate using data collected from a back-up monitoring or testing system that the detection was a false positive.

Following compliance with Provision VI.C.7.d, continuous monitoring data showing either a positive dechlorination agent residual or a chlorine residual at or below the prescribed chlorine effluent limitations is sufficient to show compliance provided the instruments are maintained and calibrated in accordance with the manufacturer's recommendations.

Any monitoring excursion that exceeds the 1-hour average or 4-day average chlorine effluent limitations shall be considered a violation unless the Discharger demonstrates through data collected from a back-up monitoring system that a chlorine spike recorded by the continuous monitor is not due to chlorine, in which case the result will be considered a false positive.

## ATTACHMENT A – DEFINITIONS

**Arithmetic Mean ( $\mu$ )**, also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean =  $\mu = \Sigma x / n$       where:  $\Sigma x$  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.

**Best Practicable Treatment or Control (BPTC)**: BPTC is a requirement of State Water Resources Control Board Resolution 68-16 – “Statement of Policy with Respect to Maintaining High Quality of Waters in California” (referred to as the “Antidegradation Policy”). BPTC is the treatment or control of a discharge necessary to assure that, “(a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.” Pollution is defined in CWC Section 13050(I). In general, an exceedance of a water quality objective in the Basin Plan constitutes “pollution”.

**Bioaccumulative** pollutants are 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)** 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)** are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

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

**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 include, but are not limited to, the Sacramento-San Joaquin Delta, as defined in California 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** are 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)** means 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** is 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)** 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 3 July 1999.

**Minimum Level (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** 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)** are those sample results less than the laboratory's MDL.

**Ocean Waters** are 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 are substances for which degradation or decomposition in the environment is nonexistent or very slow.

**Pollutant Minimization Program (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 California Water Code Section 13263.3(d), shall be considered to fulfill the PMP requirements.

**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 California 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)** 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** is 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** is any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

**Standard Deviation ( $\sigma$ )** is a measure of variability that is calculated as follows:

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

where:

x is the observed value;

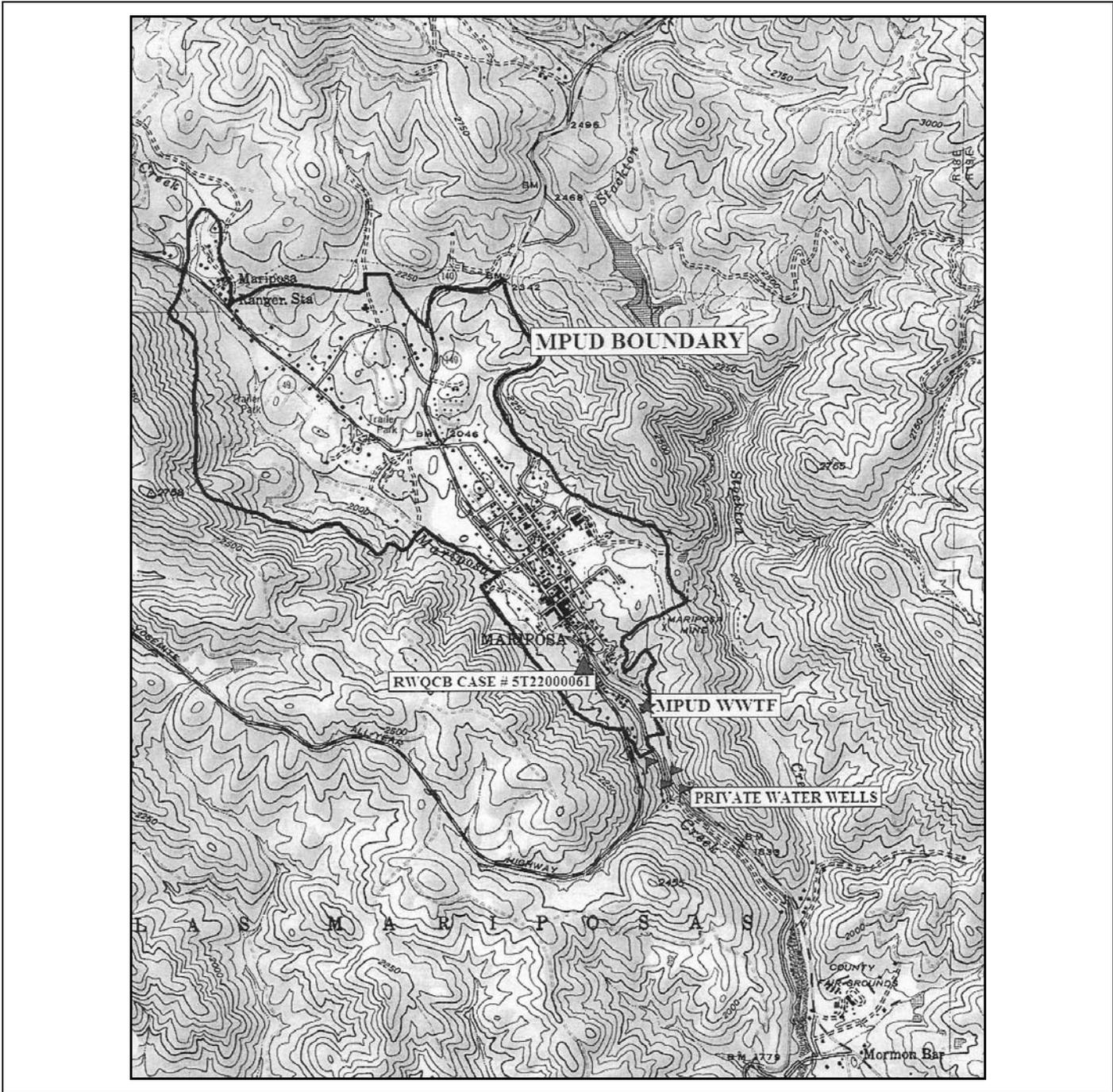
$\mu$  is the arithmetic mean of the observed values; and

n is the number of samples.

**Toxicity Reduction Evaluation (TRE)** 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,

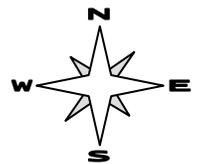
evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best 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.)

**ATTACHMENT B – MAP**

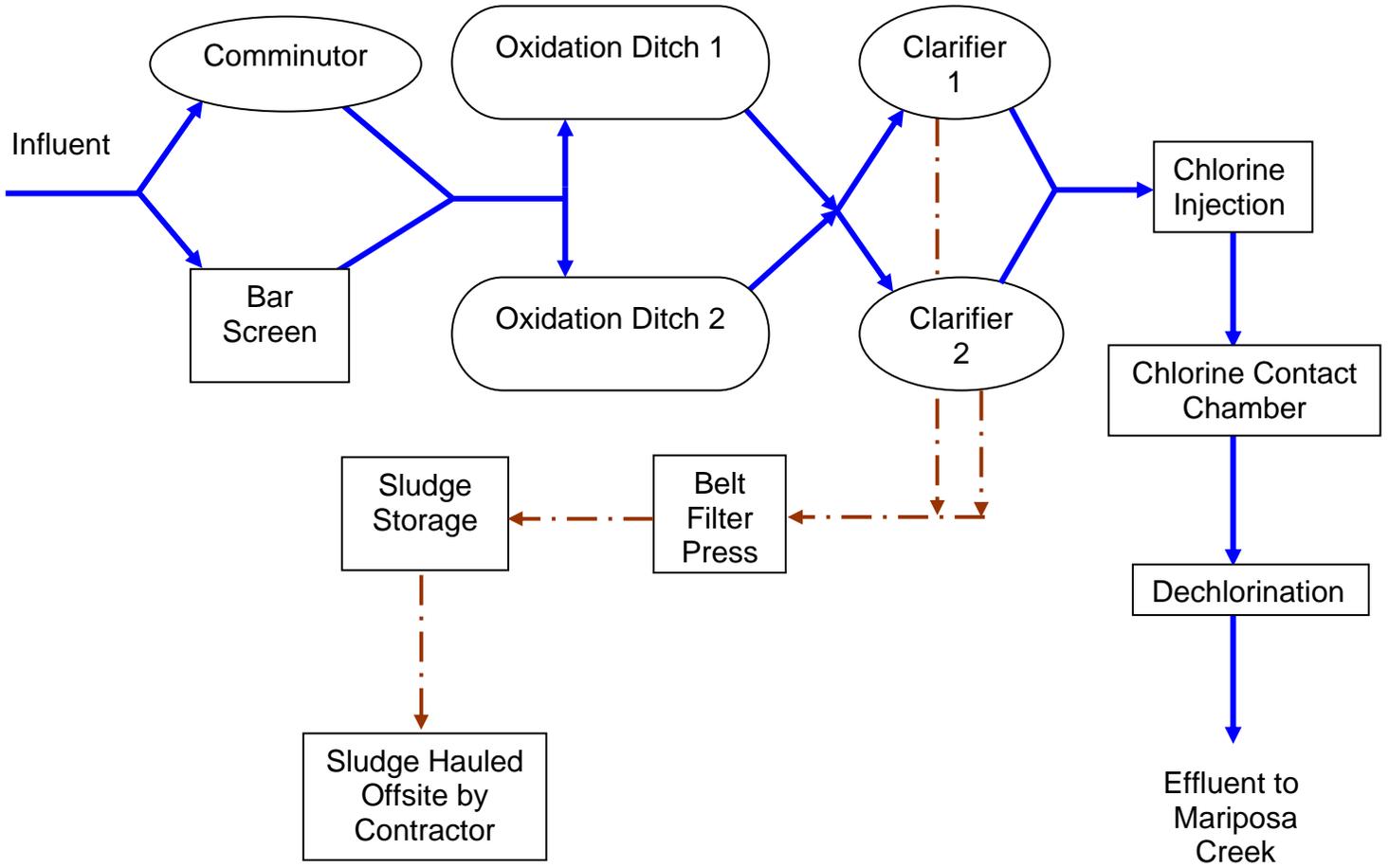


SITE LOCATION MAP

MARIPOSA PUBLIC UTILITY DISTRICT  
WASTEWATER TREATMENT FACILITY  
MARIPOSA COUNTY  
SOURCE: REPORT OF WASTE DISCHARGE, 13 DECEMBER 2004



### ATTACHMENT C – FLOW SCHEMATIC



## **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 CFR §122.41(i); Wat. Code, §13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (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 California 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));
  - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR §122.41(m)(4)(i)(B)); and
  - c. The Discharger submitted notice to the 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 California 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).)
- B. Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order. (40 CFR §122.41(j)(4); §122.44(i)(1)(iv).)

### IV. STANDARD PROVISIONS – RECORDS

- A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the 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 CFR §122.22(d).)

### **C. Monitoring Reports**

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR §122.22(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 Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the 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 section 122.29(b) (40 CFR §122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (40 CFR §122.41(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 California 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)**

40 CFR 122.48 requires that all NPDES permits specify monitoring and reporting requirements. California Water Code (CWC) Sections 13267 and 13383 also authorize the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and state regulations.

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

- A. 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.
- B. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Department of Public Health. In the event a certified laboratory is not available to the Discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Regional Water Board staff. The Quality Assurance-Quality Control Program must conform to USEPA guidelines or to procedures approved by the Regional Water Board.
- C. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Public Health. Laboratories that perform sample analyses shall be identified in all monitoring reports.
- D. 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. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.
- E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this MRP.

## 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	Facility headworks
001	EFF-001	Downstream from the last connection through which wastes can be admitted to the outfall (37°28'49"N, 119°57'39"W)
--	RSW-001	100 feet upstream from Discharge Point No. 001 in Mariposa Creek
--	RSW-002	300 feet downstream from Discharge Point No. 001 in Mariposa Creek

## III. INFLUENT MONITORING REQUIREMENTS

### A. Monitoring Location INF-001

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

**Table E-2. Influent Monitoring**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Meter	Continuous	1
Biochemical Oxygen Demand (BOD) (5-day @ 20°C)	mg/L	8-hr Composite <sup>2</sup>	1/week	1
Total Suspended Solids (TSS)	mg/L	8-hr Composite <sup>2</sup>	1/week	1

<sup>1</sup> Pollutants shall be analyzed using the analytical methods described in 40 CFR 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Appendix 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

<sup>2</sup> BOD<sub>5</sub> and TSS samples shall be collected on the same day as the effluent samples.

## IV. EFFLUENT MONITORING REQUIREMENTS

### A. Monitoring Location EFF-001

1. The Discharger shall monitor the facility effluent 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	Required Analytical Test Method
Flow	mgd	Meter	Continuous	1
<i>Conventional Pollutants</i>				
Biochemical Oxygen Demand (BOD) (5-day @ 20°C)	mg/L	8-hr Composite	1/week	1
	lbs/day	Calculate	1/week	1
Total Suspended Solids (TSS)	mg/L	8-hr Composite	1/week	1
	lbs/day	Calculate	1/week	1
pH	standard units	Grab	1/week	1
<i>Priority Pollutants</i>				
Copper, Total Recoverable	µg/L	8-hr Composite	1/month	1,2
Dichlorobromomethane	µg/L	Grab	1/month	1,2
Zinc, Total Recoverable	µg/L	8-hr Composite	1/month	1,2
Persistent Chlorinated Hydrocarbon Pesticides	µg/L	Grab	1/month	1, 2
Priority Pollutants <sup>3</sup>	µg/L	<sup>4</sup>	1/year	1,2
<i>Non-Conventional Pollutants</i>				
Ammonia Nitrogen, Total (as N) <sup>5,6</sup>	mg/L	Grab	1/month	1
Chlorine, Total Residual <sup>7</sup>	mg/L	Meter	Continuous	1
Hardness <sup>8</sup>	mg/L	Grab	1/year	1
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/week	1
Nitrate Nitrogen, Total (as N)	mg/L	Grab	1/month	1
Total Coliform	MPN/100 mL	Grab	3/week	1
Temperature	°F	Grab	1/week	1
Turbidity	NTU	Grab	1/month	1
Settleable Solids	mL/L	Grab	1/week	1
Standard Minerals <sup>9</sup>	mg/L	Grab	1/year	1

<sup>1</sup> Pollutants shall be analyzed using the analytical methods described in 40 CFR 136.

<sup>2</sup> For priority pollutant constituents with effluent limitations, detection limits shall be below the effluent limitations. If the lowest minimum level (ML) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP) is not below the effluent limitation, the detection limit shall be the lowest ML. For priority pollutant constituents without effluent limitations, the detection limits shall be equal to or less than the lowest ML published in Appendix 4 of the SIP.

<sup>3</sup> Concurrent with receiving surface water sampling.

<sup>4</sup> Volatile samples shall be grab samples. The remainder shall be 8-hour composite samples.

<sup>5</sup> Concurrent with whole effluent toxicity monitoring.

<sup>6</sup> Report as total.

- 
- <sup>7</sup> Continuous chlorine residual monitoring systems shall be operational by no later than the compliance date specified in Special Provision VI.C.7.d. Until that time, grab samples shall be collected and analyzed daily.
- <sup>8</sup> Concurrent with priority pollutant monitoring.
- <sup>9</sup> Standard minerals shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series), and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).

## V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

- A. **Acute Toxicity Testing.** The Discharger shall conduct acute toxicity testing to determine whether the effluent is contributing acute toxicity to the receiving water. The Discharger shall meet the following acute toxicity testing requirements:
1. Monitoring Frequency – The Discharger shall perform annual acute toxicity testing, concurrent with effluent ammonia sampling. Because the chronic toxicity test provides both acute and chronic toxicity information concurrently, acute toxicity testing is not necessary when chronic toxicity testing is being conducted in the same period.
  2. Sample Types – For static non-renewal and static renewal testing, the samples shall be 24-hour composites and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent Monitoring Location EFF-001.
  3. Test Species – Test species shall be fathead minnows (*Pimephales promelas*).
  4. Methods – The acute toxicity testing samples shall be analyzed using EPA-821-R-02-012, Fifth Edition. Temperature, total residual chlorine, and pH shall be recorded at the time of sample collection. No pH adjustment may be made unless approved by the Executive Officer.
  5. Test Failure – If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.
- B. **Chronic Toxicity Testing.** The Discharger shall conduct three species chronic toxicity testing to determine whether the effluent is contributing chronic toxicity to the receiving water. The Discharger shall meet the following chronic toxicity testing requirements:
- a. Monitoring Frequency – The Discharger shall perform annual three species chronic toxicity testing.
  - b. Sample Types – Effluent samples shall be 8-hour composites and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at Monitoring Location EFF-001. The receiving water control shall be a grab sample obtained from the RSW-001 monitoring location, as identified in this MRP.

- c. Sample Volumes – Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.
- d. Test Species – Chronic toxicity testing measures sublethal (e.g., reduced growth, reproduction) and/or lethal effects to test organisms exposed to an effluent compared to that of the control organisms. The Discharger shall conduct chronic toxicity tests with:
- The cladoceran, water flea, *Ceriodaphnia dubia* (survival and reproduction test);
  - The fathead minnow, *Pimephales promelas* (larval survival and growth test); and
  - The green alga, *Selenastrum capricornutum* (growth test).
- e. Methods – The presence of chronic toxicity shall be estimated as specified in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA/821-R-02-013, October 2002*.
- f. Reference Toxicant – As required by the SIP, all chronic toxicity tests shall be conducted with concurrent testing with a reference toxicant and shall be reported with the chronic toxicity test results.
- g. Dilutions – The chronic toxicity testing shall be performed using the dilution series identified in Table E-4, below. The receiving water control shall be used as the diluent (unless the receiving water is toxic).
- h. Test Failure – The Discharger must re-sample and re-test as soon as possible, but no later than fourteen (14) days after receiving notification of a test failure. A test failure is defined as follows:
- i. The reference toxicant test or the effluent test does not meet all test acceptability criteria as specified in the *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA/821-R-02-013, October 2002 (Method Manual)*, and its subsequent amendments or revisions; or
  - ii. The percent minimum significant difference (PMSD) measured for the test exceeds the upper PMSD bound variability criterion in Table 6 on page 52 of the Method Manual. (A retest is only required in this case if the test results do not exceed the monitoring trigger specified in Special Provisions VI.C.2.a.iii.)

**Table E-4. Chronic Toxicity Testing Dilution Series**

Sample	Dilutions (%)					Controls	
	100	75	50	25	12.5	Receiving Water	Laboratory Water
% Effluent	100	75	50	25	12.5	0	0
% Receiving Water	0	25	50	75	87.5	100	0
% Laboratory Water	0	0	0	0	0	0	100

- C. **WET Testing Notification Requirements.** The Discharger shall notify the Regional Water Board within 24-hrs after the receipt of test results exceeding the monitoring trigger during regular or accelerated monitoring, or an exceedance of the acute toxicity effluent limitation.
- D. **WET Testing Reporting Requirements.** All toxicity test reports shall include the contracting laboratory’s complete report provided to the Discharger and shall be in accordance with the appropriate “Report Preparation and Test Review” sections of the method manuals. At a minimum, whole effluent toxicity monitoring shall be reported as follows:
1. **Chronic WET Reporting.** Regular chronic toxicity monitoring results shall be reported to the Regional Water Board within 30 days following completion of the test, and shall contain, at minimum:
    - a. The results expressed in TUC, measured as 100/NOEC, and also measured as 100/LC<sub>50</sub>, 100/EC<sub>25</sub>, 100/IC<sub>25</sub>, and 100/IC<sub>50</sub>, as appropriate;
    - b. The statistical methods used to calculate endpoints;
    - c. The statistical output page, which includes the calculation of the percent minimum significant difference (PMSD);
    - d. The dates of sample collection and initiation of each toxicity test; and
    - e. The results compared to the numeric toxicity monitoring trigger.

Additionally, the monthly discharger self-monitoring reports shall contain an updated chronology of chronic toxicity test results expressed in TUC, and organized by test species, type of test (survival, growth or reproduction), and monitoring frequency, i.e., either quarterly, monthly, accelerated, or TRE. (Note: items a through c, above, are only required when testing is performed using the full dilution series.)
  2. **Acute WET Reporting.** Acute toxicity test results shall be submitted with the monthly discharger self-monitoring reports and reported as percent survival.
  3. **TRE Reporting.** Reports for Toxicity Reduction Evaluations shall be submitted in accordance with the schedule contained in the Discharger’s approved TRE Work Plan.

4. **Quality Assurance (QA).** The Discharger must provide the following information for QA purposes (if applicable):
- Results of the applicable reference toxicant data with the statistical output page giving the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD, and dates tested.
  - The reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory.
  - Any information on deviations or problems encountered and how they were dealt with.

**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**

- The Discharger shall monitor Mariposa Creek at Monitoring Location RSW-001 as follows:

**Table E-5a. Receiving Water Monitoring Requirements (RSW-001)**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dissolved Oxygen	mg/L	Grab	1/week	1
Turbidity	NTU	Grab	1/week	1
pH	standard units	Grab	1/week	1
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/week	1
Temperature	°F	Grab	1/week	1
Chlorine, Total Residual	mg/L	Grab	1/week	1
Nitrate (NO <sub>3</sub> -N)	mg/L	Grab	1/month	1
Hardness (as CaCO <sub>3</sub> )	mg/L	Grab	1/month	1
Priority Pollutants <sup>2</sup>	µg/L	<sup>3</sup>	1/year	1

<sup>1</sup> Pollutants shall be analyzed using the analytical methods described in 40 CFR 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Appendix 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

<sup>2</sup> Concurrent with effluent priority pollutant sampling.

<sup>3</sup> Volatile samples shall be grab samples. The remainder shall be 8-hour composite samples.

2. In conducting the receiving water sampling, a log shall be kept of the receiving water conditions at RSW-001. Notes on receiving water conditions shall be summarized in the monitoring report. Attention shall be given to the presence or absence of:
  - a. Floating or suspended matter
  - b. Discoloration
  - c. Aquatic life (including plants, fish, shellfish, birds)
  - d. Visible film, sheen, or coating
  - e. Fungi, slime, or objectionable growths
  - f. Potential nuisance conditions

**B. Monitoring Location RSW-002**

1. The Discharger shall monitor Mariposa Creek at Monitoring Location RSW-002 as follows:

**Table E-5b. Receiving Water Monitoring Requirements (RSW-002)**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dissolved Oxygen	mg/L	Grab	1/week	1
Turbidity	NTU	Grab	1/week	1
pH	standard units	Grab	1/week	1
Temperature	°F	Grab	1/week	1
Chlorine, Total Residual	mg/L	Grab	1/week	1
Nitrate (NO <sub>3</sub> -N)	mg/L	Grab	1/month	1

<sup>1</sup> Pollutants shall be analyzed using the analytical methods described in 40 CFR 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Appendix 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

2. In conducting the receiving water sampling, a log shall be kept of the receiving water conditions at RSW-002. Notes on receiving water conditions shall be summarized in the monitoring report. Attention shall be given to the presence or absence of:
  - a. Floating or suspended matter
  - b. Discoloration
  - c. Aquatic life (including plants, fish, shellfish, birds)
  - d. Visible film, sheen, or coating
  - e. Fungi, slime, or objectionable growths
  - f. Potential nuisance conditions

## IX. OTHER MONITORING REQUIREMENTS

### A. Biosolids Monitoring

1. A composite sample of biosolids shall be collected annually and, in accordance with the USEPA's *POTW Sludge Sampling and Analysis Guidance Document*, August 1989, tested for the following metals:
  - a. Arsenic
  - b. Cadmium
  - c. Chromium
  - d. Copper
  - e. Lead
  - f. Mercury
  - g. Nickel
  - h. Selenium
  - i. Zinc

A log shall be kept of sludge quantities generated and of handling and disposal activities. The frequency of entries is discretionary; however, the log should be complete enough to serve as part of the annual report.

## 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 record keeping.
2. Upon written request of the Regional Water Board, the Discharger shall submit a summary monitoring report. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).
3. **Compliance Time Schedules.** For compliance time schedules included in the Order, the Discharger shall submit to the Regional Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the compliance time schedule.
4. The Discharger shall report to the Regional Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986".

5. **Reporting Protocols.** The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR 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 RL 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 ( $\pm$  a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
  - d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.
6. **Multiple Sample Data.** When determining compliance with an AMEL, AWEL, or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:
- a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
  - b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

## 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. Monitoring results shall be submitted to the Regional Water Board by the **first day** of the second month following sample collection. Quarterly and annual monitoring results shall be submitted by the **first day of the second month following each calendar quarter, semi-annual period, and year**, respectively.
3. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly whether the discharge complies with waste discharge requirements. The highest daily maximum for the month, monthly and weekly averages, and medians, and removal efficiencies (%) for BOD and Total Suspended Solids, shall be determined and recorded as needed to demonstrate compliance.
4. With the exception of flow, all constituents monitored on a continuous basis (metered), shall be reported as daily maximums, daily minimums, and daily averages; flow shall be reported as the total volume discharged per day for each day of discharge.
5. If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the calculation and reporting of the values required in the discharge monitoring report form. Such increased frequency shall be indicated on the discharge monitoring report form.
6. A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions.
7. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

Regional Water Quality Control Board  
Central Valley Region  
1685 E Street  
Fresno, CA 93706-2007

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

**Table E-6. Monitoring Periods and Reporting Schedule**

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	First day of second calendar month following month of sampling
1/week	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	First day of second calendar month following month of sampling
2/week	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	First day of second calendar month following month of sampling
3/week	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	First day of second calendar month following month of sampling
1/month	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	First day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
1/quarter	Closest of 1 January, 1 April, 1 July, or 1 October following (or on) permit effective date	1 January through 31 March 1 April through 30 June 1 July through 30 September 1 October through 31 December	1 May 1 August 1 November 1 February
1/year	1 January following (or on) permit effective date	1 January through 31 December	1 February
2/year	1 January following (or on) permit effective date	1 January through 30 June 1 July through 31 December	1 August 1 February

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

[Not Applicable]

**D. Other Reports**

- 1. Progress Reports.** As specified in the compliance time schedules required in Special Provisions VI, progress reports shall be submitted in accordance with the following reporting requirements. At minimum, the progress reports shall include a discussion of the status of final compliance, whether the Discharger is on schedule to meet the final compliance date, and the remaining tasks to meet the final compliance date.

**Table E-7. Reporting Requirements for Special Provisions Progress Reports**

Special Provision	Reporting Requirements
Compliance Schedules for Final Effluent Limitations for Copper and Zinc and Dichlorobromomethane, compliance with final effluent limitations (Section VI.C.7.a.i.)	<b>1 June and 1 December</b> , annually, until final compliance
Compliance Schedules for Final Effluent Limitations for Copper and Zinc and Dichlorobromomethane, Pollution Prevention Plan (Section VI.C.7.a.ii.)	<b>1 June and 1 December</b> , annually, after approval of work plan until final compliance
Compliance Schedules for Final Effluent Limitations for Copper and Zinc and Dichlorobromomethane, Treatment Feasibility Study (Section VI.C.7.a.iii.)	<b>1 June and 1 December</b> , annually, after approval of work plan until final compliance
Compliance Schedules for Final Effluent Limitations for Nitrate (Section VI.C.7.b.)	<b>1 June and 1 December</b> , annually, after approval of work plan and until notified by the Executive Officer that reports are no longer necessary
Title 22 Disinfection Requirements (Section VI.C.7.c.)	<b>1 June and 1 December</b> , annually, until final compliance
Continuous Chlorination (Section VI.C.7.d.)	<b>1 June and 1 December</b> , annually, until final compliance

2. **Method Limits.** By 4 February 2008, the Discharger shall submit a report outlining minimum levels, method detection limits, and analytical methods for approval, with a goal to achieve detection levels below applicable water quality criteria. At a minimum, the Discharger shall comply with the monitoring requirements for CTR constituents as outlined in Section 2.3 and 2.4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, adopted 2 March 2000 by the State Water Resources Control Board. All peaks identified by analytical methods shall be reported.
3. **Sanitary Sewer Overflows.** The Discharger’s sanitary sewer system collects wastewater using sewers, pipes, pumps, and/or other conveyance systems and directs the raw sewage to the wastewater treatment plant. A “sanitary sewer overflow” is defined as a discharge to ground or surface water from the sanitary sewer system at any point upstream of the wastewater treatment plant. Sanitary sewer overflows are prohibited by this Order, except as allowed by Standard Provisions. All violations must be reported as required in Standard Provisions. Facilities (such as wet wells, regulated impoundments, tanks, highlines, etc.) may be part of a sanitary sewer system and discharges to these facilities are not considered sanitary sewer overflows, provided that the waste is fully contained within these temporary storage facilities.

4. **Annual Operations Report.** By **30 January** of each year, the Discharger shall submit a written report to the Executive Officer containing the following:
- a. The names, certificate grades, and general responsibilities of all persons employed at the Facility.
  - b. The names and telephone numbers of persons to contact regarding the plant for emergency and routine situations.
  - c. A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.
  - d. A statement certifying whether the current operation and maintenance manual, and contingency plan, reflect the wastewater treatment plant as currently constructed and operated, and the dates when these documents were last revised and last reviewed for adequacy.
  - e. The Discharger may also be requested to submit an annual report to the Regional Water Board with both tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.

## ATTACHMENT F – FACT SHEET

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## ATTACHMENT F – FACT SHEET

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

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

### I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

**Table F-1. Facility Information**

<b>WDID</b>	5C221012001
<b>Discharger</b>	Mariposa Public Utility District
<b>Name of Facility</b>	Wastewater Treatment Facility
<b>Facility Address</b>	4956 Miller Road
	Mariposa, CA 95338
	Mariposa County
<b>Facility Contact, Title and Phone</b>	Mark Rowney, General Manager, (209) 966-2515
<b>Authorized Person to Sign and Submit Reports</b>	Mark Rowney, General Manager, (209) 966-2515
<b>Mailing Address</b>	P.O. Box 494 Mariposa, CA 95338
<b>Billing Address</b>	Same as mailing address
<b>Type of Facility</b>	Publicly Owned Treatment Works
<b>Major or Minor Facility</b>	Minor
<b>Threat to Water Quality</b>	2
<b>Complexity</b>	B
<b>Pretreatment Program</b>	N
<b>Reclamation Requirements</b>	None
<b>Facility Permitted Flow</b>	0.61 million gallons per day (mgd)
<b>Facility Design Flow</b>	0.61 mgd
<b>Watershed</b>	Mariposa Hydrologic Unit (No. 538.00)
<b>Receiving Water</b>	Mariposa Creek
<b>Receiving Water Type</b>	Inland surface water; stream (effluent dominated water)

- A.** Mariposa Public Utility District (hereinafter Discharger) is the owner and operator of the Mariposa Wastewater Treatment Facility (hereinafter Facility), a publicly owned treatment works.

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 Facility discharges wastewater to Mariposa Creek, a water of the United States, and is currently regulated by Waste Discharge Requirements (WDRs) Order No. 5-00-122, which was adopted on 16 June 2000. The terms and conditions of the current Order have been automatically continued and remain in effect until new WDRs and National Pollutant Discharge Elimination System (NPDES) permit are adopted pursuant to this Order.
- C.** The Discharger filed a report of waste discharge and submitted an application for renewal of its WDRs and NPDES permit on 13 December 2004. A site visit was conducted on 16 November 2004 to observe operations and collect additional data to develop permit limitations and conditions.

## **II. FACILITY DESCRIPTION**

The Discharger provides sewerage service for the unincorporated community of Mariposa and serves a population of approximately 2,000. The Discharger owns and operates the publicly owned treatment works including its wastewater collection system.

Under the requirements of Order No. 5-00-122, the Facility received 0.010 mgd of extracted groundwater from a gasoline-contaminated aquifer beneath the Mariposa Shell Station (Mariposa Quick Stop). The extracted groundwater contained benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX), and other gasoline hydrocarbons. Therefore, Order No. 5-00-122 contained effluent limits for BTEX and other gasoline hydrocarbons. The groundwater cleanup site is no longer discharging to the Facility.

### **A. Description of Wastewater and Biosolids Treatment or Controls**

The treatment system at the Facility consists of headworks, two oxidation ditches, two secondary clarifiers, and a chlorine contact chamber. The design capacity of the Facility is 0.61 mgd. Biosolids are taken from the secondary clarifiers and dewatered through a belt filter press and sent to a landfill. Treated municipal wastewater is dechlorinated and discharged to Mariposa Creek at Discharge Point No. 001.

### **B. Discharge Points and Receiving Waters**

1. The Facility is in Section 23, T5S, R18E, MDB&M, as shown in Attachment B, a part of this Order.

2. Mariposa Creek is a water of the United States and a tributary to Duck Slough, which flows into the Eastside Canal. Water from the Eastside Canal is distributed to a system of natural and manmade irrigation and drainage channels with general drainage to the San Joaquin River downstream of Mendota Pool. The discharge is within the Mariposa Hydrologic Unit (No. 538.00).

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

Effluent limitations contained in the existing Order for discharges from Discharge Point No. 001 (Monitoring Location EFF-001) and representative monitoring data from the term of the existing Order are as follows:

**Table F-2. Historic Effluent Limitations and Monitoring Data**

Parameter	Units	Effluent Limitation			Monitoring Data (From 1 July 2000 – To 28 February 2007)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
5-day Biochemical Oxygen Demand	mg/L	30	45	90	3.93	6.56	6.56
Total Suspended Solids	mg/L	30	45	90	9.28	13.25	16
Settleable Solids	mL/L	0.1	--	0.2	<0.1	--	<0.1
Chlorine Residual	mg/L	0.1	--	0.2	<0.1	--	<0.1
Total Petroleum Hydrocarbons	µg/L	<50 <sup>1</sup>	--	<100	ND	--	ND
Benzene	µg/L	<0.5 <sup>1</sup>	--	<1	3.9	--	3.9
Ethylbenzene	µg/L	<0.5 <sup>1</sup>	--	<5	ND	--	ND
Toluene	µg/L	<0.5 <sup>1</sup>	--	<5	0.3	--	0.3
Total Xylenes	µg/L	<0.5 <sup>1</sup>	--	<5	0.32	--	0.32
pH	s.u.	--	--	6.5 – 8.5	--	--	6.5 – 7.62
BOD Percent Removal	%	90 <sup>2</sup>	--	--	98.1 <sup>2</sup>	--	--
TSS Percent Removal	%	90 <sup>2</sup>	--	--	95.8 <sup>2</sup>	--	--
Total Coliform	MPN/100 mL	--	23	240	--	4	170
Flow	mgd	--	--	0.61	--	--	0.867 <sup>3</sup>

ND = Not Detected

<sup>1</sup> Applied as a 30-day median effluent limitation.

<sup>2</sup> Represents the minimum average monthly percent removal.

<sup>3</sup> No effluent flow data reported during the previous permit term. Value represents the maximum average daily influent flow over the existing permit term.

## D. Compliance Summary

1. A review of the Discharger's monitoring data from July 2000 through February 2007 indicate overall satisfactory compliance with the effluent limitations specified in Order No. 5-00-122. A single exceedance was reported for the benzene daily maximum and monthly average effluent limitations.
2. Several Compliance Evaluation Inspections (CEIs) were performed at the Facility during the previous permit term. A summary of these inspections and the major findings are provided below.
  - a. A CEI was performed at the Facility on 13 June 2001 and the following major findings were documented:
    - i. A trial shutdown of the groundwater extraction program began on 22 September 2000 and remains in effect under Regional Water Board staff supervision.
    - ii. The Discharger indicated past chronic toxicity was linked to the existing flow proportional chlorine injection system, which was replaced in April 2001. The Discharger's 2001 3<sup>rd</sup> quarter analyses did not indicate chronic toxicity.
    - iii. The Discharger had violated Receiving Water Limitation No. D.2 by increasing the temperature in Mariposa Creek more than 2.8°C during June and July 2001. The Discharger had also violated Receiving Water Limitation No. D.13 by causing the receiving water to exceed MCLs for nitrate.
    - iv. The Discharger submitted a letter requesting an extension of the Survey/Plan required by Provision No. E.5, which would describe the beneficial uses of Mariposa Creek.
  - b. A CEI was performed on 7 February 2002 and the following major findings were documented:
    - i. [In reference to a raw sewage spill reported on 6 February 2002.] It appears the Discharger acted in a timely fashion in accordance with the NPDES permit to mitigate potential health and water quality impacts after several days of being unaware of a significant spill. Elevated levels of coliform existed in Mariposa Creek for nearly 1 week. Adverse health impacts were not evident. The Board did not receive any complaints regarding this incident.
    - ii. The Discharger violated its WDRs for the following:
      - Overflowing untreated or partially treated wastes.
      - Causing oils and greases to enter Mariposa Creek.
      - Causing elevated levels of fecal coliform in Mariposa Creek.
      - Creating a condition of nuisance or pollution

- iii. An investigation of coliform sources in Mariposa Creek was warranted and it was recommended that it be included in the Survey/Plan required by Provision E.5. It was also suggested that the Discharger may need to do an industrial user survey to target oil and grease contributors.
- c. A CEI was performed on 5 March 2004 and the following major finding was documented:
- i. Oxidation ditch solids concentration was extremely high but did not appear to affect the wastewater treatment facility's ability to comply with effluent limitations.
- d. The most recent CEI was performed on 15 October 2004. The following major findings were documented:
- i. The Discharger is not maintaining the second oxidation ditch in operating condition. Standard Provision A.6 requires that all facilities and systems of treatment installed to achieve compliance be properly maintained at all times.
  - ii. No up-to-date calibration records for flow measurement instruments were available. Standard Provision C.6 requires that such monitoring instruments be calibrated and Standard Provision C.8 requires records be maintained for a minimum of 5 years.
  - iii. Records were not available to document that holding times required by 40 CFR Part 136 for pH were met. 40 CFR Part 136 requires pH to be performed insitu or within 15 minutes of the taking of the sample.

#### **E. Planned Changes**

[Not Applicable]

### **III. APPLICABLE PLANS, POLICIES, AND REGULATIONS**

The requirements contained in this Order are based on the applicable plans, policies, and regulations identified in section II of the Limitations and Discharge Requirements (Findings). This section provides supplemental information, where appropriate, for the plans, policies, and regulations relevant to the discharge.

#### **A. Legal Authority**

See Limitations and Discharge Requirements - [Findings](#), Section II.C.

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

See Limitations and Discharge Requirements - Findings, Section II.E.

## C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The *Water Quality Control Plan, Fourth Edition (Revised August 2006)*, for the Sacramento and San Joaquin River Basins (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. In addition, State Water Board Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan.

The Basin Plan on page II-1.00 states: “*Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning...*” and with respect to disposal of wastewaters states that “*...disposal of wastewaters is [not] a prohibited use of waters of the State; it is merely a use which cannot be satisfied to the detriment of beneficial uses.*”

The federal CWA Section 101(a)(2), states: “*it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983.*” Federal Regulations, developed to implement the requirements of the CWA, create a rebuttable presumption that all waters be designated as fishable and swimmable. Federal Regulations, 40 CFR Sections 131.2 and 131.10, require that all waters of the State regulated to protect the beneficial uses of public water supply, protection and propagation of fish, shell fish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. Section 131.3(e), 40 CFR, defines existing beneficial uses as those uses actually attained after 28 November 1975, whether or not they are included in the water quality standards. Federal Regulation, 40 CFR 131.10 requires that uses be obtained by implementing effluent limitations, requires that all downstream uses be protected and states that in no case shall a state adopt waste transport or waste assimilation as a beneficial use for any waters of the United States.

2. **Antidegradation Policy.** See Limitations and Discharge Requirements – Findings, Section II.N. Consistency with State and Federal antidegradation policies is described in Section IV.D.4. of this Fact Sheet.
3. **Anti-Backsliding Requirements.** See Limitations and Discharge Requirements – Findings, Section II.O. Compliance with the anti-backsliding requirements is described in Section IV.D.3 of this Fact Sheet.
4. **Emergency Planning and Community Right to Know Act.** California Water Code (CWC) Section 13263.6(a) requires that “*the Regional Water Board shall prescribe effluent limitations as part of the waste discharge requirements of a POTW for all substances that the most recent toxic chemical release data reported to the state emergency response commission pursuant to Section 313 of the Emergency*

*Planning and Community Right to Know Act of 1986 (42 U.S.C. Sec. 11023) (EPCRA) indicate as discharged into the POTW, for which the State Water Board or the Regional Water Board has established numeric water quality objectives, and has determined that the discharge is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective”.*

The most recent toxic chemical data report does not indicate any reportable off-site releases or discharges to the collection system for this Facility.

5. **Stormwater Requirements.** USEPA promulgated Federal Regulations for storm water on 16 November 1990 in 40 CFR Parts 122, 123, and 124. The NPDES Industrial Storm Water Program regulates storm water discharges from wastewater treatment facilities. Wastewater treatment plants are applicable industries under the stormwater program and are obligated to comply with the Federal Regulations.
6. **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.

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

1. Under Section 303(d) of the 1972 Clean Water Act, states, territories and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. On 30 November 2006 USEPA gave final approval to California's 2006 Section 303(d) List of Water Quality Limited Segments. The Basin Plan references this list of Water Quality Limited Segments (WQLSs), which are defined as “...*those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 CFR 130, et seq.)*.” The Basin Plan also states, “*Additional treatment beyond minimum federal standards will be imposed on dischargers to [WQLSs]. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment.*” Mariposa Creek is not listed as a WQLS in the 303(d) list of impaired water bodies. Duck Slough and Eastside Canal, to which Mariposa Creek is tributary, are also not listed as WQLSs in the 303(d) list of impaired water bodies.
2. **Total Maximum Daily Loads.** The USEPA requires the Regional Water Board to develop total maximum daily loads (TMDLs) for each 303(d) listed pollutant and

water body combination. TMDLs have not been developed for Mariposa Creek, nor Duck Slough or Eastside Canal to which Mariposa Creek is tributary.

#### **E. Other Plans, Polices and Regulations**

1. The discharge authorized herein and the treatment and storage facilities associated with the discharge of treated municipal wastewater, except for discharges of residual sludge and solid waste, are exempt from the requirements of Title 27, California Code of Regulations (CCR), Section 20005 *et seq.* (hereafter Title 27). The exemption, pursuant to Title 27 CCR Section 20090(a), is based on the following:
  - a. The waste consists primarily of domestic sewage and treated effluent;
  - b. The waste discharge requirements are consistent with water quality objectives; and
  - c. The treatment and storage facilities described herein are associated with a municipal wastewater treatment plant.
2. The State Water Board adopted the *Water Quality Control Policy for the Enclosed Bays and Estuaries of California*. The requirements within this Order are consistent with the Policy.

#### **IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

Effluent limitations and toxic and pretreatment effluent standards established pursuant to Sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 304 (Information and Guidelines), and 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act (CWA) and amendments thereto are applicable to the discharge.

The Federal CWA mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state or federal law [33 U.S.C., §1311(b)(1)(C); 40 CFR 122.44(d)(1)]. NPDES permits must incorporate discharge limits necessary to ensure that water quality standards are met. This requirement applies to narrative criteria as well as to criteria specifying maximum amounts of particular pollutants. Pursuant to Federal Regulations, 40 CFR 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that “*are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality.*” Federal Regulations, 40 CFR 122.44(d)(1)(vi), further provide that “[w]here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits.”

The CWA requires point source discharges to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations: 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 to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water where numeric water quality objectives have not been established. The Regional Water Board's Basin Plan, page IV-17.00, contains an implementation policy ("Policy for Application of Water Quality Objectives" that specifies that the Regional Water Board "*will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives.*" This Policy complies with 40 CFR 122.44(d)(1). With respect to narrative objectives, the Regional Water Board must establish effluent limitations using one or more of three specified sources, including (1) USEPA's published water quality criteria, (2) a proposed state criterion (i.e., water quality objective) or an explicit state policy interpreting its narrative water quality criteria (i.e., the Regional Water Board's "Policy for Application of Water Quality Objectives")(40 CFR 122.44(d)(1) (vi) (A), (B) or (C)), or (3) an indicator parameter. The Basin Plan contains a narrative objective requiring that: "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life*" (narrative toxicity objective). The Basin Plan states that material and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The Basin Plan also limits chemical constituents in concentrations that adversely affect surface water beneficial uses. For waters designated as municipal, the Basin Plan specifies that, at a minimum, waters shall not contain concentrations of constituents that exceed Maximum Contaminant Levels (MCL) of CCR Title 22. The Basin Plan further states that, to protect all beneficial uses, the Regional Water Board may apply limits more stringent than MCLs.

Mariposa Creek is an unlisted waterbody. Thus, MUN applies pursuant to State Water Board Resolution 88-63, which is incorporated into the Basin Plan, but given the ephemeral nature of Mariposa Creek MUN may not be attainable. Additionally, the Basin Plan tributary rule does not apply to man-made conveyances such as the Eastside Canal, so the beneficial uses of the San Joaquin River cannot be carried upstream beyond the Eastside Canal to Mariposa Creek. Pursuant to WDRs Order No. 5-00-122, the Discharger conducted a study and submitted a report entitled *Draft Pubic Exposure and Prevention Plan, Mariposa Creek* (Plan). Information in the Plan indicates the existing beneficial uses of Mariposa Creek downstream of the discharge are AGR, REC-1, REC-2, WARM, and WILD. These uses are consistent with observations made by Regional Water Board staff.

Mariposa Creek is an ephemeral stream that becomes dry in the late summer. The Discharger has not submitted information documenting reliable seasonal flows that would allow dilution of treated wastewater. Nor has the Discharger submitted a mixing zone study.

The flow conditions of Mariposa Creek may prevent MUN from being attainable downstream of the discharge. Given this, and consistent with State Board Order No. WQO-2002-0015, this Order provides the Discharger the opportunity to provide the Regional Water Board the technical information necessary to conduct a Use Attainability Analysis and Basin Plan amendment for the Regional Water Board to expeditiously consider dedesignation of MUN for Mariposa Creek.

Federal regulations require implementation of the most stringent of Technology Based and Water Quality Based effluent limitations.

## **A. Discharge Prohibitions**

1. As stated in section I.G of Attachment D, Standard Provisions, this Order prohibits bypass from any portion of the treatment facility. Federal Regulations, 40 CFR 122.41 (m), define “bypass” as the intentional diversion of waste streams from any portion of a treatment facility. This section of the Federal Regulations, 40 CFR 122.41 (m)(4), prohibits bypass unless it is unavoidable to prevent loss of life, personal injury, or severe property damage. In considering the Regional Water Board’s prohibition of bypasses, the State Water Board adopted a precedential decision, Order No. WQO 2002-0015, which cites the Federal Regulations, 40 CFR 122.41(m), as allowing bypass only for essential maintenance to assure efficient operation.

## **B. Technology-Based Effluent Limitations**

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

Regulations promulgated at 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.

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 5-day biochemical oxygen demand (BOD<sub>5</sub>), total suspended solids (TSS), and pH.

The federal Clean Water Act, Section 301, requires that not later than 1 July 1977, publicly owned wastewater treatment works meet effluent limitations based on secondary treatment or any more stringent limitation necessary to meet water quality standards. Tertiary treatment limits for BOD and TSS are based on the technical capability of the process. BOD is a measure of the amount of oxygen used in the biochemical oxidation of organic matter. The solids content—suspended (TSS) and settleable (SS)—is also an important characteristic of wastewater. The secondary and tertiary treatment limits for BOD and TSS are indicators of the effectiveness of the treatment processes.

## 2. Applicable Technology-Based Effluent Limitations

- a. **BOD, TSS, Total Coliform, and Turbidity.** As previously mentioned, the beneficial uses of Mariposa Creek include MUN, AGR, and REC-1. To protect the above indicated beneficial uses, the wastewater must be disinfected and adequately treated to prevent disease.

The 1988 Memorandum of Agreement (MOA) between California Department of Health Services (now the Department of Public Health or DPH) and the State Water Board on the use of recycled water establishes basic principles relative to the agencies and the Regional Water Boards. In addition, the MOA allocates primary areas of responsibility and authority between these agencies, and provides for methods and mechanisms necessary to assure ongoing, continuous future coordination of activities relative to the use of recycled water in California. The Regional Water Board also seeks DPH guidance on discharges that may impact public health.

The DPH produced Uniform Guidelines for the Disinfection of Wastewater in 1987 and reprinted them in November of 2000. The Regional Water Board requested additional guidance from DPH on 24 February 1999 regarding relatively undiluted treated wastewater discharged to agricultural drains or streams where the water may be used or diverted for beneficial uses of irrigation of vegetable and fruit crops and body contact recreation. DPH letter dated 8 April 1999 provides the requested guidance. DPH recommends that the wastewater be adequately oxidized, coagulated, filtered and disinfected, i.e., tertiary level of treatment. The wastewater should be considered adequately disinfected if:

- i. The chlorine disinfection process provides a CT (residual chlorine concentration times modal contact time) value of not less than 450 milligram-minutes per liter at all times, with a modal contact time of at least 90 minutes, based on peak dry weather design flow; and
- ii. The median concentration of total coliform bacteria measured in the disinfected effluent does not exceed an MPN of 2.2 per 100 mL utilizing the bacteriological results of the last seven days for which analyses have been completed and the number of total coliform bacteria does not exceed an MPN of 23 per 100 mL in more than one sample in any 30 day period. No single sample should exceed an MPN of 240 per 100 mL for total coliform bacteria.

The Guidelines also indicate that a lower level of treatment may be appropriate if a reliable dilution is available.

DPH has developed reclamation criteria, California Code of Regulations (CCR), Title 22, Division 4, Chapter 3 (Title 22 RWC), for the reuse of wastewater. Title 22 RWC requires that for spray irrigation of food crops, parks, playgrounds,

schoolyards, and other areas of similar public access, wastewater be adequately disinfected, oxidized, coagulated, clarified, and filtered, and that the effluent total coliform levels not exceed 2.2 MPN/100 mL as a 7-day median.

Title 22 RWC is not directly applicable to surface waters. However, DPH guidance of 8 April 1999 for the use of relatively undiluted wastewater discharged to agricultural drains or streams where the water may be used or diverted for beneficial uses of irrigation of vegetable and fruit crops and body contact recreation coincide with Title 22 RWC for the reuse of wastewater for spray irrigation of food crops, parks, playgrounds, and other areas of similar public access. Therefore, it is appropriate to apply Title 22 RWC because Mariposa Creek is used for irrigation and is accessible to the public for body contact recreation.

Effluent limitations at the tertiary level of treatment, or equivalent, contained in this Order are necessary to protect the beneficial uses of the receiving water. Such limits are more stringent than those previously imposed by this Regional Water Board on this Facility's discharge. Therefore, in accordance with CWC Section 13241, the following were considered:

- The Existing And Potential Future Beneficial Uses Of The Receiving Stream. The beneficial uses of Mariposa Creek include MUN, AGR, REC-1, REC-2, WARM, and WILD.
- The Environmental Characteristics Of The Hydrographic Unit, Including The Quality Of Water Available. Water upstream of the discharge includes storm water runoff from the foothills, surrounding community, and Mariposa's storm water collection system. Creek flow volumes can vary significantly. Upstream flows can be much less than that discharged from the Facility. There is animal activity both upstream and downstream of the Facility that can elevate the fecal coliform results. The magnitude and duration of upstream flow is largely unknown. The water downstream of the discharge is of generally good mineral quality and when properly disinfected should be of good quality with respect to pathogens.
- Water Quality Conditions That Could Reasonably Be Achieved Through The Coordinated Control Of All Factors. Within certain limits, the Regional Water Board has the authority and responsibility to regulate all known direct discharges (e.g., storm water system, wastewater treatment facility) to Mariposa Creek and their quality. Discharges from the Mariposa storm water collection system are not addressed under the current State or federal storm water programs, and would only be regulated by this Regional Water Board if shown to have a significant adverse impact on Mariposa Creek. However, fishable, swimmable, and agricultural irrigation water quality conditions in Mariposa Creek can be reasonably achieved by upgrading the Facility to tertiary standards. Upgrading the treatment process is reasonable and necessary, and technically not difficult to achieve.

- Economic Considerations. Upgrading the treatment process will require additional expenditure of funds. The State Water Board, Division of Financial Assistance, estimates that the cost to add tertiary treatment to an existing secondary wastewater treatment facility is approximately \$1 million per mgd. The estimated cost of providing tertiary treatment with expansion of the Facility to 0.61 mgd is \$2,800,000. The Discharger may be able to use some components in its current treatment process that may reduce estimated costs. The Discharger's current monthly domestic sewer user fee is \$21.00. The California average monthly domestic sewer user fee is \$20.46.
- The Need For Developing Housing In The Area. Population growth in Mariposa County in the Mariposa area is increasing demand for housing. The requirement to increase the level of treatment for discharge to Mariposa Creek should not impede home construction in the area. Increased population density will, however, increase the potential for water related activities, such as water contact and non-contact water recreation. The public has ready access to Mariposa Creek. These beneficial uses require high quality water; i.e., tertiary treatment. Without tertiary treatment, the downstream waters could not safely be utilized for these water uses.
- The Need To Develop And Use Recycled Water. State of California and Regional Water Board policy (Basin Plan, page IV-14.00, Policy 2) both encourage the reclamation and reuse of wastewater. Upgraded effluent quality increases opportunity for reuse.

Tertiary, or equivalent, treatment will allow for the continued reuse of undiluted wastewater for irrigation and contact recreation activities, which would be otherwise unsafe based on recommended minimums from DPH.

In addition to coliform testing, a turbidity effluent limitation is an appropriate second indicator of the effectiveness of the treatment process to assure compliance with the required level of treatment. The treatment process, or equivalent, must be capable of reliably meeting a turbidity limitation of two (2) nephelometric turbidity units (NTU) as a daily average. Failure of the filtration system such that virus removal is impaired would normally result in increased particles in the effluent, which result in higher effluent turbidity. Turbidity has a major advantage for monitoring filter performance, allowing immediate detection of filter failure and rapid corrective action. Coliform testing, by comparison, is not conducted continuously and requires several hours, to days, to complete and identify high coliform concentrations.

Tertiary treatment necessitates achieving lower levels for BOD<sub>5</sub> and TSS than the secondary standards currently prescribed. Therefore, the 30-day average BOD<sub>5</sub> and TSS limitations are revised to 10 mg/L, which is technically based on the capability of a tertiary system. Average weekly and maximum daily limitations also are revised to 15 mg/L and 20 mg/L, respectively, based on this

30-day average requirement. The percent BOD<sub>5</sub> and TSS removal has been increased from 85% to 90% to reflect the capability of tertiary treatment.

The Discharger will be unable to comply immediately with tertiary treatment requirements. Therefore, a time schedule for achieving compliance is included in this Order. Until the compliance date becomes effective, interim effluent limitations for BOD<sub>5</sub> and TSS are prescribed in this Order and effluent limitations for total coliform organisms of the current Order are continued.

- b. **Flow.** The Facility was designed to provide secondary level of treatment for up to a design flow of 0.61 mgd. Therefore, this Order contains an Average Daily Discharge Flow effluent limit of 0.61 mgd.
- c. **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-3. Summary of Technology-based Effluent Limitations**

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand (BOD) (5-day @ 20°C)	mg/L	10	15	20	--	--
	lbs/day <sup>1</sup>	51	76	102	--	--
	% Removal	90	--	--	--	--
Total Suspended Solids (TSS)	mg/L	10	15	20	--	--
	lbs/day <sup>1</sup>	51	76	102	--	--
	% Removal	90	--	--	--	--
Total Coliform	MPN/100 mL	23 <sup>2</sup>	2.2 <sup>3</sup>	240	--	--
Turbidity	NTU	--	--	2 <sup>4</sup>	--	10
Flow	mgd	--	--	0.61	--	--
pH	standard units	--	--	--	6.0	9.0

<sup>1</sup> Based on a design flow of 0.61 mgd.

<sup>2</sup> The effluent total coliform organisms shall not exceed 23 MPN/100 mL more than once in any 30-day period.

<sup>3</sup> The 7-day median of total coliform organisms shall not exceed 2.2 MPN/100 mL.

<sup>4</sup> The discharge may not exceed 2 NTU as a daily average or 5 NTU more than 5% of the time within a 24-hour period.

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

**1. Scope and Authority**

40 CFR 122.44(d)(1)(i) specifies permits are required to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an in-stream excursion above any state water quality standard. 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. **Receiving Water.** Wastewater is discharged to Mariposa Creek, a water of the United States and a tributary to the Duck Slough and the Eastside Canal, which is a tributary to the San Joaquin River in the reach from Sack Dam to the Mouth of the Merced River. The beneficial uses of Mariposa Creek are as follows:

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Mariposa Creek	MUN; AGR; REC-1; REC-2; WARM; WILD.

- b. **Hardness.** Because Mariposa Creek is an effluent dominated stream, the lowest recorded hardness of the effluent of 87 mg/L was used in the calculations for the metals criteria.
- c. **Assimilative Capacity/Mixing Zone.** As described previously Mariposa Creek, absent the discharge, is an ephemeral stream. Seasonal creek flows and potential mixing zones have not been evaluated by the Discharger. The ephemeral nature of Mariposa Creek means that the designated beneficial uses must be protected, but that no credit for receiving water dilution is available. The lack of dilution results in more stringent effluent limitations to protect the beneficial uses of the creek.

**3. Determining the Need for WQBELs**

- a. The Regional Water Board conducted a reasonable potential analysis (RPA) in accordance with Section 1.3 of the SIP to determine whether pollutants are or may be discharged at a level that will cause or have the reasonable potential to cause, or contribute to an in-stream excursion above a narrative or numerical water quality standard. Although the SIP applies directly to the control of CTR priority pollutants, the State Water Board has held that the Regional Water Board may use the SIP as guidance for water quality-based toxics control.<sup>1</sup> The SIP states in the introduction “*The goal of this Policy is to establish a standardized approach for permitting discharges of toxic pollutants to non-ocean surface waters in a manner that promotes statewide consistency.*” Therefore, in this Order the RPA procedures from the SIP were used to evaluate reasonable potential for both CTR and non-CTR constituents.

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<sup>1</sup> See, Order WQO 2001-16 (Napa) and Order WQO 2004-0013 (Yuba City).

- b. The Discharger provided CTR effluent data on 15 February, 6 March, 16 August, and 20 August 2007. Regional Water Board staff collected a sample for persistent chlorinated hydrocarbon pesticides on 3 July 2007. Based on this information and information submitted as part of the application, in studies, and as directed by monitoring and reporting programs, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard for chlorine residual, copper, dichlorobromomethane, nitrate, pH, electrical conductivity, settleable solids, and zinc. WQBELs for these constituents are included in this Order. A summary of the RPA is provided in Attachment G, and a detailed discussion of the RPA for each constituent is provided below.
- c. WQBELs were calculated in accordance with section 1.4 of the SIP, as described in Attachment F, Section IV.C.4.
- d. Section 2.1 of the SIP provides that: *“Based on an existing discharger’s request and demonstration that it is infeasible for the discharger to achieve immediate compliance with a CTR criterion, or with an effluent limitation based on a CTR criterion, the RWQCB may establish a compliance schedule in an NPDES permit.”* Section 2.1, further states that compliance schedules may be included in NPDES permits provided that the following justification has been submitted: *...“(a) documentation that diligent efforts have been made to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream; (b) documentation of source control measures and/or pollution minimization measures efforts currently underway or completed; (c) a proposal for additional or future source control measures, pollutant minimization actions, or waste treatment (i.e., facility upgrades); and (d) a demonstration that the proposed schedule is as short as practicable.”*
- e. **Chlorine Residual.** The Discharger uses chlorine for disinfection, which is extremely toxic to aquatic organisms. The Discharger uses a sulfur dioxide process to dechlorinate the effluent prior to discharge to Mariposa Creek. Due to the existing chlorine use and the potential for chlorine to be discharged, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan’s narrative toxicity objective.

The USEPA *Technical Support Document for Water Quality-Based Toxics Control* [EPA/505/2-90-001] contains statistical methods for converting chronic (4-day) and acute (1-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. However, because chlorine is an acutely toxic constituent that can and will be monitored continuously, an average 1-hour limitation is considered more appropriate than an average daily limitation. An average 1-hour limitation of 0.019 mg/L and an average 4-day limitation of 0.011 mg/L for chlorine, based on these criteria, are included in this Order. Based on data reported during the existing permit term, it appears that the Discharger can immediately comply with these new effluent limitations for chlorine residual.

- f. **Copper.** The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for copper. The criteria for copper are presented in dissolved concentrations. USEPA recommends conversion factors to translate dissolved concentrations to total concentrations. The USEPA default conversion factors for copper in freshwater are 0.96 for both the acute and the chronic criteria. The applicable chronic criterion (maximum 4-day average concentration) is 8.28 µg/L and the applicable acute criterion (maximum 1-hour average concentration) is 12.28 µg/L, as total recoverable.

The maximum effluent concentration (MEC) for total copper was 10 µg/L, based on two samples collected between 14 December 2006 and 30 January 2007. The maximum observed upstream receiving water copper concentration was non-detect, based on one sample collected on 30 January 2007. Therefore, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria for copper. No dilution is allowed due to periods of no flow in the receiving water. An AMEL and MDEL for total copper of 6.1 µg/L and 12.3 µg/L, respectively, are included in this Order based on CTR criteria for the protection of freshwater aquatic life (see Attachment F, Table F-4 for WQBEL calculations).

The Discharger is unable to comply with these limitations. Section 2.1 of the SIP allows for compliance schedules within the permit for existing discharges where it is demonstrated that it is infeasible for a Discharger to achieve immediate compliance with a CTR criterion. Using the statistical methods for calculating interim effluent limitations described in Attachment F, Section IV.E.1., an interim performance-based maximum daily limitation of 31 µg/L was calculated. The new WQBELs for copper become effective on **18 May 2010**.

- g. **Cyanide:** Two sampling events yielded a nondetect and an 8.6 µg/L. The applicable chronic criterion (maximum 4-day average concentration) is 5.2 µg/L and the applicable acute criterion (maximum 1-hour average concentration) is 22 µg/L. Unfortunately, the cyanide test is subject to interferences that affect results. Given the single detect and that it may be due to test interference, there is insufficient information to conclude RP exists for cyanide. This Order requires additional monitoring for cyanide and includes a reopener so that the Regional Water Board may consider limits for cyanide if the additional data shows there is RP.
- h. **Dichlorobromomethane.** Two sampling events yielded two detects for dichlorobromomethane: 4.7 µg/L and 3.2 µg/L. Both results exceed the CTR criterion of 0.56 µg/L for the protection of human health based on a one-in-a-million cancer risk for waters from which both water and organisms are consumed. Therefore, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criterion for dichlorobromomethane.

An AMEL and MDEL for dichlorobromomethane of 0.6 µg/L and 1.1 µg/L, respectively, are included in this Order based on based on the CTR criterion for the protection of human health (see Attachment F, Table F-5 for WQBEL calculations).

The Discharger is unable to comply with these limitations. Using the statistical methods for calculating interim effluent limitations described in Attachment F, Section IV.E.1., an interim performance-based maximum daily limitation of 10 µg/L was calculated.

The new WQBELs for dichlorobromomethane become effective on **18 May 2010** unless the Discharger successfully pursues dedesignation of MUN. If MUN is dedesignated as a beneficial use of Mariposa Creek, there will be no RP for dichlorobromomethane based on existing results.

- i. **Nitrate.** Untreated domestic wastewater contains ammonia. Nitrification is a biological process that converts ammonia to nitrite and nitrite to nitrate. Denitrification is a process that converts nitrate to nitrite or nitric oxide and then to nitrous oxide or nitrogen gas, which is then released to the atmosphere. Nitrate and nitrite are known to cause adverse health effects in humans. The California DPH has adopted Primary MCLs at Title 22 of the California Code of Regulations (CCR), Table 64431-A, for the protection of human health for nitrate equal to 10 mg/L (measured as nitrogen).

For nitrate, USEPA has developed Drinking Water Standards (10,000 µg/L as Primary MCL) and Ambient Water Quality Criteria for protection of human health (10,000 µg/L for non-cancer health effects). Recent toxicity studies have indicated a possibility that nitrate is toxic to aquatic organisms.

Inadequate or incomplete denitrification may result in the discharge of nitrate to the receiving stream. The conversion of ammonia to nitrites and the conversion of nitrites to nitrates present a reasonable potential for the discharge to cause or contribute to an in-stream excursion above the Primary MCL for nitrate. An AMEL for nitrate of 10 mg/L is included in this Order based on the MCL. This effluent limitation is included in this Order to protect the beneficial use of municipal and domestic supply. As noted elsewhere, this use may not be attainable regardless of the discharge. If facts can be gathered to document the use is not attainable, the effluent limitation would no longer be appropriate.

The Discharger is unable to comply with these effluent limitations. Because these limitations are based on a new application of a water quality objective, a compliance schedule for nitrate is established in this Order. Using the statistical methods for calculating interim effluent limitations described in Attachment F, Section IV.E.1., an interim performance-based maximum daily limitation of 68 mg/L was calculated.

The new WQBELs for nitrate become effective **as soon as practicable but no later than ten years from the effective date of the permit** unless the Discharger successfully pursues dedesignation of MUN. If MUN is dedesignated as a beneficial use of Mariposa Creek, there will be no RP for nitrate.

- j. **Persistent Chlorinated Hydrocarbon Pesticides.** Endrin aldehyde, a breakdown product of endrin, was detected in the effluent at a concentration of 0.074 µg/L during the 30 January 2007 sampling event. Based on sampling performed by the Regional Water Board during a CEI performed on 3 July 2007, endrin and endrin aldehyde were not present in the effluent. However, the effluent sample taken during the CEI was positive for alpha endosulfan and the receiving water sample was positive for beta-BHC. These constituents are persistent chlorinated hydrocarbon pesticides. The Basin Plan requires that no individual pesticides shall be present in concentrations that adversely affect beneficial uses; discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses; total chlorinated hydrocarbon pesticides shall not be present in the water column at detectable concentrations; and pesticide concentrations shall not exceed those allowable by applicable antidegradation policies. The CTR also contains numeric criteria for endrin aldehyde and beta-BHC of 0.76 µg/L and 0.014 µg/L, respectively, for freshwaters from which both water and organisms are consumed and a criteria maximum concentration for alpha endosulfan of 0.22 µg/L for freshwater aquatic life. However, given the inconsistencies of the results of the sampling events on 30 January 2007 and 3 July 2007, reasonable potential cannot be determined. Therefore, this Order establishes monthly monitoring for persistent chlorinated hydrocarbon pesticides. Persistent chlorinated hydrocarbon pesticides include aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, chlordane, 4,4-DDT, 4,4-DDE, 4,4-DDD, dieldrin, alpha-endosulfan, beta-endosulfan, endosulfan sulfate, endrin, endrin aldehyde, heptachlor, heptachlor epoxide, and toxaphene. This Order may be reopened and effluent limitations established if monitoring data exhibit reasonable potential.
- k. **pH.** The Basin Plan includes a water quality objective for surface waters that the *“...pH shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters with designated COLD or WARM beneficial uses.”* Effluent Limitations for pH are included in this Order based on the Basin Plan objectives for pH.
- l. **Electrical Conductivity (EC).** The secondary MCL for EC is 900 µmhos/cm as a recommended level, 1600 µmhos/cm as an upper level, and 2200 µmhos/cm as a short-term maximum. The agricultural water quality goal that would apply the narrative chemical constituents objective, is 700 µmhos/cm as a long-term average based on Water Quality for Agriculture, Food and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers and D.W. Westcot, Rome, 1985). The 700 µmhos/cm agricultural water quality goal is intended to prevent reduction in crop yield, i.e., a restriction on use of water, for salt-sensitive crops. Most other crops can tolerate higher EC

concentrations without harm, however, as the salinity of the irrigation water increases, more crops are potentially harmed by the EC, or extra measures must be taken by the user to minimize or eliminate any harmful impacts.

A review of the Discharger's monitoring reports from 1 March 2004 through 28 February 2007 shows an average effluent EC of 402  $\mu\text{mhos/cm}$ , with a range from 235  $\mu\text{mhos/cm}$  to 550  $\mu\text{mhos/cm}$  for 287 samples. Although these levels do not exceed the applicable water quality objectives, allowing the Discharger to increase its current salt discharge may be contrary to the Region-wide effort to minimize the salinity impact from controllable discharges in the Central Valley. The salinity of supply water varies depending on the source, but is very good and the increment added though use is reasonable. Therefore, this Order establishes an annual average effluent limitation of 700  $\mu\text{mhos/cm}$  based on past performance and reasonableness and which happens also to achieve the agricultural water goal.

- m. **Settleable Solids.** For inland surface waters, the Basin Plan states that "[w]ater shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses." This Order contains average monthly and average daily effluent limitations for settleable solids. A daily maximum effluent limitation for settleable solids is included in the Order, in lieu of a weekly average, to ensure that the Facility operates in accordance with design capabilities.
- n. **Toxicity.** See Section IV.C.5. of the Fact Sheet regarding whole effluent toxicity.
- o. **Zinc.** The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for zinc. The criteria for zinc are presented in dissolved concentrations. USEPA recommends conversion factors to translate dissolved concentrations to total concentrations. The conversion factors for zinc in freshwater are 0.978 for the acute criteria and 0.986 for the chronic criteria. Using the worst-case measured hardness from the effluent (87 mg/L), the applicable chronic criterion (maximum 4-day average concentration) and the applicable acute criterion (maximum 1-hour average concentration) are both 107  $\mu\text{g/L}$ , as total recoverable.

The MEC for total zinc was 120  $\mu\text{g/L}$ , based on three samples collected between 14 December 2006 and 17 July 2007. The maximum observed upstream receiving water zinc concentration was non-detect, based on one sample collected on 30 January 2007. Therefore, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria for zinc. No dilution is allowed due to periods of no flow in the receiving water. An AMEL and MDEL for total zinc of 53  $\mu\text{g/L}$  and 106  $\mu\text{g/L}$ , respectively, are included in this Order based on CTR criteria for the protection of freshwater aquatic life (see Attachment F, Table F-6 for WQBEL calculations).

The Discharger is unable to comply with these limitations. Using the statistical methods for calculating interim effluent limitations described in Attachment F, Section IV.E.1., an interim performance-based maximum daily limitation of 373 µg/L was calculated.

The new WQBELs for zinc become effective on **18 May 2010**.

#### 4. WQBEL Calculations

- a. As discussed in Section IV.C.3 above, effluent limitations for chlorine residual, nitrate, pH, electrical conductivity, and pH were based on Basin Plan objectives and applied directly as effluent limitations.
- b. Effluent limitations for copper, dichlorobromomethane, and zinc were calculated in accordance with section 1.4 of the SIP. The following paragraphs describe the methodology used for calculating effluent limitations for these parameters.
- c. **Effluent Limitation Calculations.** For each water quality criterion/objective, the effluent concentration (ECA) was calculated using the following steady-state mass balance equation:

$$\begin{aligned} ECA &= C + D(C - B) && \text{where } C > B, \text{ and} \\ ECA &= C && \text{where } C \leq B, \end{aligned}$$

where:

- ECA = effluent concentration allowance
- D = dilution credit
- C = the priority pollutant criterion/objective
- B = the ambient background concentration.

According to the SIP, the ambient background concentration (B) in the equation above shall be the observed maximum with the exception that an ECA calculated from a priority pollutant criterion/objective that is intended to protect human health from carcinogenic effects shall use the ambient background concentration as an arithmetic mean. For ECAs based on MCLs implementing the Basin Plan chemical constituents objective that are applied as annual averages, an arithmetic mean was also used for B due to the long-term basis of the criterion.

Acute and chronic toxicity ECAs were then converted to equivalent long-term averages (LTA) using statistical multipliers and the lowest is used. Additional statistical multipliers were then used to calculate the maximum daily effluent limitation (MDEL) and the average monthly effluent limitation (AMEL).

Human health ECAs are set equal to the AMEL and a statistical multiplier is used to calculate the MDEL.

$$\begin{aligned}
 & \overbrace{\min(M_A ECA_{acute}, M_C ECA_{chronic})}^{LTA_{acute}} \\
 AMEL &= mult_{AMEL} [\min(M_A ECA_{acute}, M_C ECA_{chronic})] \\
 MDEL &= mult_{MDEL} [\min(M_A ECA_{acute}, M_C ECA_{chronic})] \\
 & \underbrace{\hspace{15em}}_{LTA_{chronic}} \\
 MDEL_{HH} &= \left( \frac{mult_{MDEL}}{mult_{AMEL}} \right) AMEL_{HH}
 \end{aligned}$$

where: mult<sub>AMEL</sub> = statistical multiplier converting minimum LTA to AMEL  
 mult<sub>MDEL</sub> = statistical multiplier converting minimum LTA to MDEL  
 M<sub>A</sub> = statistical multiplier converting CMC to LTA  
 M<sub>C</sub> = statistical multiplier converting CCC to LTA

WQBELs were calculated for copper, dichlorobromomethane, and zinc as follows in Tables F-4 through F-6, below.

**Table F-4. WQBEL Calculations for Copper**

	Acute	Chronic	Human Health
Criteria (µg/L)	12.28	8.28	200
Background Concentration (µg/L)	Non-Detect	Non-Detect	Non-Detect
Dilution Credit	No Dilution	No Dilution	No Dilution
ECA (µg/L)	12.28	8.28	200
ECA Multiplier	0.32	0.53	--
LTA (µg/L)	3.94	4.37	--
AMEL Multiplier (95 <sup>th</sup> %)	1.55	(1)	--
<b>AMEL (µg/L)</b>	<b>6.1</b>	(1)	<b>200</b>
MDEL Multiplier (99 <sup>th</sup> %)	3.11	(1)	2.01
<b>MDEL (µg/L)</b>	<b>12.3</b>	(1)	<b>401</b>

(1) Limitations based on acute LTA (Acute LTA < Chronic LTA).

**Table F-5. WQBEL Calculations for Dichlorobromomethane**

	Acute	Chronic	Human Health
Criteria (µg/L)	N/A	N/A	0.56
Background Concentration (µg/L)	Non-Detect	Non-Detect	Non-Detect
Dilution Credit	No Dilution	No Dilution	No Dilution
ECA (µg/L)	--	--	--
ECA Multiplier	--	--	--
LTA (µg/L)	--	--	--
AMEL Multiplier (95 <sup>th</sup> %)	--	--	--
<b>AMEL (µg/L)</b>			<b>0.56</b>
MDEL Multiplier (99 <sup>th</sup> %)			2.01
<b>MDEL (µg/L)</b>			<b>1.12</b>

**Table F-6. WQBEL Calculations for Zinc**

	Acute	Chronic	Human Health
Criteria (µg/L)	106	106	2,000
Background Concentration (µg/L)	Non-Detect	Non-Detect	Non-Detect
Dilution Credit	No Dilution	No Dilution	No Dilution
ECA (µg/L)	106	106	2,000
ECA Multiplier	0.32	0.53	--
LTA (µg/L)	34	56	--
AMEL Multiplier (95 <sup>th</sup> %)	1.55	(1)	--
<b>AMEL (µg/L)</b>	<b>53</b>	(1)	<b>2,000</b>
MDEL Multiplier (99 <sup>th</sup> %)	3.11	(1)	2.01
<b>MDEL (µg/L)</b>	<b>106</b>	(1)	<b>4,012</b>

(1) Limitations based on acute LTA (Acute LTA < Chronic LTA).

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

**Table F-7. Summary of Water Quality-Based Effluent Limitations**

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Chlorine, Total Residual	mg/L	0.011 <sup>1</sup>	--	0.019 <sup>2</sup>	--	--
Copper, Total Recoverable	µg/L	6.1	--	12.3	--	--
Dichlorobromomethane	µg/L	0.6	--	1.1	--	--
Nitrate Nitrogen, Total (as N)	mg/L	10	--	--	--	--
pH	standard units	--	--	--	6.5	8.5
Electrical Conductivity	µmhos/cm	700 <sup>3</sup>	--	--	--	--
Settleable Solids	mL/L/hr	0.1	--	0.2	--	--
Zinc, Total Recoverable	µg/L	53	--	106	--	--

<sup>1</sup> Applied as a 4-day average effluent limitation.

<sup>2</sup> Applied as a 1-hour average effluent limitation.

<sup>3</sup> Applied as an annual average effluent limitation.

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

For compliance with the Basin Plan’s narrative toxicity objective, this Order requires the Discharger to conduct whole effluent toxicity testing for acute and chronic toxicity, as specified in the Monitoring and Reporting Program (Attachment E, Section V.). This Order also contains effluent limitations for acute toxicity and requires the Discharger to implement best management practices to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity.

a. **Acute Aquatic Toxicity.** The Basin Plan contains a narrative toxicity objective that states, “*All waters shall be maintained free of toxic substances in*

*concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.” (Basin Plan at III-8.00) The Basin Plan also states that, “...effluent limits based upon acute biotoxicity tests of effluents will be prescribed where appropriate...”. USEPA Region 9 provided guidance for the development of acute toxicity effluent limitations in the absence of numeric water quality objectives for toxicity in its document titled "Guidance for NPDES Permit Issuance", dated February 1994. In section B.2. "Toxicity Requirements" (pgs. 14-15) it states that, "In the absence of specific numeric water quality objectives for acute and chronic toxicity, the narrative criterion 'no toxics in toxic amounts' applies. Achievement of the narrative criterion, as applied herein, means that ambient waters shall not demonstrate for acute toxicity: 1) less than 90% survival, 50% of the time, based on the monthly median, or 2) less than 70% survival, 10% of the time, based on any monthly median. For chronic toxicity, ambient waters shall not demonstrate a test result of greater than 1 TUc." Accordingly, and as required in the previous Order, effluent limitations for acute toxicity have been included in this Order as follows:*

**Acute Toxicity.** Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

Minimum for any one bioassay ----- 70%  
Median for any three or more consecutive bioassays ----- 90%

- b. **Chronic Aquatic Toxicity.** The Basin Plan contains a narrative toxicity objective that states, “All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.” (Basin Plan at III-8.00) In accordance with the Monitoring and Reporting Program of Order No. 5-00-122 and by letter dated 13 December 2001 from the Regional Water Board, the Discharger was allowed to substitute the chronic toxicity monitoring with acute toxicity monitoring beginning with the first quarterly 2002 monitoring. Therefore, adequate chronic WET data is not available to determine if the discharge has reasonable potential to cause or contribute to an in-stream excursion above of the Basin Plan’s narrative toxicity objective. Attachment E of this Order requires annual chronic WET monitoring for demonstration of compliance with the narrative toxicity objective.

In addition to WET monitoring, Special Provision VI.C.2.a. requires the Discharger to submit to the Regional Water Board an Initial Investigative TRE Work Plan for approval by the Executive Officer, to ensure the Discharger has a plan to immediately move forward with the initial tiers of a TRE, in the event effluent toxicity is encountered in the future. The provision also includes a numeric toxicity monitoring trigger and requirements for accelerated monitoring, as well as, requirements for TRE initiation if a pattern of toxicity is demonstrated.

## **D. Final Effluent Limitations**

### **1. Mass-based Effluent Limitations**

40 CFR 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 CFR 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass limitations provided in 40 CFR 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g., CTR criteria and MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

Mass-based effluent limitations were calculated based upon the permitted average daily discharge flow allowed in Section IV.A.1.g. of the Limitations and Discharge Requirements.

### **2. Averaging Periods for Effluent Limitations**

40 CFR 122.45 (d) requires average weekly and average monthly discharge limitations for publicly owned treatment works (POTWs) unless impracticable. However, for toxic pollutants and pollutant parameters in water quality permitting, the USEPA recommends the use of a maximum daily effluent limitation in lieu of average weekly effluent limitations for two reasons. *“First, the basis for the 7-day average for POTWs derives from the secondary treatment requirements. This basis is not related to the need for assuring achievement of water quality standards. Second, a 7-day average, which could comprise up to seven or more daily samples, could average out peak toxic concentrations and therefore the discharge’s potential for causing acute toxic effects would be missed.”* (TSD, pg. 96) This Order utilizes maximum daily effluent limitations in lieu of average weekly effluent limitations for copper, dichlorobromomethane, settleable solids, and zinc as recommended by the TSD for the achievement of water quality standards and for the protection of the beneficial uses of the receiving stream. An average monthly effluent limitation has been established for nitrate based on the Primary MCL. An annual average effluent limitation has been established for electrical conductivity to control the contribution of salinity into receiving waters flowing to the Sacramento – San Joaquin River Delta. Furthermore, for chlorine residual, BOD, TSS, pH, coliform, and turbidity, weekly average effluent limitations have been replaced or supplemented with effluent limitations utilizing shorter averaging periods. The rationale for using shorter averaging periods for these constituents is discussed in Attachment F, Section IV.C.3., above.

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

Some effluent limitations in this Order are less stringent than those in the previous Order. As discussed below this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

Order No. 5-00-122 required effluent limits for total petroleum hydrocarbons, benzene, ethylbenzene, toluene, and total xylenes. These effluent limits were established as a result of the discharge of extracted groundwater from a gasoline cleanup site into the Facility. The discharge of the extracted groundwater into the Facility has ceased and monitoring data demonstrates that there is no reasonable potential for these pollutants to cause or contribute to an in-stream excursion above water quality standards in the absence of the treated groundwater. Therefore, the effluent limitations for total petroleum hydrocarbons, benzene, ethylbenzene, toluene, and total xylenes have been removed based on new information consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Resources Control Board Resolution 68-16.

**4. Satisfaction of Antidegradation Policy**

The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16. This Order does not authorize any increase in flow or mass of pollutants over the existing discharge that was previously authorized by this Regional Water Board as consistent with State and Federal antidegradation policies. The installation of tertiary treatment will result in an overall reduction in the mass of pollutants discharged.

**Summary of Final Effluent Limitations  
Discharge Point No. 001**

**Table F-8. Summary of Final Effluent Limitations**

Parameter	Units	Effluent Limitations					Basis <sup>1</sup>
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Average Dry Weather Flow	Mgd	--	--	0.61	--	--	DC
<i>Conventional Pollutants</i>							
Biochemical Oxygen Demand (BOD) (5-day @ 20°C)	mg/L	10	15	20	--	--	BPJ
	lbs/day <sup>2</sup>	51	76	102	--	--	
	% Removal	90	--	--	--	--	
pH	standard units	--	--	--	6.5	8.5	BP
Total Suspended Solids (TSS)	mg/L	10	15	20	--	--	BPJ
	lbs/day <sup>2</sup>	51	76	102	--	--	
	% Removal	90	--	--	--	--	
<i>Priority Pollutants</i>							
Copper, Total Recoverable	µg/L	6.1	--	12.3	--	--	CTR
Dichlorobromomethane	µg/L	0.6	--	1.1	--	--	CTR
Zinc, Total Recoverable	µg/L	53	--	106	--	--	CTR

Parameter	Units	Effluent Limitations					Basis <sup>1</sup>
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
<i>Non-conventional Pollutants</i>							
Chlorine, Total Residual	mg/L	0.011 <sup>3</sup>	--	0.019 <sup>4</sup>	--	--	BP
Electrical Conductivity @ 25°C	µmhos/cm	700 <sup>5</sup>	--	--	--	--	AGR
Nitrate Nitrogen, Total (as N)	mg/L	10	--	--	--	--	MCL
Settleable Solids	mL/L/hr	0.1	--	0.2	--	--	BP
Total Coliform	MPN/100 mL	23 <sup>6</sup>	2.2 <sup>7</sup>	240	--	--	Title 22
Turbidity	NTU	--	--	2 <sup>8</sup>	--	10	Title 22

<sup>1</sup> DC- Based on the design capacity of the Facility.  
 TITLE 22- Based on CA Dept. of Public Health Reclamation Criteria, CCR, Division 4, Chapter 3 (Title 22).  
 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.  
 AGR- Based on Water Quality for Agriculture, Food and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers and D.W. Westcot, Rome, 1985).  
 MCL- Based on California Primary Maximum Contaminant Level.  
<sup>2</sup> Based on a design flow of 0.61 mgd.  
<sup>3</sup> Applied as a 4-day average effluent limitation.  
<sup>4</sup> Applied as a 1-hour average effluent limitation.  
<sup>5</sup> Applied as an annual average effluent limitation.  
<sup>6</sup> The effluent total coliform organisms shall not exceed 23 MPN/100 mL more than once in any 30-day period.  
<sup>7</sup> The 7-day median of total coliform organisms shall not exceed 2.2 MPN/100 mL.  
<sup>8</sup> The discharge shall not exceed 2 NTU as a daily average or 5 NTU more than 5% of the time within a 24-hour period.

**E. Interim Effluent Limitations**

- Copper, Dichloromethane, Nitrate, and Zinc.** The SIP, section 2.2.1, requires that if a compliance schedule is granted for a CTR or NTR constituent, the Regional Water Board shall establish interim requirements and dates for their achievement in the NPDES permit. The interim limitations must be based on current treatment plant performance or existing permit limitations, whichever is more stringent. The State Water Board has held that the SIP may be used as guidance for non-CTR constituents. Therefore, the SIP requirement for interim effluent limitations has been applied to both CTR and non-CTR constituents in this Order.

The interim limitations for copper, dichloromethane, nitrate, and zinc in this Order are based on the current treatment plant performance. In developing the interim limitation, where there are 10 sampling data points or more, sampling and laboratory variability is accounted for by establishing interim limits that are based on normally distributed data where 99.9% of the data points will lie within 3.3 standard deviations of the mean (*Basic Statistical Methods for Engineers and Scientists, Kennedy and Neville, Harper and Row*). Therefore, the interim limitations in this Order are established as the mean plus 3.3 standard deviations of the available data.

When there are less than 10 sampling data points available, the *Technical Support Document for Water Quality- Based Toxics Control* ((EPA/505/2-90-001), TSD) recommends a coefficient of variation of 0.6 be utilized as representative of wastewater effluent sampling. The TSD recognizes that a minimum of 10 data points is necessary to conduct a valid statistical analysis. The multipliers contained in Table 5-2 of the TSD are used to determine a maximum daily limitation based on a long-term average objective. In this case, the long-term average objective is to maintain, at a minimum, the current plant performance level. Therefore, when there are less than 10 sampling points for a constituent, interim limitations are based on 3.11 times the maximum observed effluent concentration to obtain the daily maximum interim limitation (TSD, Table 5-2).

The Regional Water Board finds that the Discharger can undertake source control and treatment plant measures to maintain compliance with the interim limitations included in this Order. Interim limitations are established when compliance with effluent limitations cannot be achieved by the existing discharge. Discharge of constituents in concentrations in excess of the final effluent limitations, but in compliance with the interim effluent limitations, can significantly degrade water quality and adversely affect the beneficial uses of the receiving stream on a long-term basis. The interim limitations, however, establish an enforceable ceiling concentration until compliance with the effluent limitation can be achieved.

Table F-9 summarizes the calculations of the interim effluent limitations for copper, dichlorobromomethane, nitrate, and zinc:

**Table F-9. Interim Effluent Limitation Calculation Summary**

Parameter	Units	MEC	Mean	Std. Dev.	# of Samples	Interim Limitation
Copper	µg/L	10	9.9	--	2	31
Dichlorobromomethane	µg/L	3.2	3.2	--	1	10
Nitrate	mg/L	91	10.1	17.6	39	68
Zinc	µg/L	160	140	--	2	373

- BOD, TSS, and Total Coliform Organisms.** As stated in the above Findings, the Discharger is being required to achieve compliance with tertiary treatment standards. This Order establishes a compliance schedule for meeting the more stringent limitations that reflect Title 22 equivalent treatment requirements. The Regional Water Board is establishing interim requirements based on existing permit limitations.

**F. Land Discharge Specifications**

[Not Applicable]

**G. Reclamation Specifications**

[Not Applicable]

## V. RATIONALE FOR RECEIVING WATER LIMITATIONS

The Receiving Water Limitations are based on the Basin Plan water quality objectives to protect the beneficial uses of surface water and groundwater

### A. Surface Water

For surface water the limits are as follows:

- a. **Bacteria.** The Basin Plan includes a water quality objective that “[*I*]n water designated for contact recreation (REC-1), the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400/100 ml.” Numeric Receiving Water Limitations for bacteria are included in this Order and are based on the Basin Plan objective.
- b. **Biostimulatory Substances.** The Basin Plan includes a water quality objective that “[*W*]ater shall not contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.” Receiving Water Limitations for biostimulatory substances are included in this Order and are based on the Basin Plan objective.
- c. **Chemical Constituents.** The Basin Plan includes a water quality objective that “[*W*]aters shall not contain chemical constituents in concentrations that adversely affect beneficial uses.” Receiving Water Limitations for chemical constituents are included in this Order and are based on the Basin Plan objective.
- d. **Color.** The Basin Plan includes a water quality objective that “[*W*]ater shall be free of discoloration that causes nuisance or adversely affects beneficial uses.” Receiving Water Limitations for color are included in this Order and are based on the Basin Plan objective.
- e. **Dissolved Oxygen.** The Basin Plan includes a water quality objective that “[*W*]ithin the legal boundaries of the Delta, the dissolved oxygen concentrations shall not be reduced below: 7.0 mg/L in the Sacramento River (below the I Street Bridge) and in all Delta waters west of the Antioch Bridge; 6.0 mg/L in the San Joaquin River (between Turner Cut and Stockton, 1 September through 30 November); and 5.0 mg/L in all other Delta waters except those bodies of water which are constructed for special purposes and from which fish have been excluded or where the fishery is not important as a beneficial use.” Numeric Receiving Water Limitations for dissolved oxygen are included in this Order and are based on the Basin Plan objective.
- f. **Floating Material.** The Basin Plan includes a water quality objective that “[*W*]ater shall not contain floating material in amounts that cause nuisance or adversely affect beneficial uses.” Receiving Water Limitations for floating material are included in this Order and are based on the Basin Plan objective.

- g. **Oil and Grease.** The Basin Plan includes a water quality objective that “[W]aters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.” Receiving Water Limitations for oil and grease are included in this Order and are based on the Basin Plan objective.
- h. **pH.** The Basin Plan includes water quality objective that “[T]he pH shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters with designated COLD or WARM beneficial uses” This Order includes receiving water limitations for both pH range and pH change.

The Basin Plan allows an appropriate averaging period for pH change in the receiving stream. Since there is no technical information available that indicates that aquatic organisms are adversely affected by shifts in pH within the 6.5 to 8.5 range, an averaging period is considered appropriate and a monthly averaging period for determining compliance with the 0.5 receiving water pH limitation is included in this Order.

- i. **Pesticides.** The Basin Plan includes a water quality objective for pesticides beginning on page III-6.00. Receiving Water Limitations for pesticides are included in this Order and are based on the Basin Plan objective.
- j. **Radioactivity.** The Basin Plan includes a water quality objective that “[R]adionuclides shall not be present in concentrations that are harmful to human, plant, animal or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life.” The Basin Plan states further that “[A]t a minimum, waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of radionuclides in excess of the maximum contaminant levels (MCLs) specified in Table 4 (MCL Radioactivity) of Section 64443 of Title 22 of the California Code of Regulations...” Receiving Water Limitations for radioactivity are included in this Order and are based on the Basin Plan objective.
- k. **Sediment.** The Basin Plan includes a water quality objective that “[T]he 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 beneficial uses” Receiving Water Limitations for suspended sediments are included in this Order and are based on the Basin Plan objective.
- l. **Settleable Material.** The Basin Plan includes a water quality objective that “[W]aters shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.” Receiving Water Limitations for settleable material are included in this Order and are based on the Basin Plan objective.

- m. **Suspended Material.** The Basin Plan includes a water quality objective that “[W]aters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.” Receiving Water Limitations for suspended material are included in this Order and are based on the Basin Plan objective.
- n. **Taste and Odors.** The Basin Plan includes a water quality objective that “[W]ater shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.” Receiving Water Limitations for taste- or odor-producing substances are included in this Order and are based on the Basin Plan objective.
- o. **Temperature.** Mariposa Creek has the beneficial uses of both COLD and WARM. The Basin Plan includes the objective that “[a]t no time or place shall the temperature of COLD or WARM intrastate waters be increased more than 5°F above natural receiving water temperature.” This Order includes a receiving water limitation based on this objective.
- p. **Toxicity.** The Basin Plan includes a water quality objective that “[A]ll waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.” Receiving Water Limitations for toxicity are included in this Order and are based on the Basin Plan objective.
- q. **Turbidity.** The Basin Plan includes a water quality objective that “[I]ncreases in turbidity attributable to controllable water quality factors shall not exceed the following limits:
- Where natural turbidity is between 0 and 5 Nephelometric Turbidity Units (NTUs), increases shall not exceed 1 NTU.
  - Where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20 percent.
  - Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs.
  - Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent.”

A numeric Receiving Surface Water Limitation for turbidity is included in this Order and is based on the Basin Plan objective for turbidity.

## B. Groundwater

[Not Applicable]

## VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC Sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The 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<sub>5</sub> and TSS reduction requirements). The monitoring frequencies for BOD<sub>5</sub> and TSS (weekly) and flow (continuous) have been retained from Order No. 5-00-122. The sample type for BOD<sub>5</sub> and TSS shall be an 8-hour composite.

### 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.
2. Effluent monitoring of the discharge to Mariposa Creek (Discharge Point No. 001) at Monitoring Location EFF-001 has been established as follows:
  - a. Effluent monitoring frequencies and sample types for flow (continuous), pH (weekly), settleable solids (weekly), nitrate (monthly), total coliform (three times per week), and electrical conductivity (weekly) have been retained from Order No. 5-00-122 to determine compliance with effluent limitations for these parameters.
  - b. The sample type for BOD<sub>5</sub> and TSS has been changed from a grab sample to an 8-hour composite to better characterize the effluent. The monitoring frequency has been retained from Order No. 5-00-122.
  - c. Monitoring for ammonia (monthly) and standard minerals (annually) have been retained from Order No. 5-00-122 to monitor treatment plant operations and concentrations of potential contaminants.
  - d. Monitoring for total petroleum hydrocarbons, benzene, ethylbenzene, toluene, and total xylenes have been removed from Order No. 5-00-122.
  - e. Monitoring data submitted by the Discharger during the existing permit term indicates that the discharge has the reasonable potential to exceed water quality

criteria for copper, dichlorobromomethane, total residual chlorine, turbidity, and zinc. Monthly monitoring using 8-hour composite samples for copper and zinc is required to determine compliance with the applicable effluent limitations. Monthly monitoring using a grab sample for dichlorobromomethane and turbidity is required to determine compliance with the applicable effluent limitations. Continuous monitoring is required to determine compliance with total residual chlorine.

- f. Due to inconsistencies in available monitoring data for persistent chlorinated hydrocarbon pesticides, reasonable potential cannot be determined. This Order requires monthly monitoring to gather additional information about persistent chlorinated hydrocarbon pesticides in the effluent.
- g. Weekly monitoring using a grab sample for temperature is necessary to characterize the potential temperature impacts on Mariposa Creek.
- h. Annual monitoring for the hardness of the effluent is established to ensure the water quality criteria/objectives are correctly adjusted for when determining reasonable potential as specified in section 1.3 of the SIP.
- i. Annual monitoring for priority pollutants has been established in accordance with Section 1.3 of the SIP which requires periodic monitoring for priority pollutants for which criteria or objectives apply and for which no effluent limitations have been established.

### C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity.** Quarterly 96-hour bioassay testing was required in the existing Order. Monitoring data submitted by the Discharger during the term of the existing Order indicates the Discharger has complied with the acute toxicity effluent limitation during the previous permit term. The testing frequency has been reduced from quarterly to annually to demonstrate compliance with the effluent limitation for acute toxicity. Because the chronic toxicity test provides both acute and chronic toxicity information concurrently, acute toxicity testing is not necessary when chronic toxicity testing is being conducted in the same period.
2. **Chronic Toxicity.** Quarterly three species chronic toxicity monitoring was required in the existing Order. Footnote 1 under the "Three Species Chronic Toxicity Monitoring" in the Monitoring and Reporting Program of Order No. 5-00-122 allowed for the substitution of quarterly chronic toxicity monitoring with quarterly acute toxicity monitoring if four continuous quarters of chronic toxicity monitoring indicate that the discharge does not have a reasonable potential to violate Receiving Water Limitation D.14. In a letter from the Executive Officer on 13 December 2001, the Discharger was permitted to substitute chronic toxicity monitoring with acute toxicity monitoring beginning with the first quarterly 2002 monitoring because quarterly chronic toxicity testing indicated compliance with effluent toxicity limitations. This Order establishes annual chronic whole effluent toxicity testing in order to

demonstrate compliance with the Basin Plan's narrative toxicity objective and to determine if future effluent limitations would be necessary.

## **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. The receiving water monitoring requirements for dissolved oxygen (weekly), turbidity (weekly), pH (weekly), temperature (weekly), chlorine (weekly), and nitrate (monthly) from Order No. 5-00-122 have been retained in this Order.
- b. Monthly monitoring for hardness of the upstream receiving water is established to ensure the water quality criteria/objectives are correctly adjusted for the receiving water when determining reasonable potential as specified in section 1.3 of the SIP.
- c. Weekly monitoring for electrical conductivity in the upstream receiving water is established in order to characterize the receiving water.
- d. Annual monitoring for priority pollutants upstream of the discharge point is required to collect the necessary data to determine reasonable potential as required in section 1.2 of the SIP.

### **2. Groundwater**

[Not Applicable]

## **E. Other Monitoring Requirements**

### **1. Sludge Monitoring**

Annual sludge monitoring for metals are required by this Order. The required sludge monitoring under this Order is identical to the monitoring required by previous Order No. 5-00-122.

## **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 CWC is more stringent. In lieu of these conditions, this Order incorporates by reference CWC Section 13387(e).

## **B. Special Provisions**

### **1. Reopener Provisions**

- a. The Regional Water Board shall re-open this Order should new information require the need for additional requirements or the alteration of existing requirements.
- b. **Whole Effluent Toxicity.** This Order requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity through a Toxicity Reduction Evaluation (TRE). This Order may be reopened to include a numeric chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened to include a numeric chronic toxicity limitation based on that objective.
- c. **Pollution Prevention.** This Order requires the Discharger prepare pollution prevention plans following CWC Section 13263.3(d)(3) in Special Provision VI.C.7.a. This reopener provision allows the Regional Water Board to reopen this Order for addition and/or modification of effluent limitations and requirements for constituents based on a review of the pollution prevention plans.
- d. **Mixing Zone and Dilution Credits.** This reopener allows the Regional Water Board to reopen this Order for the calculation of dilution credits and a mixing zone for the Facility, provided that the Discharger submits a mixing zone study that provides sufficient information/data to determine compliance with the mixing zone requirements contained in Section 1.4.2.2 of the SIP, or an equivalent study as approved by the Regional Water Board.
- e. **Beneficial Use Dededesignation.** This reopener allows the Regional Water Board to reopen this Order to incorporate necessary changes should the Discharger choose to do a Use Attainability Analysis (UAA) that results in a Basin Plan amendment to dedesignate MUN in Mariposa Creek.

## 2. Special Studies and Additional Monitoring Requirements

- a. **Chronic Whole Effluent Toxicity Requirements.** The Basin Plan contains a narrative toxicity objective that states, "All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life." (Basin Plan at III-8.00.) Adequate WET data is not available to determine if the discharge has reasonable potential to cause or contribute to an in-stream excursion above of the Basin Plan's narrative toxicity objective. Attachment E of this Order requires annual chronic WET monitoring for demonstration of compliance with the narrative toxicity objective.

In addition to WET monitoring, this provision requires the Discharger to submit to the Regional Water Board an Initial Investigative TRE Work Plan for approval by the Executive Officer, to ensure the Discharger has a plan to immediately move forward with the initial tiers of a TRE, in the event effluent toxicity is encountered in the future. The provision also includes a numeric toxicity monitoring trigger and requirements for accelerated monitoring, as well as, requirements for TRE initiation if a pattern of toxicity is demonstrated.

**Monitoring Trigger.** A numeric toxicity monitoring trigger of  $> 1$  TUC (where TUC =  $100/\text{NOEC}$ ) is applied in the provision, because this Order does not allow any dilution for the chronic condition. Therefore, a TRE is triggered when the effluent exhibits a pattern of toxicity at 100% effluent.

**Accelerated Monitoring.** The provision requires accelerated WET testing when a regular WET test result exceeds the monitoring trigger. The purpose of accelerated monitoring is to determine, in an expedient manner, whether there is a pattern of toxicity before requiring the implementation of a TRE. Due to possible seasonality of the toxicity, the accelerated monitoring should be performed in a timely manner, preferably taking no more than 2 to 3 months to complete.

The provision requires accelerated monitoring consisting of four (4) chronic toxicity tests in a 6-week period (i.e., one test every 2 weeks) using the species that exhibited toxicity. Guidance regarding accelerated monitoring and TRE initiation is provided in the *Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001, March 1991* (TSD). The TSD at page 118 states, "EPA recommends if toxicity is repeatedly or periodically present at levels above effluent limits more than 20 percent of the time, a TRE should be required." Therefore, four accelerated monitoring tests are required in this provision. If no toxicity is demonstrated in the four accelerated tests, then it demonstrates that toxicity is not present at levels above the monitoring trigger more than 20 percent of the time (only 1 of 5 tests are toxic, including the initial test). However, notwithstanding the accelerated monitoring results, if there is adequate evidence of a pattern of effluent toxicity (i.e. toxicity present exceeding

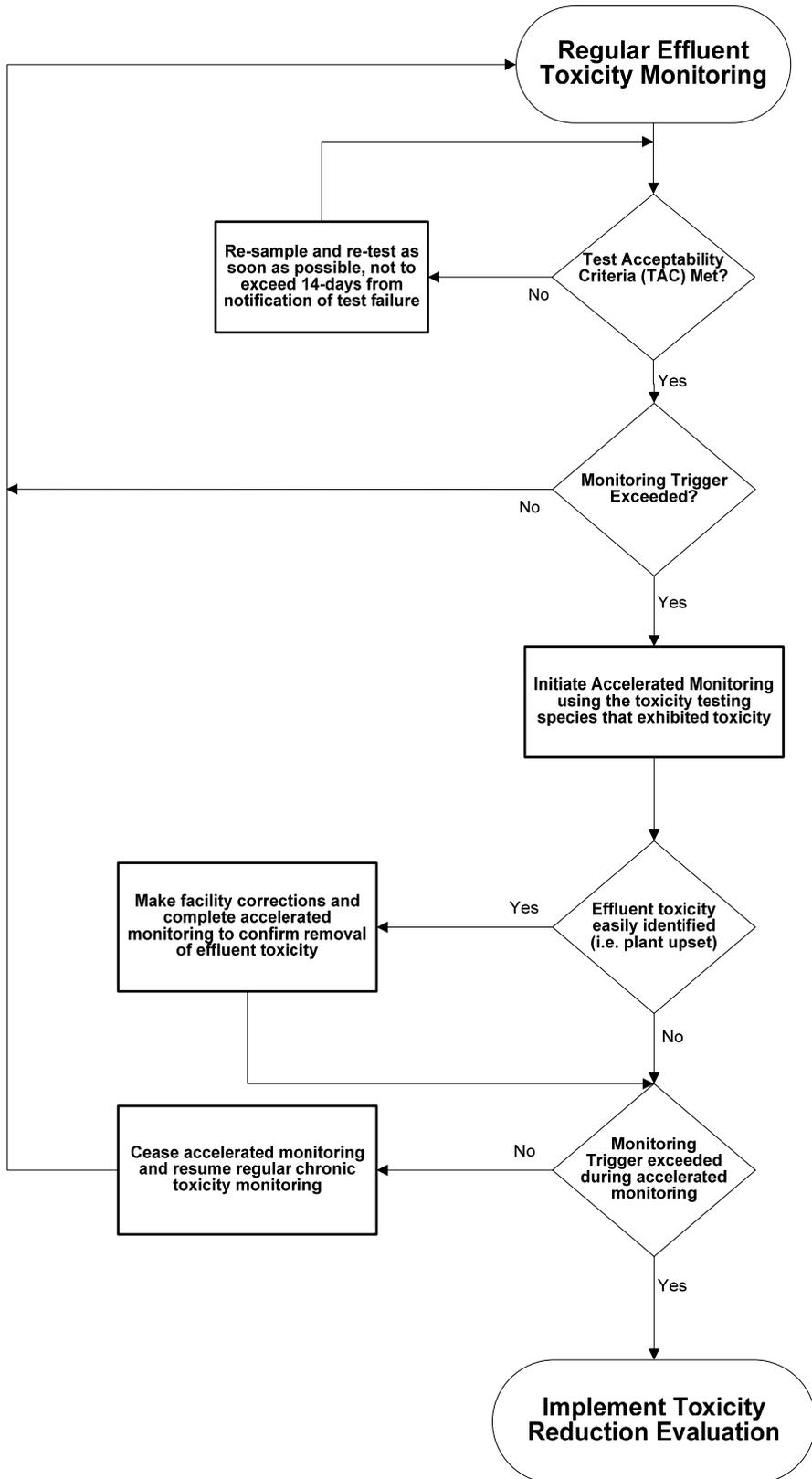
the monitoring trigger more than 20 percent of the time), the Executive Officer may require that the Discharger initiate a TRE.

See the WET Accelerated Monitoring Flow Chart (Figure F-1), below, for further clarification of the accelerated monitoring requirements and for the decision points for determining the need for TRE initiation.

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

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

**Figure F-1  
WET Accelerated Monitoring Flow Chart**



- b. **Dilution/Mixing Zone Study.** Although evidence indicates that seasonal flows exist in Mariposa Creek, the Discharger has not submitted information that documents dilution sufficient to derive seasonal effluent limitations. Section 1.4.2 of the SIP establishes procedures for granting mixing zones and dilution credits. Before establishing a mixing zone and a dilution credit for a discharge, it must first be determined if, and how much (if any), receiving water is available to dilute the discharge. In determining the appropriate available receiving water flow, the Regional Water Board may take into account actual and seasonal variations of the receiving water and the effluent. This permit may be reopened for the calculation of dilution credits and a mixing zone for the Facility, provided that the Discharger submits a mixing zone study that provides sufficient information/data to determine compliance with the mixing zone requirements contained in Section 1.4.2.2 of the SIP, or an equivalent study as approved by the Regional Water Board.
- c. **Use Attainability Analysis.** As a result of the MUN designation of Mariposa Creek, this Order establishes effluent limitations for dichlorobromomethane based on the CTR human health criterion for consumption of water and organisms and nitrate based the Primary MCL. This Order allows the Discharger to choose whether to comply with the final effluent limitations and an associated compliance schedules for dichlorobromomethane and nitrate or to provide information/support for the Regional Water Board to perform a Use Attainability Analysis (UAA) for the MUN beneficial use designation for Mariposa Creek.

If the UAA indicates that the Basin Plan should be amended to remove this designated beneficial use, the Regional Water Board will process the Basin Plan amendment, if appropriate, with support provided by the Discharger. The Discharger should be aware that the Vacaville Order makes it clear that the Discharger bears the responsibility for providing the information to support this evaluation including efforts to amend the Basin Plan. To the extent that beneficial use designation/designation issues are relevant in this case, the Discharger should consider evaluating alternatives for the discharge to determine the most cost effective course of action (e.g., increased treatment, alternative disposal of the effluent, studies to support redesignating beneficial uses).

### 3. Best Management Practices and Pollution Prevention

- a. **CWC Section 13263.3(d)(3) Pollution Prevention Plans.** The pollution prevention plans required in Special Provision VI.C.7.a.ii. of the Order shall, at a minimum, meet the requirements outlined in CWC Section 13263.3(d)(3). The minimum requirements for the pollution prevention plans include the following:
- i. An estimate of all of the sources of a pollutant contributing, or potentially contributing, to the loadings of a pollutant in the treatment plant influent.
  - ii. An analysis of the methods that could be used to prevent the discharge of the pollutants into the Facility, including application of local limits to industrial or

commercial dischargers regarding pollution prevention techniques, public education and outreach, or other innovative and alternative approaches to reduce discharges of the pollutant to the Facility. The analysis also shall identify sources, or potential sources, not within the ability or authority of the Discharger to control, such as pollutants in the potable water supply, airborne pollutants, pharmaceuticals, or pesticides, and estimate the magnitude of those sources, to the extent feasible.

- iii. An estimate of load reductions that may be attained through the methods identified in subparagraph ii.
- iv. A plan for monitoring the results of the pollution prevention program.
- v. A description of the tasks, cost, and time required to investigate and implement various elements in the pollution prevention plan.
- vi. A statement of the Discharger's pollution prevention goals and strategies, including priorities for short-term and long-term action, and a description of the Discharger's intended pollution prevention activities for the immediate future.
- vii. A description of the Discharger's existing pollution prevention programs.
- viii. An analysis, to the extent feasible, of any adverse environmental impacts, including cross-media impacts or substitute chemicals that may result from the implementation of the pollution prevention program.
- ix. An analysis, to the extent feasible, of the costs and benefits that may be incurred to implement the pollution prevention program.

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

[Not Applicable]

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

##### **a. Sanitary Sewer Overflow**

- i. Sanitary sewer overflows consist of varying mixtures of domestic sewage, industrial wastewater, and commercial wastewater. This mixture depends on the pattern of land use in the sewage collection system tributary to the overflow. The chief cause of sanitary sewer overflows include lack of maintenance, blockages due to grease, roots, and debris, sewer line flood damage, manhole structure failures, vandalism, pump station mechanical failures, power outages, storm water or groundwater inflow/infiltration, insufficient capacity, and contractor caused blockages.

- ii. Sanitary sewer overflows often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen demanding organic compounds, oil and grease, and other pollutants. Sanitary sewer overflows can cause exceedance of applicable water quality objectives, pose a threat to public health, adversely affect aquatic life, and impair the public recreational use and aesthetic enjoyment of surface waters in the area.
- iii. The Discharger is responsible for all necessary steps to adequately maintain and operate its sanitary sewer collection system. The provisions in this Order are included to ensure compliance with the requirements in the 2 May 2006 State Water Board Order 2006-0003, a Statewide General WDR for Sanitary Sewer Systems.

## **6. Other Special Provisions**

- a. Wastewater shall be oxidized, coagulated, filtered, and adequately disinfected pursuant to the DPH reclamation criteria, California Code of Regulations, Title 22, Division 4, Chapter 3, (Title 22), or equivalent. Special Provision VI.C.7.c. of the Order establishes a compliance schedule to achieve compliance with the Title 22 tertiary treatment requirements.
- b. Prior to making any change in the discharge point, place of use, or purpose of use of the wastewater, the Discharger must obtain approval of, or clearance from the State Water Resources Control Board (Division of Water Rights).

In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.

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 Regional Water Board and a statement. The statement shall comply with the signatory paragraph of Federal Standard Provision V.B.5 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 without requirements, a violation of the CWC. Transfer shall be approved or disapproved in writing by the Executive Officer.

## **7. Compliance Schedules**

The use and location of compliance schedules in the permit depends on the Discharger's ability to comply and the source of the applied water quality criteria.

- a. **Compliance Schedules for Final Effluent Limitations for Copper, Zinc, and Dichlorobromomethane.** The Discharger submitted a request, and justification dated 28 August 2007, for a compliance schedule for copper, dichlorobromomethane, and zinc. The compliance schedule justification included all items specified in Paragraph 3, items (a) through (d), of Section 2.1 of the SIP. This Order establishes a compliance schedule for the new, final, WQBELs for copper, dichlorobromomethane, and zinc and requires full compliance by not later than 18 May 2010. Interim limitations are in effect until 17 May 2010. Should the beneficial use of MUN be dedesignated for Mariposa Creek, this Order will be reopened to eliminate effluent limits and compliance schedules for dichlorobromomethane.
- b. **Compliance Schedule for Nitrate.** The permit includes a compliance schedule that requires the Discharger to evaluate its options and implement measures to comply with the final effluent limits for nitrate in the shortest practicable time not to exceed 10 years from the adoption date of the Order. In the meantime, interim limits for nitrate are in effect. Should the beneficial use of MUN be dedesignated for Mariposa Creek, this Order will be reopened to eliminate limits and compliance schedules for nitrate.
- c. **Compliance Schedule for Tertiary Treatment.** To protect the beneficial uses of the receiving water, the effluent wastewater from the Discharger must be disinfected and adequately treated to prevent disease. Tertiary treatment standards have been established for the Discharger. Tertiary treatment necessitates achieving lower levels for BOD<sub>5</sub> and TSS than the secondary standards currently prescribe. The Discharger will be unable to comply immediately with tertiary treatment requirements. Therefore, a time schedule for achieving compliance is included in this Order. Until the compliance date becomes effective, interim effluent limitations for BOD<sub>5</sub>, TSS, and total coliform are prescribed in this Order based on those contained in the previous Order.
- d. **Continuous Total Chlorine Residual Monitoring.** Chlorine is toxic to aquatic life. This Order requires the Discharger to install continuous total chlorine residual monitoring by the end of the permit term to protect WARM beneficial uses of Mariposa Creek.

## VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Central Valley 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 Mariposa Public Utility District Wastewater Treatment Facility. 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 by mailing to interested parties, posting on the Regional Water Board website; and posting by the Discharger at the site, the Mariposa County Court House, and the Mariposa Post Office.

## **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 should be received at the Regional Water Board offices by 12:00 p.m. on **15 October 2007**.

## **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: 6/7 December 2007  
Time: 8:30 am  
Location: Regional Water Quality Control Board, Central Valley Region  
11020 Sun Center Dr., Suite #200  
Rancho Cordova, CA 95670

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/rwqcb5/> 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 (559) 445-5116.

**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 W. Dale Harvey at (559) 445-6190.

**ATTACHMENT G - SUMMARY OF REASONABLE POTENTIAL ANALYSIS**

Constituent	Units	MEC	B	C	CMC	CCC	Water & Org	Org. Only	Basin Plan	MCL	Reasonable Potential
Ammonia	mg/L	0.08	NA	0.69	1.72 <sup>(1)</sup>	0.69 <sup>(2)</sup>	--	--	--	--	No
Bis(2-Ethylhexyl)phthalate	µg/L	11.1	NA								No <sup>(6)</sup>
Boron	µg/L	0.2	NA	700	--	--	--	--	--	700 <sup>(3)</sup>	No
Chloride	mg/L	52	NA	106	860 <sup>(1)</sup>	230 <sup>(4)</sup>	--	--	--	106 <sup>(3)</sup>	No
Chloroform	µg/L	18	ND		--	1,240 <sup>(4)</sup>				100 <sup>(5)</sup>	No
Copper	µg/L	10	ND	8.3	12.3	8.3	1,300	--	--	1,000	Yes
Cyanide	µg/L	8.6	ND	5.2	22	5.2					No <sup>(7)</sup>
Dichlorobromomethane	µg/L	3.2	ND	0.56			0.56				Yes
Endrin Aldehyde	µg/L	0.074	ND	ND			0.76		ND		No <sup>(7)</sup>
Iron	µg/L	110	NA	300	--	1,000 <sup>(4)</sup>	--	--	--	300	No
Nitrate-N	µg/L	21,000	2,300	10,000	--	--	--	--	--	10,000	Yes
Electrical Conductivity (EC) @ 20 °C	µmhos/cm	550	NA	700	--	--	--	--	--	700 <sup>(3)</sup>	No
Sulfate	mg/L	44	NA	250	--	--	--	--	--	250	No
Toluene	µg/L	0.3	ND	150	--	--	6,800	200,000	--	150	No
Total Dissolved Solids	mg/L	370	NA	500	--	--	--	--	--	500	No
Xylene	µg/L	0.32	NA	20	--	--	--	--	--	20	No
Zinc	µg/L	120	ND	107	107	107	--	--	--	5,000	Yes

General Note: All inorganic concentrations are given as a total recoverable.

MEC = Maximum Effluent Concentration

B = Maximum Receiving Water Concentration or lowest detection level, if non-detect

C = Criterion used for Reasonable Potential Analysis

CMC = Criterion Maximum Concentration (CTR or NTR)

CCC = Criterion Continuous Concentration (CTR or NTR)

Water & Org = Human Health Criterion for Consumption of Water & Organisms (CTR or NTR)

Org. Only = Human Health Criterion for Consumption of Organisms Only (CTR or NTR)

Basin Plan = Numeric Site-specific Basin Plan Water Quality Objective

MCL = Drinking Water Standards Maximum Contaminant Level

NA = Not Available

ND = Non-detect

Footnotes:

(1) USEPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 1-hour Average.

(2) USEPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 30-day Average.

(3) Water Quality for Agriculture.

(4) USEPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 4-day Average.

(5) California MCL.

(6) Unreliable result; contaminant found in method blank.

(7) See Fact Sheet Section IV.C.3.

**ATTACHMENT G - SUMMARY OF REASONABLE POTENTIAL ANALYSIS (Toxic Constituent Data)**

Constituent (µg/L unless otherwise noted)	Most Stringent Criterion	Basis <sup>1</sup>	18 March 2004	14 April 2004	23 June 2004	11 September 2004	6 December 2004	14 March 2005	24 May 2005	22 September 2005	13 December 2005	20 March 2006	25 September 2006	4 December 2006	14 December 2006	30 January 2007 <sup>2</sup>	17 July 2007 <sup>2</sup>
Antimony, Total Recoverable	6	MCL	--	--	--	--	--	--	--	--	--	--	--	--	--	<5	<5
Arsenic, Total Recoverable	10	MCL	--	--	--	--	--	--	--	--	--	--	--	--	--	<10	<10
Beryllium, Total Recoverable	4	MCL	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
Cadmium, Total Recoverable	2.21	CTR-AL	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
Chromium (III)	50	MCL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium (VI)	11.43	CTR-AL	--	--	--	--	--	--	--	--	--	--	--	--	--	<10	<10
Copper, Total Recoverable	8.28	CTR-AL	--	--	--	--	--	--	--	--	--	--	--	--	10	9.8	<5
Lead, Total Recoverable	2.66	CTR-AL	--	--	--	--	--	--	--	--	--	--	--	--	--	<5	<5
Mercury, Total Recoverable	0.05	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.2	<0.2
Nickel, Total Recoverable	46.37	CTR-AL	--	--	--	--	--	--	--	--	--	--	--	--	--	<5	<5
Selenium, Total Recoverable	5	CTR-AL	--	--	--	--	--	--	--	--	--	--	--	--	--	<20	<20
Silver, Total Recoverable	3.19	CTR-AL	--	--	--	--	--	--	--	--	--	--	--	--	--	<5	<5
Thallium, Total Recoverable	1.7	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<20	<20
Zinc, Total Recoverable	107	CTR-AL	--	--	--	--	--	--	--	--	--	--	--	--	120	60	71
Cyanide	5.2	CTR-AL	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	8.6
Asbestos (MFL)	7 x 10 <sup>6</sup>	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.2	--
2,3,7,8-TCDD (Dioxin)	1.3 x 10 <sup>-8</sup>	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	21	NAWQC	--	--	--	--	--	--	--	--	--	--	--	--	--	<10	<10
Acrylonitrile	0.059	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<5	--
Benzene	1	MCL	ND	ND	ND	ND	ND	ND	ND	ND	<0.5	ND	ND	ND	<0.5	<0.5	<0.5
Bromoform	4.3	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<0.5
Carbon tetrachloride	0.25	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
Chlorobenzene	20	Taste & Odor	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
Chlorodibromomethane	0.41	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
Chloroethane	16	Taste & Odor	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
2-chloroethylvinyl ether	--	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	80	MCL	--	--	--	--	--	--	--	--	--	--	--	--	--	18	32
Dichlorobromomethane	0.56	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	3.2	4.7
1,1-dichloroethane	5	MCL	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5

Constituent (µg/L unless otherwise noted)	Most Stringent Criterion	Basis <sup>1</sup>	18 March 2004	14 April 2004	23 June 2004	11 September 2004	6 December 2004	14 March 2005	24 May 2005	22 September 2005	13 December 2005	20 March 2006	25 September 2006	4 December 2006	14 December 2006	30 January 2007 <sup>2</sup>	17 July 2007 <sup>2</sup>
1,2-dichloroethane	0.38	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
1,1-dichloroethylene	0.057	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
1,2-dichloropropane	0.52	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
1,3-dichloropropene	0.5	MCL	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
Ethylbenzene	29	Taste & Odor	ND	ND	ND	ND	ND	ND	ND	ND	<0.5	ND	ND	ND	<0.5	<0.5	<0.5
Methyl bromide	48	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	4
Methyl chloride	3	DWA	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	0.93
Methylene chloride	4.7	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1
1,1,2,2-tetrachloroethane	0.17	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<0.5
Tetrachloroethylene	0.8	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<0.5
Toluene	42	Taste & Odor	0.3	ND	ND	ND	ND	ND	ND	ND	<0.5	ND	ND	ND	<0.5	<0.5	2.8
1,2-trans-dichloroethene	10	MCL	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
1,1,1-trichloroethane	200	MCL	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
1,1,2-trichloroethane	0.6	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
Trichloroethene	2.7	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
Vinyl chloride	0.5	MCL	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
2-chlorophenol	0.1	Taste & Odor	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--
2,4-dichlorophenol	0.3	Taste & Odor	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--
2,4-dimethylphenol	400	Taste & Odor	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--
2-methyl-4,6-dinitrophenol	13.4	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<10	--
2,4-dinitrophenol	70	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<10	--
2-nitrophenol	150	NAWQC	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--
4-nitrophenol	60	DWA	--	--	--	--	--	--	--	--	--	--	--	--	--	<10	--
3-methyl-4-chlorophenol	30	NAWQC	--	--	--	--	--	--	--	--	--	--	--	--	--	<4	--
Pentachlorophenol	0.28	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<10	<10
Phenol	300	Taste & Odor	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2
2,4,6-trichlorophenol	2	Taste & Odor	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--
Acenaphthene	20	Taste & Odor	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--
Acenaphthylene	--	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--
Anthracene	9,600	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--

Constituent (µg/L unless otherwise noted)	Most Stringent Criterion	Basis <sup>1</sup>	18 March 2004	14 April 2004	23 June 2004	11 September 2004	6 December 2004	14 March 2005	24 May 2005	22 September 2005	13 December 2005	20 March 2006	25 September 2006	4 December 2006	14 December 2006	30 January 2007 <sup>2</sup>	17 July 2007 <sup>2</sup>
Benzidine	0.00012	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benz(a)anthracene	0.0044	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--
Benzo(a)pyrene	0.0044	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--
Benzo(b)fluoranthene	0.0044	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--
Benzo(g,h,i)perylene	--	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--
Benzo(k)fluoranthene	0.0044	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--
Bis (2-chloroethoxy) methane	--	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--
Bis (2-chloroethyl) ether	0.031	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--
Bis (2-chloroisopropyl) ether	122	NAWQC	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--
Bis (2-ethylhexyl) phthalate	1.8	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	11.1
4-Bromophenyl phenyl ether	122	NAWQC	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--
Butylbenzyl phthalate	3	NAWQC	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2
2-chloronaphthalene	1,600	NAWQC	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--
4-chlorophenyl phenyl ether	--	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--
Chrysene	0.0044	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2
Dibenz(a,h)anthracene	0.0044	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2
1,2-dichlorobenzene	24	Taste & Odor	--	--	--	--	--	--	--	--	--	--	--	--	--	<2 / <0.5	<0.5
1,3-dichlorobenzene	400	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2 / <0.5	<0.5
1,4-dichlorobenzene	5	MCL	--	--	--	--	--	--	--	--	--	--	--	--	--	<2 / <0.5	<0.5
3,3-dichlorobenzidine	0.04	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<4	--
Diethyl phthalate	3	NAWQC	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2
Dimethyl phthalate	3	NAWQC	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2
Di-n-butyl phthalate	3	NAWQC	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2
2,4-dinitrotoluene	0.11	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--
2,6-dinitrotoluene	0.05	IRIS	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	--
Di-n-octyl phthalate	3	NAWQC	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2
1,2-diphenylhydrazine	0.04	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	300	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2
Fluorene	1,300	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2
Hexachlorobenzene	0.00075	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2

Constituent (µg/L unless otherwise noted)	Most Stringent Criterion	Basis <sup>1</sup>	18 March 2004	14 April 2004	23 June 2004	11 September 2004	6 December 2004	14 March 2005	24 May 2005	22 September 2005	13 December 2005	20 March 2006	25 September 2006	4 December 2006	14 December 2006	30 January 2007 <sup>2</sup>	17 July 2007 <sup>2</sup>
Hexachlorobutadiene	0.44	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2 / <1	<0.5 / <2
Hexachlorocyclopentadiene	1	Taste & Odor	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2
Hexachlorethane	1.9	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2
Indeno (1,2,3-cd) pyrene	0.0044	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2
Isophorone	8.4	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2
Naphthalene	21	Taste & Odor	--	--	--	--	--	--	--	--	--	--	--	--	--	<2 / <0.5	<1 / <2
Nitrobenzene	17	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2
N-nitrosodimethylamine	0.00069	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<5
n-nitrosodi-n-propylamine	0.005	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2
N-nitrosodiphenylamine	5	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2
Phenanthrene	--	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2
Pyrene	960	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<2	<2
1,2,4-trichlorobenzene	5	MCL	--	--	--	--	--	--	--	--	--	--	--	--	--	<2 / <1	--
Aldrin	0.00013	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.005	<0.005
alpha-BHC	0.0039	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01
beta-BHC	0.014	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.005	<0.005
gamma-BHC	0.019	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.02	<0.02
delta-BHC	500	NAS	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.005	<0.005
Chlordane	0.00057	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.1	<0.1
4,4-DDT	0.00059	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01
4,4-DDE	0.00059	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.05	<0.05
4,4-DDD	0.00083	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.05	<0.05
Dieldrin	0.00014	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01
alpha-Endosulfan	0.056	CTR-AL	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.02	<0.02
beta-Endosulfan	0.056	CTR-AL	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01
Endosulfan sulfate	0.056	NAWQC	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.05	<0.05
Endrin	0.036	CTR-AL	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01
Endrin aldehyde	0.76	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	0.074	<0.01
Heptachlor	0.00021	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01
Heptachlor epoxide	0.0001	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.01	<0.01

Constituent (µg/L unless otherwise noted)	Most Stringent Criterion	Basis <sup>1</sup>	18 March 2004	14 April 2004	23 June 2004	11 September 2004	6 December 2004	14 March 2005	24 May 2005	22 September 2005	13 December 2005	20 March 2006	25 September 2006	4 December 2006	14 December 2006	30 January 2007 <sup>2</sup>	17 July 2007 <sup>2</sup>
PCB-1016	0.00017	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
PCB-1221	0.00017	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
PCB-1232	0.00017	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
PCB-1242	0.00017	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
PCB-1248	0.00017	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
PCB-1254	0.00017	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
PCB-1260	0.00017	CTR-HH	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
Toxaphene	0.0002	CTR-AL	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.5	<0.5
Boron, Total Recoverable	700	AGR	--	--	--	--	160	--	--	--	190	--	--	--	190	--	--
Chloride (mg/L)	106	AGR	--	--	--	--	52	--	--	--	49	--	--	--	37	--	--
Chromium (Total)	50	MCL	--	--	--	--	--	--	--	--	--	--	--	--	--	<5 / <5	<5
Iron, Total Recoverable	300	SEC MCL	--	--	--	--	110	--	--	--	<100	--	--	--	<100	--	--
Manganese, Total Recoverable	50	SEC MCL	--	--	--	--	--	--	--	--	--	--	--	--	<5	--	--
Methy tert-butyl ether (MTBE)	5	SEC MCL	--	--	--	--	--	--	--	--	<2.5	--	--	--	--	<1	<0.5
Nitrite Nitrogen, Total (as N)	1,000	MCL	--	--	--	--	--	--	--	--	--	--	--	--	<100	--	--
Sulfate (mg/L)	250	SEC MCL	--	--	--	--	33	--	--	--	44	--	--	--	22	--	--
Total Dissolved Solids (mg/L)	500	SEC MCL	--	--	--	--	300	--	--	--	370	--	--	--	280	--	--
Total Petroleum Hydrocarbons	--	No Criteria	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--
Xylene	20	SEC MCL	0.32	ND	ND	ND	ND	ND	ND	ND	<1.5	ND	ND	ND	<0.5	<2	<0.5

Note: Values reported as not detected are represented with the associated minimum detection level if available. If not available, the value is represented as ND.

- <sup>1</sup> MCL – Based on the Primary Maximum Contaminant Level  
 CTR-AL – Based on the California Toxics Rule criterion for the protection of freshwater aquatic life  
 CTR-HH – Based on the California Toxics Rule criterion for the protection of human health for the consumption of water and organisms  
 NAWQC – Based on USEPA’s National Ambient Water Quality Criteria for the protection of freshwater aquatic life  
 Taste & Odor – Based on taste and odor thresholds contained in USEPA’s National Ambient Water Quality Criteria or published by J.E. Amoore and E. Hautala in the Journal of Applied Toxicology (1983)  
 DWA – Based on USEPA’s Drinking Water Health Advisory or Suggested No-Adverse-Response Levels (SNARLs)  
 IRIS – Based on USEPA’s Integrated Risk Information System one-in-a-million cancer risk estimate  
 NAS – Based on the National Academy of Sciences Drinking Water Health Advisory or SNARLs  
 AGR – Based on water quality criteria for the protection of agriculture  
 SEC MCL – Based on the Secondary Maximum Contaminant Level
- <sup>2</sup> The results of split samples are represented in the table as “value / value”

**ATTACHMENT G - SUMMARY OF REASONABLE POTENTIAL ANALYSIS (EC, Ammonia, Nitrate Nitrogen Data)**

Constituent	Electrical Conductivity	Ammonia Nitrogen, Total (as N)	Nitrate Nitrogen, Total (as N)
Unit	µmhos/cm	mg/L	mg/L
Most Stringent Criterion	700	0.69	10
Basis <sup>1</sup>	AGR	NAWQC	MCL
3/1/2004	330	<0.08	5.3
3/3/2004	400	--	--
3/8/2004	375	--	--
3/10/2004	380	--	--
3/15/2004	365	--	--
3/17/2004	360	--	--
3/22/2004	400	--	--
3/24/2004	400	--	--
3/29/2004	370	--	--
3/31/2004	350	--	--
4/5/2004	360	--	--
4/7/2004	350	--	--
4/12/2004	380	--	--
4/14/2004	385	<0.08	3.5
4/19/2004	380	--	--
4/21/2004	375	--	--
4/26/2004	380	--	--
4/28/2004	400	--	--
5/24/2004	--	<0.08	3.2
6/23/2004	--	0.08	0.5
7/5/2004	400	--	--
7/7/2004	390	--	--
7/12/2004	400	--	--
7/14/2004	380	--	--
7/19/2004	415	--	--
7/21/2004	410	<0.08	0.8
7/26/2004	410	--	--
7/28/2004	460	--	--
8/2/2004	420	--	--
8/4/2004	440	--	--
8/9/2004	470	--	--

Constituent	Electrical Conductivity	Ammonia Nitrogen, Total (as N)	Nitrate Nitrogen, Total (as N)
Unit	µmhos/cm	mg/L	mg/L
Most Stringent Criterion	700	0.69	10
Basis <sup>1</sup>	AGR	NAWQC	MCL
8/11/2004	490	--	--
8/16/2004	450	<0.08	1.2
8/18/2004	460	--	--
8/23/2004	415	--	--
8/25/2004	420	--	--
8/30/2004	410	--	--
9/1/2004	430	--	--
9/6/2004	400	--	--
9/8/2004	400	--	--
9/13/2004	410	--	--
9/15/2004	420	--	--
9/19/2004	--	<0.08	2.2
9/20/2004	405	--	--
9/22/2004	400	--	--
9/27/2004	400	--	--
9/29/2004	420	--	--
10/4/2004	405	--	--
10/6/2004	415	--	--
10/11/2004	415	--	--
10/13/2004	420	<0.08	2.4
10/18/2004	410	--	--
10/20/2004	450	--	--
10/25/2004	450	--	--
10/27/2004	420	--	--
11/1/2004	420	--	--
11/3/2004	420	--	--
11/8/2004	415	--	--
11/10/2004	550	--	--
11/15/2004	375	--	--
11/17/2004	400	<0.08	9.7
11/22/2004	365	--	--
11/24/2004	380	--	--
11/29/2004	400	--	--
12/1/2004	420	--	--
12/6/2004 <sup>2</sup>	330 / 490	<0.08	1.8 / 60

Constituent	Electrical Conductivity	Ammonia Nitrogen, Total (as N)	Nitrate Nitrogen, Total (as N)
Unit	µmhos/cm	mg/L	mg/L
Most Stringent Criterion	700	0.69	10
Basis <sup>1</sup>	AGR	NAWQC	MCL
12/8/2004	340	--	--
12/13/2004	360	--	--
12/15/2004	380	--	--
12/20/2004	400	--	--
12/22/2004	350	--	--
12/27/2004	350	--	--
12/29/2004	325	--	--
1/3/2005	305	--	--
1/5/2005	275	--	--
1/10/2005	--	<0.08	6.7
1/11/2005	350	--	--
1/13/2005	280	--	--
1/17/2005	300	--	--
1/19/2005	315	--	--
1/24/2005	305	--	--
1/26/2005	300	--	--
1/31/2005	320	--	--
2/2/2005	330	--	--
2/7/2005	315	--	--
2/9/2005	350	<0.08	6.7
2/14/2005	330	--	--
2/16/2005	340	--	--
2/21/2005	270	--	--
2/23/2005	315	--	--
2/28/2005	320	--	--
3/2/2005	340	--	--
3/7/2005	320	--	--
3/9/2005	350	--	--
3/14/2005	370	<0.08	7.5
3/16/2005	365	--	--
3/21/2005	340	--	--
3/28/2005	310	--	--
3/30/2005	335	--	--
4/4/2005	365	--	--
4/6/2005	365	--	--

Constituent	Electrical Conductivity	Ammonia Nitrogen, Total (as N)	Nitrate Nitrogen, Total (as N)
Unit	µmhos/cm	mg/L	mg/L
Most Stringent Criterion	700	0.69	10
Basis <sup>1</sup>	AGR	NAWQC	MCL
4/11/2005	360	--	--
4/13/2005	350	<0.08	5.7
4/18/2005	410	--	--
4/20/2005	380	--	--
4/25/2005	410	--	--
4/27/2005	390	--	--
5/2/2005	410	--	--
5/4/2005	410	--	--
5/9/2005	390	--	--
5/11/2005	450	--	--
5/16/2005	400	--	--
5/18/2005	410	--	--
5/20/2005	--	<0.08	3.8
5/23/2005	390	--	--
5/25/2005	370	--	--
5/30/2005	400	--	--
6/1/2005	380	--	--
6/6/2005	400	--	--
6/8/2005	410	--	--
6/13/2005	380	--	--
6/15/2005	410	--	--
6/20/2005	425	--	--
6/22/2005	420	--	--
6/27/2005	425	<0.08	1.1
6/29/2005	415	--	--
7/4/2005	430	--	--
7/6/2005	420	--	--
7/11/2005	455	--	--
7/13/2005	470	--	--
7/18/2005	435	--	--
7/20/2005	490	<0.08	1.7
7/25/2005	425	--	--
7/27/2005	420	--	--
8/1/2005	400	--	--
8/3/2005	440	--	--

Constituent	Electrical Conductivity	Ammonia Nitrogen, Total (as N)	Nitrate Nitrogen, Total (as N)
Unit	µmhos/cm	mg/L	mg/L
Most Stringent Criterion	700	0.69	10
Basis <sup>1</sup>	AGR	NAWQC	MCL
8/8/2005	450	--	--
8/10/2005	410	--	--
8/15/2005	460	--	--
8/17/2005	450	--	--
8/22/2005	490	--	--
8/24/2005	500	<0.08	2.6
8/29/2005	500	--	--
9/7/2005	440	--	--
9/9/2005	420	--	--
9/14/2005	500	--	--
9/16/2005	520	--	--
9/19/2005	500	<0.08	2.9
9/21/2005	480	--	--
9/26/2005	450	--	--
9/28/2005	450	--	--
10/3/2005	420	--	--
10/5/2005	400	--	--
10/10/2005	490	--	--
10/12/2005	490	--	--
10/17/2005	430	--	--
10/19/2005	400	--	--
10/20/2005	--	<0.08	10.8
10/24/2005	415	--	--
10/26/2005	460	--	--
10/31/2005	440	--	--
11/2/2005	480	--	--
11/7/2005	440	--	--
11/9/2005	400	--	--
11/14/2005	420	--	--
11/16/2005	540	<0.08	9.6
11/21/2005	425	--	--
11/23/2005	475	--	--
11/28/2005	385	--	--
11/30/2005	420	--	--
12/5/2005	400	--	--

Constituent	Electrical Conductivity	Ammonia Nitrogen, Total (as N)	Nitrate Nitrogen, Total (as N)
Unit	µmhos/cm	mg/L	mg/L
Most Stringent Criterion	700	0.69	10
Basis <sup>1</sup>	AGR	NAWQC	MCL
12/7/2005	400	--	--
12/12/2005	420	--	--
12/13/2005	520	ND	21
12/14/2005	435	--	--
12/19/2005	400	--	--
12/21/2005	420	--	--
12/26/2005	325	--	--
12/28/2005	430	--	--
12/29/2005	--	<0.08	10.5
1/3/2006	235	--	--
1/5/2006	400	--	--
1/9/2006	370	--	--
1/11/2006	400	<0.08	8.1
1/16/2006	420	--	--
1/18/2006	310	--	--
1/23/2006	290	--	--
1/25/2006	350	--	--
1/30/2006	425	--	--
2/1/2006	425	--	--
2/6/2006	400	--	--
2/8/2006	430	--	--
2/13/2006	350	--	--
2/15/2006	350	<0.08	6.8
2/20/2006	325	--	--
2/22/2006	350	--	--
2/27/2006	350	--	--
3/1/2006	425	--	--
3/6/2006	315	--	--
3/8/2006	300	--	--
3/13/2006	300	--	--
3/15/2006	300	--	--
3/20/2006	325	<0.08	7.1
3/22/2006	300	--	--
3/27/2006	300	--	--
3/29/2006	325	--	--

Constituent	Electrical Conductivity	Ammonia Nitrogen, Total (as N)	Nitrate Nitrogen, Total (as N)
Unit	µmhos/cm	mg/L	mg/L
Most Stringent Criterion	700	0.69	10
Basis <sup>1</sup>	AGR	NAWQC	MCL
4/3/2006	290	--	--
4/5/2006	250	--	--
4/10/2006	300	<0.08	3.6
4/12/2006	325	--	--
4/17/2006	351	--	--
4/19/2006	382	--	--
4/24/2006	413	--	--
4/26/2006	407	--	--
5/1/2006	410	--	--
5/3/2006	410	--	--
5/8/2006	403	--	--
5/10/2006	405	--	--
5/15/2006	449	<0.08	2.5
5/17/2006	424	--	--
5/22/2006	383	--	--
5/24/2006	418	--	--
5/29/2006	443	--	--
5/31/2006	451	--	--
6/5/2006	465	--	--
6/7/2006	461	--	--
6/12/2006	455	--	--
6/14/2006	484	--	--
6/19/2006	453	--	--
6/21/2006	484	<0.08	3.2
6/26/2006	446	--	--
6/28/2006	448	--	--
7/3/2006	476	--	--
7/5/2006	473	--	--
7/10/2006	446	--	--
7/12/2006	415	--	--
7/17/2006	429	--	--
7/19/2006	415	<0.08	8.8
7/24/2006	417	--	--
7/26/2006	418	--	--
7/31/2006	437	--	--

Constituent	Electrical Conductivity	Ammonia Nitrogen, Total (as N)	Nitrate Nitrogen, Total (as N)
Unit	µmhos/cm	mg/L	mg/L
Most Stringent Criterion	700	0.69	10
Basis <sup>1</sup>	AGR	NAWQC	MCL
8/2/2006	433	--	--
8/7/2006	429	--	--
8/9/2006	411	--	--
8/14/2006	431	--	--
8/16/2006	409	<0.08	3.8
8/20/2006	438	--	--
8/22/2006	437	--	--
8/28/2006	437	--	--
8/30/2006	423	--	--
9/4/2006	422	--	--
9/6/2006	424	--	--
9/11/2006	425	--	--
9/13/2006	425	<0.08	11.3
9/18/2006	419	--	--
9/20/2006	351	--	--
9/25/2006	356	--	--
9/27/2006	356	--	--
10/2/2006	350	--	--
10/4/2006	364	--	--
10/9/2006	356	--	--
10/11/2006	362	--	--
10/16/2006	363	--	--
10/18/2006	347	<0.08	7.3
10/23/2006	346	--	--
10/25/2006	352	--	--
10/30/2006	368	--	--
11/1/2006	359	--	--
11/6/2006	359	--	--
11/8/2006	357	<0.08	6.8
11/13/2006	471	--	--
11/15/2006	453	--	--
11/20/2006	471	--	--
11/22/2006	491	--	--
11/27/2006	453	--	--
11/29/2006	496	--	--

Constituent	Electrical Conductivity	Ammonia Nitrogen, Total (as N)	Nitrate Nitrogen, Total (as N)
Unit	µmhos/cm	mg/L	mg/L
Most Stringent Criterion	700	0.69	10
Basis <sup>1</sup>	AGR	NAWQC	MCL
12/4/2006	463	<0.08	7.3
12/6/2006	485	--	--
12/11/2006	441	--	--
12/13/2006	436	--	--
12/14/2006	450	--	11.3
12/18/2006	482	--	--
12/20/2006	474	--	--
12/25/2006	473	--	--
12/27/2006	459	--	--
1/1/2007	466	--	--
1/3/2007	480	--	--
1/8/2007	468	--	--
1/10/2007	485	--	--
1/15/2007	456	--	--
1/17/2007	461	--	--
1/22/2007	450	--	--
1/24/2007	476	--	--
1/29/2007	477	--	--
1/30/2007	--	<0.8	8.9
1/31/2007	484	--	--
2/5/2007	469	--	--
2/7/2007	479	--	--
2/12/2007	357	<0.08	7.1
2/14/2007	413	--	--
2/19/2007	490	--	--
2/21/2007	463	--	--
2/26/2007	392	--	--
2/28/2007	372	--	--

Note: Values reported as non-detect are represented with the associated minimum detection level if available. If not available, the value is represented as ND.

<sup>1</sup> AGR – Based on water quality criteria for the protection of agriculture

NAWQC – Based on USEPA’s National Ambient Water Quality Criteria for the protection of freshwater aquatic life

MCL – Based on the Primary Maximum Contaminant Level

<sup>2</sup> The results of split samples are represented in the table as “value / value”



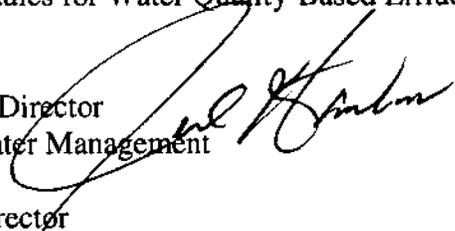
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

MAY 10 2007

OFFICE OF  
WATER

MEMORANDUM

SUBJECT: Compliance Schedules for Water Quality-Based Effluent Limitations in NPDES Permits

FROM: James A. Hanlon, Director  
Office of Wastewater Management 

TO: Alexis Strauss, Director  
Water Division  
EPA Region 9

Recently, in discussions with Region 9, questions have been raised concerning the use of compliance schedules in National Pollutant Discharge Elimination System (NPDES) permits consistent with the Clean Water Act (CWA) and its implementing regulations at 40 C.F.R. § 122.47. The use of compliance schedules in NPDES permits is also the subject of ongoing litigation in California. The purpose of this memo is to provide a framework for the review of permits consistent with the CWA and its implementing regulations.

When may a permitting authority include a compliance schedule in a permit for the purpose of achieving a water quality-based effluent limitation?

In *In The Matter of Star-Kist Caribe, Inc.*, 3 E.A.D. 172, 175, 177 (1990), the EPA Administrator interpreted section 301(b)(1)(C) of the CWA to mean that 1) after July 1, 1977, permits must require immediate compliance with (*i.e.*, may not contain compliance schedules for) effluent limitations based on water quality standards adopted before July 1, 1977, and 2) compliance schedules are allowed for effluent limitations based on standards adopted after that date only if the State has clearly indicated in its water quality standards or implementing regulations that it intends to allow them.

What principles are applicable to assessing whether a compliance schedule for achieving a water quality-based effluent limitation is consistent with the CWA and its implementing regulations?

1. “When appropriate,” NPDES permits may include “a schedule of compliance leading to compliance with CWA and regulations . . . as soon as possible, but not later than the applicable statutory deadline under the CWA.” 40 C.F.R. § 122.47(a)(1). Compliance schedules that are longer than one year in duration must set forth interim requirements and dates for their achievement. 40 C.F.R. § 122.47(a)(3).

2. Any compliance schedule contained in an NPDES permit must be an “enforceable sequence of actions or operations leading to compliance with a [water quality-based] effluent limitation [“WQBEL”]” as required by the definition of “schedule of compliance” in section 502(17) of the CWA. *See also* 40 C.F.R. § 122.2 (definition of schedule of compliance).

3. Any compliance schedule contained in an NPDES permit must include an enforceable final effluent limitation and a date for its achievement that is within the timeframe allowed by the applicable state or federal law provision authorizing compliance schedules as required by CWA sections 301(b)(1)(C); 502(17); the Administrator’s decision in *Star-Kist Caribe, Inc.* 3 E.A.D. 172, 175, 177-178 (1990); and EPA regulations at 40 C.F.R. §§ 122.2, 122.44(d) and 122.44(d)(1)(vii)(A).

4. Any compliance schedule that extends past the expiration date of a permit must include the final effluent limitations in the permit in order to ensure enforceability of the compliance schedule as required by CWA section 502(17) and 40 C.F.R. § 122.2 (definition of schedule of compliance).

5. In order to grant a compliance schedule in an NPDES permit, the permitting authority has to make a reasonable finding, adequately supported by the administrative record, that the compliance schedule “will lead[ ] to compliance with an effluent limitation . . . ” “to meet water quality standards” by the end of the compliance schedule as required by sections 301(b)(1)(C) and 502(17) of the CWA. *See also* 40 C.F.R. §§ 122.2, 122.44(d)(1)(vii)(A).

6. In order to grant a compliance schedule in an NPDES permit, the permitting authority has to make a reasonable finding, adequately supported by the administrative record and described in the fact sheet (40 C.F.R. § 124.8), that a compliance schedule is “appropriate” and that compliance with the final WQBEL is required “as soon as possible.” *See* 40 C.F.R. §§ 122.47(a), 122.47(a)(1).

7. In order to grant a compliance schedule in an NPDES permit, the permitting authority has to make a reasonable finding, adequately supported by the administrative record, that the discharger cannot immediately comply with the WQBEL upon the effective date of the permit. 40 C.F.R. §§ 122.47, 122.47(a)(1).

8. Factors relevant to whether a compliance schedule in a specific permit is “appropriate” under 40 C.F.R. § 122.47(a) include: how much time the discharger has already had to meet the WQBEL(s) under prior permits; the extent to which the discharger has made good faith efforts to comply with the WQBELs and other requirements in its prior permit(s); whether there is any need for modifications to treatment facilities, operations or measures to meet the WQBELs and if so, how long would it take to implement the modifications to treatment, operations or other measures; or whether the discharger would be expected to use the same treatment facilities, operations or other measures to meet the WQBEL as it would have used to meet the WQBEL in its prior permit.

9. Factors relevant to a conclusion that a particular compliance schedule requires compliance with the WQBEL “as soon as possible,” as required by 40 C.F.R. § 122.47(a)(1) include: consideration of the steps needed to modify or install treatment facilities, operations or other measures and the time those steps would take. The permitting authority should not simply presume that a compliance schedule be based on the maximum time period allowed by a State’s authorizing provision.

10. A compliance schedule based solely on time needed to develop a Total Maximum Daily Load is not appropriate, consistent with EPA’s letter of October 23, 2006, to Celeste Cantu, Executive Director of the California State Water Resources Control Board, in which EPA disapproved a provision of the Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries for California.

11. A compliance schedule based solely on time needed to develop a Use Attainability Analysis is also not appropriate, consistent with EPA’s letter of February 20, 2007, to Doyle Childers, Director Missouri Department of Natural Resources, nor is a compliance schedule based solely on time needed to develop a site specific criterion, for the same reasons as set forth in the October 23, 2006, (referenced in Paragraph 10) and February 20, 2007 letters.

If you have any questions, please contact me at (202) 564-0748 or have your staff contact Linda Boornazian at (202) 564-0221.