CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

CENTRAL VALLEY REGION

11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114
Phone (916) 464-3291 • FAX (916) 464-4645
http://www.waterboards.ca.gov/centralvalley

ORDER NO. R5-2007-0070
NPDES NO. CA0079367
WASTE DISCHARGE REQUIREMENTS FOR THE
PLACER COUNTY DEPARTMENT OF FACILITY SERVICES
PLACER COUNTY SEWER MAINTENANCE DISTRICT NO. 3
PLACER COUNTY

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

Discharger	**Placer County Department of Facility Services**
Name of Facility	**Placer County Sewer Maintenance District No. 3**
Facility Address	**4928 Auburn Folsom Road**
	Loomis, CA 95650
	Placer County

The discharge by the Owner from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Treated Wastewater	38º, 47’, 40” N	120 º, 7’, 35” W	Miners Ravine

This Order was adopted by the Regional Water Board on:	**22 June 2007**
This Order shall become effective on:	**50 days after adopted date**
This Order shall expire on:	**1 June 2012**
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Board have classified this discharge as a minor discharge.	
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, **no later than 180 days in advance of the Order expiration date** as application for issuance of new waste discharge requirements.	

IT IS HEREBY ORDERED, that Order No. 5-00-118 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code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 **22 June 2007.**

_____
PAMELA C. CREEDON, Executive Officer

TABLE OF CONTENTS

I. Facility Information 3
II. Findings 3
III. Discharge Prohibitions 8
IV. Effluent Limitations and Discharge Specifications 9
A. Effluent Limitations – Discharge Point D-001 9
B. Land Discharge Specifications – Not Applicable 12
C. Reclamation Specifications – Not Applicable 12
V. Receiving Water Limitations 12
A. Surface Water Limitations 12
B. Groundwater Limitations 15
VI. Provisions 15
A. Standard Provisions 15
B. Monitoring and Reporting Program Requirements 20
C. Special Provisions 20
1. Reopener Provisions 20
2. Best Management Practices and Pollution Prevention 23
3. Construction, Operation and Maintenance Specifications 24
4. Special Provisions for Municipal Facilities 24
5. Other Special Provisions 27
6. Compliance Schedules 28
VII. Compliance Determination 28
Attachment A – Definitions A-1
Attachment B – Topographic Map B-1
Attachment C – Flow Schematic C-1
Attachment D – Federal Standard Provisions D-1
Attachment E – Monitoring and Reporting Program (MRP) E-1
Attachment F – Fact Sheet F-1

I. FACILITY INFORMATION

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

Discharger	**Placer County Department of Facility Services**
Name of Facility	**Placer County Sewer Maintenance District No. 3**
Facility Address	**4928 Auburn Folsom Road**
	Loomis, CA 95650
	Placer County
Facility Contact, Title, and Phone	**Will Dickinson, Deputy Director of Facility Services, 530-886-4900**
Mailing Address	**Placer County Department of Facility Services 11476 C Avenue Auburn, CA 95603**
Type of Facility	**Publicly Owned Treatment Works**
Facility Design Flow	**0.30 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 Placer County Department of Facility Services (hereinafter Discharger) is currently discharging under Order No. 5-00-118 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0079367. The Discharger submitted a Report of Waste Discharge, dated 27 December 2004**,** and applied for a NPDES permit renewal to discharge an average dry weather flow of 0.3 mgd of treated wastewater from the Placer County Sewer Maintenance District No. 3 wastewater treatment plant**,** hereinafter Facility. The application was deemed legally complete on 1 June 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 the Placer County Sewer Maintenance District No. 3 wastewater treatment plant (WWTP). The WWTP consists of a primary clarifier, trickling filter, secondary clarifier, final clarifier, chemical feed system for flocculation, sand filtration (tertiary treatment), chlorination, and dechlorination. Sludge is anaerobically digested, dewatered, and disposed of off-site at a local landfill. Wastewater is discharged from Discharge D-001 (see table on cover page) to Miners Ravine, a water of the United States and a tributary to Dry Creek, the Natomas East Main Drainage Canal, Bannon Slough, and the Sacramento River. Bannon Slough enters the Sacramento River immediately upstream of the confluence with the American River. Attachment B provides a topographic 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). 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 of the CWC for discharges that are not subject to regulation under CWA section 402.

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. 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 are also incorporated into this Order.

E. **California Environmental Quality Act (CEQA).** This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, *et seq*.) in accordance with Section 13389 of the CWC.

F. **Technology-Based Effluent Limitations**. Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations (CFR)[1] 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 Part 133. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet.

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

Section 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) EPA

[1] All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

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 section 122.44(d)(1)(vi).

H. **Water Quality Control Plans**. The Regional Water Board adopted a *Water Quality Control Plan, Fourth Edition,* for the *Sacramento and San Joaquin River Basins* (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. In addition, State Water Resources Control Board (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 at II-2.0 states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. The Basin Plan does not specifically identify beneficial uses for Miners Ravine, but identify existing and potential uses for the Sacramento River (Colusa Basin Drain to the "I" Street Bridge, Colusa Basin Drain Hydrologic Unit 520.00), to which Miners Ravine, via Dry Creek, Natomas East Main Drainage Canal, and Bannon Slough is tributary. These beneficial uses are municipal and domestic supply (MUN); agricultural irrigation (AGR), water contact recreation (REC-1) and non-contact water recreation (REC-2), warm (WARM) and cold (COLD) freshwater habitat, warm and cold water migration habitat (MIGR), warm and cold water spawning (SPWN), wildlife habitat (WILD) and navigation (NAV). In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assigns the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. Thus, as discussed in detail in the Fact Sheet (Attachment F), beneficial uses applicable to Miners Ravine are as follows:

Discharge Point	Receiving Water	Beneficial Use(s)
001	Miners Ravine	Existing: MUN, AGR, REC-1, REC-2, WARM, COLD, MIGR, SPWN, WILD, NAV.

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, which was amended on 4 May 1995 and 9 November 1999, and the CTR on 18 May 2000, which was amended on 13 February 2001. These rules include water quality criteria for priority pollutants and are applicable to this discharge.

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 24 February 2005.

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 Board Order WQ 2001-06 at pp. 53-55). See also Communities for a Better Environment 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 September 25, 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 Water Code section 13300 or a Cease and Desist Order pursuant to Water Code 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 May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation that 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 and/or discharge specifications. A detailed discussion of the basis for the compliance schedule(s) and interim effluent limitation(s) and/or discharge specifications 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 FR 24641, 27 April 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 BOD_5 and TSS. The water quality-based effluent limitations consist of restrictions on turbidity and pathogens. 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, 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 Water Code section 13241 in establishing these requirements.

Water quality-based effluent limitations 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 water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on May 1, 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 May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "*applicable water quality standards for purposes of the [Clean Water] Act*" pursuant to 40 CFR section 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.** Section 131.12 of 40 CFR requires that State water quality standards include an antidegradation policy consistent with the federal policy. The

State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings.

As discussed in detail in the Fact Sheet (Attachment F) the permitted discharge is consistent with the antidegradation provision of 40 CFR §131.12 and State Water Board Resolution 68-16. This Order does not allow an increase of discharge from the previous WDR Order and implements existing and new limitations and requirements.

O. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR Section 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. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

P. **Monitoring and Reporting.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC 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 in accordance with 40 CFR Sections 122.41and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D. 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 (Attachment F).

R. **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 (Attachment F) of this Order.

S. **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 (Attachment F) 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 to surface waters 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 as defined in Section 13050 of the California Water Code.

D. The Discharger shall not allow pollutant-free wastewater to be discharged into the collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Order.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point D-001

1. Final Effluent Limitations – Discharge Point D-001

a. The discharge of treated wastewater shall maintain compliance with the following effluent limitations at Discharge Point D-001, with compliance measured at Monitoring Location M-001 as described in the attached Monitoring and Reporting Program (Attachment E):

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand 5-day @ 20°C	mg/L	10	15	25	--	--
	lbs/day[1]	25	38	63	--	--
Total Suspended Solids	mg/L	10	15	25	--	--
	lbs/day[1]	25	38	63	--	--
pH	standard units	--	--	--	6.5	8.2
Settleable Solids	mL/L-hr	0.1	--	0.2	--	--
Electrical Conductivity @ 25°C	µmhos/cm	700	--	---	--	--
Turbidity[2]	NTU	--	--	--	--	10
Nitrate (as N)	mg/L	10	--	--	--	--
	lbs/day[1]	25	--	--	--	--
Organochlorine Pesticides	µg/L	--	--	--	--	ND[3]
Aluminum (Total)	µg/L	71.2	--	142.9	--	--
	lbs/day[1]	0.18	--	0.36	--	--
Iron (Total)	µg/L	300				
	lbs/day[1]	0.75				
Manganese (Total)	µg/L	50				
	lbs/day[1]	0.13				
Ammonia, total (as N)	mg/L	1.2	--	3.7	--	--
	lbs/day[1]	3.0	--	9.3	--	--
Dichlorobromomethane	µg/L	0.56	--	1.13	--	--

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
	lbs/day[1]	1.40	--	2.83	--	--
Copper (Total)	µg/L	2.89	--	5.76	--	--
	lbs/day[1]	0.007	--	0.014	--	--
Dibromochloromethane	µg/L	0.41	--	0.82	--	--
	lbs/day[1]	1.03	--	2.05	--	--

[1] Based upon an average dry weather flow of 0.3 mgd.
[2] When the receiving water flow to effluent flow ratio is greater than 20-to-1, the instantaneous maximum turbidity limitation does not apply. The filters shall be used to the maximum extent possible.
[3] The non-detectable (ND) limitation applies to each individual pesticide. No individual pesticide may be present in the discharge at detectable concentrations. The Discharger shall use USEPA standard analytical techniques with a maximum acceptable detection level of 0.05 µg/L. Organochlorine pesticides include aldrin, dieldrin, chlordane, endrin, endrin aldehyde, heptachlor, heptachlor epoxide, hexachlorocyclohexane (alpha-BHC, beta-BHC, delta-BHC, and gamma-BHC or lindane), endosulfan (alpha and beta), endosulfan sulfate, toxaphene, 4,4'DDD, 4,4'DDE, and 4,4'DDT.

b. **Average Dry Weather Flow**: The average dry weather discharge flow shall not exceed 0.3 million gallons per day.

c. **Mercury**: The total monthly mass discharge of total mercury shall not exceed0.000606 pounds/month.

d. **Percent Removal:** The average monthly percent removal of BOD 5-day 20°C and total suspended solids shall not be less than 85 percent.

e. **Total Residual Chlorine**: Effluent total residual chlorine shall not exceed the following:

   i. 0.01 mg/L as a four-day average;
   ii. 0.02 mg/L as a one-hour average;

f. **Turbidity**: When the receiving water flow to effluent flow ratio is less than 20-to-1, effluent turbidity shall not exceed the following when tertiary treatment, or equivalent, is required:

   i. 2 NTU as a daily average;
   ii. 5 NTU more than 5 percent of the time within a 24-hour period; and

g. **Total Coliform Organisms**: Effluent total coliform organisms concentrations shall not exceed the following:

   i. 2.2 MPN/100 mL as a seven-day median;
   ii. 23 MPN/100 mL more than once in any 30-day period; and
   iii. 240 MPN/100 ml at any time

h. **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%

2. **Interim Effluent Limitations**

The following interim effluent limitations shall apply in lieu of the corresponding final effluent limitations specified for the same parameters during the time period indicated in this provision. Final effluent limitations in Section IV.a.1. for constituents that do not have corresponding interim limitation are effective upon the effective date of this Order. Compliance shall be maintained at D-001, with compliance measured at Monitoring Location M-001 as described in the attached Monitoring and Reporting Program (Attachment E).

a. During the period beginning with the effective date of this Order and ending on 18 May 2010, the discharge of treated wastewater shall maintain compliance with the following limitations at D-001.

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Aluminum (Total)	µg/L	--	--	547	--	--
	lbs/day[1]	--	--	1.4	--	--
Dichlorobromomethane	µg/L	--	--	59.0	--	--
	lbs/day[1]	--	--	0.15	--	--
Copper (Total)	µg/L	--	--	23.0	--	--
	lbs/day[1]	--	--	0.058	--	--
Dibromochloromomethane	µg/L	--	--	6.5	--	--
	lbs/day[1]	--	--	0.016	--	--
4,4-DDD	µg/L	--	--	0.17	--	--
	lbs/day[1]	--	--	0.00043	--	--
4,4-DDT	µg/L	--	--	0.096	--	--
	lbs/day[1]	--	--	0.00024	--	--
Aldrin	µg/L	--	--	0.12	--	--
	lbs/day[1]	--	--	0.00030	--	--
Alpha-BHC	µg/L	--	--	1.4	--	--
	lbs/day[1]	--	--	0.0035	--	--
beta-Endosulfan	µg/L	--	--	0.062	--	--
	lbs/day[1]	--	--	0.00015	--	--
Endrin	µg/L	--	--	0.065	--	--
	lbs/day[1]	--	--	0.00016	--	--

[1] Based upon an average dry weather flow of 0.3 mgd.

b. During the period beginning with the effective date of this Order and ending three years after the effective date of this Order, the discharge of treated wastewater shall maintain compliance with the following limitations:

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Turbidity[1]	NTU	2	--	5	--	--

[1] When the receiving water flow to effluent flow ratio is greater than 20-to-1, the filters will be used to the maximum extent possible and the effluent turbidity limit does not apply. The receiving water turbidity limitation remains intact.

c. During the period beginning on May 19, 2010 and ending five years after the effective date of this Order, the discharge of treated wastewater shall maintain compliance with the following limitations:

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
4,4-DDD	µg/L	--	--	0.0017	--	--
4,4-DDT	µg/L	--	--	0.0012	--	--
Aldrin	µg/L	--	--	0.00026	--	--
Alpha-BHC	µg/L	--	--	0.0078	--	--
Beta-Endosulfan	µg/L	--	--	0.09	--	0.22
Endrin	µg/L	--	--	0.06	--	--

d. **Total Coliform Organisms**: During the period beginning with the effective date of this Order and ending two years after the effective date of this Order, effluent total coliform organisms concentrations shall not exceed 2.2 MPN/100 mL as a seven-day median and 23 MPN/100 mL as a daily maximum, as required in the previous WDR Order No. 5-00-118.

e. **Nitrates**: The Discharger shall comply with final nitrate mass effluent limitations in Section IV.A.1.a. within four years after the effective date of this Order. Effluent nitrate concentrations shall not exceed the interim limitations included in CDO No. R5-2007-XXX.

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 Miners Ravine:

1. **Fecal Coliform**. 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 that 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. **Discoloration**. Discoloration that causes nuisance or adversely affects beneficial uses.

5. **Dissolved Oxygen**. The dissolved oxygen concentration to be reduced below 7.0 mg/L at any time.

6. **Floating Material**. Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.

7. **Oils and Greases**. 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 A one-month averaging period may be applied when calculating the pH change of 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, 18th 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.

g. Thiobencarb to be present in excess of 1.0 mg/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.

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- or Odor-Producing Substances**. 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. **Toxic Substances**. 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.

d. More than 10 percent where natural turbidity is greater than 100 NTUs.

B. **Groundwater Limitations**

1. Release of waste constituents from any storage, treatment, or disposal component associated with the WWTP, in combination with other sources, shall not cause the underlying groundwater to contain waste constituents in concentrations greater than background water quality, and shall not violate water quality objectives, impact beneficial uses, or cause a condition of pollution or nuisance.

VI. PROVISIONS

A. **Standard Provisions**

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

   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.

2. **Regional Water Board Standard Provisions.** The Discharger shall comply with the following provisions:

   a. If the Discharger's wastewater treatment plant 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 14.

   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:

1. 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.

2. 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.

3. Change in sludge use or disposal practice. Under 40 Code of Federal Regulations (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 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. If more stringent applicable water quality standards are approved, pursuant to Section 303 of the CWA, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

e. 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.

f. 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.

g. By-pass (the intentional diversion of waste streams from any portion of a treatment facility or collection system, except those portions designed to meet variable effluent limits) is prohibited except under the following conditions:

i. by-pass is required for essential maintenance to assure efficient operation;

and

ii. neither effluent nor receiving water limitations are exceeded;

and

iii. the Discharger notifies the Regional Water Board ten days in advance.

h. 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.

i. 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.

j. The discharge of any radiological, chemical or biological warfare agent or high-level, radiological waste is prohibited.

k. 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.

l. Neither the treatment nor the discharge shall create a condition of nuisance or pollution as defined by the CWC, Section 13050.

m. 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.

n. The Discharger, upon written request of the Regional Water Board, shall file with the Regional Water 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.l.

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 that 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.

o. 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.

p. The Discharger shall submit technical reports as directed by the Executive Officer.

q. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. 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 Board staff. The Quality Assurance-Quality Control Program must conform to EPA guidelines or to procedures approved by the Regional Water Board.

   Unless otherwise specified, all metals shall be reported as Total Metals.

   Unless otherwise specified, bioassays shall be performed in the following manner:

   i. Acute bioassays shall be performed in accordance with guidelines approved by the Regional Water Board and the Department of Fish and Game or in accordance with methods described in USEPA's manual for measuring acute toxicity of effluents (EPA-821-R-02-012 and subsequent amendments).

   ii. Short-term chronic bioassays shall be performed in accordance with USEPA guidelines (EPA-821-R-02-013 and subsequent amendments).

r. Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Regional Water Board and USEPA.

s. 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.

t. 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.

u. 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.

v. 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.

w. 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.

x. Upon written request of the Board, the Discharger shall submit a summary monitoring report to the Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).

B. **Monitoring and Reporting Program Requirements**

1. The discharger shall comply with the Monitoring and Reporting Program, and future revisions thereto, in Attachment E of this Order.

2. Within **60 days** of permit adoption, 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.

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 or other information that becomes available.

b. 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. **Salinity Evaluation and Minimization Plan.** This Order requires that the Discharger prepare and implement a salinity and mineralization evaluation and minimization plan to address sources of salinity and mineralization from the municipal wastewater treatment system. The plan shall be completed and submitted to the Regional Water Board within 9 months of the effective date of this Order for approval by the Executive Officer. Based on a review of the results of implementation of the salinity evaluation and minimization plan this Order may be reopened for addition and/or modification of effluent limitations and requirements for salinity.

d. **Pollution Prevention.** This Order (Provisions VI.C.3 and VI.C.7) requires the Discharger to prepare pollution prevention plans following CWC section 13263.3(d)(3) for aluminum, 4,4-DDD, 4,4-DDT, aldrin, alpha-BHC, aluminum, dichlorobromomethane, dibromochloromethane, copper, beta-endosulfan, and endrin. 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 these constituents.

e. A Compliance Schedule for new final Effluent Limitations for; 4,4-DDD, 4,4-DDT, aldrin, alpha-BHC, aluminum, dichlorobromomethane, dibromochloromethane, copper, beta-endosulfan, endrin, nitrates (mass limitation only) and total coliform bacteria (instantaneous maximum limitation only) is included in this Order: The data submitted by the Discharger indicate that the discharge contains constituents that have a reasonable potential to cause or contribute to an exceedance of water quality standards. Therefore, water quality based Effluent Limitations have been included in this Order for the constituents 4,4-DDD, 4,4-DDT, aldrin, alpha-BHC, aluminum, dichlorobromomethane, dibromochloromethane, copper, beta-endosulfan, and endrin.

   The Discharger's Infeasibility Analysis, dated January 2007, provides justification for a compliance schedule and meets the requirements of Section

2.1 of the SIP. The justification in the Analysis provides for a time schedule for the Discharger to comply with all new limitations for California Toxic Rule (CTR) constituents by 18 May 2010, and new limitations for new organochlorine pesticides limitation (based on Basin Plan objectives) in five years from the effective date of this Order and new and existing limitations for nitrates in four years from this Order. The Analysis includes the Discharger's final determination regarding regionalization of this facility with the City of Roseville Dry Creek WWTP. Allowance of an additional compliance schedule beyond the dates specified above may be granted in a subsequent enforcement order (for example, Time Schedule Order or Cease and Desist Order), as the Regional Water Board deems necessary. The Discharger has committed to submitting their decision regarding regionalization of this facility to the Regional Water Board office by 31 January 2008.

The Discharger shall submit semiannual progress reports on 15 January and 15 July each year until the Discharger achieves compliance with the final Effluent Limitations for 4,4-DDD, 4,4-DDT, aldrin, alpha-BHC, aluminum, dichlorobromomethane, dibromochloromethane, copper, beta-endosulfan, endrin, and total coliform bacteria. Prior to the compliance date specified in this Order, the Discharger shall comply with the interim Effluent Limitations. The Discharger shall additionally complete a study to assess the sources of 4,4-DDD, 4,4-DDT, aldrin, alpha-BHC, aluminum, dichlorobromomethane, dibromochloromethane, copper, beta-endosulfan, and endrin and determine if source control measures or treatment are necessary to achieve compliance. The Discharger must comply with the following schedule to evaluate 4,4-DDD, 4,4-DDT, aldrin, alpha-BHC, aluminum, dichlorobromomethane, dibromochloromethane, copper, beta-endosulfan, and endrin concentrations in effluent from this facility, and in the receiving water, and to develop a source control program or treatment measures necessary to achieve compliance with this Order:

Task	Compliance Date
Submit Plan for Studies	Within 60 days of adoption of this Order
Begin Studies	Within 60 days of adoption of this Order
Submit Final Decision Regarding Regionalization of Facility	31 January 2008
Complete Studies for CTR Constituents	Within 16 months of adoption of this Order
Complete Studies for non-CTR Constituents	Within 24 months of adoption of this Order
Submit Report on Study	Within 3 months of completing each stu
Full Compliance with Effluent Limitations	As specified in this Order

The Discharger shall submit to the Regional Water Board on or before each compliance 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 schedule. If new

water quality criteria or objectives for 4,4-DDD, 4,4-DDT, aldrin, alpha-BHC, aluminum, dichlorobromomethane, dibromochloromethane, copper, beta-endosulfan, and endrin are adopted, this Order will be reopened and the Effluent Limitations for 4,4-DDD, 4,4-DDT, aldrin, alpha-BHC, aluminum, dichlorobromomethane, dibromochloromethane, copper, beta-endosulfan, and endrin will be modified or new ones added, as necessary.

f. **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.

g. **Water Effects Ratios (WER) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for copper. If the Discharger performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

h. **Mixing Zone.** Available receiving water flow data indicate that some dilution may always be available in the receiving water. If the Discharger performs and submits to the Regional Water Board an approvable mixing zone study, this Order may be reopened to modify the effluent limitations, as appropriate, based on the findings of an approved study.

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

a. **Pollution Prevention Plans for aluminum, 4,4-DDD, 4,4-DDT, aldrin, alpha-BHC, dichlorobromomethane, dibromochloromethane, copper, beta-endosulfan, and endrin.** The Discharger shall prepare pollution prevention plans for aluminum, 4,4-DDD, 4,4-DDT, aldrin, alpha-BHC, dichlorobromomethane, dibromochloromethane, copper, beta-endosulfan, and endrin in accordance with CWC section 13263.3(d)(3). The minimum requirements for the pollution prevention plans are outlined in the Fact Sheet, Attachment F. A work plan and time schedule for preparation of the pollution prevention plan shall be completed and submitted **within 6 months of the effective date of this Order** 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 Monitoring and Reporting Program (Attachment E, Section X.D.1.).

b. **Salinity Evaluation and Minimization Plan.** The Discharger shall prepare and implement a salinity and mineralization evaluation and minimization plan to address sources of salinity and mineralization from the municipal wastewater treatment system. The plan shall be completed and submitted to the Regional Water Board **within 9 months of the effective date of this Order for approval by the Executive Officer**.

c. **Salinity Reduction Goal.** The Discharger shall provide annual reports demonstrating reasonable progress in the reduction of salinity in its discharge to Miners Ravine. Based on effluent data for this facility, the Regional Water Board finds that a monthly average salinity effluent limitation of 700 µmhos/cm as electrical conductivity (EC) is a reasonable performance-based limitation that can be immediately achieved upon the effective date of this Order. The annual reports shall be submitted in accordance with the Monitoring and Reporting Program (Attachment E, Section X.D.1.).

3. **Construction, Operation and Maintenance Specifications**

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

b. This permit, and the Monitoring and Reporting Program 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 has established an electronic system for operator notification for continuous recording device alarms and is required to maintain the system.

4. **Special Provisions for Municipal Facilities**

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 quality control 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

Groundwater Limitations V.B. Sludge treatment or biosolids dewatering does not occur onsite at this facility between 15 October and 15 April of each year. If sludge/biosolids processing is needed during this period due to high levels in the digester, the Discharger is to transport the sludge/biosolids to another County facility. 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 Groundwater Limitations V.B. .

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 Monitoring and Reporting Program 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 U.S. EPA 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 May 2, 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. As required, the Discharger applied for coverage under State Water Board Order No. 2006-0003 for operation of its wastewater collection system.

   Regardless of the coverage obtained under Order No. 2006-0003, the Discharger's collection system is part of the treatment system that is subject to this Order. As such, pursuant to federal regulations, the Discharger must properly operate and maintain its collection system [40 CFR section 122.41(e)], report any non-compliance [40 CFR section 122.41(l)(6) and (7)], and mitigate any discharge from the collection system in violation of this Order [40 CFR. section 122.41(d)].

e. **Pretreatment Requirements – Not Applicable**

5. **Other Special Provisions**

a. When required by this Order, wastewater shall be oxidized, coagulated, filtered, and adequately disinfected pursuant to the DHS reclamation criteria, Title 22 California Code of Regulations, Division 4, Chapter 3, (Tile 22) or equivalent.

b. 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.

c. 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 (916) 464-3291 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall include the information required by Federal Standard Provision V.E.1 [*40 CFR §122.41(l)(6)(i)*].

d. 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. All violations must be reported as required in the Federal 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.

e. Prior to making any change in the discharge point, place of use, or purpose of use of the wastewater, the Discharger shall obtain approval of, or clearance from the State Water Resources Control Board (Division of Water Rights).

f. 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 Standard Provision 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 California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

6. **Compliance Schedules**

a. This Order contains new final Effluent Limitations based on water quality criteria contained in the CTR for dichlorobromomethane, dibromochloromethane, and copper. The Discharger must comply with new effluent limitations for CTR constituents on or before 18 May 2010. New final Effluent Limitations for aluminum are based on U.S. EPA aquatic life criteria. New final Effluent Limitations for 4,4-DDD, 4,4-DDT, aldrin, alpha-BHC, beta-endosulfan, and endrin are based on the Basin Plan non-detect narrative objective. New final Effluent Limitations for total coliform bacteria, turbidity, and nitrates (mass effluent limitation only) are based on levels needed to protect receiving water. The Discharger must comply with these new and/or newly interpreted effluent limitations based on Basin Plan objectives by the final compliance date specified in this Order. As this compliance schedule is greater than one year, the Discharger shall submit semi-annual progress reports on **15 January** and **15 July** of each year until the Discharger achieves compliance with all final water quality based effluent limitations.

VII. COMPLIANCE DETERMINATION

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

A. **BOD and TSS Effluent Limitations**. Compliance with the final effluent limitations for BOD and TSS required in sections IV.A.1. shall be ascertained by 24-hour composite samples. Compliance with effluent limitations in Section IV.A.1.b. of this Order for percent removal shall be calculated using the arithmetic mean of 20°C BOD (5-day) and total suspended solids 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. **Aluminum Effluent Limitations**. Compliance with the final effluent limitations for aluminum can be demonstrated using either total or acid-soluble (inductively coupled plasma/atomic emission spectrometry or inductively coupled plasma/mass spectrometry) analysis methods, as supported by US EPA's Ambient Water Quality Criteria for Aluminum document (EPA 440/5-86-008), or other standard methods that exclude aluminum silicate particles as approved by the Executive Officer.

C. **Average Dry Weather Flow Effluent Limitations (Sections IV.A.1.a., IV.A.1.b., IV.A.2.a., and IV.A.2.c.)**. The Average Dry Weather Flow represents the daily average flow when groundwater is at or near normal and runoff is not occurring. Compliance with the Average Dry Weather Flow effluent limitations will be determined annually based on the average daily flow over three consecutive dry weather months (e.g. July, August, and September).

D. **Total Coliform Organisms Effluent Limitations (Section IV.A.1.g.)**. 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.

E. **Total Mercury Mass Loading Effluent Limitation**

The procedures for calculating mass loadings are as follows:

i. The total pollutant mass load for each individual calendar month shall be determined using an average of all concentration data collected that month and the corresponding total monthly flow. All monitoring data collected under the monitoring and reporting program, pretreatment program and any special studies shall be used for these calculations.

ii. In calculating compliance, the Discharger shall count all non-detect measures at one-half of the detection level. If compliance with the effluent limitation is not attained due to the non-detect contribution, the Discharger shall improve and implement available analytical capabilities and compliance shall be evaluated with consideration of the detection limits.

F. **Organochlorine Pesticides Instantaneous Maximum Effluent Limitation.** The non-detectable (ND) instantaneous maximum effluent limitation for organochlorine pesticides applies to each individual pesticide. No individual pesticide may be present in the discharge at detectable concentrations. The Discharger shall use USEPA standard analytical techniques with the lowest possible detectable level for organochlorine pesticides with a maximum acceptable detection level of 0.05 µg/L. If the analytical result of a single effluent grab sample is detected for any organochlorine pesticide, a violation will be flagged and the discharger will be considered out of compliance for that single sample. Non-compliance for each sample will be considered separately (*e.g.*, the results of two grab samples taken within a calendar day that both exceed the

G. **Total Residual Chlorine (Section IV.A.1.d.).** Continuous monitoring analyzers for chlorine residual or for dechlorination agent residual in the effluent are appropriate methods for compliance determination. A positive residual dechlorination agent in the effluent indicates that chlorine is not present in the discharge, which demonstrates compliance with the effluent limitations. This type of monitoring can also be used to prove that some chlorine residual exceedances are false positives. Continuous monitoring data showing either a positive dechlorination agent residual or a chlorine residual at or below the prescribed limit are sufficient to show compliance with the total residual chlorine effluent limitations, as long as the instruments are maintained and calibrated in accordance with the manufacturer's recommendations.

   Any excursion above the 1-hour average or 4-day average total residual chlorine effluent limitations is a violation. If the Discharger conducts continuous monitoring and the Discharger can demonstrate, through data collected from a back-up monitoring system, that a chlorine spike recorded by the continuous monitor was not actually due to chlorine, then any excursion resulting from the recorded spike will not be considered an exceedance, but rather reported as a false positive.

H. **Mass Effluent Limitations.** Compliance with the mass effluent limitations will be determined during average dry weather periods only when groundwater is at or near normal and runoff is not occurring.

ATTACHMENT A – DEFINITIONS

Average Dry Weather Flow: the daily average flow when groundwater is at or near normal and runoff is not occurring.

Average Four-Day Effluent Limitation: the highest allowable average of daily discharges over a four-day period, calculated as the sum of all daily discharges measured during a four-day period divided by the number of daily discharges measured during that four-day period.

Average Hourly Effluent Limitation: the highest allowable average of discharges over a one-hour period, calculated as the sum of all discharges measured during that one-hour period divided by the number of discharges measured during that one-hour period.

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.

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).

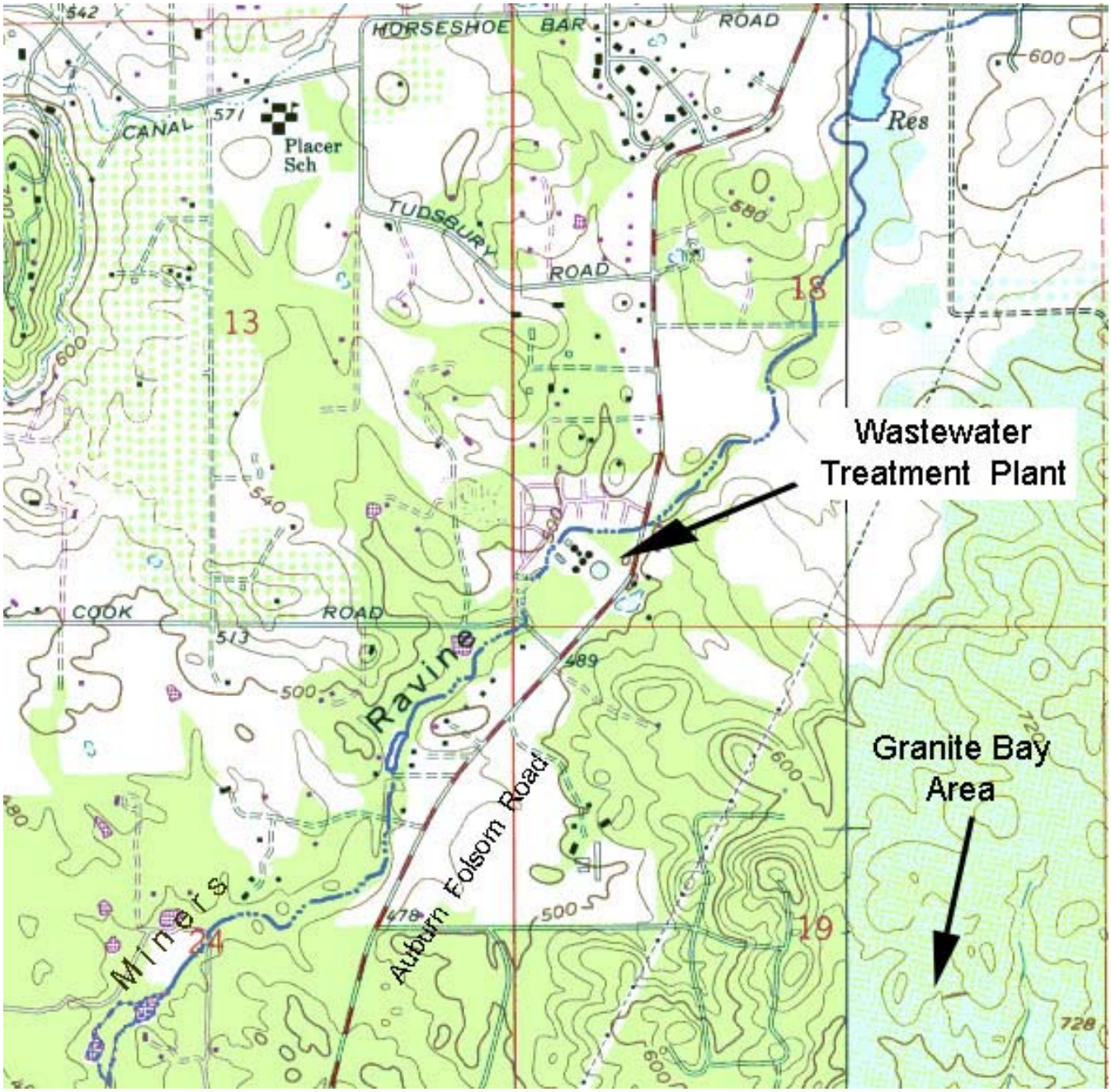
The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if one 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.

Maximum Daily Effluent Limitation (MDEL): the highest allowable daily discharge of a pollutant.

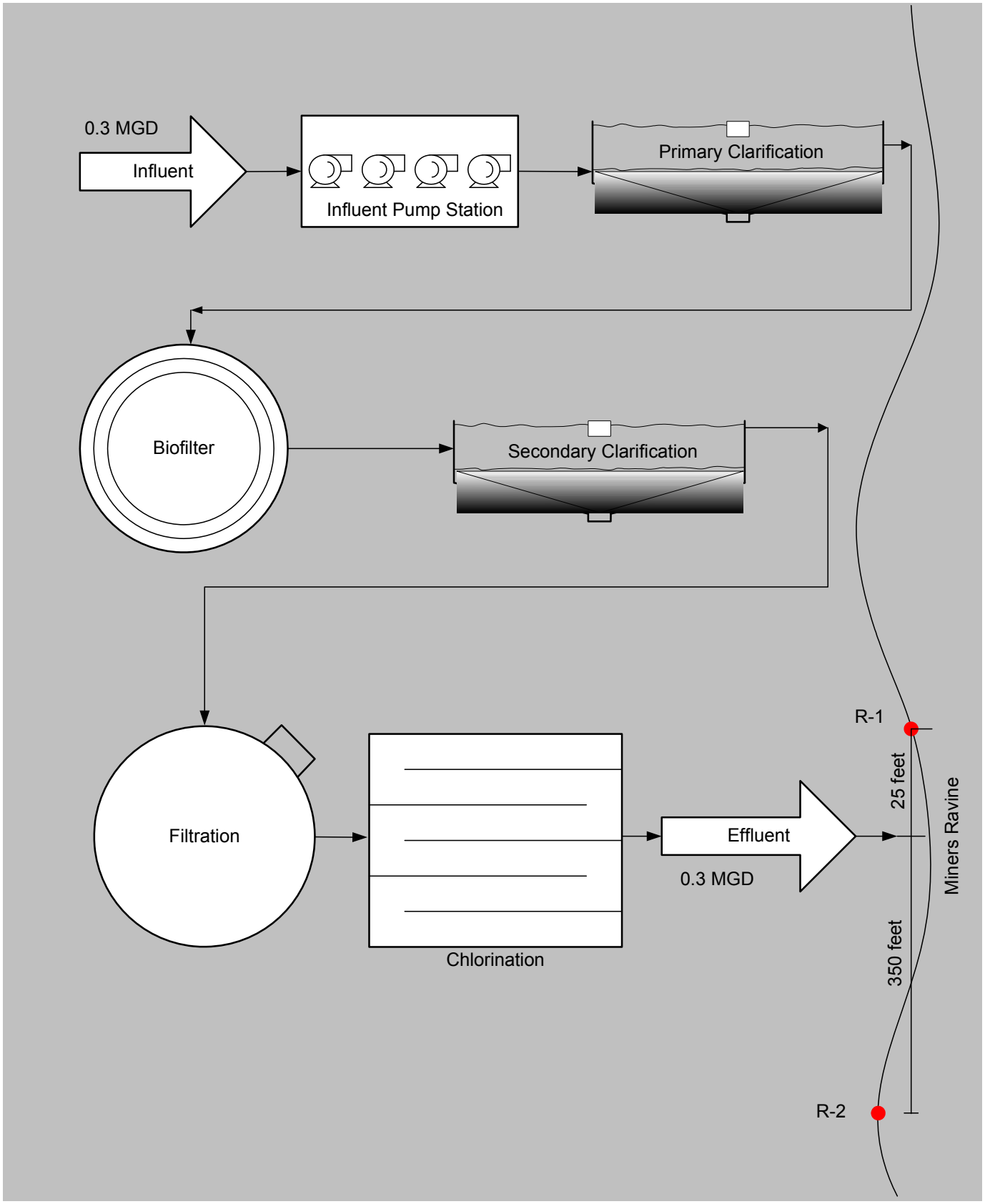
Percent Removal: the arithmetic mean of 20°C BOD (5-day) and total suspended solids in effluent samples collected over a monthly period as a percentage of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period (85 percent removal).

ATTACHMENT B – TOPOGRAPHIC MAP



Drawing Reference: **ROCKLIN QUADRANGLE** U.S.G.S TOPOGRAPHIC MAP 7.5 MINUTE QUADRANGLE *Not to scale*	SECTION 18, T11N, R8E, MDB&M WASTWATER TREATMENT PLANT PLACER COUNTY SEWER MAINTENANCE DISTRICT NO. 3 PLACER COUNTY	N W E S

ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – FEDERAL 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 (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or denial of a permit renewal application [*40 CFR Section 122.41(a)*].

2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act 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 been modified to incorporate the requirement [*40 CFR Section 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 Section 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 Section 122.41(e)*].

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges [*40 CFR Section 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 Section 122.5(c)*].

F. **Inspection and Entry**

The Discharger shall allow the Regional Water Quality Control Board (Regional Water Board), State Water Resources Control 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 Section 122.41(i)*] [*CWC 13383(c)*]:

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 Section 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 Section 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 Section 122.41(i)(3)*];

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location [*40 CFR Section 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 Section 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 Section 122.41(m)(4)(i)*]:

    a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [*40 CFR Section 122.41(m)(4)(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 Section 122.41(m)(4)(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 Section 122.41(m)(4)(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 Section 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 Section 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 Section 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 permittee. 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 Section 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 Section 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 Section 122.41(n)(3)*]:

   a. An upset occurred and that the Discharger can identify the cause(s) of the upset [*40 CFR Section 122.41(n)(3)(i)*];

   b. The permitted facility was, at the time, being properly operated [*40 CFR Section 122.41(n)(3)(i)*];

   c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) [*40 CFR Section 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 Section 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 Section 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 Section 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 Section 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 CWC [*40 CFR Section 122.41(l)(3)*] [*40 CFR Section 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 Section 122.41(j)(1)*].

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

IV. STANDARD PROVISIONS – RECORDS

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

B. **Records of monitoring information shall include:**

1. The date, exact place, and time of sampling or measurements [*40 CFR Section 122.41(j)(3)(i)*];

2. The individual(s) who performed the sampling or measurements [*40 CFR Section 122.41(j)(3)(ii)*];

3. The date(s) analyses were performed [*40 CFR Section 122.41(j)(3)(iii)*];

4. The individual(s) who performed the analyses [*40 CFR Section 122.41(j)(3)(iv)*];

5. The analytical techniques or methods used [*40 CFR Section 122.41(j)(3)(v)*]; and

6. The results of such analyses [*40 CFR Section 122.41(j)(3)(vi)*].

C. **Claims of confidentiality for the following information will be denied [*40 CFR Section 122.7(b)*]:**

1. The name and address of any permit applicant or Discharger [*40 CFR Section 122.7(b)(1)*]; and

2. Permit applications and attachments, permits and effluent data [*40 CFR Section 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 Section 122.41(h)*] [*CWC 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 Section 122.41(k)*].

2. All permit applications shall be signed as follows:

   a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures [*40 CFR Section 122.22(a)(1)*];

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively [*40 CFR Section 122.22(a)(2)*]; or

c. For a municipality, State, federal, or other public agency: 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 Section 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 paragraph (b) of this provision, 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 paragraph (2.) of this provision [*40 CFR Section 122.22(b)(1)*];

   b. The authorization specified 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 Section 122.22(b)(2)*]; and

   c. The written authorization is submitted to the Regional Water Board, State Water Board, or USEPA [*40 CFR Section 122.22(b)(3)*].

4. If an authorization under paragraph (3.) of this provision 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 paragraph (3.) of this provision must be submitted to the Regional Water Board, State Water Board, or USEPA prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 CFR Section 122.22(c)].

5. Any person signing a document under paragraph (2.) or (3.) of this provision 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 Section 122.22(d)*].

C. **Monitoring Reports**

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program in this Order [*40 CFR Section 122.41(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 Section 122.41(l)(4)(i)*].

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board [*40 CFR Section 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 Section 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 Section 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 Section 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 Section 122.41(l)(6)(ii)*]:

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

b. Any upset that exceeds any effluent limitation in this Order [*40 CFR Section 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 Section 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 Section 122.41(l)(1)*]:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR Section 122.29(b) [*40 CFR Section 122.41(l)(1)(i)*]; or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. [*40 CFR Section 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 Section 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 Section 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 Section 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 Section 122.41(l)(8)*].

VI. STANDARD PROVISIONS – ENFORCEMENT—NOT APPLICABLE

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 Section 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 Section 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 Section 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 Section 122.42(b)(3)*].

Attachment E – Monitoring and Reporting Program – Table of Contents

Attachment E – Monitoring and Reporting Program (MRP) E-2
I. General Monitoring Provisions E-2
II. Monitoring Locations E-3
III. Influent Monitoring Requirements E-4
A. Monitoring Location M-INF E-4
IV. Effluent Monitoring Requirements E-4
A. Monitoring Location M-001 ..... E-4
V. Whole Effluent Toxicity Testing Requirements E-6
A. Acute Toxicity Testing. E-6
B. Chronic Toxicity Testing. E-6
C. WET Testing Notification Requirements E-8
D. WET Testing Reporting Requirements E-8
VI. Land Discharge Monitoring Requirements – Not applicable E-9
VII. Reclamation Monitoring Requirements – not applicable E-9
VIII. Receiving Water Monitoring Requirements – Surface Water and Groundwater E-9
A. Monitoring Location R-001U and R-002D E-9
IX. Other Monitoring Requirements E-10
A. Water Supply Monitoring—Monitoring Location SPL-001 ..... E-10
B. Biosolids Monitoring—Monitoring Location B-001 ..... E-11
X. Reporting Requirements E-12
A. General Monitoring and Reporting Requirements E-12
B. Self Monitoring Reports (SMRs) E-12
C. Discharge Monitoring Reports (DMRs) – Not Applicable E-15
D. Other Reports E-15

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

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

I. GENERAL MONITORING PROVISIONS

A. 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.

B. 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.

C. 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.

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

E. Monitoring locations shall not be changed without notification to and the approval of this Regional Water Board.

F. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ±10 percent from true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration and operation of acceptable flow measurement devices can be obtained from the following references:

1. "A Guide to Methods and Standards for the Measurement of Water Flow," U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 96 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD Catalog No. C13.10:421.)

2. "Water Measurement Manual," U.S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U.S. Government Printing Office, Washington D.C. 20402. Order by Catalog No. 172.19/2:W29/2, Stock No. S/N 24003-0027.)

3. "Flow Measurement in Open Channels and Closed Conduits," U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy or microfiche from National Technical Information Services (NTIS) Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST.)

4. "NPDES Compliance Sampling Manual," U.S. Environmental Protection Agency, Office of Water Enforcement, Publication MCD-51, 1977, 140 pp. (Available from the General Services Administration (8FFS), Centralized Mailing Lists Services, Building 41, Denver Federal Center, CO 80225.)

G. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services.

II. MONITORING LOCATIONS

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

Discharge Point Name	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude (when available)
--	M-INF	Treatment plant headworks
D-001	M-001	Downstream from the last connection through which wastes can be admitted to the outfall (38 º, 43’, 53” N, 121 º, 18’, 58” W)
--	R-001U	25 feet upstream from discharge 001 in Miners Ravine
--	R-002D	350 feet downstream from discharge 001 in Miners Ravine
--	B-001	Treatment plant biosolids
--	SPL-001	Municipal Source Water

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location M-INF

1. Samples shall be collected at approximately the same time as effluent samples and should be representative of the influent for the period sampled. The Discharger shall monitor influent to the facility at M-INF as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	metered	continuous	
BOD 5-day 20°C	mg/L	24-hour composite	1/week	[1]
Total Suspended Solids	mg/L	24-hour composite	1/week	[1]

1 Pollutants shall be analyzed using the analytical methods described in 40 CFR sections 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 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.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location M-001

1. Effluent samples shall be collected downstream from the last connection through which wastes can be admitted into the outfall, following the last unit process. Effluent samples should be representative of the volume and quality of the discharge. Time of collection of samples shall be recorded. The Discharger shall monitor treatment plant effluent at M-001 as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dry Weather Flow	mgd	metered	continuous	
Biochemical Oxygen Demand 5-day @ 20°C	mg/L	24-hour composite	1/week	[1]
	lbs/day	calculate	1/week	[1]
Total Suspended Solids	mg/L	24-hour composite	1/week	[1]
	lbs/day	calculate	1/week	[1]
pH	standard units	meter	continuous	[1]
Hardness	mg/L	grab	1/month	[1]
Temperature	˚C	grab	5 days/week[2]	[1]
Turbidity	NTU	meter	continuous	[1]
Total Coliform Organisms	MPN/100 mL	grab	5 days/week[2]	[1]
Electrical Conductivity @ 25˚C	µmhos/cm	grab	5 days/week[2]	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Settleable Solids	mL/L	24-hour composite	1/week	[1]
Chlorine, Total Residual	mg/L	meter	continuous	[1]
	lbs/day	calculate	continuous	[1]
Oil and Grease	mg/L	grab	1/quarter	[1]
	lbs/day	calculate	1/quarter	[1]
Copper, Total Recoverable	µg/L	grab	1/month	[1]
	lbs/day	calculate	1/month	[1]
Dibromochoromethane	µg/L	grab	1/month	[1]
	lbs/day	calculate	1/month	[1]
Dichlorombromomethane	µg/L	grab	1/month	[1]
	lbs/day	calculate	1/month	[1]
Methyl Mercury	µg/L	grab	1/quarter	[1]
Mercury, Total Recoverable	µg/L	grab	1/month	[1]
	lbs/day	calculate	1/month	[1]
Aluminum, Total Recoverable	µg/L	grab	1/month	[1]
	lbs/day	calculate	1/month	[1]
Ammonia	mg N/L	grab	5 days/week[2]	[1]
	lbs/day	calculate	5 days/week[2]	[1]
Chloride	mg/L	grab	1/month	[1]
	lbs/day	calculate	1/month	[1]
Iron, Total Recoverable	µg/L	grab	1/month	[1]
	lbs/day	calculate	1/month	[1]
Manganese, Total Recoverable	µg/L	grab	1/month	[1]
	lbs/day	calculate	1/month	[1]
Mercury, Total Recoverable	Lbs/month	grab/calculate	1/month	[1]
Total Dissolved Solids	mg/L	grab	1/month	[1]
	lbs/day	calculate	1/month	[1]
Organochlorine Pesticides	µg/L	grab	1/month	[1]
	lbs/day	calculate	1/month	[1]
Nitrate (as N)	mg/L	grab	1/month	[1]
	lbs/day	calculate	1/month	[1]
Sulfate	mg/L	grab	1/month	[1]
	lbs/day	calculate	1/month	[1]
Priority Pollutants	µg/L	grab	1/year	[1]
	lbs/day	calculate	1/year	[1]

1 Pollutants shall be analyzed using the analytical methods described in 40 CFR sections 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Board
2 This facility is staffed five days per week.

2. If the discharge is intermittent rather than continuous, then on the first day of each such intermittent discharge, the Discharger shall monitor and record data for all of the constituents listed above, except for priority pollutants, after which

the frequencies of analysis given in the schedule shall apply for the duration of each such intermittent discharge. In no event shall the Discharger be required to monitor and record data more often than twice the frequencies listed in the schedule.

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 semi-annual acute toxicity testing, concurrent with effluent ammonia sampling.

2. *Sample Types* – For static non-renewal and static renewal testing, the samples shall be 24-hour, flow-proportional composites and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location M-001.

3. *Test Species* – Test species shall be fathead minnows (*Pimephales promelas*).

4. *Methods* – The acute bioassays tests shall be conducted in accordance with EPA-821-R-02-012, Fifth Edition, or later amendment with Executive Officer approval. Temperature, total residual chlorine, ammonia, 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 seven (7) business 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:

1. *Monitoring Frequency* – the Discharger shall perform semi-annual three-species, chronic toxicity testing.

2. *Sample Types* – Effluent samples shall be flow-proportional, 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 specified in the

Monitoring and Reporting Program. The receiving water control shall be a grab sample obtained from the R-001U sampling location, as identified in the Monitoring and Reporting Program.

3. *Sample Volumes* – Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.

4. *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:

   a. The cladoceran, water flea, *Ceriodaphnia dubia* (survival and reproduction test);

   b. The fathead minnow, *Pimephales promelas* (larval survival and growth test); and

   c. The green alga, *Selenastrum capricornutum* (growth test).

5. *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, or later amendment with Executive Officer approval.

6. *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.

7. *Dilutions* – The chronic toxicity testing shall be performed using the dilution series identified in Table E-1, below. The receiving water control shall be used as the diluent (unless the receiving water is toxic).

Table E-1
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

8. *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:

a. 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

b. 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.

C. **WET Testing Notification Requirements**

The Discharger shall notify the Regional Water Board within 24 hours 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 $100/LC_{50}$, $100/EC_{25}$, $100/IC_{25}$, and $100/IC_{50}$, 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.

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:

   a. 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.

   b. The reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory.

   c. 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

A. Monitoring Location R-001U and R-002D

1. The Discharger shall monitor Miners Ravine at R-001U and R-002D as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[2]
Dissolved Oxygen	mg/L	Grab	Weekly	[1]
	% saturation	Grab	Weekly	[1]
pH	standard units	Grab	Weekly	[1]
Turbidity	NTU	Grab	Weekly	
Temperature	°C	Grab	Weekly	[1]
Electrical Conductivity @ 25° C	µmhos/cm	Grab	Weekly	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[2]
Fecal Coliform Organisms	MPN/100 mL	Grab	Quarterly	
Radionuclides	pCi/L	Grab	Annually	
Hardness (as $CaCO_3$)	mg/L	Grab	Monthly	

1. A hand-held field meter may be used, provided the meter utilizes a USEPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the WWTP.
2. Pollutants shall be analyzed using the analytical methods described in 40 CFR sections 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 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.

In conducting the receiving water sampling, a lo g shall be kept of the receiving water conditions throughout the reach bounded by Stations R-00lU and R-002D. The presence or absence of the conditions listed below shall be noted and presence shall be described:

a. Floating or suspended matter
b. Discoloration
c. Bottom deposits
d. Aquatic life
e. Visible films, sheens or coatings
f. Fungi, slimes, or objectionable growths
g. Potential nuisance conditions

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

IX. OTHER MONITORING REQUIREMENTS

A. Water Supply Monitoring—Monitoring Location SPL-001

A sampling station shall be established where a representative sample of the municipal water supply can be obtained. The Discharger shall monitor the water supply as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Dissolved Solids[2]	mg/L	Grab	Annually	1
Electrical Conductivity[2]	µmhos/cm	Grab	Annually	1
Standard Minerals[3]	mg/L	Grab	Annually	1

1 Pollutants shall be analyzed using the analytical methods described in 40 CFR sections 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 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 If the water supply is from more than one source, the monitoring report shall report the electrical conductivity and total dissolved solids results as a weighted average and include copies of supporting calculations.
3 Standard minerals shall include all major cations and anions and include verification that the analysis is complete (*i.e.*, cation/anion balance). Standard minerals shall include boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series), and hardness.

B. **Biosolids Monitoring—Monitoring Location B-001**

1. A composite sample of sludge shall be collected when sludge is removed for disposal in accordance with USEPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989, and tested for priority pollutants listed in 40 CFR section 122 Appendix D, Tables II and III (excluding total phenols).

2. Sampling records shall be retained for a minimum of **five years**. 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 a basis for part of the annual report.

3. Upon removal of sludge, the Discharger shall submit characterization of sludge quality to the Regional Water Board, including sludge percent solids and quantitative results of chemical analysis for the priority pollutants listed in 40 CFR 122 Appendix D, Tables II and III (excluding total phenols) to the Regional Water Board. Suggested methods for analysis of sludge are provided in USEPA publications titled "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods" and "Test Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater". Recommended analytical holding times for sludge samples should reflect those specified in 40 CFR 136.6.3(e). Other guidance is available in USEPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

2. 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".

3. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the reported analytical result are readily discernible. The data shall be summarized in such a manner to clearly illustrate whether the discharge complies with waste discharge requirements. Monthly maximums, minimums, and averages shall be reported for each monitored constituent and parameter. Removal efficiencies (%) for biochemical oxygen demand and total suspended solids and all periodic averages and medians for which there are limitations shall also be calculated and reported.

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.

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 SMRsin accordance with the requirements described in subsection B.5 below. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. Additionally, the Discharger shall report in the SMR the results of any acute and chronic toxicity testing required by Special Provisions – VI.C. of this Order. The Discharger shall submit monthly SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

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

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	Submit with monthly SMR
Daily	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with monthly SMR
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	Submit with monthly SMR
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
Quarterly	1 January following 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
Twice Annually	1 January following permit effective date	1 January through June 30 1 July through December 31	1 August 1 February
Annually	1 January following permit effective date	1 January through December 31	1 February

4. 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 Part 136.

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

   a. Sample results greater than or equal to the 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 (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

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

d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.

5. Multiple Sample Data. If the permit contains an AMEL for a priority pollutant and more than one sample result is available for the pollutant, the Discharger shall report the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the Discharger shall report 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.

   a. 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.

6. The Discharger shall submit SMRs (with an original signature) in accordance with the following requirements:

   a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

   b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

c. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

California Regional Water Quality Control Board
Central Valley Region
NPDES Compliance and Enforcement Unit
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670

C. **Discharge Monitoring Reports (DMRs) – Not Applicable**

D. **Other Reports**

1. By **1 February** of each year, the Discharger shall submit an annual progress report demonstrating reasonable progress in their Pollution Prevention Plan and Salinity Reduction Plan (See Section VI.C.2.a. and b.).

2. 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. 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.

3. By **1 February** 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 WWTP.

   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 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 – Table of Contents

Attachment F – Fact Sheet F-3
I. Permit Information F-3
II. Facility Description F-4
A. Description of Wastewater and Biosolids Treatment or Controls F-4
B. Discharge Points and Receiving Waters F-4
C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data F-5
D. Compliance Summary F-6
E. Planned Changes F-5
III. Applicable Plans, Policies, and Regulations F-7
A. Legal Authorities F-7
B. California Environmental Quality Act (CEQA) F-7
C. State and Federal Regulations, Policies, and Plans F-7
D. Impaired Water Bodies on CWA 303(d) List – Not Applicable F-12
E. Other Plans, Policies, and Regulations F-12
IV. Rationale For Effluent Limitations and Discharge Specifications F-12
A. Discharge Prohibitions F-13
B. Technology-Based Effluent Limitations F-14
1. Scope and Authority F-14
2. Applicable Technology-Based Effluent Limitations F-14
C. Water Quality-Based Effluent Limitations (WQBELs) F-15
1. Scope and Authority F-15
2. Applicable Beneficial Uses and Water Quality Criteria and Objectives F-15
3. Determining the Need for WQBELs F-16
4. WQBEL Calculations F-37
5. Whole Effluent Toxicity (WET) F-40
D. Final Effluent Limitations F-41
E. Interim Effluent Limitations F-43
F. Land Discharge Specifications – Not Applicable F-44
G. Reclamation Specifications – Not Applicable F-44
V. Rationale for Receiving Water Limitations F-44
A. Surface Water F-44
B. Groundwater F-46
VI. Rationale for Monitoring and Reporting Requirements F-47
A. Influent Monitoring F-47
B. Effluent Monitoring F-47
C. Whole Effluent Toxicity Testing Requirements F-47
D. Receiving Water Monitoring F-47
1. Surface Water F-47
2. Groundwater F-47
E. Other Monitoring Requirements F-48
VII. Rationale for Provisions F-48
A. Standard Provisions F-48
B. Special Provisions F-49
1. Reopener Provisions F-49

2. Special Studies and Additional Monitoring Requirements F-49
3. Best Management Practices and Pollution Prevention – Not Applicable F-53
4. Construction, Operation, and Maintenance Specifications F-54
5. Special Provisions for Municipal Facilities (POTWs Only) F-54
7. Other Special Provisions F-54
8. Compliance Schedules F-55
9. Public Participation F-56
a. Notification of Interested Parties F-56
b. Written Comments F-56
c. Public Hearing F-57
d. Waste Discharge Requirements Petitions F-57
e. Information and Copying F-58
f. Register of Interested Persons F-58
g. Additional Information F-58

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 renewed Order regulates the discharge of up to 0.3 million gallons per day (mgd), the design average dry weather flow (ADWF), of effluent from the Facility. This Order includes effluent, groundwater, water supply, sludge, and surface water limitations, monitoring and reporting requirements, additional study requirements, and reopener provisions.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

WDID	**5A310104018**
Discharger	**Placer County Department of Facility Services**
Name of Facility	**Placer County Sewer Maintenance District No. 3**
Facility Address	**4928 Auburn Folsom Road**
	Loomis, CA 95650
	Placer County
Facility Contact, Title and Phone	**Will Dickinson, Deputy Director of Facility Services, (530) 886-4900**
Authorized Person to Sign and Submit Reports	**Will Dickinson, Deputy Director of Facility Services, (530) 886-4900**
Mailing Address	**Placer County Department of Facility Services** **11476 C Avenue** **Auburn, CA 95603**
Billing Address	**SAME**
Type of Facility	**Publicly Owned Treatment Works (POTW)**
Major or Minor Facility	**Minor**
Threat to Water Quality	**2**
Complexity	**B**
Pretreatment Program	**N**
Reclamation Requirements	**NA**
Facility Permitted Flow (ADWF)	**0.30 million gallons per day (mgd)**
Facility Design Flow (ADWF)	**0.30 mgd**
Watershed	**Dry Creek – Sacramento River**
Receiving Water	**Miners Ravine**
Receiving Water Type	**Inland Surface Water**

A. The Placer County Department of Facility Services (hereinafter Discharger) is the owner and operator of Placer County Sewer Maintenance District No. 3 (hereinafter Facility) a Publicly Owned Treatment Works (POTW).

B. The Facility discharges wastewater to Miners Ravine, a water of the United States and is currently regulated by Order No. 5-00-118 which was adopted on 16 June 2000 and expired on 1 June 2005. The terms of the existing Order automatically remain in effect

after the permit expiration date.

C. The Discharger filed a report of waste discharge and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on 29 December 2004.

II. FACILITY DESCRIPTION

The Discharger provides sewerage service for the Horseshoe Bar Road and Folsom Lake area and serves a population of approximately 1500. The wastewater treatment plant (WWTP) design average dry weather flow capacity is 0.30 mgd. Effluent from the facility discharges to the local surface water. The Discharger is considering the inclusion of this facility in the South Placer Wastewater Authority's regionalization effort. If this facility is incorporated in the regionalization efforts, the wastewater flow is proposed to be piped to the City of Roseville Dry Creek WWTP for treatment and disposal, therefore eliminating the existing discharge to Miner's Ravine. This Order requires the Discharger to report their decision regarding regionalization of this facility by 31 January 2008.

A. Description of Wastewater and Biosolids Treatment or Controls

The treatment system at this facility consists of a bar screens, primary clarifier, trickling filter, secondary clarifier, final clarifier, chemical feed system, sand filtration for tertiary treatment, chlorination, and dechlorination. Treated wastewater is discharged to Miners Ravine, a water of the United States and a tributary to the Sacramento River within the Sacramento River Basin. Biosolids treatment consists of an anaerobic digester, dewatering, and disposal off-site at a local landfill.

This Order does not allow an increase in regulated flow from the existing Order. The facility's design dry weather flow is 0.3 mgd. The Discharger's Report of Waste Discharge describes the annual average daily flow rate as 0.116 mgd with a daily maximum flow rate of 3.0 mgd.

B. Discharge Points and Receiving Waters

1. The treatment plant is located in Section 18, T11N, R8E, MDB&M, as shown on Attachment B, a part of this Order. Treated wastewater is discharged to Miners Ravine from Outfall D-001, latitude 38˚, 47', 40" N (degrees, minutes, seconds) and longitude 120 º, 7', 35" W (degrees, minutes, seconds).

2. Treated municipal wastewater is discharged to Miners Ravine and tributary to Dry Creek, the Natomas East Main Drainage Canal, and Bannon Slough, which flows into the Sacramento River immediately north of the confluence with the American River.

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

1. Effluent limitations contained in the existing WDR Order No. 5-00-118 for discharges from D-001 (Monitoring Location M-001) and representative monitoring data from the term of the existing Order are as follows:

Parameter (units)	Effluent Limitation			Monitoring Data May 1, 2000 To July 31, 2005
	Average Monthly	Average Weekly	Maximum Daily	Highest Discharge
Flow (mgd) – 0.30 mgd average daily dry weather discharge flow	--	--	--	0.45[2]
Biochemical Oxygen Demand 5-day @ 20°C (mg/L)	10	15	25	8.42
Total Suspended Solids (mg/L)	10	15	25	15.47
Total Coliform (MPN/100 mL)	--	2.2 (7-day Median Limitation)	23	240
Settleable Solids (mL/L)	0.1	--	0.2	0.1
Turbidity (NTU)	2	--	5	7.7
Ammonia (mg N/L)	--	[1]	[1]	7.5
Nitrates as NO_3(mg/L)	45	--	--	151
Chlorine Residual (mg/L)	--	0.01	0.02	2

1 Floating limitation based on pH and Temperature in accordance with USEPA Ambient Water Quality Criteria for Ammonia
2 Maximum Instantaneous flow recorded on 31 December 2005

2. The Report of Waste Discharge describes the WWTP discharge as follows:

Design Flow:	0.30	mgd
Annual Average Daily Flow Rate:	0.116	mgd
Maximum Daily Flow Rate:	0.297	mgd
Average Temperature, Summer:	79	ºF
Average Temperature, Winter:	54	ºF
BOD[1]:	4.6	mg/L
Total Suspended Solids:	3.3	mg/L

[1] 5-day, 20°C biochemical oxygen demand

D. **Compliance Summary and Planned Changes**

1. On 14 August 2003, the Regional Water Board issued a Notice of Violation to the Discharger for discharging secondary quality wastewater to surface waters in violation of the Waste Discharge Requirements (WDR). In addition, the Discharger had reported non-compliance with the requirements found in the previous Order for exceedance of chlorine limitations and the discharge of un-chlorinated effluent.

   The Discharger has been unable to comply with the nitrate effluent limitations and compliance schedule prescribed in previous WDR Order No. 5-00-118. The Discharger remains in non-compliance with the final effluent limitations for nitrate, as required in both the previous WDR Order and this Order.

   In a letter dated 30 January 2004, the Discharger requested an extension of the time schedule before the facility is required to achieve compliance with the final nitrate limitations. On 7 April 2004 the Regional Water Board responded to the Discharger's request, stating that "....The WDR for this facility was adopted on 16 June 2000 and required compliance with an Effluent Limitation for nitrate by 1 January 2004. On 6 November 2002, the County submitted a letter stating, 'Placer County has secured funding for the eventual abandonment of the SMD 3 WWTP....' to connect to the City of Roseville wastewater collection and treatment system. Comments submitted by the County regarding the WDR, prior to adoption, indicated a major portion of the funding was available at that time for closure of the plant."

   Through their correspondence with the Regional Water Board office, the Discharger indicated that a potential method of compliance with the nitrate limitations is closure of facility. Additional correspondence, such as a 30 January 2004 letter from the Discharger, did not discuss a proposed facility closure, or an achievable compliance date or compliance project completion date. Through a 7 April 2004 letter, the Regional Water Board requested the Discharger to provide a firm final compliance date for the nitrate limitations.

   On 25 January 2007, a representative of Placer County provided an informational presentation to the Regional Water Board discussing the successes and challenges regarding compliance and regionalization efforts. The Discharger has submitted information and a proposed completion date of a study to evaluate compliance options. Through a 21 December 2006 letter, the Discharger requested an additional four years to come in compliance with their existing nitrates concentration effluent limitations and new nitrates mass limitations. The compliance schedule granted by the Regional Water Board for the Discharger to comply with the nitrates effluent requirements is included in Cease and Desist Order No. 2007-XXX

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the following requirements and authorities.

A. Legal Authorities

This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as an 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 of the CWC for discharges that are not subject to regulation under CWA section 402.

B. California Environmental Quality Act (CEQA)

The action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, *et seq*.), requiring preparation of an environmental impact report or negative declaration in accordance with Section 13389 of the California Water Code.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans**. The Regional Water Board adopted a *Water Quality Control Plan, Fourth Edition,* for the *Sacramento and San Joaquin River Basins* (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. In addition, State Water Resources Control Board (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 at page II-2.00 states that the "…*beneficial uses of any specifically identified water body generally apply to its tributary streams*." The Basin Plan does not specifically identify beneficial uses for Miners Ravine, but does identify present and potential uses for the Sacramento River, to which Miners Ravine, via the Natomas East Main Drainage Canal and Bannon Slough, is tributary. These beneficial uses are as follows: municipal and domestic supply (MUN); agricultural irrigation (AGR), water contact recreation (REC-1) and non-contact water recreation (REC-2), warm (WARM) and cold (COLD) freshwater habitat, warm and cold water migration habitat (MIGR), warm and cold water spawning (SPWN), wildlife habitat (WILD) and navigation (NAV). In addition, State Water Resources Control Board (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. Thus, as discussed

in detail in the Fact Sheet (Attachment F), beneficial uses applicable to Miners Ravine are as follows:

Discharge Point	Receiving Water Name	Beneficial Use(s)
D-001	Miners Ravine	Existing: MUN, AGR, REC-1, REC-2, WARM, COLD, MIGR, SPWN, WILD, NAV

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 swimable. Federal Regulations, 40 CFR Sections 131.2 and 131.10, require that all waters of the State be 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 Section131.10, 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.

In reviewing whether the existing and/or potential uses of the Sacramento River apply to Miners Ravine**,** the Regional Water Board has considered the following facts:

a. Municipal, Domestic and Agricultural Water Supply

   The Regional Water Board is required to apply the beneficial uses of municipal, domestic and agricultural water supply to Miners Ravine based on State Water Board Resolution No. 88-63 which was incorporated in the Basin Plan pursuant to Regional Water Board Resolution No. 89-056 and Basin Plan agricultural water quality objectives.

b. Water Contact and Non-contact Recreation and Esthetic Enjoyment

   The Regional Water Board finds that the discharge flows through residential

areas, there is ready public access, exclusion of the public is unrealistic and contact recreational activities currently exist along the receiving and downstream waters and these uses are likely to increase as the population in the area grows. Prior to flowing into the Sacramento River; Miners Ravine, the Natomas East Main Drainage Canal and Bannon Slough flow through areas of general public access, meadows, residential areas, and parks. The Sacramento River also offers recreational opportunities.

c. Preservation and Enhancement of Fish, Wildlife, and Other Aquatic Resources

Miners Ravine flows to the Sacramento River, via the Natomas East Main Drainage Canal and Bannon Slough. The Basin Plan (Table II-1) designates the Sacramento River as being a warm and cold freshwater habitat; wildlife habitat; and warm and cold spawning. The Sacramento River supports significant aquatic life, and therefore these beneficial uses apply to its unnamed tributaries. The cold-water habitat designation necessitates that the in-stream dissolved oxygen concentration be maintained at, or above, 7.0 mg/L.

Upon review of the flow conditions, habitat values, and beneficial uses of Miners Ravine, and the facts described above, the Regional Water Board finds that the beneficial uses identified in the Basin Plan for the Sacramento River are applicable to Miners Ravine.

2. ***National Toxics Rule (NTR) and California Toxics Rule (CTR).*** USEPA adopted the NTR on 22 December 1992, which was amended on 4 May 1995 and 9 November 1999, and the CTR on 18 May 2000, which was amended on 13 February 2001. These rules include water quality criteria for priority pollutants and are applicable to this discharge.

3. ***State Implementation Policy.*** On 2 March 2000, 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 California Toxics Rule. The State Water Board adopted amendments to the SIP on 24 February 2005 that became effective on 13 July 2005.

4. ***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 FR 24641, 27 April 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.

5. ***Stringency of Requirements for Individual Pollutants*.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. The technology-based effluent limitations consist of restrictions on 5-day biochemical oxygen demand, total suspended solids, flow, and percent removal. Restrictions on technology-based effluent limitations are specified in federal regulations as discussed in Findings F, and the permit's technology-based pollutant restrictions are no more stringent than required by the CWA. Water quality-based effluent limitations 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 water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on 18 May 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless *"applicable water quality standards for purposes of the [Clean Water] Act"* pursuant to 40 CFR Section 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.

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

   This Order is consistent with the antidegradation provisions of 40 CFR section 131.12 and State Water Board Resolution 68-16. This Order does not allow an increase in regulated flow from the previous WDR Order. This Order contains existing limitations and requirements from the previous Order and requires additional limitations and requirements for additional constituents, including salinity. Therefore, with no increase in flow, and a more stringent set of effluent requirements,

degradation of the receiving water is not anticipated.

7. ***Anti-Backsliding Requirements*.** Sections 402(o)(2) and 303(d)(4) of the CWA and 40 CFR §122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. All effluent limitations in the Order are at least as stringent as the effluent limitations in the previous Order, with the exception of the removal of the existing Oil and Grease effluent limitations.

   Historical water quality data and specific monitoring data for this facility has shown that the maximum effluent Oil and Grease concentration does not have a reasonable potential to cause an exceedance of the 10 mg/L monthly average concentration and 15 mg/L daily average concentration that was previously implemented to protect beneficial uses of the receiving water. Therefore, this new information indicates that removal of the effluent limitation will not result in an exceedance of a water quality standard.

8. ***Monitoring and Reporting Requirements*.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in Attachment E.

9. ***Emergency Planning and Community Right to Know Act***. Section 13263.6(a), California Water Code, 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) (EPCRKA) 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*". There have been no reported releases for this facility.

10. ***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 municipal sanitary sewer systems. Wastewater treatment plants are applicable industries under the stormwater program and are obligated to comply with the Federal Regulations.

D. **Impaired Water Bodies on CWA 303(d) List – Not Applicable**

E. **Other Plans, Policies, 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.

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 Section 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) EPA'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 requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, discoloration, toxic substances, radionuclides, or taste and odor producing substances that adversely affect beneficial uses. 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.

A. **Discharge Prohibitions**

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

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

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

2. Applicable Technology-Based Effluent Limitations

BOD_5 and TSS. Federal Regulations, 40 CFR, Part 133, establish the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for BOD_5 and TSS. Tertiary treatment is necessary to protect the beneficial uses of the receiving stream and the final effluent limitations for BOD_5 and TSS are based on the technical capability of the tertiary process. BOD_5 is a measure of the amount of oxygen used in the biochemical oxidation of organic matter. The secondary and tertiary treatment standards for BOD_5 and TSS are indicators of the effectiveness of the treatment processes. The principal design parameter for wastewater treatment plants is the daily BOD_5 and TSS loading rates and the corresponding removal rate of the system. In applying 40 CFR Part 133 for weekly and monthly average BOD_5 and TSS limitations, the application of tertiary treatment processes results in the ability to achieve lower levels for BOD_5 and TSS than the secondary standards currently prescribed; the 30-day average BOD_5 and TSS limitations have been revised to 10 mg/L, which is technically based on the capability of a tertiary system. In addition to the average weekly and average monthly effluent limitations, a daily maximum effluent limitation for BOD_5 and TSS is included in the Order to ensure that the treatment works are not organically overloaded and operate in accordance with design capabilities. See Table F-3 for final technology-based effluent limitations required by this Order. In addition, 40 CFR 133.102, in describing the minimum level of effluent quality attainable by secondary treatment, states that the 30-day average percent removal shall not be less than 85 percent. If 85 percent removal of BOD_5 and TSS must be achieved by a secondary treatment plant, it must also be achieved by a tertiary (i.e., treatment

beyond secondary level) treatment plant. This Order contains a limitation requiring an average of 85 percent removal of BOD_5 and TSS over each calendar month.

Summary of Technology-based Effluent Limitations
Discharge Point D-001

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
5-Day BOD @ 20 °C	mg/L	10	15	20	--	--
	lbs/day[1]	25	38	63	--	--
Total Suspended Solids	mg/L	10	15	20	--	--
	lbs/day	25	38	63	--	--
pH	Standard units	--	--	--	6.0	9.0

a. **Average Dry Weather Flow**: The average dry weather discharge flow shall not exceed 0.3 million gallons per day.

b. **Percent Removal:** The average monthly percent removal of BOD 5-day 20°C and total suspended solids shall not be less than 85 percent.

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

1. **Scope and Authority**

As specified in 40 CFR §122.44(d)(1)(i), 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 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 water quality criteria contained in the CTR and NTR.

2. **Applicable Beneficial Uses and Water Quality Criteria and Objectives**

a. ***Receiving Water***— The receiving stream is Miners Ravine, which is tributary to the Sacramento River via the Natomas East Main Drainage Canal and Bannon Slough. The beneficial uses of Miners Ravine, as described above in III.C.1, are as follows:

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Miners Ravine	Existing: MUN, AGR, REC-1, REC-2, WARM, COLD, MIGR, SPWN, WILD, NAV

b. ***Hardness***—While no Effluent Limitation for hardness is necessary in this Order, hardness is critical to the assessment of the need for, and the development of, Effluent Limitations for certain metals. The *California Toxics Rule*, at (c)(4), states the following:

"Application of metals criteria. (i) *For purposes of calculating freshwater aquatic life criteria for metals from the equations in paragraph (b)(2) of this section, for waters with a hardness of 400 mg/L or less as calcium carbonate, the actual ambient hardness of the surface water shall be used in those equations*." [emphasis added]

The State Water Resources Control Board, in footnote 19 to Water Quality Order No. 2004-0013, stated: "*We note that…the Regional Water Board…applied a variable hardness value whereby effluent limitations will vary depending on the actual, current hardness values in the receiving water. We recommend that the Regional Water Board establish either fixed or seasonal effluent limitations for metals, as provided in the SIP, rather than 'floating' effluent limitations*."

Effluent Limitations for the discharge must be set to protect the beneficial uses of the receiving water for all discharge conditions. In the absence of the option of including condition-dependent, "floating" effluent limitations that are reflective of actual conditions at the time of discharge, Effluent Limitations must be set using a reasonable worst-case condition in order to protect beneficial uses for all discharge conditions. Hardness-dependent effluent limitations in this Order were calculated using the reasonable worst-case ambient (lowest upstream receiving water) measured hardness from the receiving water of 39 mg/L as $CaCO_3$.

c. ***Assimilative Capacity/Mixing Zone***—Based on the available information, the worst-case dilution is assumed to be zero to provide protection for the receiving water beneficial uses. The impact of assuming zero assimilative capacity within the receiving water is that discharge limitations are end-of-pipe limits with no allowance for dilution within the receiving water.

3. **Determining the Need for WQBELs**

a. CWA section 301 (b)(1) requires NPDES permits to include effluent limitations that achieve technology-based standards and any more stringent limitations necessary to meet water quality standards. Water quality standards include Regional Water Board Basin Plan beneficial uses and narrative and numeric water quality objectives, State Water Board-adopted standards, and federal standards, including the CTR and NTR. The Basin Plan includes numeric site-specific water quality objectives and narrative objectives for toxicity, chemical

constituents, and tastes and odors. The narrative toxicity objective 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.) With regards to the narrative chemical constituents objective, the Basin Plan states that waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. At minimum, "…*water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs)*" in Title 22 of CCR. The narrative tastes and odors objective states: "*Water 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.*"

b. Federal regulations require effluent limitations for all pollutants that 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. Based on information submitted as part of the application, in studies, and as directed by monitoring and reporting programs, the Regional Water Board finds that the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard for copper, dibromochloromethane, dichlorobromomethane, organochlorine pesticides, aluminum, iron, manganese, ammonia, chloride, surfactants (MBAs), nitrates, total dissolved solids, electrical conductivity and sulfates. Water quality-based effluent limitations (WQBELs) for these constituents are included in this Order. A detailed discussion of the RPA for each constituent is provided below.

c. The Regional Water Board conducted the RPA in accordance with Section 1.3 of the SIP. 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.[2] The SIP states in its 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.

d. WQBELs were calculated in accordance with section 1.4 of the SIP, as described in Attachment F, Section IV.C.4. The reasonable potential for the constituents that have effluent limitations in this Order is summarized in the following Table F-1.

[2] See, Order WQO 2001-16 (Napa) and Order WQO 2004-0013 (Yuba City)

Table F-1: Summary of Reasonable Potential Analysis

CTR	CONSTITUENT	Sources	Objectives	Units	n	MEC	B	CTR	RP
110	4,4-DDD	**Basin Plan**	**ND**	**ug/L**	4	0.055	ND	Y	Y
	[Pesticide]	Cal/EPA Cancer Potency Factor as a drinking water level (b)	0.15	ug/L					
		California Toxics Rule (USEPA) for sources of drinking water	0.00083	ug/L					
		Basin Plan	ND	ug/L					
108	4,4-DDT	**Basin Plan**	**ND**	**ug/L**	4	0.031	ND	Y	Y
	[Pesticide]	Cal/EPA Cancer Potency Factor as a drinking water level (b)	0.1	ug/L					
		California Toxics Rule (USEPA) for sources of drinking water	0.00059	ug/L					
		California Toxics Rule (USEPA) / 4-day average (total)	0.001	ug/L					
		California Toxics Rule (USEPA) / instantaneous maximum	1.1	ug/L					
		Basin Plan	ND	ug/L					
102	Aldrin	**Basin Plan**	**ND**	**ug/L**	4	0.039	ND	Y	Y
	[Pesticide]	Cal/EPA Cancer Potency Factor as a drinking water level (b)	0.0021	ug/L					
		California Toxics Rule (USEPA) for sources of drinking water	0.00013	ug/L					
		California Toxics Rule (USEPA) / instantaneous maximum	3	ug/L					
		Basin Plan	ND	ug/L					
103	alpha-BHC	**California Toxics Rule (USEPA) for sources of drinking water**	**0.0039**	**ug/L**	4	0.45	ND	Y	Y
	(alpha-Benzene hexachloride)	Cal/EPA Cancer Potency Factor as a drinking water level (b)	0.013	ug/L					
		California Toxics Rule (USEPA) for sources of drinking water	0.0039	ug/L					
	Aluminum	**USEPA National Recomm. W Q Criteria**	**87 / 750**	**ug/L**	4	176	233	N	Y
		California Primary MCL	1,000	ug/L					
		California Secondary MCL	200	ug/L					
		Water Quality for Agriculture (Ayers & Westcot)	5,000	ug/L					
		California Public Health Goal for Drinking Water	600	ug/L					
		USEPA National Recomm. W Q Criteria / 4-day avg (total) (f)	87	ug/L					
		USEPA National Recomm. W Q Criteria / 1-hour avg (total) (f)	750	ug/L					

n=number of observations, MEC=maximum effluent concentration, B=receiving water concentration, CTR=California Toxics Rule parameter, RP=reasonable potential

Table F-1: Summary of Reasonable Potential Analysis

CTR	CONSTITUENT	Sources	Objectives	Units	n	MEC	B	CTR	RP
	Ammonia Nitrogen, Total (as N)	**USEPA National Ambient Water Quality Criteria**	**3.83/2.23**	**mg/L**	468	2.8	0.750	N	Y
		Odor threshold (Amoore and Hautala)	1.5	mg/L					
		USEPA Draft Health Advisory	30	mg/L					
27	Dichlorobromomethane	**California Toxics Rule (USEPA) for sources of drinking water**	**0.56**	**ug/L**	4	19	ND	Y	Y
	(Bromodi-chloromethane)	California Primary MCL (total trihalomethanes)	100	ug/L					
		USEPA Primary MCL (total trihalomethanes)	80	ug/L					
		Cal/EPA Cancer Potency Factor as a drinking water level (b)	0.27	ug/L					
		California Toxics Rule (USEPA) for sources of drinking water	0.56	ug/L					
	Chloride	**Water Quality for Agriculture (Ayers & Westcot)**	**106,000**	**ug/L**	4	77,000	14,000	N	N
		California Secondary MCL	250,000	ug/L					
		Water Quality for Agriculture (Ayers & Westcot)	106,000	ug/L					
		USEPA National Ambient W Q Criteria / 4-day average	230,000	ug/L					
		USEPA National Ambient W Q Criteria / 1-hour average	860,000	ug/L					
6	Copper, Total Recoverable	**California Toxics Rule (USEPA)**	**4.2 / 5.8**	**ug/L**	4	7.4	3.7	Y	Y
		California Primary MCL	1,300	ug/L					
		California Secondary MCL	1,000	ug/L					
		Water Quality for Agriculture (Ayers & Westcot)	200	ug/L					
		California Secondary MCL	1,000	ug/L					
		California Public Health Goal for Drinking Water	170	ug/L					
23	Chlorodibromomethane	**California Toxics Rule (USEPA) for sources of drinking water**	**0.41**	**ug/L**	4	2.1	ND	Y	Y
	(Dibromo-chloromethane)	California Primary MCL (total trihalomethanes)	100	ug/L					
		USEPA Primary MCL (total trihalomethanes)	80	ug/L					
		Cal/EPA Cancer Potency Factor as a drinking water level (b)	0.37	ug/L					
		California Toxics Rule (USEPA) for sources of drinking water	0.41	ug/L					

n=number of observations, MEC=maximum effluent concentration, B=receiving water concentration, CTR=California Toxics Rule parameter, RP=reasonable potential

Table F-1: Summary of Reasonable Potential Analysis

CTR	CONSTITUENT	Sources	Objectives	Units	n	MEC	B	CTR	RP
113	beta-Endosulfan	**Basin Plan**	**ND**	**ug/L**	4	0.02	ND	Y	Y
	(Endosulfan II)	USEPA IRIS Reference Dose (c)	42	ug/L					
	[Pesticide]	California Toxics Rule (USEPA) for sources of drinking water	110	ug/L					
		National Toxics Rule (USEPA) / 4-day average (total)	0.056	ug/L					
		National Toxics Rule (USEPA) / Instantaneous Maximum	0.22	ug/L					
		Basin Plan	ND	ug/L					
115	Endrin	**Basin Plan**	**ND**	**ug/L**	4	0.021	ND	Y	Y
	[Pesticide]	California Primary MCL	2	ug/L					
	Iron, Total Recoverable	**California Secondary MCL**	**300**	**ug/L**	4	63.9	740	N	Y
		California Secondary MCL	300	ug/L					
		Water Quality for Agriculture (Ayers & Westcot)	5,000	ug/L					
		USEPA National Ambient W Q Criteria / 4-day average	1,000	ug/L					
	Manganese, Total Recoverable	**California Secondary MCL**	**50**	**ug/L**	4	14.7	96	N	Y
		California Secondary MCL	50	ug/L					
		Water Quality for Agriculture (Ayers & Westcot)	200	ug/L					
		California DHS Action Level for drinking water	500	ug/L					
	Methylene blue active substances	**California Secondary MCL**	**500**	**ug/L**	4	110	ND	N	N
	Nitrate Nitrogen, Total (as N)	**California Primary MCL**	**10,000**	**ug/L**	123	151,000	1010	N	Y
		California Primary MCL	10,000	ug/L					
		California Public Health Goal for Drinking Water	10,000	ug/L					
	Nitrite Nitrogen, Total (as N)			**ug/L**	5	1200	ND		

n=number of observations, MEC=maximum effluent concentration, B=receiving water concentration, CTR=California Toxics Rule parameter, RP=reasonable potential

Table F-1: Summary of Reasonable Potential Analysis

CTR	CONSTITUENT	Sources	Objectives	Units	n	MEC	B	CTR	RP
	Electrical Conductivity @ 20 ºC	**Water Quality for Agriculture (Ayers & Westcot)**	**700**	**umhos/cm**	1317	864	266	N	Y
	Specific conductance	California Secondary MCL	900	umhos/cm					
		Water Quality for Agriculture (Ayers & Westcot)	700	umhos/cm					
	Sulfate, Total (as SO4)	**California Secondary MCL**	**250**	**mg/L**	5	69	9.9	N	N
		California Secondary MCL (recommended level)	250	mg/L					
		California Secondary MCL (upper level)	500	mg/L					
		USEPA Drinking Water Advisory	500	mg/L					
	Total Dissolved Solids	**Water Quality for Agriculture (Ayers & Westcot)**	**450,000**	**ug/L**	6	423,000	140,000	N	N
	(TDS)	California Secondary MCL	500,000	ug/L					
		Water Quality for Agriculture (Ayers & Westcot)	450000	ug/L					

n=number of observations, MEC=maximum effluent concentration, B=receiving water concentration, CTR=California Toxics Rule parameter, RP=reasonable potential

a. ***Aluminum***—Aluminum in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a level necessary to protect aquatic life, and, therefore to violate the Basin Plan's narrative toxicity objective. USEPA developed National Recommended Ambient Water Quality Criteria for protection of freshwater aquatic life for aluminum. The recommended four-day average (chronic) and one-hour average (acute) criteria for aluminum are 87 µg/L and 750 µg/L, respectively. USEPA recommends that the ambient criteria are protective of the aquatic beneficial uses of receiving waters in lieu of site-specific criteria. Applying 40 CFR Section 122.44(d)(1)(vi)(B), Effluent Limitations for aluminum are included in this Order and are based on USEPA's Ambient Water Quality Criteria for the protection of the beneficial use of freshwater aquatic habitat.

Aluminum was detected in an effluent sample collected at a concentration of 176 µg/L. The recommended continuous concentration (maximum four-day average concentration or CCC) is 87 µg/L and the recommended maximum concentration (maximum one-hour average concentration or CMC) is 750 µg/L. The observed MEC is greater than the water quality criteria; therefore, effluent limitations for aluminum are required.

The USEPA *Technical Support Document for Water Quality-Based Toxics Control* [EPA/505/2-90-001] contains statistical methods for converting chronic (four-day) and acute (one-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.

In USEPA's *Ambient Water Quality Criteria for Aluminum—1988* [EPA 440/5-86-008], USEPA states that "[a]*cid-soluble aluminum…is probably the best measurement at the present…*"; however, USEPA has not yet approved an acid-soluble test method for aluminum. Replacing the ICP/AES portion of the analytical procedure with ICP/MS would allow lower detection limits to be achieved. Based on USEPA's discussion of aluminum analytical methods, this Order allows the use of the alternate aluminum testing protocol described above to meet monitoring requirements.

This Order includes average monthly and maximum daily effluent limitations for aluminum. The Discharger has indicated in their Infeasibility Report that additional time may be required beyond 18 May 2010 to comply with final effluent limits for aluminum. Based on the Discharger's performance in implementing their corrective action plan and pollution prevention plan, and submittal of an engineering treatment feasibility study, the Regional Water Board may consider the future issuance of a Time Schedule Order to provide additional time for compliance with final aluminum effluent limitations.

b. ***Ammonia***—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. The Discharger does not currently use nitrification to remove ammonia from the waste stream. Inadequate or incomplete nitrification may result in the discharge of ammonia to the receiving stream. Ammonia is known to cause toxicity to aquatic organisms in surface waters. Discharges of ammonia would violate the Basin Plan narrative toxicity objective. Applying 40 CFR Section 122.44(d)(1)(vi)(B), it is appropriate to use USEPA's Ambient National Water Quality Criteria for the Protection of Freshwater Aquatic Life for ammonia, which was developed to be protective of aquatic organisms.

USEPA's *Ambient Water Quality Criteria for the Protection of Freshwater Aquatic Life*, for total ammonia, recommends acute (1-hour average; criteria maximum concentration or CMC) standards based on pH and chronic (30-day average, criteria continuous concentration or CCC) standards based on pH and temperature. It also recommends a maximum four-day average concentration of 2.5 times the 30-day CCC. USEPA found that as pH increased, both the acute and chronic toxicity of ammonia increased. Salmonids were more sensitive to acute toxicity effects than other species. However, while the acute toxicity of ammonia was not influenced by temperature, it was found that invertebrates and young fish experienced increasing chronic toxicity effects with increasing temperature. USEPA's recommended criteria are show below:

$$CCC_{30-day} = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}} \right) \times MIN\left(2.85, 1.45 \cdot 10^{0.028(25-T)}\right),$$

$CCC_{4\text{-day}}$ = 2.5 x $CCC_{30\text{-day}}$, and

$$CMC = \left(\frac{0.275}{1+10^{7.204-pH}} + \frac{39.0}{1+10^{pH-7.204}} \right),$$

where *T* is in degrees Celsius

Per the request of the Discharger, the maximum permitted effluent pH in this Order is further restricted from 8.5 to 8.2. (The Basin Plan objective for pH in the receiving stream is the range of 6.5 to 8.5.) To protect against worst-case short-term exposure to an aquatic organism, a pH value of 8.2 was used to derive the acute criterion. The resulting acute criterion is 3.83 mg/l. Additionally, the Discharger requested seasonal fixed ammonia limitations to account for the change in temperature. The maximum observed rolling 30-day average effluent temperature (as of July 2003) for the months from May through October was 79.1 ºF (26.2ºC), and 63.4ºF (17.4ºC) for the months from November through April. The maximum observed rolling 30-day R-1 temperature was 75.2 ºF (24 ºC), for the 30-day periods ending 31 July 2005. The maximum observed pH of the effluent for the months from May through October and November through April were 7.4 and 7.3 respectively.

Using a pH value of 7.4 and the reasonable worst-case temperature values of 26.2°C (on a rolling 30-day basis) as shown above, the resulting 30-day CCC for the months from May through October is 2.23 mg/L (as N). Using a pH value of 7.3 and the worst-case temperature value of 63.4 °F (17.4 °C) on a rolling 30-day basis, the resulting 30-day CCC for the months from November through April is 4.22 mg/L (as N). The 4-day average concentration is derived in accordance with the USEPA criterion as 2.5 times the 30-day CCC. Based on a 30-day CCC of 2.23 mg/L (as N), the 4-day average concentrations that should not be exceeded are 5.58 mg/L (as N) and 10.55 mg/L (as N) for the summer and winter months, respectively. Using a pH value of 7.4 and the worst-case temperature value of 79.1 °F (26.2 °C) on a rolling 30-day basis, the resulting 30-day CCC for the months from May through October is 2.23 mg/L (as N).

The Regional Water Board calculates WQBELs in accordance with SIP procedures for non-CTR constituents, and ammonia is a non-CTR constituent. The SIP procedure assumes a 4-day averaging period for calculating the long term average discharge condition (LTA). However, USEPA recommends modifying the procedure for calculating permit limits for ammonia using a 30-day averaging period for the calculation of the LTA corresponding to the 30-day chronic criteria. Therefore, while the LTAs corresponding to the acute and 4-day chronic criteria were calculated according to SIP procedures, the LTA corresponding to the 30-day chronic criteria was calculated assuming a 30-day averaging period. The lowest LTA representing the acute, 4-day, and 30-day chronic criteria is then selected for deriving the average monthly effluent limitation (AMEL) and the maximum daily effluent limitation (MDEL). The remainder of the WQBEL calculation for ammonia was performed according to the SIP procedures.

Due to the difference in variation in the datasets resulting in slightly different coefficient of variation the following seasonally based ammonia limits will be applied:

From 1 May thru 31 October: Average Monthly Limitation: 1.3 mg/L (as N)
Maximum Daily Limitation: 3.9 mg/L (as N)
From 1 November thru 30 April: Average Monthly Limitation: 1.2 mg/L (as N)
Maximum Daily Limitation: 3.7 mg/L (as N)

In the above calculations, the acute toxicity condition prevails, which is based solely on pH. Because there is no information that supports the variation in pH is seasonal, the slight variation in the seasonal results is not considered and the ammonia effluent limitations included in this Order are year-round limitations. The limitations will assure the treatment facility adequately nitrifies the waste stream to protect the beneficial uses of the receiving water. The following table illustrated the various factors and coefficients used to calculate the year-round effluent limitations:

Table F-8
WQBEL Calculations for Ammonia

	Acute	Chronic (30-day)	Chronic (4-day)
pH	8.2	8.2	NA
Temperature °C (2)	N/A	26	NA
Criteria (mg/L) (3)	3.83	0.855	5.58
Dilution Credit	No Dilution	No Dilution	No Dilution
ECA (4)	3.83	2.23	5.58
Coefficient of Variation	2.08	2.00	2.0
ECA Multiplier(5)	0.131	0.47	0.20
LTA	0.502	1.05	1.12
AMEL Multiplier (99th%)	2.56	(6)	(6)
AMEL (mg/L)	1.2	(6)	(6)
MDEL Multiplier (99th%)	8.78	(6)	(6)
MDEL (mg/L)	3.7	(6)	(6)

(1) Acute design pH = 8.2 (max. allowed effluent pH)
(2) Temperature = Maximum monthly average seasonal effluent temperature
(3) USEPA Ambient Water Quality Criteria
(4) 4-day criterion is 2.5 times the 30-day criterion per criteria document.
(5) LTA developed based on Acute and Chronic ECA Multipliers calculated at 99th percentile level per SIP.
(6) Limitations based on acute LTA ($LTA_{acute} < LTA_{chronic}$)

A 30-day period is a reasonable representation of a calendar month; Therefore, to comply with 40 CFR Section 122.45, 30 days is used as the duration of one month resulting in the 30-day average criteria being equal to average monthly limitations in this Order.

c. ***Chloride*** – See Salinity

d. ***Chlorine Residual***— The Discharger uses chlorine for disinfection, which is extremely toxic to aquatic organisms. The Discharger uses sodium bisulfite to dechlorinate the effluent prior to discharge to Miners Ravine. 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 (four-day) and acute (one-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 one-hour limitation is considered more appropriate than an average daily limitation. Average one-hour and four-day limitations for chlorine, based on these criteria, are included in this Order.

e. ***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 conversion factors for copper in freshwater are 0.960 for both the acute and the chronic criteria.

The observed copper Maximum Effluent Concentration (MEC) was detected in a sample collected at a concentration of 7.4 µg/L. Using the reasonable worst-case ambient (lowest upstream receiving water) measured hardness from the receiving water (39 mg/L as $CaCO_3$), the applicable chronic criterion (maximum four-day average concentration) is 4.16 µg/L and the applicable acute criterion (maximum one-hour average concentration) is 5.77 µg/L. The observed MEC is greater than the water quality criteria. Therefore, Effluent Limitations for copper are required. The Effluent Limitations for copper included in this Order are presented in total concentrations, and are based on CTR standards for the protection of freshwater aquatic life.

The SIP requires converting CTR chronic (four-day) and acute (one-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. This Order includes average monthly and maximum daily effluent copper limitations.

The Discharger has indicated in their Infeasibility Report that additional time may be required beyond 18 May 2010 to comply with final effluent limits for copper. Based on the Discharger's performance in implementing their corrective action plan and pollution prevention plan, and submittal of an engineering treatment feasibility study, the Regional Water Board may consider the future issuance of a Time Schedule Order to provide additional time for compliance with final copper effluent limitations.

f. ***Dibromochloromethane***—The CTR includes a dibromochloromethane criterion of 0.41 µg/L for the protection of human health and is based on a one-in-a-million cancer risk for waters from which both water and organisms are consumed.

Dibromochloromethane was detected in an effluent sample collected at a concentration of 5.46 µg/L. The observed MEC is greater than the water quality criteria. Therefore, Effluent Limitations for dibromochloromethane are required. Effluent Limitations for dibromochloromethane are included in this Order and are based on the CTR standard for the protection of human health.

No dibromochloromethane has been detected in the receiving water. The average monthly effluent limitation is set at 0.41 µg/L.

With the AMEL set equal to 0.41 µg/L, the MDEL was calculated as follows:

$$MDEL = \left(\frac{3.11}{1.55}\right) AMEL = 0.82\ \mu g / L$$

Where: AMEL = average monthly effluent limitation
MDEL = maximum daily effluent limitation

This Order includes average monthly and maximum daily effluent limitations for dibromochloromethane. The Discharger has indicated in their Infeasibility Report that additional time may be required beyond 18 May 2010 to comply with final effluent limits for dibromochloromethane. Based on the Discharger's performance in implementing their corrective action plan and pollution prevention plan, and submittal of an engineering treatment feasibility study, the Regional Water Board may consider the future issuance of a Time Schedule Order to provide additional time for compliance with final dibromochloromethane effluent limitations..

g. ***Dichlorobromomethane***—The CTR includes a dichlorobromomethane criterion of 0.56 µg/L for the protection of human health and is based on a one-in-a-million cancer risk for waters from which both water and organisms are consumed.

Dichlorobromomethane was detected in an effluent sample collected at a concentration of 2.1 µg/L. The observed MEC is greater than the water quality criteria. Therefore, Effluent Limitations for dichlorobromomethane are required. Effluent Limitations for dichlorobromomethane are included in this Order and are based on the CTR standard for the protection of human health.

No dichlorobromomethane has been detected in the receiving water. Using a multiplier to project the MEC with a 99% confidence level and 99% probability basis, the projected dichlorobromomethane MEC for the purpose of calculating effluent limitations is 2.1 µg/L. The average monthly effluent limitation, therefore, was set at 0.56 µg/L.

With the AMEL set equal to 0.56 µg/L, the MDEL was calculated as follows:

$$MDEL = \left(\frac{3.11}{1.55}\right) AMEL = 1.12\ \mu g / L$$

Where: AMEL = average monthly effluent limitation
MDEL = maximum daily effluent limitation

This Order includes average monthly and maximum daily effluent limitations for dichlorobromomethane. The Discharger has indicated in their Infeasibility Report that additional time may be required beyond 18 May 2010 to comply with final effluent limits for dichlorobromomethane. Based on the Discharger's performance in implementing their corrective action plan and pollution prevention plan, and submittal of an engineering treatment feasibility study, the Regional Water Board may consider the future issuance of a Time Schedule Order to provide additional time for compliance with final dichlorobromomethane effluent limitations.

h. ***Electrical Conductivity***—See Salinity.

i. ***Flow—***The Placer County Sewer Maintenance District No. 3 plant was designed to provide a tertiary level of treatment for up to its design flow of 0.3 mgd. The effluent flow limitation is therefore set at 0.3 mgd.

j. ***Iron-*** The Secondary MCL - Consumer Acceptance Limit for iron is 300 µg/L. The MEC for iron was 63.9 µg/L, based on four samples collected between March and December of 2002, while the maximum observed upstream receiving water iron concentration was 740 µg/L, based on four samples collected between March and December 2002. The receiving water has exceeded the Secondary MCL for iron. Therefore, no assimilative capacity is available in the receiving water for iron. As specified in State Water Board Resolution No. 2005-0019 amending SIP, if the ambient background pollutant concentration exceeds the water quality criteria and the pollutant is detected in the effluent, an effluent limitation is required. Therefore, an AMEL of 300 µg/L for iron is included in this Order, based on protection of the Basin Plan's narrative chemical constituents objective. Based on the sample results in the effluent, it appears the Discharger can meet this new limitation.

k. ***Manganese-*** The Secondary MCL - Consumer Acceptance Limit for manganese is 50 µg/L. The MEC for manganese was 13.8 µg/L, based on four samples collected between March and December 2002, while the maximum observed upstream receiving water manganese concentration was 60.1 µg/L, based on four samples collected between March and December 2002. The receiving water has exceeded the Secondary MCL for manganese. Therefore, no assimilative capacity is available in the receiving water for manganese. As specified in State Water Board Resolution No. 2005-0019 amending SIP, if the ambient background pollutant concentration exceeds the water quality criteria and the pollutant is detected in the effluent, an effluent limitation is required. Therefore, effluent limitations for Manganese are required. An AMEL of 50 µg/L for manganese is included in this Order based on protection of the Basin Plan's narrative chemical constituents objective. Based on the sample results in the effluent, it appears the Discharger can meet this new limitation.

l. ***Mercury-*** The current USEPA Ambient Water Quality Criteria for Protection of Freshwater Aquatic Life, continuous concentration, for mercury is 0.77 µg/L (30-day average, chronic criteria). The CTR contains a human health criterion (based on a one-in-a-million cancer risk) of 0.050 µg/L for waters from which both water and aquatic organisms are consumed. Both values are controversial and subject to change. In 40 CFR Part 131, USEPA acknowledges that the human health criteria may not be protective of some aquatic or endangered species and that "…*more stringent mercury limits may be determined and implemented through use of the State's narrative criterion.*" In the CTR, USEPA reserved the mercury criteria for freshwater and aquatic life and may adopt new criteria at a later date. The maximum observed effluent mercury concentration was 0.0080 µg/L measured on 1 June 2005 . The Sacramento River has been listed as an

impaired water body pursuant to Section 303(d) of the Clean Water Act because of mercury. Mercury bioaccumulates in fish tissue and, therefore, discharge of mercury to the receiving water is likely to contribute to exceedances of the narrative toxicity objective and impacts on beneficial uses. Because the Sacramento River has been listed as an impaired water body for mercury, the discharge must not cause or contribute to increased mercury levels. The SIP, Section 1.3, requires the establishment of an effluent limitation for a constituent when the receiving stream background water quality exceeds an applicable criterion or objective. This Order contains a final performance-based mass Effluent Limitation of 0.000606 lbs/month for mercury for the effluent discharge to the Miner's Ravine, a tributary to the Sacramento River. This limitation is based on maintaining the mercury loading at the current level until a total maximum daily load (TMDL) can be established and USEPA develops mercury standards that are protective of human health. The mass limitation was derived using the maximum observed effluent mercury concentration of 0.0080 ug/l (0.00000796mg/l) and the average dry weather flow rate of 0.3 mgd as follows:

(0.00000796 mg/l)x(0.3 mgd)x(8.34 lbs/day conversion factor) x (365 days/12 months)

= 0.000606 pounds/month

A compliance time schedules has not been included since the maximum effluent concentration is less than the water quality criteria for the receiving water and compliance with the mass limitation can be maintained through implementation measures and/or by limiting new sewer discharges containing mercury concentrations. If USEPA develops new water quality standards for mercury, this permit may be reopened and the Effluent Limitations adjusted

m. ***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 Department of Health Services (DHS) has adopted Primary Maximum Contaminant Levels (MCLs) for the protection of human health for nitrate that is equal to 10 mg/L as N (measured as nitrogen). Title 22 of the California Code of Regulations (CCR), Table 64431-A, also includes a primary MCL of 10 mg/L for nitrate, measured as nitrogen. The discharge from the facility has been violating the primary MCL and has a reasonable potential to continue causing or contributing to an in-stream excursion above water quality standards for nitrate. For nitrate, USEPA has developed Drinking Water Standards (10 mg/L as N for the Primary Maximum Contaminant Level) and Ambient Water Quality Criteria for protection of human health (10 mg/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 MCLs for nitrate. Effluent concentration and mass limitations for nitrates, are based on the MCLs, to assure the treatment process adequately nitrifies and denitrifies the waste stream to protect the beneficial use of municipal and domestic supply.

This Order includes the existing final concentration limitations for nitrate in the previous Order No. 5-00-118, plus a new final mass limitation. (The nitrates concentration limitation of 45 mg/l as NO_3 as included in the previous permit is equivalent to the 10 mg/l as N concentration limitation in this Order.) The Discharger has not been able to comply with the existing nitrates concentration limitation and has requested a time schedule to come in compliance with the existing concentration and new mass limitation within four years of the effective date of this Order. This Order includes a four-year time schedule for the Discharger to come into compliance with the new nitrates mass limitation. CDO No. R5-2007-XXX includes an interim nitrate concentration limitation and a four-year compliance schedule. Within this requested time schedule, the Discharger is to make a formal decision whether this facility is to be connected to the City of Roseville Dry Creek Wastewater Treatment Plant, as part of the South Placer County regionalization effort.

An interim maximum daily nitrates concentration limitation of 32 mg/l as N is included in CDO Order No. R5-2007-XXX. The Discharger's average effluent nitrate concentration was 75 mg/L (as NO3). The standard deviation of the effluent data is 19.4 with a coefficient of variation of 0.26. Utilizing USEPA procedures included in the Technical Support Document, an interim limitation of 139 mg/L (as NO3) or 32 mg/L (as N) has been established.

n. ***Oil and Grease***—Untreated domestic wastewater contains oil and grease. The Basin Plan includes a water quality objective for oil and grease in surface waters, which states: “Waters 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”. If necessary, numeric limitations are implemented based on observations of treatment processes and accumulations of oil and grease on process equipment and banks of receiving streams.

Historical water quality data and specific monitoring data for this facility has shown that the maximum effluent Oil and Grease concentration does not have a reasonable potential to cause an exceedance of the 10 mg/L monthly average concentration and 15 mg/L daily average concentration that was previously implemented in the previous Order to protect beneficial uses of the receiving water. Therefore, based on this new information, it is concluded that the removal of the previous Oil and Grease effluent limitation will not result in an exceedance of a water quality standard.

o. ***Organochlorine (Chlorinated Hydrocarbon) Pesticides***— Aldrin, alpha-BHC, beta-BHC, 4,4-DDD, 4,4-DDT, and endrin, were detected at a maximum effluent concentration of 0.039 μg/L, 0.45 μg/L, 0.02 μg/L, 0.055 μg/L, 0.031 μg/L and 0.021 μg/L, respectively. Each of these constituents is a chlorinated hydrocarbon pesticide. 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 contains numeric criteria for aldrin, alpha-BHC, beta-BHC, and endrin of 0.00013 μg/l, 0.0039 μg/L, 0.014 μg/L, and 0.036 μg/L, respectively, for freshwaters from which both water and organisms are consumed. In addition to aldrin, alpha-BHC, beta-BHC, 4,4-DDD, 4,4-DDT, and endrin; chlorinated hydrocarbon pesticides include beta endosulfan, heptachlor, lindane, delta BHC, 4,4'-DDE, chlordane, dieldrin, endrin aldehyde, alpha endosulfan, endosulfan sulfate, heptachlor epoxide, and toxaphene. Effluent Limitations for organochlorine pesticides are included in this Order and are based on CTR criteria and the Basin Plan objective of no detectable concentrations of chlorinated hydrocarbon pesticides. Since the Basin Plan objective is no detectable concentrations, there can be no assimilative capacity and the final effluent limitations are "non-detect" based on the minimum analytical reporting levels specified in the SIP. The limitations for chlorinated hydrocarbon pesticides are included in this Order based on the presence of these constituents in the effluent, thus reasonable potential to cause or contribute to an in-stream excursion of the water quality objective.

The Discharger has indicated in their Infeasibility Report that additional time may be required beyond 18 May 2010 to comply with final CTR-based effluent limits for aldrin, alpha-BHC, beta-endosulfan, 4,4-DDD, 4,4-DDT, and endrin. Interim limitations have been provided for the Discharger to comply with CTR criteria based daily maximum effluent limitations by May 18, 2010. Additional time, not to exceed five years after the effective date of this Order, has been provided for the Discharger to comply with the Basin Plan non-detect effluent limitation.

p. ***Pathogens***— The beneficial uses of Miners Ravine include municipal and domestic supply, water contact recreation, and agricultural irrigation supply, and there is, at times, less than 20:1 dilution (the lowest receiving water to effluent flow ratio in the summer of 2006 was 13:1). To protect these beneficial uses, the Regional Water Board requires the wastewater to be disinfected and adequately treated to prevent disease. The principal infectious agents (pathogens) that may be present in raw sewage may be classified into three broad groups: bacteria, parasites, and viruses. Tertiary treatment, consisting of chemical coagulation, sedimentation, and filtration, has been found to remove approximately 99.5% of

viruses. Filtration is an effective means of reducing viruses and parasites from the waste stream. The wastewater must be treated to tertiary standards (filtered), or equivalent, to protect contact recreational and food crop irrigation uses, when discharged during the condition of the receiving water flow to effluent flow ratio is less than 20-to-1. However, the wastewater must be disinfected and meet total bacteria Coliform limitations under all discharge conditions.

The California Department of Health Services (DHS) has developed reclamation criteria, CCR, Division 4, Chapter 3 (Title 22), for the reuse of wastewater. Title 22 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 m*l* as a 7-day median. As coliform organisms are living and mobile, it is impracticable to quantify an exact number of coliform organisms and to establish weekly average limitations. Instead, coliform organisms are measured as a most probable number and regulated based on a 7-day median limitation.

Title 22 also requires that recycled water used as a source of water supply for non-restricted recreational impoundments be disinfected tertiary recycled water that has been subjected to conventional treatment. A non-restricted recreational impoundment is defined as "*…an impoundment of recycled water, in which no limitations are imposed on body-contact water recreational activities.*" Title 22 is not directly applicable to surface waters; however, the Regional Water Board finds that it is appropriate to apply an equivalent level of treatment to that required by DHS's reclamation criteria because the receiving water is used for irrigation of agricultural land and for contact recreation purposes. The stringent disinfection criteria of Title 22 are appropriate since the undiluted effluent may be used for the irrigation of food crops and/or for body-contact water recreation. Coliform organisms are intended as an indicator of the effectiveness of the entire treatment train and the effectiveness of removing other pathogens. The method of treatment is not prescribed by this Order; however, wastewater must be treated to a level equivalent to that recommended by DHS.

The previous Order No. 5-00-118 includes Total Coliform effluent limitations of 2.2 MPN/100 ml as a 7-day median effluent limitation and a 23 MPN/100 ml as a Daily Maximum effluent limitation. This Order includes the existing Total Coliform effluent limitations plus a new 240 MPN/100 ml as an Instantaneous Maximum effluent limitation.

In addition to coliform testing, a turbidity effluent limitation has been included as a second indicator of the effectiveness of the treatment process and to assure compliance with the required level of treatment. The tertiary treatment process, or equivalent, is capable of reliably meeting a turbidity limitation of 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 identify high coliform concentrations. Therefore, to ensure compliance with the DHS recommended Title 22 disinfection criteria, weekly average effluent limitations are impracticable for turbidity.

This Order contains effluent limitations and a tertiary level of treatment, or equivalent, during low stream flow conditions, that are necessary to protect the beneficial uses of the receiving water. In accordance with CWC section 13241, the Regional Water Board has considered the following:

i. The past, present and probable future beneficial uses of the receiving stream include municipal and domestic supply, agricultural irrigation, body contact water recreation, other non-body contact water recreation, warm freshwater aquatic habitat, cold freshwater aquatic habitat, warm fish migration habitat, cold fish migration habitat, warm spawning habitat, wildlife habitat, and navigation.

ii. The environmental characteristics of the hydrographic unit, including the quality of the available water, will be improved by the requirement to provide tertiary treatment for this wastewater discharge. Tertiary treatment will allow for the reuse of the undiluted wastewater for food crop irrigation and contact recreation activities that would otherwise be unsafe according to recommendations from the California Department of Health Services (DHS).

iii. Fishable and swimmable water quality conditions can be reasonably achieved through the coordinated control of all factors that affect water quality in the area.

iv. The requirement to provide tertiary treatment for this discharge under low stream flow conditions will not adversely impact the need for housing in the area. The potential for developing housing in the area will be facilitated by improved water quality, which protects the contact recreation and irrigation uses of the receiving water. DHS recommends that, in order to protect the public health, relatively undiluted wastewater effluent must be treated to a tertiary level for contact recreational and food crop irrigation uses. Without tertiary treatment, the downstream waters could not be safely utilized for contact recreation or the irrigation of food crops.

v. It is the Regional Water Board's policy, (Basin Plan, page IV-12.00, Policy 2) to encourage the reuse of wastewater. The Regional Water Board requires dischargers to evaluate how reuse or land disposal of wastewater can be optimized. The need to develop and use recycled water is facilitated by

providing a tertiary level of wastewater treatment that will allow for a greater variety of uses in accordance with CCR, Title 22.

vi. The Regional Water Board has considered the factors specified in CWC section 13263, including considering the provisions in CWC section 13241, in adopting the disinfection and filtration requirements under Title 22 criteria. The Regional Water Board finds, on balance, that these requirements are necessary to protect the beneficial uses, including water contact recreation and irrigation uses, of Miners Ravine, and the downstream waterbodies in which it is tributary to, including: Dry Creek, the Natomas East Main Drainage Canal, Bannon Slough, and the Sacramento River.

q. **pH—**The Basin Plan includes a water quality objective for surface waters (except for Goose Lake) 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." The Discharger requested the pH in the effluent be restricted to 8.2. Therefore, the pH in the effluent must be between 6.5 and 8.2 and pH-dependent-effluent limitations in this Order are based on the more restricted effluent pH of 8.2.

r. **Salinity-** The discharge contains total dissolved solids (TDS), chloride, sulfate, and electrical conductivity (EC). These are water quality parameters that are indicative of the salinity of the water. Their presence in water can be growth limiting to certain agricultural crops and can affect the taste of water for human consumption. There are no USEPA water quality criteria for the protection of aquatic organisms for these constituents. The Basin Plan contains a chemical constituent objective that incorporates State MCLs, contains a narrative objective, and contains numeric water quality objectives for EC, TDS, Sulfate, and Chloride.

Table F-2: Salinity Water Quality Criteria/Objectives and Existing Effluent Concentrations

Parameter	Agricultural WQ Goal[1]	Secondary MCL[3]	Effluent	
			Avg	Max
EC (µmhos/cm)	700[2]	900, 1600, 2200	553	864
TDS (mg/L)	450[2]	500, 1000, 1500	362	423
Sulfate (mg/L)	N/A	250, 500, 600	53	69
Chloride (mg/L)	106[2]	250, 500, 600	65	77

[1] Agricultural water quality goals 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)

[2] Agricultural water quality goals listed provide no restrictions on crop type or irrigation methods for maximum crop yield. Higher concentrations may require special irrigation methods to maintain crop yields or may restrict types of crops grown.

[3] The secondary MCLs are stated as a recommended level, upper level, and a short-term maximum level.

i. **Chloride**. The secondary MCL for chloride is 250 mg/L, as a recommended level, 500 mg/L as an upper level, and 600 mg/L as a short-term maximum. 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 recommended agricultural water quality goal for chloride, that applies the narrative chemical constituent objective is 106 mg/L as a long-term average. The 106 mg/L water quality goal is intended to protect against adverse effects on sensitive crops when irrigated via sprinklers.

Chloride concentrations in the effluent ranged from 58 mg/L to 77 mg/L, with an average of 65 mg/L, for five samples collected by the Discharger. Similarly, background concentrations in Miners Ravine ranged from 3.2 mg/L to 14 mg/L, with an average of 6.5 mg/L, for five samples collected by the Discharger.

ii. **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 used to 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, such as beans, carrots, turnips, and strawberries). 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 farmer to minimize or eliminate any harmful impacts.

A review of the Discharger's monitoring reports shows an average effluent EC of 553 µmhos/cm, with a range from 340 µmhos/cm to 864 µmhos/cm, therefore indicating "reasonable potential" to cause or contribute to an exceedance of a water quality objective. The discharger submitted 771 sampling results from 1 August 2002 through 31 August 2005. The average effluent concentration of EC for the 771 samples is 553 µmhos/cm and the coefficient of variation among the sample results is 0.11. Therefore, when the data is plotted, it shows a fairly constant discharge concentration of EC without much variability. The data demonstrates that the Discharger is able to comply with a final EC monthly average effluent limitation of 700 µmhos/cm, as included in this Order, without a compliance schedule. The final effluent limitation is established as a water-quality-based effluent limitation to maintain the agricultural water quality goal in the receiving water. This Order contains a Special Provision in Section VI.C.1.c. for the Discharger to submit a salinity

minimization plan for EC and identify alternatives to continue minimizing the salinity in the discharge.

iii. **Sulfate**. The secondary MCL for sulfate is 250 mg/L as recommended level, 500 mg/L as an upper level, and 600 mg/L as a short-term maximum. Sulfate concentrations in the effluent ranged from 34 mg/L to 69 mg/L, with an average of 53 mg/L, for 5 samples collected by the Discharger. Background concentrations in Miners Ravine ranged from 3.1 mg/L to 9.9 mg/L, with an average of 6.1 mg/L, for 5 samples collected by the Discharger.

iv. **Total Dissolved Solids (TDS)**. The secondary MCL for TDS is 500 mg/L as a recommended level, 1000 mg/L as an upper level, and 1500 mg/L as a short-term maximum. The recommended agricultural water quality goal for TDS, that would apply the narrative chemical constituent objective, is 450 mg/L 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). Water Quality for Agriculture evaluates the impacts of salinity levels on crop tolerance and yield reduction, and establishes water quality goals that are protective of the agricultural uses. The 450 mg/L water quality goal is intended to prevent reduction in crop yield, i.e. a restriction on use of water, for salt-sensitive crops. Only the most salt sensitive crops require irrigation water of 450 mg/L or less to prevent loss of yield. Most other crops can tolerate higher TDS concentrations without harm, however, as the salinity of the irrigation water increases, more crops are potentially harmed by the TDS, or extra measures must be taken by the farmer to minimize or eliminate any harmful impacts.

The average TDS effluent concentration was 362 mg/L and a ranged from 330 mg/L to 423 mg/L for 6 samples collected by the Discharger. The background receiving water TDS ranged from 40 mg/L to 140 mg/L, with an average of 84 mg/L in 4 sampling events performed by the Discharger. This Order includes an Effluent Limitation for EC to limit salinity. Therefore, a limitation for TDS is deemed unnecessary.

s. **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.

Because the amount of settleable solids is measured in terms of volume per volume without a mass component, it is impracticable to calculate mass limitations for inclusion in this Order. A daily maximum effluent limitation for settleable solids is included in the Order, in lieu of a weekly average, to ensure that the treatment works operate in accordance with design capabilities.

t. ***Sulfate*** – See Salinity

u. ***Total Dissolved Solids –*** See Salinity

v. **Toxicity**—The Basin Plan states 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. This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances." The Basin Plan requires that "[a]s a minimum, compliance with this objective…shall be evaluated with a 96-hour bioassay." This Order requires both acute and chronic toxicity monitoring to evaluate compliance with this water quality objective.

The Basin Plan further states that "…effluent limits based upon acute biotoxicity tests of effluents will be prescribed…". Effluent limitations for acute toxicity are included in this Order.

4. **WQBEL Calculations**

a. The Discharger conducted monitoring for priority and non-priority pollutants. The analytical results were submitted to the Regional Water Board. The results of these sampling events were used in developing this Order. All detectable results from these analyses are summarized in Table 1 (below). Effluent limitations are included in the Order to protect the beneficial uses of the receiving stream and to ensure that the discharge complies with the Basin Plan objective that toxic substances not be discharged in toxic amounts. Unless otherwise noted, all mass limitations in this Order are calculated by multiplying the concentration limitation by the design flow and the appropriate unit conversion factors.

SMD #3 Wastewater Treatment Facility Order No. R5-2007____:
Statistics for Effluent Constituents Exhibiting Reasonable Potential

Constituent	Max	Mean	Standard Deviation	CV[1]	# of Results	MEC
Aluminum (ug/L)	176	64.23	77.2	0.6	4	827
Ammonia (mg/L)	2.8	0.15	0.23	2.08	297	3.3
Chloride (mg/L)	77000	65.25	8.34	0.6	4	361900
Copper (µg/L)	7.43	4.72	1.92	0.6	4	7.4
Dibromochloromethane (µg/L)	2.1	1.425	0.47	0.6	4	2.1
Dichlorobromomethane (µg/L)	19	12.7	4.92	0.6	4	19
Electrical Conductivity (µmhos/cm)	864	553	61.3	0.11	771	847
Nitrate (mg/L)	151000	16	1.88	0.6	5	185730

[1] Coefficient of variation

SMD #3 Wastewater Treatment Facility Order No. R5-2007____: Statistics for Effluent Constituents Exhibiting Reasonable Potential						
Constituent	Max	Mean	Standard Deviation	CV[1]	# of Results	MEC
Sulfate (mg/L)	69	52.6	13.2	0.6	5	290
Total Dissolved Solids (mg/L)	423000	350	23.5	0.6	6	1615860

b. Effluent Limitations for water quality-based limitations are calculated in accordance with Section 1.4 of the SIP and the TSD. The following paragraphs describe the general methodology used for calculating Effluent Limitations.

c. *Calculations for Effluent Limitations*—In calculating maximum effluent limitations, the effluent concentration allowances were set equal to the criteria/standards/objectives.

$$ECA_{acute} = CMC \qquad ECA_{chronic} = CCC \qquad ECA_{HH} = HH + D_{HH}\left(HH - B_{HH}\right)$$

where: ECA_{acute} = effluent concentration allowance for acute (one-hour average) toxicity criterion

$ECA_{chronic}$ = effluent concentration allowance for chronic (four-day average) toxicity criterion

ECA_{HH} = effluent concentration allowance for human health, agriculture, or other long-term criterion/objective

CMC = criteria maximum concentration (one-hour average

CCC = criteria continuous concentration (four-day average, unless otherwise noted)

D_{HH} = dilution ratio for human health, agriculture, or other long-term criterion/objective

HH = human health, agriculture, or other long-term criterion/objective

B_{HH} = background concentration for human health. (for carcinogens: arithmetic mean of R-1 concentrations, for non-carcinogens: observed maximum R-1 concentration; or lowest detection level if all results are non-detect)

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). The statistical multipliers were calculated using data shown in Table F-1.

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

$$AMEL = mult_{AMEL}\left[\min\left(\overbrace{M_A ECA_{acute}}^{LTA_{acute}}, M_C ECA_{chronic}\right)\right]$$

$$MDEL = mult_{MDEL}\left[\min\left(M_A ECA_{acute}, \underbrace{M_C ECA_{chronic}}_{LTA_{chronic}}\right)\right]$$

$$MDEL_{HH} = \left(\frac{mult_{MDEL}}{mult_{AMEL}} \right) AMEL_{HH}$$

where: $mult_{AMEL}$ = statistical multiplier converting minimum LTA to AMEL
$mult_{MDEL}$ = statistical multiplier converting minimum LTA to MDEL
M_A = statistical multiplier converting CMC to LTA
M_C = statistical multiplier converting CCC to LTA

d. *Mass-based Effluent Limitations*—Mass-based effluent limitations were based upon a design treatment capacity of 0.3 mgd.

e. USEPA recommends a maximum daily limitation rather than an average weekly limitation for water quality based permitting.

Summary of Water Quality-based Effluent Limitations - Discharge Point D-001

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	standard units	--	--	--	6.5	8.2
Turbidity	NTU	--	--	--	--	10
Settleable Solids	mL/L	0.1	--	0.2	--	--
Electrical Conductivity @ 25°C	µmhos/cm	700	--	---	--	--
Ammonia, total (as N)	mg/L	1.2	--	3.7	--	--
	lbs/day[1]	3.0	--	9.3	--	--
Nitrate (as N)	mg/L	10	--	--	--	--
	lbs/day[1]	25	--	--	--	--
Organochlorine Pesticides	µg/L	--	--	--	--	ND
	lbs/day[1]	--	--	--	--	ND
Aluminum (Total)	µg/L	71.2	--	142.9	--	--
	lbs/day[1]	0.18	--	0.36	--	--
Iron	µg/L	300	--	--	--	--
	lbs/day[1]	0.75	--	--	--	--
Manganese	µg/L	50	--	--	--	--
	lbs/day[1]	0.13	--	--	--	--
Dichlorobromomethane	µg/L	0.56	--	1.13	--	--
	lbs/day[1]	1.40	--	2.83	--	--
Copper (Total)	µg/L	2.89	--	5.8	--	--
	lbs/day[1]	0.007	--	0.014	--	--
Dibromochloromethane	µg/L	0.41	--	0.82	--	--
	lbs/day[1]	1.03	--	2.05	--	--

[1]Average Dry Weather flow of 0.3 mgd used to calculate mass limitations.

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 investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity.

a. **Acute Toxicity**: The Basin Plan further states that "…*effluent limits based upon acute biotoxicity tests of effluents will be prescribed*…". Effluent limitations for acute toxicity are included in this Order. This Order includes the following limitation for 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.)

No dilution has been granted for the chronic condition. Therefore, chronic toxicity testing results exceeding 1 chronic toxicity unit (TUc) demonstrates the discharge has a reasonable potential to cause or contribute to an exceedance of the Basin Plan's narrative toxicity objective.

Numeric chronic WET effluent limitations have not been included in this Order. However, to ensure compliance with the Basin Plan's narrative toxicity objective, the Discharger is required to conduct chronic whole effluent toxicity testing, as specified in the Monitoring and Reporting Program (Attachment E, Section V.). Furthermore, Special Provisions VI.C.2.a of this Order requires the Discharger to investigate the causes of, and identify and implement corrective actions to reduce or eliminate effluent toxicity. If the discharge demonstrates a pattern of toxicity exceeding the numeric toxicity monitoring trigger, the Discharger is required to initiate a Toxicity Reduction Evaluation (TRE), in accordance with an approved TRE work plan. The numeric toxicity monitoring trigger is not an effluent limitation; it is the toxicity threshold in which the Discharger is required to perform accelerated chronic toxicity monitoring. The numeric toxicity monitoring trigger also serves as the threshold to initiate a TRE if a pattern of effluent toxicity has been demonstrated.

D. **Final Effluent Limitations**

1. 40 CFR Section 122.45 states that:

   a. "*In the case of POTWs, permit effluent limitations…shall be calculated based on design flow.*"

   b. "*For continuous discharges all permit effluent limitations…shall unless impracticable be stated as…*[a]*verage weekly and average monthly discharge limitations for POTWs*."

   c. "*All pollutants limited in permits shall have limitations…expressed in terms of mass except…*[f]*or pH, temperature, radiation, or other pollutants which cannot appropriately be expressed by mass…Pollutants limited in terms of mass additionally may be limited in terms of other units of measurement, and the permit shall require the permittee to comply with both limitations*."

Summary of Final Effluent Limitations
Discharge Point D-001

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Avg. Dry Weather Flow	mgd	--	--	0.30	--	--
Biochemical Oxygen Demand (BOD) 5-day @ 20°C	mg/L	10	15	25	--	--
	lbs/day[1]	25	38	63	--	--
Total Suspended Solids (TSS)	mg/L	10	15	25	--	--
	lbs/day[1]	25	38	63	--	--
pH	standard units	--	--	--	6.5	8.2
Turbidity[2]	NTU	--	--	--	--	10
Settleable Solids	mL/L-hr	0.1	--	0.2	--	--
Electrical Conductivity (@ 25°C)	µmhos/cm	700	--	---	--	--
Ammonia, total (as N)	mg/L	1.2	--	3.7	--	--
	lbs/day[1]	3.0	--	9.3	--	--
Nitrate (as N)	mg/L	10	--	--	--	--
	lbs/day[1]	25	--	--	--	--
Organochlorine Pesticides	µg/L	--	--	--	--	ND[3]
	lbs/day[1]	--	--	--	--	ND[3]
Aluminum (Total)	µg/L	71.2	--	142.9	--	--
	lbs/day[1]	0.18	--	0.36	--	--
Iron	µg/L	300	--	--	--	--
	lbs/day[1]	0.75	--	--	--	--
Manganese	µg/L	50	--	--	--	--
	lbs/day[1]	0.13	--	--	--	--

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Dichlorobromomethane	µg/L	0.56	--	1.13	--	--
	lbs/day[1]	1.40	--	2.83	--	--
Copper (Total)	µg/L	2.89	--	5.76	--	--
	lbs/day[1]	0.007	--	0.014	--	--
Dibromochloromethane	µg/L	0.41	--	0.82	--	--
	lbs/day[1]	1.03	--	2.05	--	--

[1] Based upon an average dry weather flow of 0.3 mgd.
[2] When the receiving water flow to effluent flow ratio is greater than 20-to-1, the instantaneous maximum turbidity limitation does not apply. The filters shall be used to the maximum extent possible.
[3] The non-detectable (ND) limitation applies to each individual pesticide. No individual pesticide may be present in the discharge at detectable concentrations. The Discharger shall use USEPA standard analytical techniques with a maximum acceptable detection level of 0.05 µg/L.

a. **Average Dry Weather Flow**: The average dry weather discharge flow shall not exceed 0.3 mgd.

b. **Mercury**: The total monthly mass discharge of total mercury shall not exceed 0.000606 pounds/month

c. **Percent Removal:** The average monthly percent removal of BOD5-day 20°C and TSS shall not be less than 85 percent.

d. **Total Residual Chlorine**: Effluent total residual chlorine shall not exceed the following:

   i. 0.01 mg/L as a four-day average;
   ii. 0.025 lbs/day as a four-day average;
   iii. 0.02 mg/L as a one-hour average; and
   iv. 0.05 lbs/day as a one-hour average.

e. **Turbidity**: When the receiving water flow to effluent flow ratio is less than 20-to-1, effluent turbidity shall not exceed the following and tertiary treatment, or equivalent, is required:

   i. 2 NTU as a daily average;
   ii. 5 NTU more than 5 percent of the time within a 24-hour period.
   iii.

f. **Total Coliform Organisms**: Effluent total coliform organisms concentrations shall not exceed the following:

   i. 2.2 MPN/100 mL as a seven-day median
   ii. 23 MPN/100 mL more than once in any 30-day period; and;
   iii. 240 MPN/100 mL at any time

g. **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%

E. **Interim Effluent Limitations**

CTR Constituents. The USEPA adopted the NTR and the CTR, which contains water quality standards applicable to this discharge. The SIP contains guidance on implementation of the NTR and CTR. 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; include interim compliance dates separated by no more than one year, and; be included in the Provisions.

The interim limitations in this Order are based on the current treatment plant performance. In developing the interim limitation, where there are ten 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 ten 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 ten 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 ten 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 NTR- and CTR-based 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-3. Interim Effluent Limitation Calculation Summary

Parameter	MEC	Mean	Std. Dev.	# of Samples	Interim Limitation
4,4-DDD (µg/L)	0.055	--	--	4	0.17
4,4-DDT (µg/L)	0.031	--	--	4	0.096
Aldrin (µg/L)	0.039	--	--	4	0.12
alpha-BHC (µg/L)	0.45	--	--	4	1.4
Aluminum (µg/L)	176	--	--	4	574
Dichlorobromomethane (µg/L)	19	--	--	4	59
Copper (µg/L)	7.43	--	--	4	23
Dibromochloromomethane (µg/L)	2.1	--	--	4	6.5
beta-Endosulfan (µg/L)	0.02	--	--	4	0.062
Endrin (µg/L)	0.021	--	--	4	0.065

Interim limitations are included for all mass (lbs/day) limitations. (Interim mass limitations are calculated using the average dry weather flow of 0.3 mgd.) Interim limitations for nitrates are included in CDO No. R5-2007-XXX.

F. **Land Discharge Specifications – Not Applicable**

G. **Reclamation Specifications – Not Applicable**

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

1. The CWA, Section 303(a-c), required states to adopt numeric criteria where they are necessary to protect designated uses. The Regional Water Board adopted numeric criteria in the Basin Plan. The Basin Plan is a regulatory reference for meeting the state and federal requirements for water quality control (40 CFR Section131.20). State Water Board Resolution No. 68-16, the Antidegradation Policy, does not allow changes in water quality less than that prescribed in Water Quality Control Plans (Basin Plans). The Basin Plan states that "[t]*he numerical and narrative water quality objectives define the least stringent standards that the Regional Water Board will apply to regional waters in order to protect the beneficial uses*." This Order contains Receiving Water Limitations based on the Basin Plan numerical and narrative water quality objectives for biostimulatory substances, chemical constituents, color, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, salinity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity and turbidity.

2. ***Ammonia—***The Basin Plan states that, "[w]*aters shall not contain un-ionized ammonia in amounts which adversely affect beneficial uses. In no case shall the discharge of wastes cause concentrations of un-ionized ammonia (NH_3) to exceed 0.025 mg/l (as N) in receiving waters.*"

3. ***Dissolved Oxygen***—Miners Ravine has been designated as having the beneficial use of cold freshwater aquatic habitat (COLD). For water bodies designated as having COLD as a beneficial use, the Basin Plan includes a water quality objective of maintaining a minimum of 7.0 mg/L of dissolved oxygen. Since the beneficial use of COLD does apply to the Sacramento River, a receiving water limitation of 7.0 mg/L for dissolved oxygen was included in this Order.

   For surface water bodies outside of the Delta, the Basin Plan includes the water quality objective that "…*the monthly median of the mean daily dissolved oxygen (DO) concentration shall not fall below 85 percent of saturation in the main water mass, and the 95 percentile concentration shall not fall below 75 percent of saturation.*" This objective is included as a receiving water limitation in this Order.

4. ***Fecal coliform***—Miners Ravine has been designated as having the beneficial use of contact recreation (REC-1). For water bodies designated as having REC-1 as a beneficial use, the Basin Plan includes a water quality objective limiting the "…*fecal coliform concentration based on a minimum of not less than five samples for any 30-day period*…" to a maximum geometric mean of 200 MPN/100 mL. The objective also states that "…[no] *more than ten percent of the total number of samples taken during any 30-day period* [shall] *exceed 400/100 ml*." This objective is included in this Order as a receiving water limitation.

5. ***pH***—For all surface water bodies in the Sacramento River and San Joaquin River basins, the Basin Plan includes water quality objectives stating 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.

6. ***Temperature***—The Basin Plan Sacramento River 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 5ºF above natural receiving water temperature*." This Order includes a receiving water limitation based on this objective.

7. ***Turbidity***—The Basin Plan includes the following objective: "*Increases 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 10 NTUs, increases shall not exceed 20 percent.*
   - *Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTU.*
   - Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent."

B. **Groundwater**

1. The beneficial uses of the underlying ground water, as identified in the Basin Plan, are municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply.

2. Basin Plan water quality objectives to protect the beneficial uses of groundwater include numeric objectives and narrative objectives, including objectives for chemical constituents, toxicity of groundwater, and taste and odor. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. The chemical constituent objective states groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use or that exceed the maximum contaminant levels (MCLs) in Title 22, CCR. The Basin Plan requires the application of the most stringent objective necessary to ensure that groundwaters do not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances in concentrations that adversely affect municipal and domestic water supply, agricultural supply, or any other beneficial use.

3. State Water Resources Control Board (State Water Board) Resolution No. 68-16 (hereafter Resolution 68-16) requires the Regional Water Board in regulating discharge of waste to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the Regional Water Board's policies (*e.g.*, quality that exceeds water quality objectives). Resolution 68-16 requires that the discharge be regulated to meet best practicable treatment or control to assure that pollution or nuisance will not occur and the highest water quality consistent with the maximum benefit to the people of the State be maintained.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 of 40 CFR requires all NPDES permits to specify recording and reporting of monitoring results. Sections 13267 and 13383 of the California Water Code authorize the Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program, 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 Monitoring and Reporting Program 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 (*i.e*., BOD and TSS reduction requirements).

B. Effluent Monitoring

1. Pursuant to the requirements of 40 CFR Section122.44(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.

C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity.** Semi-annual 96-hour bioassay testing is required to demonstrate compliance with the effluent limitation for acute toxicity.

2. **Chronic Toxicity.** Semi-annual chronic whole effluent toxicity testing is required in order to demonstrate compliance with the Basin Plan's narrative toxicity objective.

D. Receiving Water Monitoring

1. **Surface Water**

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

2. **Groundwater**

   a. Section 13267 of the California Water Code states, in part, *"(a) A Regional Water Board, in establishing…waste discharge requirements… may investigate the quality of any waters of the state within its region*" and *"(b) (1) In conducting an investigation… the Regional Water Board may require that any person who… discharges… waste…that could affect the quality of waters within its region shall*

furnish, under penalty of perjury, technical or monitoring program reports which the Regional Water Board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports." The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the Regional Water Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports. The attached Monitoring and Reporting Program is issued pursuant to California Water Code Section 13267. The Placer County Sewer Maintenance District No. 3 is responsible for the discharges of waste at the facility subject to this Order.

b. This site does not discharge wastes to holding ponds or to land. Groundwater monitoring is not required in this Order.

E. **Other Monitoring Requirements**

1. **Biosolids Monitoring**

Biosolids monitoring is required to ensure compliance with the biosolids disposal requirements (Special Provisions VI.C.6.a.). Biosolids disposal requirements are imposed pursuant to 40 CFR Part 503 to protect public health and prevent groundwater degradation.

2. **Water Supply Monitoring**

Water supply monitoring is required to evaluate the source of constituents in the wastewater.

VII. RATIONALE FOR PROVISIONS

A. **Standard Provisions**

Standard Provisions, which in accordance with 40 CFR §§122.41 and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D to the Order.

Title 40 CFR Section 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 Section 123.25(a)(12) allows the State to omit or modify conditions to impose more stringent requirements. In accordance with Section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR Sections 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**

Upon adoption of any applicable water quality standard for receiving waters by the Regional Water Board or the State Water Board pursuant to the CWA and regulations adopted thereunder, this permit may be reopened and receiving water limitations added.

2. **Special Studies and Additional Monitoring Requirements**

a. **CTR Compliance Schedule Justification Study.** The SIP, Section 2.1, 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 and/or pollution minimization 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.*" This Order requires the Discharger to provide this information. The new water quality-based effluent limitations for 4,4-DDD, 4,4-DDT, aldrin, alpha-BHC, dichlorobromomethane, dibromochloromethane, copper, beta-endosulfan, and endrin become effective on the first day of month following 60 days after adoption of this Order if a compliance schedule justification is not completed and submitted by the Discharger to the Regional Water Board. With proper justification, final water quality-based effluent limitations for 4,4-DDD, 4,4-DDT, aldrin, alpha-BHC, dichlorobromomethane, dibromochloromethane, copper, beta-endosulfan, and endrin become effective May 18, 2010.

b. **Salinity Evaluation and Minimization Plan.** This Order requires the Discharger shall prepare and implement a salinity and mineralization evaluation and minimization plan to address sources of salinity and mineralization from the municipal wastewater treatment system. The plan shall be completed and submitted to the Regional Water Board within 9 months of the effective date of this Order for approval by the Executive Officer. This reopener provision allows the Regional Water Board to reopen this Order for addition and/or modification of effluent limitations and requirements for salinity based on a review of the results of implementation of the salinity evaluation and

minimization plan.

c. **Chronic Whole Effluent Toxicity Requirements (Special Provisions VI.C.1.d.).** 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.)

Special Provisions VI.C.1.d requires the Discharger to develop a Toxicity Reduction Evaluation (TRE) Work Plan in accordance with EPA guidance. In addition, the provision provides a numeric toxicity monitoring trigger and requirements for accelerated monitoring, as well as, requirements for TRE initiation if a pattern of toxicity has been demonstrated.

Monitoring Trigger. A numeric toxicity monitoring trigger of >1 TUc (where TUc=100/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 percent 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 must be performed in a timely manner, no more than two to three months to complete.

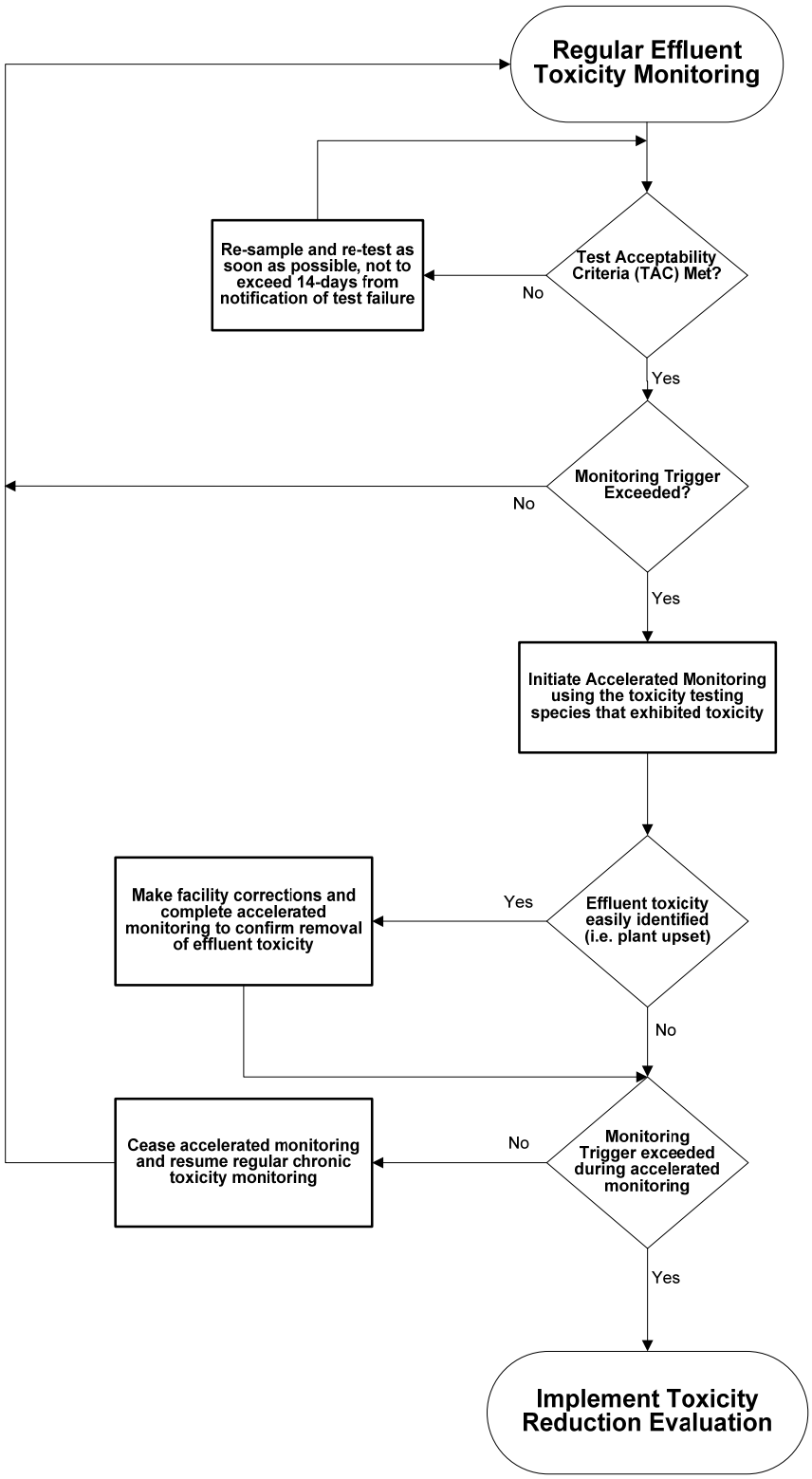
The provision requires accelerated monitoring consisting of four chronic toxicity tests every two weeks using the species that exhibited toxicity. Guidance regarding accelerated monitoring and TRE initiation is provided in the *Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001, 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 one of five 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



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

a. **CWC section 13263.3(d)(3) Pollution Prevention Plans.** The pollution prevention plans required for aluminum, 4,4-DDD, 4,4-DDT, aldrin, alpha-BHC, dichlorobromomethane, dibromochloromethane, electrical copper, beta-endosulfan, and endrin shall, at 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.

Annual progress reports for implementation of the Pollution Prevention Plan shall be submitted in accordance with the Monitoring and Reporting Program (Attachment E, Section X.D.1.

b. **Salinity Reduction Goal.** The Discharger is required to submit annual reports demonstrating reasonable progress in the reduction of salinity in its discharge to Miners Ravine. The annual reports shall be submitted in accordance with the Monitoring and Reporting Program (Attachment E, Section X.D.1.

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

b. These provisions are based on the requirements of 40 CFR 122.41(e) and the previous Order.

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

6. **Pretreatment Requirements – Not Applicable**

7. **Other Special Provisions**

a. This Order requires the Discharger to use the best practicable treatment or control technique currently available to limit mineralization to no more than a reasonable increment.

b. 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.

c. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition or limitation contained in this Order, this Order requires the Discharger to notify the Regional Water Board by telephone (916) 464-3291 (or to the Regional Water Board staff engineer assigned to the facility) within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall include the information required by Federal Standard Provision V.E.1 [*40 CFR §122.41(l)(6)(i)*].

d. 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. All violations must be reported as required in the Federal 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.

e. 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 California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

8. **Compliance Schedules**

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

a. The SIP, at Section 2.1, states that "[b]*ased 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*."

   The SIP further states that "[t]*he discharger shall submit to the RWQCB the following justification before compliance schedules may be authorized in a*

permit: (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, and the results of those efforts; (b) documentation of source control and/or pollution minimization efforts currently underway or completed; (c) a proposed schedule 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."

b. The Discharger submitted a Compliance Schedule request and an Infeasibility Report that provides justification for a compliance schedule for 4,4-DDD, 4,4-DDT, aldrin, alpha-BHC, aluminum, dichlorobromomethane, dibromochloromethane, copper, beta-endosulfan, endrin, nitrates and total coliform organisms. This Order establishes a compliance schedule for the new, final, water quality-based effluent limitations for 4,4-DDD, 4,4-DDT, aldrin, alpha-BHC, aluminum, dichlorobromomethane, dibromochloromethane, copper, beta-endosulfan, endrin and total coliform bacteria, and requires full compliance (1) no later than 18 May 2010 for limitations based on CTR criteria, and .(2) up to four years of the effective date of this Order for the final nitrates mass limitation, and (3) up to five years of the effective date of this Order for limitations based on non-CTR criteria. A compliance schedule for the existing nitrates concentration effluent limitations and an interim concentration limitation are included in a separate Regional Water Board Cease and Desist Order (CDO No. 2007-XXX).

9. 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 Placer County Sewer Maintenance District No. 3 Wastewater Treatment Plant. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

b. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the publication of a Notice of Public Hearing in a local newspaper and posting at the local municipal office(on 2 March 2007). The Notice was also posted on the Regional Water Board website.

c. Written Comments

The staff determinations in the tentative order(s) were circulated for public comments. Interested persons were invited to submit written comments

concerning these tentative WDRs. Comments were 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.

For response by staff and consideration by the Regional Water Board, written comments were received at the Regional Water Board offices by 5:00 p.m. on 2 April 2007.

d. **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: **21/22 June 2007**
Time: **8:30 a.m.**
Location: Central Valley Regional Water Board,
11020 Sun Center Drive, #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/centralvalley where you can access the current agenda for changes in dates and locations.

e. **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

f. **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 (916) 464-4645.

g. **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.

h. **Additional Information**

Requests for additional information or questions regarding this order should be directed to Ms. Diana Messina at (916) 464-4828 or dcmessina@waterboards.ca.gov.