CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

CENTRAL VALLEY REGION

1685 "E" Street, Fresno, California 93706-2007
Phone (559) 445-5116 • Fax (559) 445-5910
http://www.waterboards.ca.gov/centralvalley

ORDER NO. <R5-2011-XXXX>
NPDES NO. CA0078950

WASTE DISCHARGE REQUIREMENTS FOR PLANADA COMMUNITY SERVICES DISTRICT PLANADA WASTEWATER TREATMENT FACILITY MERCED COUNTY

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

Table 1. Discharger Information

Discharger	Planada Community Services District
Name of Facility	Planada Wastewater Treatment Facility
Facility Address	8597 East Toews Avenue
	Planada, CA 95365
	Merced County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge.	

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

Table 2. Discharge Locations

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Treated Municipal Wastewater	37° 16' 43.03" N	120° 20' 2.55" W	Miles Creek
002	Treated Municipal Wastewater	--	--	Groundwater

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**<Adoption Date>**
This Order shall become effective on:	**<Effective Date>**
This Order shall expire on:	**<Expiration Date>**
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	**<180 days prior to the Order expiration date OR insert date>**

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 **<Adoption Date>**.

_____
PAMELA C. CREEDON, Executive Officer

Table of Contents

I. Facility Information 3
II. Findings 3
III. Discharge Prohibitions 9
IV. Effluent Limitations and Discharge Specifications 9
A. Effluent Limitations – Discharge Point 001 9
B. Land Discharge Specifications – Not Applicable 11
C. Reclamation Specifications – Not Applicable 11
V. Receiving Water Limitations 11
A. Surface Water Limitations 11
B. Groundwater Limitations 13
VI. Provisions 14
A. Standard Provisions 14
B. Monitoring and Reporting Program Requirements 18
C. Special Provisions 18
1. Reopener Provisions 18
2. Special Studies, Technical Reports and Additional Monitoring Requirements 19
3. Best Management Practices and Pollution Prevention 21
4. Construction, Operation and Maintenance Specifications 22
5. Special Provisions for Municipal Facilities (POTWs Only) 23
6. Other Special Provisions – Not Applicable 24
7. Compliance Schedules 24
VII. Compliance Determination 25

List of Tables

Table 1. Discharger Information 1
Table 2. Discharge Locations 1
Table 3. Administrative Information 1
Table 4. Facility Information 3
Table 5. Basin Plan Beneficial Uses 5
Table 6. Final Effluent Limitations 10
Table 7. Interim Effluent Limitations 11

List of Attachments

Attachment A – Definitions A-1
Attachment B – Map B-1
Attachment C – Flow Schematic C-1
Attachment D – Standard Provisions D-1
Attachment E – Monitoring and Reporting Program E-1
Attachment F – Fact Sheet F-1
Attachment G – Summary of Reasonable Potential Analysis G-1
Attachment H – Calculation of WQBELs H-1

I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	Planada Community Services District
Name of Facility	Planada Wastewater Treatment Facility
Facility Address	8597 East Toews Avenue
	Planada, CA 95365
	Merced County
Facility Contact, Title, and Phone	Stan Rodriguez, Chief Plant Operator, (209) 382-0213
Mailing Address	P.O. Box 905 Planada, CA 95365
Type of Facility	Publicly Owned Treatment Works
Facility Design Flow	0.53 million gallons per day (mgd)

II. FINDINGS

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

A. Background. Planada Community Services District (hereinafter Discharger) is currently discharging pursuant to Order No. R5-2005-0009 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0078950. The Discharger submitted a Report of Waste Discharge, dated 29 July 2009, and applied for a NPDES permit renewal to discharge up to 0.53 mgd of treated municipal wastewater from the Planada Wastewater Treatment Facility, hereinafter Facility. The application was deemed complete on 29 August 2009.

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 wastewater collection, treatment, and disposal system, and provides sewerage service to the community of Planada. The treatment system consists of a metering manhole, an influent pump station, a grinder to shred solids in the raw sewage, an influent distribution box, three silty clay-lined aerated lagoons, three unlined stabilization ponds, six unlined intermittent sand filters, six pressure filter pods, a chlorination manhole, a chlorine contact pipe, dechlorination equipment, and an effluent pump station. Wastewater is discharged from Discharge Point 001 (see table on cover page) to Miles Creek, a water of the United States and a tributary to the San Joaquin River between Sack Dam and the mouth of the Merced River, within the San Joaquin Valley Floor Hydrologic Unit. The Discharger has begun the process of ceasing discharge to Miles Creek and dispose of its effluent by recycling its treated wastewater on surrounding cropland.

Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

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

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

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

F. Technology-based Effluent Limitations. Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations (40 CFR 122.44) require that permits include conditions meeting applicable technology-based requirements, at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR 133 and Best Professional Judgment (BPJ) in accordance with 40 CFR 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet.

G. Water Quality-based Effluent Limitations (WQBELs). Section 301(b) of the CWA and 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. This Order contains requirements, expressed as technology equivalence requirements, that are necessary to achieve water quality standards. The Central Valley Water Board has considered the factors listed in CWC section 13241 in establishing these requirements. The rationale for these requirements, which consist of tertiary treatment or equivalent requirements, is discussed in the Fact Sheet.

40 CFR 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) USEPA criteria guidance under CWA section

304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

H. Water Quality Control Plans. The Central Valley Water Board adopted a *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins*, Fourth Edition, revised September 2009 (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan at page II-2.00 states that the "…*beneficial uses of any specifically identified water body generally apply to its tributary streams*." The Basin Plan does not specifically identify beneficial uses for Miles Creek, but does identify present and potential uses for the San Joaquin River between Sack Dam and the mouth of the Merced River, to which Miles Creek, via Owens Creek, is tributary. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Thus, as discussed in detail in the Fact Sheet, beneficial uses applicable to Miles Creek are listed in Table 5 below.

Groundwater underlying the Facility is in Detailed Analysis Unit (DAU) No. 210 of the Merced Hydrologic Unit. The beneficial uses of groundwater for this DAU are designated in the Basin Plan and listed in Table 5 below.

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Uses
001	Miles Creek, San Joaquin River between Sack Dam and the mouth of the Merced River	Municipal and domestic supply (MUN); agricultural supply, including irrigation and stock watering (AGR); industrial process supply (PRO); water contact recreation, including canoeing and rafting (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); migration of aquatic organisms, warm and cold (MIGR); spawning, reproduction, and/or early development, warm and cold (SPWN); wildlife habitat (WILD); shellfish harvesting (SHELL)
002	Groundwater underlying Facility	MUN; AGR; industrial service supply (IND); PRO

The Basin Plan includes a list of Water Quality Limited Segments (WQLSs), which are defined as "…*those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 CFR 130, et seq.)*." The Basin Plan also states, "*Additional treatment beyond minimum federal standards will be imposed on dischargers to WQLSs. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment*." Miles Creek is not listed as a WQLS, but portions of the San Joaquin River between Sack Dam and the mouth of the Merced River are listed as WQLSs for boron, chlorpyrifos, DDT, diazinon, EC, Group A pesticides, toxicity, mercury, and

selenium in the 2006 303(d) List of Water Quality Limited Segments. Effluent monitoring requirements for these constituents are included in this Order, and an effluent limitation for EC is also included.

Requirements of this Order implement the Basin Plan.

I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on 22 December 1992 and later amended it on 4 May 1995 and 9 November 1999. About 40 criteria in the NTR applied in California. On 18 May 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on 13 February 2001. These rules contain water quality criteria for priority pollutants.

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

K. **Compliance Schedules and Interim Requirements.** In general, a NPDES permit must include final effluent limitations that are consistent with CWA section 301 and with 40 CFR 122.44(d). There are exceptions to this general rule. The State Water Board's *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits* (Compliance Schedule Policy) allows compliance schedules for new, revised, or newly interpreted water quality objectives or criteria, or in accordance with a Total Maximum Daily Load (TMDL). All compliance schedules must be as short as possible, and may not exceed ten years from the effective date of the adoption, revision, or new interpretation of the applicable water quality objective or criterion, unless a TMDL allows a longer schedule. The Central Valley Water Board, however, is not required to include a compliance schedule, but may issue a Time Schedule Order pursuant to CWC section 13300 or a Cease and Desist Order pursuant to CWC section 13301 where it finds that the discharger is violating or threatening to violate the permit. The Central Valley 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 Compliance Schedule Policy, should consider feasibility of achieving compliance and must impose a schedule that is as short as possible to achieve compliance with the effluent limitation based on the objective or criteria.

The Compliance Schedule Policy and the SIP do not allow compliance schedules for priority pollutants beyond 18 May 2010, except for new or more stringent priority pollutant criteria adopted by USEPA after 17 December 2008.

Where a compliance schedule for a final effluent limitation exceeds one year, the Order must include interim numeric limitations for that constituent or parameter, interim milestones, and compliance reporting within 14 days after each interim milestone. The Order may also include interim requirements to control the pollutant, such as pollutant minimization and source control measures. This Order does include a compliance schedule and interim effluent limitations. A detailed discussion of the basis for the compliance schedule and interim effluent limitations 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 become effective for CWA purposes. (40 CFR 131.21 and 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 effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on flow. The WQBELs consist of restrictions on 5-day biochemical oxygen demand (BOD_5), total suspended solids (TSS), BOD_5 and TSS percent removal, pH, cyanide, carbon tetrachloride, chlorodibromomethane, dichlorobromomethane, electrical conductivity, settleable solids, total coliform, and acute toxicity. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order includes new effluent limitations for total ammonia nitrogen (as N), total nitrate nitrogen (as N), total residual chlorine, total dissolved solids, and chronic toxicity to meet numeric objectives or protect beneficial uses.

WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR-SIP, which was approved by USEPA on 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 30 May 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to 30 May 2000, but not approved by USEPA before that date, are nonetheless "*applicable water quality standard[s] for purposes of the [Clean Water] Act*" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

N. Antidegradation Policy. 40 CFR 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Central Valley Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet, the permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and Resolution No. 68-16.

O. Anti-Backsliding Requirements. Sections 303(d)(4) and 402(o)(2) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions. Some effluent limitations in this Order are less stringent that those in Order No. R5-2005-0009. As discussed in detail in the Fact Sheet, this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

P. Endangered Species Act. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limitations, receiving water limitations, and other requirements to protect the beneficial uses of waters of the State. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

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

R. Standard and Special Provisions. Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42. The Central Valley 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 Fact Sheet (Attachment F).

S. Provisions and Requirements Implementing State Law. The provisions/requirements in sections V.B and portions of section VI.C.4 of this Order are included to implement State law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these

provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

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

U. Consideration of Public Comment. The Central Valley 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.

THEREFORE, IT IS HEREBY ORDERED, that Order No. R5-2005-0009 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 CWC (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in 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 condition of pollution or nuisance as defined in section 13050 of the CWC.

D. The Discharger shall not allow pollutant-free wastewater to be discharged into the treatment or disposal system in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.

E. Discharge of waste classified as 'hazardous' as defined in Title 23, California Code of Regulations (CCR), Section 2521(a), et seq., or 'designated', as defined in Section 13173 of the CWC, is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations – Discharge Point 001

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the Monitoring and Reporting Program:

a. The effluent limitations specified in Table 6:

Table 6. Final Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand 5-day @ 20°C	mg/L	10	15	20	--	--
	lbs/day	44[1]	66[1]	88[1]	--	--
Total Suspended Solids	mg/L	10	15	20	--	--
	lbs/day	44[1]	66[1]	88[1]	--	--
pH	standard units	--	--	--	6.5	8.5
Cyanide, Total Recoverable	µg/L	4.2	--	8.5	--	--
Carbon Tetrachloride	µg/L	0.25	--	0.50	--	--
Chlorodibromomethane	µg/L	0.41	--	0.82	--	--
Dichlorobromomethane	µg/L	0.56	--	1.1	--	--
Ammonia Nitrogen, Total (as N)	mg/L	0.74	--	2.2	--	--
Electrical Conductivity @ 25°C	µmhos/cm	700	--	--	--	--
Nitrate Nitrogen, Total (as N)	mg/L	10	--	--	--	--
Settleable Solids	mL/L	--	--	0.1	--	--
Total Dissolved Solids	mg/L	450	--	--	--	--

[1] Based upon a design flow of 0.53 mgd

b. Flow. The average monthly daily discharge flow shall not exceed 0.53 mgd.

c. Percent Removal. The average monthly percent removal of 5-day biochemical oxygen demand (BOD_5) and total suspended solids (TSS) shall not be less than 90 percent.

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

i. 0.011 mg/L, as a 4-day average; nor
ii. 0.019 mg/L, as a 1-hour average.

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

i. 2.2 most probable number (MPN) per 100 mL, as a 7-day median;
ii. 23 MPN/100 mL, more than once in any 30-day period; nor
iii. 240 MPN/100 mL, instantaneous maximum.

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

i. Minimum for any one bioassay ---------- 70%
ii. Median for any three consecutive bioassays---------- 90%

g. **Chronic Whole Effluent Toxicity.** There shall be no chronic toxicity in the effluent discharge.

2. **Interim Effluent Limitations**

a. Beginning on the effective date of this Order and ending on the date specified in Provision VI.C.7.a., Task vi., the Discharger shall maintain compliance with the effluent limitations listed in Table 7 at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the Monitoring and Reporting Program. These interim effluent limitations shall apply in lieu of the final effluent limitations specified for the same parameters in section IV.A.1.a., Table 6 during the time period indicated in this provision.

Table 7. Interim Effluent Limitations

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Ammonia Nitrogen, Total (as N)	mg/L	--	20	--	--
Total Dissolved Solids	mg/L	--	750	--	--

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 or contribute to the following in Miles Creek:

1. **Bacteria.** The fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, to exceed a geometric mean of 200 MPN/100 mL, nor more than 10 percent of the total number of fecal coliform samples taken during any 30-day period to exceed 400 MPN/100 mL.

2. **Biostimulatory Substances.** Water to contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.

3. **Chemical Constituents.** Chemical constituents to be present in concentrations that adversely affect beneficial uses.

4. **Color.** Discoloration that causes nuisance or adversely affects beneficial uses.

5. **Dissolved Oxygen:**

   a. The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass;

   b. The 95 percentile dissolved oxygen concentration to fall below 75 percent of saturation; nor

   c. The dissolved oxygen concentration to fall below 5.0 mg/L until the date specified in Provision VI.C.7.a., Task vi., and thereafter to fall below 7.0 mg/L.

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

7. **Oil and Grease.** Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.

8. **pH.** The pH to be depressed below 6.5 nor raised above 8.5.

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;

   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 concentrations in excess of the maximum contaminant levels set forth in Title 22, California Code of Regulations (CCR), division 4, chapter 15; nor

   g. Thiobencarb to be present in excess of 1.0 µg/L.

10. **Radioactivity:**

   a. Radionuclides to be present in concentrations that are harmful to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the

food web to an extent that presents a hazard to human, plant, animal, or aquatic life.

b. Radionuclides to be present in excess of the maximum contaminant levels specified in Table 4 (MCL Radioactivity), Title 22, CCR, Section 64443.

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

12. 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.

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

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

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

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

17. Turbidity.

a. Shall not exceed 2 Nephelometric Turbidity Units (NTU) where natural turbidity is less than 1 NTU;

b. Shall not increase more than 1 NTU where natural turbidity is between 1 and 5 NTUs;

c. Shall not increase more than 20 percent where natural turbidity is between 5 and 50 NTUs;

d. Shall not increase more than 10 NTU where natural turbidity is between 50 and 100 NTUs; and

e. Shall not increase 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 Facility shall not, in combination with other sources, cause or contribute to the following in groundwater:

a. Nitrate (as N) to exceed 10 mg/L.

b. The most probable number of total coliform organisms to exceed 2.2 per 100 mL.

c. Exceedances of the concentrations identified in Title 22, CCR for the Primary and Secondary Maximum Contaminant Levels (MCLs).

d. Taste- or odor-producing constituents, toxic substances, or any other constituents to be present in concentrations that cause nuisance or adversely affect beneficial uses.

VI. PROVISIONS

A. Standard Provisions

1. The Discharger shall comply with all (federal NPDES standard conditions from 40 CFR 122) Standard Provisions included in Attachment D of this Order.

2. The Discharger shall comply with the following provisions:

a. If the Discharger's wastewater treatment 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 26.

b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

i. violation of any term or condition contained in this Order;

ii. obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;

iii. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and

iv. a material change in the character, location, or volume of discharge.

The causes for modification include:

- *New regulations.* New regulations have been promulgated under section 405(d) of the CWA, or the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued.

- *Land application plans.* When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.

- *Change in sludge use or disposal practice.* Under 40 CFR 122.62(a)(1), a change in the Discharger's sludge use or disposal practice is a cause for modification of the permit. It is cause for revocation and reissuance if the Discharger requests or agrees.

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

c. If a toxic effluent standard or prohibition (including any scheduled compliance specified in such effluent standard or prohibition) is established under section 307(a) of the CWA, or amendments thereto, for a toxic pollutant that is present in the discharge authorized herein, and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the Central Valley Water Board will revise or modify this Order in accordance with such toxic effluent standard or prohibition.

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

d. This Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:

i. contains different conditions or is otherwise more stringent than any effluent limitation in the Order; or

ii. controls any pollutant limited in the Order.

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

e. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

f. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.

g. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by USEPA under section 307 of the CWA, or amendment thereto, for any discharge to the municipal system.

h. 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.

i. 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 Central Valley 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 5 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 Central Valley Water Board.

iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Central Valley Water Board not approve the existing safeguards, the Discharger shall, within 90 days of having been advised in writing by the Central Valley Water Board that the existing safeguards are inadequate, provide to the Central Valley 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 Central Valley Water Board, become a condition of this Order.

j. The Discharger, upon written request of the Central Valley Water Board, shall file with the Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. This report may be combined with that required under Central Valley Water Board Standard Provision contained in section VI.A.2.i. of this Order.

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

k. A publicly owned treatment works 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 3 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 4 years, the Discharger shall notify the Central Valley 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 Central Valley Water Board may extend the time for submitting the report.

l. The Discharger shall submit technical reports as directed by the Executive Officer. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, Sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

m. The Central Valley Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, sections 13268, 13350, 13385, 13386, and 13387.

n. For publicly owned treatment works, prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (CWC section 1211).

o. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, instantaneous minimum, instantaneous maximum, maximum daily effluent limitation, 1-hour average effluent limitation, acute toxicity

effluent limitation, or receiving water limitation contained in this Order, the Discharger shall notify the Central Valley Water Board by telephone at (559) 445-5116 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within 5 days, unless the Central Valley Water Board waives confirmation. The written notification shall include the information required by the Standard Provision contained in Attachment D section V.E.1. [40 CFR 122.41(l)(6)(i)].

p. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this Facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

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

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Central Valley Water Board and a statement. The statement shall comply with the signatory and certification requirements in the federal Standard Provisions (Attachment D, section V.B) and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the CWC. Transfer shall be approved or disapproved in writing by the Executive Officer.

B. Monitoring and Reporting Program Requirements

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

C. Special Provisions

1. Reopener Provisions

a. This Order may be reopened to address conditions that necessitate a major modification of a permit, as described in 40 CFR 122.62, including, but not limited to:

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.

b. 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.

c. Whole Effluent Toxicity. As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a new 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.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Chronic Whole Effluent Toxicity. For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct chronic whole effluent toxicity (WET) testing, as specified in the Monitoring and Reporting Program (Attachment E, section V). Furthermore, this Provision requires the Discharger to investigate the causes of and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge exhibits toxicity as described in subsection ii below, the Discharger is required to initiate a TRE in accordance with an approved TRE work plan and take actions to mitigate the impact of the discharge and prevent recurrence of toxicity. A TRE is a site-specific study conducted in a stepwise process to identify the source(s) of toxicity and the effective control measures for effluent toxicity. TREs are designed to identify the causative agents and sources of effluent toxicity, evaluate the effectiveness of the toxicity control options, and confirm the reduction in effluent toxicity. This Provision includes requirements for the Discharger to develop and submit a TRE work plan and includes procedures for accelerated chronic toxicity monitoring and TRE initiation.

i. Toxicity Reduction Evaluation (TRE) Work Plan. By **<90 days after the effective date of this Order>**, the Discharger shall submit to the Central Valley Water Board a TRE Work Plan for approval by the Executive Officer. The TRE Work Plan shall outline the procedures for identifying the source(s) of and reducing or eliminating effluent toxicity. The TRE Work Plan must be

developed in accordance with USEPA guidance[1] and be of adequate detail to allow the Discharger to immediately initiate a TRE as required in this Provision.

ii. Accelerated Monitoring and TRE Initiation. When the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity monitoring, and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring as required in the Accelerated Monitoring Specifications. The Discharger shall initiate a TRE to address effluent toxicity if any WET testing results exceed the numeric toxicity monitoring trigger during accelerated monitoring.

iii. Numeric Toxicity Monitoring Trigger. The numeric toxicity monitoring trigger to initiate a TRE is > **1 TU_C** (where TU_C = 100/NOEC)(NOEC = No Observed Effect Concentration). The monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to begin accelerated monitoring and initiate a TRE when the effluent exhibits toxicity.

iv. Accelerated Monitoring Specifications. If the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity testing, the Discharger shall initiate accelerated monitoring within 14 days of notification by the laboratory of the exceedance. Accelerated monitoring shall consist of four (4) chronic toxicity tests in a six-week period (i.e., one test every two weeks) using the species that exhibited toxicity. The following protocol shall be used for accelerated monitoring and TRE initiation:

(a) If the results of four (4) consecutive accelerated monitoring tests do not exceed the monitoring trigger, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring. However, notwithstanding the accelerated monitoring results, if there is adequate evidence of effluent toxicity, the Executive Officer may require that the Discharger initiate a TRE.

(b) If the source(s) of the toxicity is easily identified (e.g., temporary plant upset), the Discharger shall make necessary corrections to the Facility and shall continue accelerated monitoring until four (4) consecutive accelerated tests do not exceed the monitoring trigger. Upon confirmation that the effluent toxicity has been removed, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring.

(c) If the result of any accelerated toxicity test exceeds the monitoring trigger, the Discharger shall cease accelerated monitoring and begin a TRE to investigate the cause(s) of and identify corrective actions to reduce or eliminate effluent toxicity. Within **thirty (30) days** of notification by the

[1] See the Fact Sheet (Attachment F, section VII.B.2.a.) for a list of USEPA guidance documents that must be considered in the development of the TRE Work Plan.

laboratory of any test result exceeding the monitoring trigger during accelerated monitoring, the Discharger shall submit a TRE Action Plan to the Central Valley Water Board including, at minimum:

(1) Specific actions the Discharger will take to investigate and identify the cause(s) of toxicity, including a TRE WET monitoring schedule;

(2) Specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and

(3) A schedule for these actions.

b. Salinity Site-Specific Study. The Discharger shall complete and submit to the Central Valley Water Board a report on the results of a site-specific investigation of appropriate salinity (i.e., electrical conductivity and total dissolved solids) levels to protect the beneficial uses of groundwater. The study shall include, at minimum, the following:

i. The most salt sensitive crop types that are grown and could be grown in the vicinity and irrigated with recycled wastewater or groundwater potentially affected by the Facility;

ii. Identification of the irrigation management practices used in the vicinity of the Facility;

iii. The sodium adsorption ratio of soils in the affected area;

iv. The effects of rainfall and flood-induced leaching; and

v. The background groundwater quality relating to salinity.

Based on these factors, as well as economic and environmental impacts (such as increased irrigation water usage, groundwater hydraulics and degraded water quality), the study shall recommend site-specific numeric values for electrical conductivity and total dissolved solids that provide reasonable protection for beneficial uses of groundwater when irrigating with recycled wastewater or groundwater potentially affected by the Facility. The Discharger shall comply with the following time schedule to complete the study:

Task	Compliance Date
i. Submit Salinity Study Work Plan for Executive Officer review	**<6 months** following adoption of this Order**>**
ii. Complete Study and submit Study Report	**<9 months** following Task i>

3. Best Management Practices and Pollution Prevention

a. Salinity Evaluation and Minimization Plan. The Discharger shall prepare a salinity evaluation and minimization plan to address sources of salinity to the

Facility and from within the Facility. The plan shall be completed and submitted to the Central Valley Water Board by **<9 months of the adoption date of this Order>** for the approval by the Executive Officer.

4. Construction, Operation and Maintenance Specifications

a. Turbidity Operational Requirements. The Discharger shall operate the treatment system to ensure that the turbidity measured at INT-001, as described in the MRP (Attachment E), shall not exceed:

i. 2 NTU, as a daily average;
ii. 5 NTU, more than 5 percent of the time within a 24-hour period; and
iii. 10 NTU, at any time.

b. Treatment Pond Operating Requirements.

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

ii. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.

iii. Ponds shall be managed to prevent breeding of mosquitoes. In particular,

(a) An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.

(b) Weeds shall be minimized.

(c) Dead algae, vegetation, and debris shall not accumulate on the water surface.

iv. Vegetation management operations in areas in which nesting birds have been observed shall be carried out either before or after, but not during, the 1 April through 30 June bird nesting season.

v. The Discharger shall maintain and operate all ponds sufficient to protect the integrity of containment levees and prevent overtopping or overflows. Unless a California civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard in any pond shall never be less than two feet (measured vertically to the lowest point of overflow). As a means of management and to discern compliance with this Provision, the Discharger shall install and maintain in each pond permanent markers with calibration that indicates the water level at design capacity and enables determination of available operational freeboard.

vi. The discharge of waste classified as "hazardous" as defined in Title 23, CCR, Section 2521(a), or "designated", as defined in section 13173 of the CWC, to the treatment ponds is prohibited.

vii. Objectionable odors originating at this Facility shall not be perceivable beyond the limits of the wastewater treatment and disposal areas (or property owned by the Discharger).

viii. The dissolved oxygen content in the upper zone (1 foot) of wastewater in the ponds shall not be less than 1.0 mg/L for three consecutive sampling events. Should the dissolved oxygen be below 1.0 mg/L for three consecutive sampling events, the Discharger shall report the finding to the Central Valley Water Board and propose a remedial approach to resolve the low dissolved oxygen results **within 30 days**.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. Pretreatment Requirements – Not Applicable

b. Sludge/Biosolids Treatment or Discharge Specifications. Sludge in this document means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screening material generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the wastewater treatment plant. Biosolids refer to sludge that has been treated and tested and shown to be capable of being beneficially and legally used pursuant to federal and state regulations as a soil amendment for agricultural, silvicultural, horticultural, and land reclamation activities as specified under 40 CFR Part 503.

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, storage, disposal, or reuse at sites (e.g., landfill, composting sites, soil amendment sites) that are operated in accordance with valid waste discharge requirements issued by a Central Valley Water Board will satisfy these specifications.

ii. Sludge and solid waste shall be removed from screens, sumps, ponds, clarifiers, etc. as needed to ensure optimal plant performance.

iii. The treatment and storage 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 in section V.B. of this Order. 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 included in section V.B. of this Order.

iv. The use, disposal, storage, and transportation of biosolids shall comply with existing federal and state laws and regulations, including permitting requirements and technical standards included in 40 CFR Part 503. If the State Water Board and the Central Valley Water Board are given the authority to implement regulations contained in 40 CFR Part 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 Part 503 whether or not they have been incorporated into this Order.

v. Any proposed change in biosolids use or disposal practice from a previously approved practice shall be reported to the Executive Officer and USEPA Regional Administrator at least **90 days** in advance of the change.

c. Collection System. On 2 May 2006, the State Water Board adopted State Water Resources Control Board Order No. 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems. The Discharger shall be subject to the requirements of Order No. 2006-0003-DWQ and any future revisions thereto. Order No. 2006-0003-DWQ requires that all public agencies that currently own or operate sanitary sewer systems apply for coverage under the general WDRs. The Discharger has applied for and has been approved for coverage under Order No. 2006-0003-DWQ 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 122.41(e)], report any non-compliance [40 CFR 122.41(l)(6) and (7)], and mitigate any discharge from the collection system in violation of this Order [40 CFR 122.41(d)].

6. Other Special Provisions – Not Applicable

7. Compliance Schedules

a. Compliance Schedule for Final Effluent Limitations for Total Ammonia Nitrogen (as N) and Total Dissolved Solids. This Order requires compliance with the final effluent limitations for total ammonia nitrogen (as N) and total dissolved solids by the date specified below. The Discharger shall comply with the following time schedule to ensure compliance with the final effluent limitations:

Task	Date Due
i. Complete California Environmental Quality Act documentation	**6 September 2011**
ii. Complete final Facility design for modifications necessary to cease discharge to Miles Creek	**19 January 2012**
iii. Complete land purchase for land disposal	**2 July 2012**
iv. Report of compliance or noncompliance with interim milestones	14 days following each interim date
v. Quarterly Progress Reports[1]	**1 February, 1 May, 1 August, and 1 November** until final compliance
vi. Full Compliance with the final effluent limitations for total ammonia nitrogen (as N) and total dissolved solids if there are no construction delays encountered due to the presence of a Swainson's Hawk nest[2]	**10 May 2013**
-or-	
Full Compliance with the final effluent limitations for total ammonia nitrogen (as N) and total dissolved solids if construction delays are encountered due to the presence of a Swainson's Hawk nest[2]	**8 November 2013**

[1] The progress reports shall detail what steps have been implemented towards achieving compliance with waste discharge requirements, including studies, construction progress, evaluation of measures implemented, and recommendations for additional measures as necessary to achieve full compliance by the final compliance date.

[2] The Discharger shall inform the Central Valley Water Board immediately upon learning of a delay due to the presence of a Swainson's Hawk nest.

VII. COMPLIANCE DETERMINATION

A. BOD_5 and TSS Effluent Limitations (Section IV.A.1.). Compliance with the final effluent limitations for BOD_5 and TSS required in Limitations and Discharge Requirements section IV.A.1.a. shall be ascertained by 24-hour composite samples. Compliance with effluent limitations required in Limitations and Discharge Requirements section IV.A.1.c. for percent removal shall be calculated using the arithmetic mean of BOD_5 and TSS in effluent samples collected over a monthly period as a percentage of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.

B. Flow Effluent Limitation (Section IV.A.1.b.). Compliance with the flow effluent limitation shall be determined monthly based on the average daily flow.

C. Total Coliform Effluent Limitations (Section IV.A.1.e.). For each day that an effluent sample is collected and analyzed for total coliform, 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 7 days in which a sample was collected. For example, if a sample is collected on a Wednesday, the result from that sampling event and all results from the previous 6 days in which a sample was collected are used to calculate the 7-day median. If the 7-day median of total coliform exceeds a most probable number (MPN) of 2.2 per 100 milliliters, the Discharger will be considered out of compliance.

D. **Total Residual Chlorine Effluent Limitations (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. Records supporting validation of false positives shall be maintained in accordance with Section IV, Standard Provisions (Attachment D).

   Until the date specified in Provision VI.C.7.a., Task vi., compliance shall be determined using the analytical results of twice daily grab samples. The method used for analysis during this period shall have a minimum detection limit of 0.01 mg/L or less.

E. **Chronic Whole Effluent Toxicity Effluent Limitation (Section IV.A.1.g.).** Compliance with the accelerated monitoring and TRE/TIE provisions of Provision VI.C.2.a. shall constitute compliance with the effluent limitation.

F. **Mass Effluent Limitations.** The mass effluent limitations contained in Final Effluent Limitations IV.A.1.a. are based on the permitted flow and calculated as follows:

   Mass (lbs/day) = Flow (MGD) × Concentration (mg/L) × 8.34 (conversion factor)

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ)

Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL)

The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)

The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Practicable Treatment or Control (BPTC)

BPTC is a requirement of State Water Resources Control Board Resolution No. 68-16 – "Statement of Policy with Respect to Maintaining High Quality of Waters in California" (referred to as the "Antidegradation Policy"). BPTC is the treatment or control of a discharge necessary to assure that, "*(a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained*." Pollution is defined in CWC section 13050(l). In general, an exceedance of a water quality objective in the Basin Plan constitutes "pollution".

Bioaccumulative

Those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic

Carcinogenic pollutants are substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV)

CV is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge

Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of 1 day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ)
DNQ are those sample results less than the reporting limit (RL), but greater than or equal to the laboratory's method detection limit (MDL).

Dilution Credit
Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Effluent Concentration Allowance (ECA)
ECA is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in USEPA guidance (*Technical Support Document For Water Quality-based Toxics Control*, March 1991, second printing, EPA/505/2-90-001).

Estimated Chemical Concentration
The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the minimum level (ML) value. Same as Detected, but Not Quantified.

Inland Surface Waters
All surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation
The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum effluent limitation).

Instantaneous Minimum Effluent Limitation
The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum effluent limitation).

Maximum Daily Effluent Limitation (MDEL)
The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations

expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median
The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

Method Detection Limit (MDL)
MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 CFR 136, Attachment B, revised as of 3 July 1999.

Minimum Level (ML)
ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone
Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

No Observed Effect Concentration
The highest concentration of toxicant to which organisms are exposed in a full life-cycle or partial life-cycle (short-term) test, that causes no observable adverse effects on the test organisms (i.e., the highest concentration of toxicant in which the values for the observed responses are not statistically significantly different from the controls).

Not Detected (ND)
Sample results which are less than the laboratory's MDL.

Persistent Pollutants
Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP)
PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Central Valley Water Board may

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

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

Reporting Level (RL)
RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Central Valley Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

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

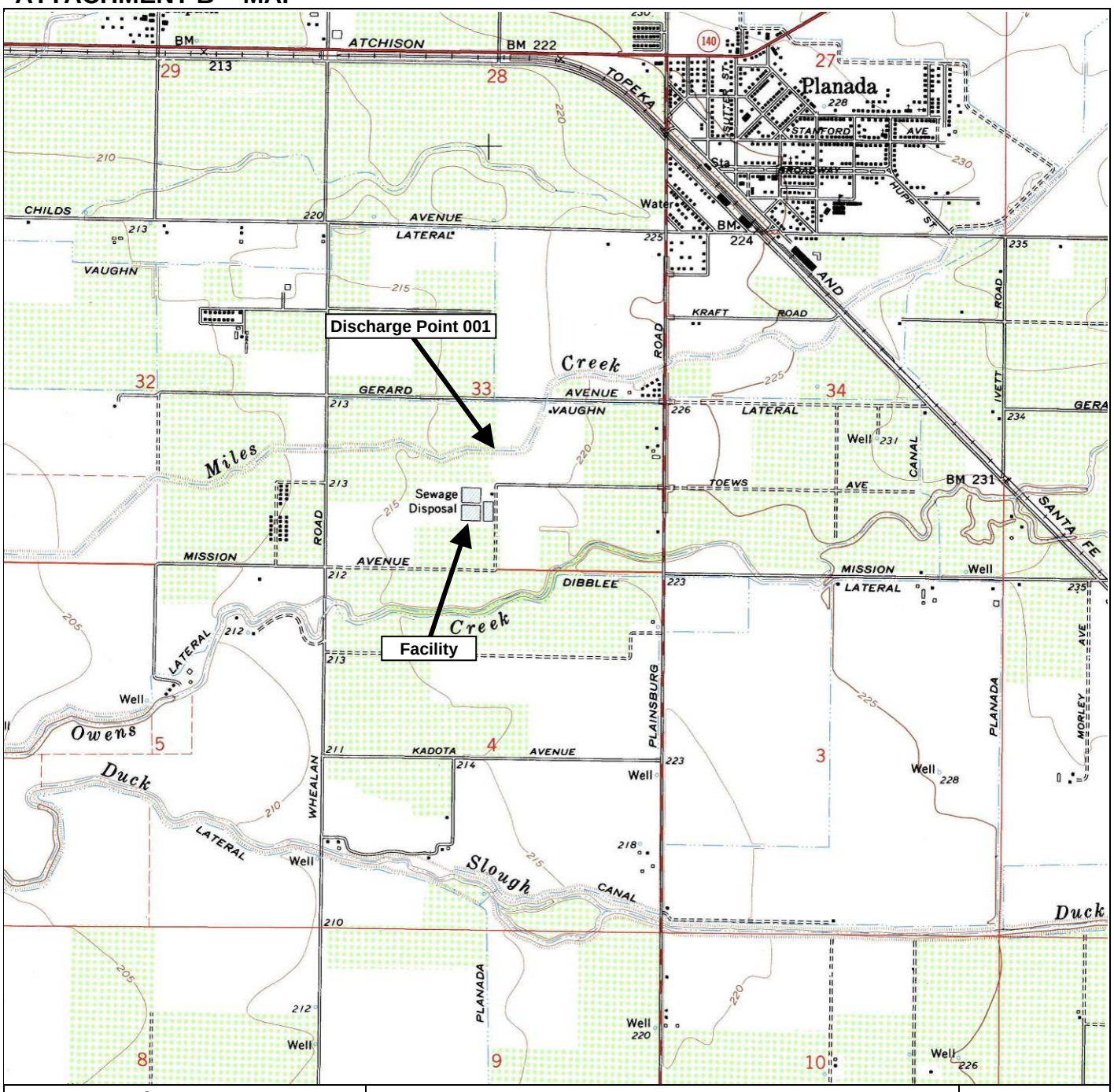
Standard Deviation (σ)
Standard Deviation is a measure of variability that is calculated as follows:

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

where:
x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

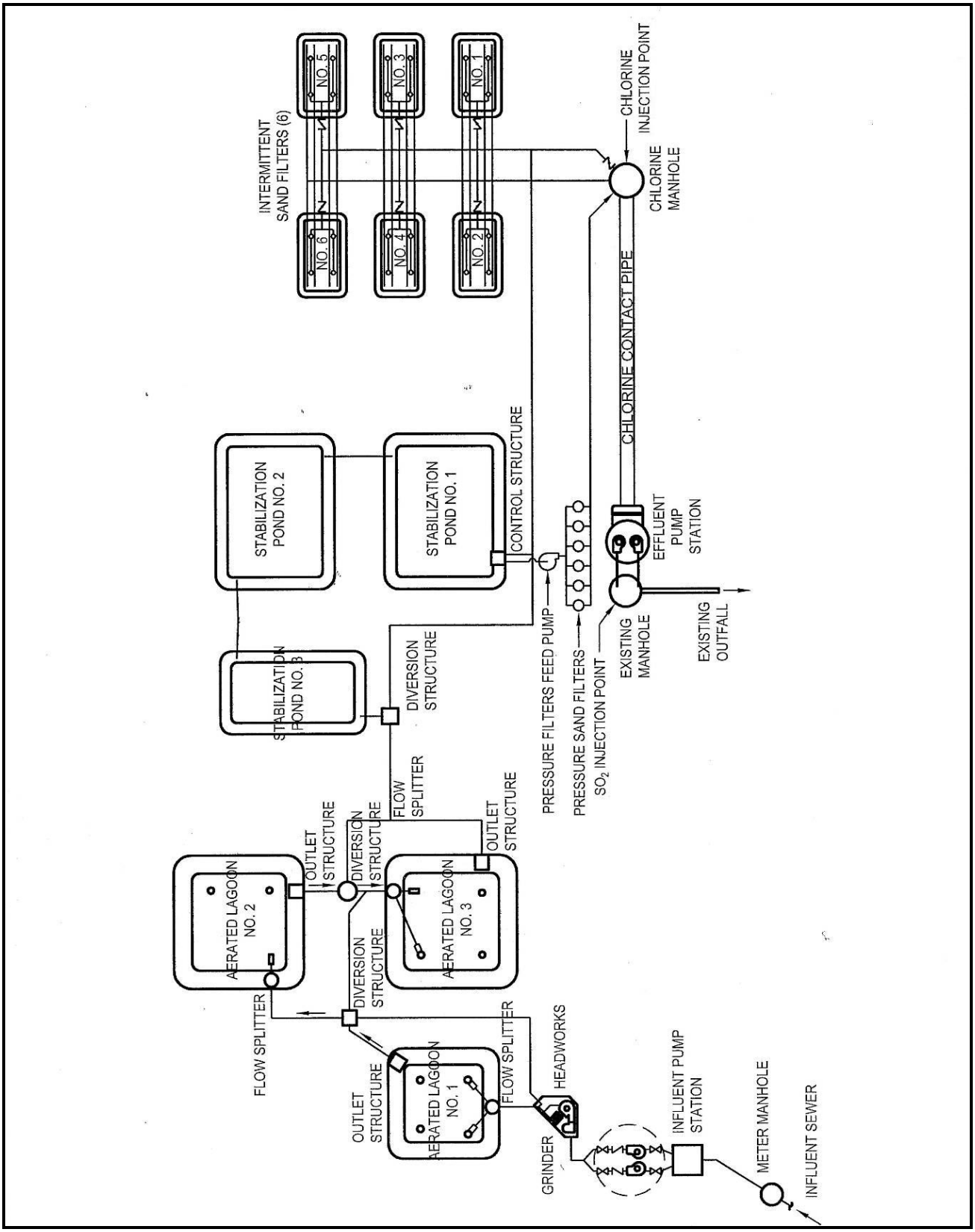
Toxicity Reduction Evaluation (TRE)
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first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

ATTACHMENT B – MAP



Drawing Reference: PLANADA U.S.G.S TOPOGRAPHIC MAP 7.5 MINUTE QUADRANGLE *Photorevised 1973* *Not to scale*	**SITE LOCATION MAP** PLANADA COMMUNITY SERVICES DISTRICT PLANADA WASTEWATER TREATMENT FACILITY MERCED COUNTY	N W E S

ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

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

2. The Discharger shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 CFR 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 CFR 122.41(c).)

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR 122.41(d).)

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 CFR 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR 122.41(g).)

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 CFR 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the Central Valley Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 CFR 122.41(i); CWC section 13383):

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

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 CFR 122.41(i)(2));

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 CFR 122.41(i)(3)); and

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

G. Bypass

1. Definitions

   a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR 122.41(m)(1)(i).)

   b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR 122.41(m)(1)(ii).)

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

3. Prohibition of bypass. Bypass is prohibited, and the Central Valley Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR 122.41(m)(4)(i)):

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR 122.41(m)(4)(i)(A));

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR 122.41(m)(4)(i)(B)); and

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

4. The Central Valley Water Board may approve an anticipated bypass, after considering its adverse effects, if the Central Valley Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 CFR 122.41(m)(4)(ii).)

5. Notice

a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 CFR 122.41(m)(3)(i).)

b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 CFR 122.41(m)(3)(ii).)

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 CFR 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was

caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR 122.41(n)(2).)

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR 122.41(n)(3)):

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

b. The permitted facility was, at the time, being properly operated (40 CFR 122.41(n)(3)(ii));

c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 CFR 122.41(n)(3)(iii)); and

d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 CFR 122.41(n)(3)(iv).)

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 CFR 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 CFR 122.41(f).)

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 CFR 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the Central Valley Water Board. The Central Valley 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 122.41(l)(3) and 122.61.)

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR 122.41(j)(1).)

B. Monitoring results must be conducted according to test procedures under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order. (40 CFR 122.41(j)(4) and 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 5 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 Central Valley Water Board Executive Officer at any time. (40 CFR 122.41(j)(2).)

B. Records of monitoring information shall include:

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

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

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

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

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

6. The results of such analyses. (40 CFR 122.41(j)(3)(vi).)

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

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

2. Permit applications and attachments, permits and effluent data. (40 CFR 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Central Valley Water Board, State Water Board, or USEPA within a reasonable time, any information which the Central Valley 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 Central Valley Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR 122.41(h); Wat. Code, § 13267.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Central Valley Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 CFR 122.41(k).)

2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR 122.22(a)(3).).

3. All reports required by this Order and other information requested by the Central Valley Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 CFR 122.22(b)(1));

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR 122.22(b)(2)); and

c. The written authorization is submitted to the Central Valley Water Board and State Water Board. (40 CFR 122.22(b)(3).)

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard

Provisions – Reporting V.B.3 above must be submitted to the Central Valley Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR 122.22(c).)

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

"*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*" (40 CFR 122.22(d).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR 122.22(l)(4).)

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

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

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

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time

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

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

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

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

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

F. Planned Changes

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

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

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR 122.41(l)(1)(ii).)

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

G. Anticipated Noncompliance

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

H. Other Noncompliance

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

I. Other Information

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

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Central Valley 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.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Central Valley Water Board of the following (40 CFR 122.42(b)):

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 CFR 122.42(b)(1)); and

2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order. (40 CFR 122.42(b)(2).)

3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 CFR 122.42(b)(3).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Table of Contents

I. General Monitoring Provisions E-2
II. Monitoring Locations E-3
III. Influent Monitoring Requirements E-3
  A. Monitoring Location INF-001 ..... E-3
IV. Effluent Monitoring Requirements E-4
  A. Monitoring Location EFF-001 ..... E-4
V. Whole Effluent Toxicity Testing Requirements E-6
VI. Land Discharge Monitoring Requirements – Not Applicable E-9
VII. Reclamation Monitoring Requirements – Not Applicable E-9
VIII. Receiving Water Monitoring Requirements – Surface Water E-9
  A. Monitoring Locations RSW-001 and RSW-002 ..... E-9
IX. Other Monitoring Requirements E-10
  A. Groundwater Monitoring Locations MW-1, MW-2, and MW-3 ..... E-10
  B. Pond Monitoring E-11
  C. Municipal Water Supply E-12
  D. Tertiary Treatment Filters E-12
X. Reporting Requirements E-13
  A. General Monitoring and Reporting Requirements E-13
  B. Self Monitoring Reports (SMRs) E-13
  C. Discharge Monitoring Reports (DMRs) – Not Applicable E-17
  D. Other Reports E-17

List of Tables

Table E-1. Monitoring Station Locations E-3
Table E-2. Influent Monitoring E-4
Table E-3. Effluent Monitoring E-4
Table E-4. Chronic Toxicity Testing Dilution Series E-7
Table E-5. Receiving Water Monitoring Requirements E-9
Table E-6. Groundwater Monitoring Requirements E-11
Table E-7. Pond Monitoring Requirements E-11
Table E-8. Municipal Water Supply Monitoring Requirements E-12
Table E-9. Tertiary Treatment Filters Monitoring Requirements E-12
Table E-10. Monitoring Periods and Reporting Schedule E-14

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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

I. GENERAL MONITORING PROVISIONS

A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of this Central Valley Water Board.

B. Unless otherwise specified herein, 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.

C. Chemical, bacteriological, and bioassay analyses of any material required by this Order shall be conducted by a laboratory certified for such analyses by the California Department of Public Health (DPH; formerly the Department of Health Services). Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Central Valley Water Board. In the event a certified laboratory is not available to the Discharger for any onsite field measurements such as pH, turbidity, temperature, and residual chlorine, such 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 for any onsite field measurements such as pH, turbidity, temperature, and residual chlorine must be kept at the treatment facility laboratory and shall be available for inspection by Central Valley Water Board, State Water Board, USEPA staff, and/or their authorized representatives. The Discharger must demonstrate sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform these field measurements. The Quality Assurance-Quality Control Program must conform to USEPA guidelines or to procedures approved by the Central Valley Water Board.

D. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their

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

E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program.

F. Laboratories analyzing monitoring samples shall be certified by DPH, in accordance with the provision of CWC section 13176, and must include quality assurance/quality control data with their reports.

G. 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.

H. The Discharger shall file with the Central Valley Water Board technical reports on self-monitoring performed according to the detailed specifications contained in this Monitoring and Reporting Program.

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

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Location where a representative sample of the Facility's influent can be obtained, prior to any additives, treatment processes, and plant return flows
001	EFF-001	Location where a representative sample of the Facility's effluent can be obtained prior to discharge into Miles Creek
--	RSW-001	Miles Creek at Gerard Avenue
--	RSW-002	Miles Creek at Whealan Avenue
--	MW-1	Groundwater Monitoring Well MW-1
--	MW-2	Groundwater Monitoring Well MW-2
--	MW-3	Groundwater Monitoring Well MW-3
--	SPL-001 through SPL-00N	Water supply wells
002	PND-001 though PND-006	Aerated Lagoons Nos. 1, 2, and 3, and Stabilization Ponds Nos. 1, 2, and 3
--	INT-001	At a location after tertiary treatment filters and prior to disinfection

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

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

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Meter	Continuous	--
Biochemical Oxygen Demand (BOD) (5-day @ 20°C)	mg/L	Composite[1]	1/Week[2]	[3]
	lbs/day	Calculated	1/Week	--
Total Suspended Solids	mg/L	Composite[1]	1/Week[2]	[3]
	lbs/day	Calculated	1/Week	--
pH	standard units	Grab	Weekdays	[3]

[1] Composite samples shall be 24-hour, flow-proportioned composites.
[2] Samples shall be collected on the same day as the effluent samples.
[3] Pollutants shall be analyzed using the analytical methods described in 40 CFR 136.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor treated effluent at EFF-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Meter	Continuous	--
Conventional Pollutants				
Biochemical Oxygen Demand (BOD) (5-day @ 20°C)	mg/L	Composite[1]	1/Week	[2]
	lbs/day	Calculated	1/Week	--
BOD, Percent Removal	%	Calculated	1/Month	[2]
Total Suspended Solids (TSS)	mg/L	Composite[1]	1/Week	[2]
	lbs/day	Calculated	1/Week	--
TSS, Percent Removal	%	Calculated	1/Month	[2]
pH	standard units	Grab	1/Week	[2]
Priority Pollutants				
Bis(2-ethylhexyl)phthalate[3]	µg/L	Grab	1/Month[4]	[2, 5]
Carbon Tetrachloride	µg/L	Grab	1/Quarter	[2, 5]
Chlorodibromomethane	µg/L	Grab	1/Quarter	[2, 5]
Copper, Total Recoverable	µg/L	Grab	1/Month[4]	[2, 5]
Cyanide, Total Recoverable	µg/L	Grab	1/Month	[2, 5]
Dichlorobromomethane	µg/L	Grab	1/Quarter	[2, 5]
Lead, Total Recoverable	µg/L	Grab	1/Month[4]	[2, 5]
Priority Pollutants	vary	Composite[1, 7]	1/Year[6]	[2, 5]
Non-Conventional Pollutants				
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Week[12]	[2]
Chlorine, Total Residual	mg/L	Meter[8]	Continuous[8]	[2, 9]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Chlorpyrifos	µg/L	Grab	2/Permit Cycle	USEPA Method 625M; Method 8141 or equivalent
Diazinon	µg/L	Grab	2/Permit Cycle	USEPA Method 625M; Method 8141 or equivalent
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Week	[2]
General Minerals[10]	mg/L	Composite[1]	1/Year	[2]
Hardness, Total (as $CaCO_3$)	mg/L	Grab	1/Month	[2]
Nitrate Nitrogen, Total (as N)	mg/L	Grab	1/Week	[2]
Nitrite Nitrogen, Total (as N)	mg/L	Grab	1/Week	[2]
Settleable Solids	mL/L	Grab	1/Week	[2]
Sulfate	mg/L	Meter	Continuous	[2]
Temperature	°F	Grab	Weekdays	[2]
Total Coliform	MPN/100 mL	Grab	1/Day[11]	[2]
Total Dissolved Solids	mg/L	Grab	1/Month	[2]
Total Kjeldahl Nitrogen (as N)	mg/L	Grab	1/Week	[2]
Turbidity	NTU	Grab	Weekdays	[2]

[1] Composite samples shall be 24-hour composites.
[2] Pollutants shall be analyzed using the analytical methods described in 40 CFR 136, or other methods approved and specified by the Executive Officer. The detection limits shall be low enough to determine compliance with the effluent limitations or the applicable water quality objective for those constituents without effluent limitations.
[3] In order to verify if bis(2-ethylhexyl)phthalate is truly present in the effluent discharge, the Discharger shall take steps to assure that sample containers, sampling apparatus, and analytical equipment are not sources of the detected contaminant.
[4] The Discharger is not required to commence monitoring until June 2014.
[5] For priority pollutant constituents with effluent limitations, detection limits shall be below the effluent limitations. If the lowest minimum level (ML) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP) is not below the effluent limitation, the detection limit shall be the lowest ML. For priority pollutant constituents without effluent limitations, the detection limits shall be equal to or less than the lowest ML published in Appendix 4 of the SIP. Sampling and analysis of bis(2-ethylhexyl)phthalate shall be conducted using ultra-clean techniques that eliminate the possibility of sample contamination.
[6] Concurrent with receiving surface water priority pollutant sampling, effluent hardness sampling, and effluent pH sampling.
[7] Volatile constituents shall be sampled in accordance with 40 CFR 136.
[8] Continuous monitoring systems for total residual chlorine shall be operational no later than the date specified in Provision VI.C.7.a., Task vi. Until that time, the Discharger shall collect and analyze grab samples **twice per day**.
[9] Total residual chlorine must be monitored with a method sensitive to and accurate at the permitted level of 0.01 mg/L.
[10] General minerals shall include the following: aluminum, boron, calcium, chloride, iron, magnesium, manganese, phosphate, potassium, sodium, and total alkalinity (including alkalinity series), and include verification that the analysis is complete (i.e., cation/anion balance).
[11] Daily monitoring for total coliform shall begin no later than the date specified in Provision VI.C.7.a., Task vi. Until that time, the Discharger shall collect and analyze grab samples **twice per week**.
[12] pH and temperature shall be recorded at the time of ammonia sample collection.

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 **1/year** acute toxicity testing, concurrent with effluent ammonia sampling.

2. *Sample Types* – The samples shall be 24-hour composites and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location EFF-001.

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

4. *Test Type and Duration* – Test type shall be static renewal, and the test duration shall be 96 hours.

5. *Dilutions* – The acute toxicity testing shall be performed using undiluted effluent.

6. *Test Methods* – The acute toxicity testing samples shall be analyzed using *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. Temperature, total residual chlorine, and pH shall be recorded at the time of sample collection. No pH adjustment may be made unless approved by the Executive Officer.

7. *Test Failure* – If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.

8. *Ammonia Toxicity* – The acute toxicity testing may be modified to eliminate ammonia-related toxicity until the date specified in Provision VI.C.7.a., Task vi., at which time the Discharger shall be required to implement the test without modifications to eliminate ammonia toxicity.

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 (2/year)** three species chronic toxicity testing.

2. *Sample Types* – Effluent samples shall be 24-hour composites and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location EFF-001. The receiving water control shall be a grab sample obtained from the RSW-001 sampling location, as identified in this 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:

   - The cladoceran, water flea, *Ceriodaphnia dubia* (survival and reproduction test);
   - The fathead minnow, *Pimephales promelas* (larval survival and growth test); and
   - The green alga, *Selenastrum capricornutum* (growth test).

5. *Test 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 (Method Manual), October 2002.

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* – For regular and accelerated chronic toxicity testing it is not necessary to perform the test using a dilution series. The test may be performed using 100% effluent and two controls. For Toxicity Reduction Evaluation (TRE) monitoring, the chronic toxicity testing shall be performed using the dilution series identified in Table E-4 below. The receiving water control shall be used as the diluent (unless the receiving water is toxic).

Table E-4. Chronic Toxicity Testing Dilution Series

Sample	Dilutions (%)					Controls	
	100	75	50	25	12.5	Receiving Water	Laboratory Water
% Effluent	100	75	50	25	12.5	0	0
% Receiving Water[1]	0	25	50	75	87.5	100	0
% Laboratory Water	0	0	0	0	0	0	100

[1] If there is no flow in Miles Creek, the Discharger may use laboratory water for dilution.

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 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. (A retest is only required in this case if the test results do not exceed the monitoring trigger specified in the Special Provision at section VI.C.2.a.iii. of this Order.)

9. *Ammonia Toxicity* – The chronic toxicity testing may be modified to eliminate ammonia-related toxicity until the date specified in Provision VI.C.7.a., Task vi., at which time the Discharger shall be required to implement the test without modifications to eliminate ammonia toxicity.

C. WET Testing Notification Requirements. The Discharger shall notify the Central Valley 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 Central Valley Water Board **within 30 days** following completion of the test, and shall contain, at minimum:

a. The dates of sample collection and initiation of each toxicity test; and

b. 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 **within 30 days** following completion of the test and reported as percent survival.

3. TRE Reporting. Reports for TREs 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 Locations RSW-001 and RSW-002

1. The Discharger shall monitor Miles Creek at RSW-001 and RSW-002 as follows:

Table E-5. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	cfs	Calculated[1]	1/Day	--
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Week	[2]
Dissolved Oxygen	mg/L	Grab	1/Week	[2]
pH	standard units	Grab	1/Week[8]	[2]
Turbidity	NTU	Grab	1/Week	[2]
Temperature	°F	Grab	1/Week[8]	[2]
Fecal Coliform	MPN/100 mL	Grab	1/Week	[2]
Chlorine, Total Residual	mg/L	Grab	1/Week	[2]
Chlorpyrifos	µg/L	Grab	2/Permit Cycle	USEPA Method 625M; Method 8141 or equivalent
Diazinon	µg/L	Grab	2/Permit Cycle	USEPA Method 625M; Method 8141 or equivalent
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Week[8]	[2]
Nitrate Nitrogen, Total (as N)	mg/L	Grab	1/Week	[2]
Total Kjeldahl Nitrogen (as N)	mg/L	Grab	1/Week	[2]
Hardness, Total (as $CaCO_3$)	mg/L	Grab	1/Month	[2]
General Minerals[3]	mg/L	Grab	1/Year	[2]
Bis(2-ethylhexyl)phthalate[4]	µg/L	Grab	1/Month[5, 6]	[2, 7]
Copper, Total Recoverable	µg/L	Grab	1/Month[5, 6]	[2, 7]
Lead, Total Recoverable	µg/L	Grab	1/Month[5, 6]	[2, 7]
Priority Pollutants	vary	Grab	1/Year[6]	[2, 7]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method

[1] Flow shall be an estimate. The methodology for obtaining the estimate must be reported with monthly self-monitoring reports.
[2] Pollutants shall be analyzed using the analytical methods described in 40 CFR 136.
[3] General minerals shall include the following: aluminum, boron, calcium, chloride, iron, magnesium, manganese, phosphate, potassium, sodium, sulfate, and total alkalinity (including alkalinity series), and include verification that the analysis is complete (i.e., cation/anion balance).
[4] In order to verify if bis(2-ethylhexyl)phthalate is truly present in the receiving water, the Discharger shall take steps to assure that sample containers, sampling apparatus, and analytical equipment are not sources of the detected contaminant.
[5] The Discharger is not required to commence monitoring until June 2014.
[6] Concurrent with effluent monitoring for the same parameter and receiving water monitoring for hardness.
[7] For priority pollutant constituents, the detection limits shall be equal to or less than the lowest ML published in Appendix 4 of the SIP. Sampling and analysis of bis(2-ethylhexyl)phthalate shall be conducted using ultra-clean techniques that eliminate the possibility of sample contamination
[8] Monitoring shall be conducted concurrently with effluent ammonia sampling.

2. In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by monitoring locations RSW-001 and RSW-002. Attention shall be given to the presence or absence of:

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

IX. OTHER MONITORING REQUIREMENTS

A. Groundwater Monitoring Locations MW-1, MW-2, and MW-3

1. Groundwater monitoring wells MW-1, MW-2, and MW-3 shall be sampled and analyzed according to the schedule below. All samples shall be collected using approved USEPA methods. Water table elevations shall be calculated to determine groundwater gradient and direction of flow.

Prior to sampling and after measuring the depth to groundwater, the wells shall be purged of at least three well volumes until temperature, pH, and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Groundwater monitoring at MW-1, MW-2, and MW-3 shall include, at a minimum, the following:

Table E-6. Groundwater Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Depth to Groundwater	±0.01 feet	Measurement	1/Quarter[1]	--
Groundwater Elevation[2]	±0.01 feet	Calculated	1/Quarter[1]	--
Gradient	feet/feet	Calculated	1/Quarter[1]	--
Gradient Direction	degrees	Calculated	1/Quarter[1]	--
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Quarter[1]	[3]
Total Dissolved Solids	mg/L	Grab	1/Quarter[1]	[3]
Fixed Dissolved Solids	mg/L	Grab	1/Quarter[1]	[3]
pH	standard units	Grab	1/Quarter[1]	[3]
Carbon, Total Organic	mg/L	Grab	1/Quarter[1]	[3]
Total Coliform	MPN/100 mL	Grab	1/Quarter[1]	[3]
Nitrate Nitrogen, Total (as N)	mg/L	Grab	1/Quarter[1]	[3]
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Quarter[1]	[3]
Total Kjeldahl Nitrogen (as N)	mg/L	Grab	1/Quarter[1]	[3]
Adjusted SAR[4]	--	Calculated	1/Quarter[1]	[3]
Title 22 MCL Inorganic Chemicals[5]	mg/L	Grab	1/Quarter[1]	[3, 7]
General Minerals[6]	µg/L	Grab	1/Quarter[1]	[3, 7]

[1] January, April, July, and October

[2] Groundwater elevation shall be determined based on depth-to-water measurements from a surveyed measuring point elevation on the well. The groundwater elevation shall be used to calculate the direction and gradient of groundwater flow, which must be reported.

[3] Pollutants shall be analyzed using the analytical methods described in 40 CFR 136, or the Discharger may propose alternative methods for approval by the Executive Officer.

[4] Adjusted sodium adsorption ratio (SAR) shall be determined as follows:

Sodium adsorption ratio $(SAR) = \frac{Na}{\sqrt{\frac{Ca + Mg}{2}}}$, where Na, Ca, and Mg are in meq/L.

[5] Title 22, CCR, Section 64431, Table 64431-A Maximum Contaminant Levels Inorganic Chemicals

[6] General minerals shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series), and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).

[7] For metals: Samples placed in an acid-preserved bottle must first be filtered through a 0.45 µm nominal pore size filter. If field filtering is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24 hours with a request (on the chain-of-custody form) to immediately filter then preserve the sample.

B. Pond Monitoring

1. Pond monitoring at PND-001 through PND-006 shall include at least the following:

Table E-7. Pond Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Freeboard	±0.1 feet	Visual	1/Week	--

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Visual observation of weeds, dead algae, foam, scum, or solids buildup on ponds	--	Visual	1/Week	--
Dissolved oxygen	mg/L	Grab[1]	1/Week	[2]

[1] Dissolved oxygen shall be measured between 8:00 a.m. and 10:00 a.m. and shall be taken opposite the pond inlet at a depth of approximately one foot.
[2] Pollutants shall be analyzed using the analytical methods described in 40 CFR 136, or the Discharger may propose alternative methods for approval by the Executive Officer.

C. Municipal Water Supply

1. Monitoring Location SPL-001 through SPL-00N

The Discharger shall monitor each municipal water supply source (SPL-001 through SPL-00N) as specified in Table E-8.

Table E-8. Municipal Water Supply Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Quarter[1]	[2]
General Minerals[3]	vary[4]	Grab	1/Permit Cycle[5]	[2]

[1] January, April, July and October
[2] Pollutants shall be analyzed using the analytical methods described in 40 CFR 136, or the Discharger may propose alternative methods for approval by the Executive Officer.
[3] General minerals shall include the following: aluminum, boron, calcium, chloride, iron, magnesium, manganese, phosphate, potassium, sodium, sulfate, and total alkalinity (including alkalinity series), and include verification that the analysis is complete (i.e., cation/anion balance).
[4] Aluminum and Iron - µg/L; all others - mg/L.
[5] Concurrent with California Department of Public Health reporting requirement.

The Discharger shall calculate and report **quarterly (1/quarter)** the flow-weighted average electrical conductivity utilizing the water supply flow data and the electrical conductivity data collected during the quarterly monitoring period. Copies of supporting calculations shall also be submitted.

D. Tertiary Treatment Filters

1. Monitoring Location INT-001

The Discharger shall monitor the tertiary treated wastewater after the tertiary treatment filters but prior to disinfection at INT-001 as specified in Table E-9 below.

Table E-9. Tertiary Treatment Filters Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Turbidity	NTU	Meter[1]	Continuous	[2]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method

[1] Continuous monitoring systems for turbidity shall be operational no later than the date specified in Provision VI.C.7.a., Task vi.

[2] Pollutants shall be analyzed using the analytical methods described in 40 CFR 136, or the Discharger may propose alternative methods for approval by the Executive Officer.

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

3. **Compliance Time Schedules.** For compliance time schedules included in the Order, the Discharger shall submit to the Central Valley Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter when it returns to compliance with the compliance time schedule.

4. The Discharger shall report to the Central Valley 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.

B. Self Monitoring Reports (SMRs)

1. The Discharger shall electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program web site (http://ciwqs.waterboards.ca.gov/). 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 SMRs the results for all monitoring specified in this Monitoring and Reporting Program under sections III through X. The Discharger shall submit monthly, quarterly, and annual SMRs including the results of all required monitoring 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:

Table E-10. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	First day of the calendar month following the permit effective date or on the permit effective date if that date is the first day of the month	All	Submit with **monthly** SMR
2/Day	First day of the calendar month following the permit effective date or on the permit effective date if that date is the first day of the month	Midnight through 11:59AM and 12:00PM through 11:59PM	Submit with **monthly** SMR
1/Day	First day of the calendar month following the permit effective date or on the permit effective date if that date is the first day of the month	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with **monthly** SMR
Weekdays	First Monday of the calendar month following the permit effective date or on the permit effective date if the permit effective date falls on the first Monday of the month	Monday through Friday	Submit with **monthly** SMR
2/Week	First Sunday of the calendar month following the permit effective date or on the permit effective date if the permit effective date falls on the first Sunday of the month	Sunday through Saturday, with samples collected on non-consecutive days	Submit with **monthly** SMR
1/Week	First Sunday of the calendar month following the permit effective date or on the permit effective date if the permit effective date falls on the first Sunday of the month	Sunday through Saturday	Submit with **monthly** SMR
1/Month	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	First day of calendar month through last day of calendar month	First day of the second month following month of sampling
1/Quarter	Closest of 1 January, 1 April, 1 July, or 1 October following (or on) permit effective date	1 January through 31 March 1 April through 30 June 1 July through 30 September 1 October through 31 December	1 May 1 August 1 November 1 February
2/Year (Chronic Toxicity)	Closest of 1 January or 1 July following (or on) permit effective date	1 January through 30 June 1 July through 31 December	Within 30 days following completion of test
1/Year	1 January following (or on) permit effective date	1 January through 31 December	Submit with the monthly SMR in which sample was taken (e.g., if a sample is taken in March, the result must be included in the March SMR [due 1 May])
1/Year (Acute Toxicity)	1 January following (or on) permit effective date	1 January through 31 December	Within 30 days following completion of test

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
1/Permit Cycle (Water Supply)	On permit effective date	Concurrent with California Department of Public Health reporting requirement	Submit with the monthly SMR in which sample was taken (e.g., if a sample is taken in March, the result must be included in the March SMR [due 1 May])
2/Permit Cycle	1 December 2014	Once between 1 December 2014 and 1 March 2015 and once between 2 March 2015 and 30 November 2015, in nonconsecutive months	Submit with the monthly SMR in which sample was taken (e.g., if a sample is taken in March, the result must be included in the March SMR [due 1 May])

4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable reported Minimum Level (ML)/Reporting Limit (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR 136.

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

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

   b. Sample results less than the ML/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/RL value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

5. **Compliance Determination.** Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and in Attachment A of this Order. For purposes of reporting and administrative enforcement by the Central Valley Water Board and the State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the ML/RL.

6. **Multiple Sample Data.** When determining compliance with an AMEL or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

   a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

   b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

7. The Discharger shall submit SMRs in accordance with the following requirements:

   a. When CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data as an attachment.

   b. The Discharger shall attach laboratory analysis sheets, including quality assurance/quality control information, with all its SMRs for which sample analyses were performed.

   c. The Discharger shall attach a cover letter to each 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. Violations must also be entered into the CIWQS web site under the Violations tab for the reporting period in which the violation occurred.

   d. SMRs must be submitted to the Central Valley Water Board, signed and certified as required by the Standard Provisions (Attachment D), through the CIWQS web site.

8. Reports must clearly show when discharging to EFF-001 or other permitted discharge locations. Reports must show the date that the discharge started and stopped at each location.

C. Discharge Monitoring Reports (DMRs) – Not Applicable

D. Other Reports

1. 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.

2. **Annual Operations Report.** 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 Facility.

   b. The names and telephone numbers of persons to contact regarding the Facility for emergency and routine situations.

   c. A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.

   d. A statement certifying whether the current operation and maintenance manual, and contingency plan, reflect the Facility 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 Central Valley 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 overall 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

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-4
D. Compliance Summary F-5
E. Planned Changes F-6
III. Applicable Plans, Policies, and Regulations F-6
A. Legal Authorities F-6
B. California Environmental Quality Act (CEQA) F-6
C. State and Federal Regulations, Policies, and Plans F-6
D. Impaired Water Bodies on CWA 303(d) List F-8
E. Other Plans, Polices and Regulations F-9
IV. Rationale For Effluent Limitations and Discharge Specifications F-9
A. Discharge Prohibitions F-10
B. Technology-Based Effluent Limitations F-11
1. Scope and Authority F-11
2. Applicable Technology-Based Effluent Limitations F-11
C. Water Quality-Based Effluent Limitations (WQBELs) F-12
1. Scope and Authority F-12
2. Applicable Beneficial Uses and Water Quality Criteria and Objectives F-13
3. Determining the Need for WQBELs F-17
4. WQBELs Calculations F-34
5. Whole Effluent Toxicity (WET) F-36
D. Final Effluent Limitations F-38
1. Mass-based Effluent Limitations F-38
2. Averaging Periods for Effluent Limitations F-39
3. Satisfaction of Anti-Backsliding Requirements F-39
4. Satisfaction of Antidegradation Policy F-40
5. Stringency of Requirements for Individual Pollutants F-40
E. Interim Effluent Limitations F-42
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-47
VI. Rationale for Monitoring and Reporting Requirements F-47
A. Influent Monitoring F-48
B. Effluent Monitoring F-48
C. Whole Effluent Toxicity Testing Requirements F-48
D. Receiving Water Monitoring F-49
1. Surface Water F-49

2. Groundwater F-49
E. Other Monitoring Requirements F-50
1. Pond Monitoring F-50
2. Water Supply Monitoring F-50
3. Tertiary Treatment Filters Monitoring F-50
VII. Rationale for Provisions F-50
A. Standard Provisions F-50
B. Special Provisions F-51
1. Reopener Provisions F-51
2. Special Studies and Additional Monitoring Requirements F-51
3. Best Management Practices and Pollution Prevention F-54
4. Construction, Operation, and Maintenance Specifications F-54
5. Special Provisions for Municipal Facilities (POTWs Only) F-54
6. Other Special Provisions – Not Applicable F-55
7. Compliance Schedules F-55
VIII. Public Participation F-55
A. Notification of Interested Parties F-55
B. Written Comments F-56
C. Public Hearing F-56
D. Waste Discharge Requirements Petitions F-56
E. Information and Copying F-56
F. Register of Interested Persons F-57
G. Additional Information F-57

List of Tables

Table F-1. Facility Information F-3
Table F-2. Historic Effluent Limitations and Monitoring Data F-5
Table F-3. Summary of Technology-based Effluent Limitations F-12
Table F-4. Basin Plan Beneficial Uses F-14
Table F-5. Salinity Water Quality Criteria/Objectives F-31
Table F-6. Summary of Water Quality-Based Effluent Limitations F-36
Table F-7. Summary of Final Effluent Limitations F-41
Table F-8. Interim Effluent Limitations Calculation Summary F-44

ATTACHMENT F – FACT SHEET

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

WDID	5C240110001
Discharger	Planada Community Services District
Name of Facility	Planada Wastewater Treatment Facility
Facility Address	8567 East Toews Avenue
	Planada, CA 95365
	Merced County
Facility Contact, Title and Phone	Stan Rodriguez, Chief Plant Operator, (209) 382-0213
Authorized Person to Sign and Submit Reports	Stan Rodriguez, Chief Plant Operator, (209) 382-0213 Rene Perez, President, (209) 382-0213
Mailing Address	P.O. Box 905 Planada, CA 95365
Billing Address	SAME
Type of Facility	Publicly Owned Treatment Works
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	B
Pretreatment Program	No
Reclamation Requirements	Not applicable
Facility Permitted Flow	0.53 million gallons per day (mgd)
Facility Design Flow	0.53 mgd
Watershed	San Joaquin Valley Floor Hydrologic Unit, Merced Hydrologic Area (No. 535.80)
Receiving Water	Miles Creek
Receiving Water Type	Inland surface water

A. Planada Community Services District (hereinafter Discharger) is the owner and operator of the Planada Wastewater Treatment Facility (hereinafter Facility), a publicly owned treatment works.

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. The Facility discharges wastewater to Miles Creek, a water of the United States, and is currently regulated by Order No. R5-2005-0009 which was adopted on 27 January 2005 and expired on 26 January 2010. The terms and conditions of the current Order have been automatically continued and remain in effect until new Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit are adopted pursuant to this Order.

C. The Discharger filed a report of waste discharge and submitted an application for renewal of its WDRs and NPDES permit on 29 July 2009.

II. FACILITY DESCRIPTION

The Discharger provides sewerage service for the community of Planada and serves a population of approximately 4,300. The Discharger owns and operates the publicly owned treatment works including its wastewater collection system. The design daily average flow capacity of the Facility is 0.53 million gallons per day (mgd).

A. Description of Wastewater and Biosolids Treatment or Controls

The treatment system at the Facility consists of a metering manhole, an influent pumping station, a grinder to shred solids in the raw sewage, an influent distribution box, three silty clay-lined aerated lagoons, three unlined stabilization ponds, six intermittent sand filters, six pressure filter pods, a chlorination manhole, a chlorine contact pipe, dechlorination, and an effluent pump station. The Facility does not waste sludge, but has cleaned sludge from its ponds in the past and removes solids from its filters. Treated municipal wastewater is discharged to Miles Creek at Discharge Point 001.

B. Discharge Points and Receiving Waters

1. The Facility is in Section 33, T7S, R15E, MDB&M, as shown in Attachment B, a part of this Order.

2. Treated municipal wastewater is discharged at Discharge Point 001 to Miles Creek, a water of the United States and a tributary to the San Joaquin River between Sack Dam and the mouth of the Merced River, at a point latitude 37° 16' 43.03" N and longitude 120° 20' 2.55" W (NAD83). The discharge is within the San Joaquin Valley Floor Hydrologic Unit (No. 535.80).

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

Effluent limitations contained in Order No. R5-2005-0009 for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from the term of Order No. R5-2005-0009 are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation			Monitoring Data (From 1 February 2005 to 30 June 2010)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Flow	mgd	0.53	--	--	0.50	--	--
pH	standard units	--	--	6.5-8.5[1]	--	--	6.39-8.25[1]
Electrical Conductivity @ 25°C (EC)	µmhos/ cm	700	--	--	919	--	--
Total Residual Chlorine	mg/L	0.01	--	0.02	ND	--	ND
Settleable Solids	ml/L	--	--	0.1	--	--	ND
Cyanide	µg/L	10 (4.2[2])	--	20 (8.5[2])	22	--	22
Carbon Tetrachloride	µg/L	0.45 (0.25[2])	--	0.9 (0.50[2])	0.9	--	0.9
Chlorodibromomethane	µg/L	1.6 (0.41[2])	--	2.1 (0.82[2])	3.5	--	3.5
Dichlorobromomethane	µg/L	6 (0.56[2])	--	12 (1.1[2])	23	--	23
Biochemical Oxygen Demand (BOD) 5-day @ 20°C	mg/L	30 (10[2])	45 (15[2])	60 (20[2])	48	130	130
	lbs/day	133 (44[2])	199 (66[2])	265 (88[2])	155	367	414
BOD % Removal	%	85[3] (90[2,3])	--	--	79[3]	--	--
Total Suspended Solids (TSS)	mg/L	30 (10[2])	45 (15[2])	60 (20[2])	44	65	65
	lbs/day	133 (44[2])	199 (66[2])	265 (88[2])	119	213	188
TSS % Removal	%	85[3] (90[2,3])	--	--	60[3]	--	--
Total Coliform	MPN/ 100 mL	--	--	23/240[4] (2.2/23[2,4])	--	--	300/>1600[4]
Turbidity	NTU	--	--	-- (2/10[5])	--	--	55

ND = Not Detected
1 Instantaneous minimum to instantaneous maximum range
2 Final effluent limitation, which became applicable to the discharge on 26 January 2010
3 Represents the minimum average monthly percent removal
4 7-sample median / maximum daily
5 Average daily / instantaneous maximum

D. Compliance Summary

The Discharger was issued Administrative Civil Liability Orders on 23 June 2005 and 30 November 2009 for two separate Administrative Civil Liability Complaints. The two

complaints were for mandatory minimum penalties associated primarily with violations of effluent limitations for total residual chlorine, total coliform, and secondary treatment limits for BOD and TSS. There were also mandatory minimum penalty violations for pH, EC, carbon tetrachloride, trihalomethanes, and cyanide.

E. Planned Changes

The Discharger intends to cease discharging to Miles Creek by the date specified in Provision VI.C.7.a., Task vi., and dispose of its treated effluent by crop irrigation. The Discharger holds a purchase option on 109 acres of land, is negotiating a purchase option on an additional 38 acres, and is currently working to comply with CEQA/NEPA requirements and secure funding. The Discharger's efforts to cease discharging to Miles Creek are its sole means of complying with certain final effluent limitations and monitoring requirements included in this Order.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the applicable plans, policies, and regulations identified in the Findings in section II of this Order. The applicable plans, policies, and regulations relevant to the discharge include the following:

A. Legal Authorities

This Order is issued pursuant to regulations in the Clean Water Act (CWA) and the California Water Code (CWC) as specified in the Finding contained at section II.C of this Order.

B. California Environmental Quality Act (CEQA)

This Order meets the requirements of CEQA as specified in the Finding contained at section II.E of this Order.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** This Order implements the following water quality control plans as specified in the Finding contained at section II.H of this Order.

   a. *Water Quality Control Plan, for the Sacramento River and San Joaquin River Basins*, Fourth Edition, revised September 2009 (Basin Plan)

2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** This Order implements the NTR and CTR as specified in the Finding contained at section II.I of this Order.

3. **State Implementation Policy (SIP).** This Order implements the SIP as specified in the Finding contained at section II.J of this Order.

4. **Alaska Rule.** This Order is consistent with the Alaska Rule as specified in the Finding contained at section II.L of this Order.

5. **Antidegradation Policy.** As specified in the Finding contained at section II.N of this Order and as discussed in detail in the Fact Sheet (Attachment F, Section IV.D.4.), the discharge is consistent with the antidegradation provisions of Title 40, Code of Federal Regulations, Section 131.12 (40 CFR 131.12) and State Water Resources Control Board (State Water Board) Resolution No. 68-16.

6. **Anti-Backsliding Requirements.** This Order is consistent with anti-backsliding policies as specified in the Finding contained at section II.O of this Order. Compliance with the anti-backsliding requirements is discussed in the Fact Sheet (Attachment F, Section IV.D.3).

7. **Emergency Planning and Community Right to Know Act.** Section 13263.6(a) of the CWC, requires that "*[t]he regional water board shall prescribe effluent limitations as part of the waste discharge requirements of a POTW for all substances that the most recent toxic chemical release data reported to the state emergency response commission pursuant to Section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. Sec. 11023) [EPCRA] indicate as discharged into the POTW, for which the state board or the regional board has established numeric water quality objectives, and has determined that the discharge is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective*".

   The most recent toxic chemical data report does not indicate any reportable off-site releases or discharges to the collection system for this Facility. Therefore, a reasonable potential analysis based on information from EPCRA cannot be conducted. Based on information from EPCRA, there is no reasonable potential to cause or contribute to an excursion above any numeric water quality objectives included within the Basin Plan or in any State Water Board plan, so no effluent limitations are included in this permit pursuant to CWC section 13263.6(a).

   However, as detailed elsewhere in this Order, available effluent data indicate that there are constituents present in the effluent that have a reasonable potential to cause or contribute to exceedances of water quality standards and require inclusion of effluent limitations based on federal and state laws and regulations.

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

   As the discharge is less than 1 mgd, this Facility is not required to obtain coverage under the State Water Board, Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities.

9. **Endangered Species Act.** This Order is consistent with the Endangered Species Act as specified in the Finding contained at section II.P of this Order.

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

1. Under section 303(d) of the 1972 CWA, states, territories and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. On 28 June 2007, USEPA gave final approval to California's 2006 section 303(d) List of Water Quality Limited Segments. The Basin Plan references this list of Water Quality Limited Segments (WQLSs), which are defined as "…*those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 CFR Part 130, et seq.).*" The Basin Plan also states, "*Additional treatment beyond minimum federal requirements will be imposed on dischargers to WQLSs. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment*." Miles Creek is not listed as a WQLS in the 2006 303(d) List of WQLSs. However, Miles Creek is tributary to the San Joaquin River between Sack Dam and the mouth of the Merced River. Segments of the San Joaquin River between Sack Dam and the mouth of the Merced River are listed as WQLSs in the 2006 303(d) list for boron, chlorpyrifos, DDT, diazinon, EC, Group A pesticides, mercury, selenium, and unknown toxicity. This Order includes monitoring requirements for all of these pollutants, and also includes an effluent limitation for EC.

2. **Total Maximum Daily Loads (TMDLs).** USEPA requires the Central Valley Water Board to develop TMDLs for each 303(d) listed pollutant and water body combination. TMDLs on the Lower San Joaquin River have been established for chlorpyrifos, diazinon, boron, and EC.

   a. The Basin Plan includes waste load allocations for diazinon and chlorpyrifos applicable to all NPDES dischargers. The previous Order did not require the Discharger to monitor for chlorpyrifos or diazinon. This Order includes monitoring requirements for these constituents to determine if the discharge is in compliance with the waste load allocations in the Basin Plan.

   b. The Basin Plan contains a TMDL for salt and boron applicable to the Discharger (*Control Program for Salt and Boron Discharges into the Lower San Joaquin River*) (Salt and Boron TMDL). It identifies existing NPDES point source dischargers as a low priority. Compliance dates for low priority dischargers are contained in Table IV-4.3 of the Basin Plan. Low priority dischargers are not required to be in compliance during wet through dry years for 16 years and 20 years during critical years, starting from the effective date of the control program [28 July 2006]. At that time, the discharge must not exceed the water quality objectives for EC that apply to the San Joaquin River at Vernalis. Generally, discharges must not exceed an EC of 700 µmhos/cm from 1 April through 31 August and 1,000 µmhos/cm from 1 September through 31 March.

This Order carries over the EC effluent limitation established in Order No. R5-2005-0009 of 700 µmhos/cm.

3. The 303(d) listings and TMDLs have been considered in the development of this Order. A pollutant-by-pollutant evaluation of each pollutant of concern is described in section IV.C.3. of this Fact Sheet.

E. Other Plans, Polices and Regulations

1. The discharge authorized herein and the treatment and storage facilities associated with the discharge of treated municipal wastewater, except for discharges of residual sludge and solid waste, are exempt from the requirements of Title 27, California Code of Regulations (CCR), Section 20005 *et seq.* (hereafter Title 27). The treatment facilities, which include three aerated lagoons and three stabilization ponds, are exempt from Title 27 requirements pursuant to Title 27, CCR, Section 20090(a). The exemption for the discharge to Miles Creek, pursuant to Title 27, CCR, Section 20090(a), is based on the following:

a. The waste consists primarily of domestic sewage and treated effluent; and

b. The waste discharge requirements are consistent with water quality objectives.

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 CWA and amendments thereto are applicable to the discharge.

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

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in

the Code of Federal Regulations: 40 CFR 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR 122.44(d) requires that permits include WQBELs 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 Basin Plan at page IV-17.00 contains an implementation policy, "*Policy for Application of Water Quality Objectives*", that specifies that the Central Valley 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 Central Valley Water Board must establish effluent limitations using one or more of three specified sources, including: (1) USEPA's published water quality criteria, (2) a proposed state criterion (i.e., water quality objective) or an explicit state policy interpreting its narrative water quality criteria (i.e., the Central Valley 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 includes numeric site-specific water quality objectives and narrative objectives for toxicity, chemical constituents, discoloration, radionuclides, 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-8.01.) 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 narrative chemical constituents objective 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 the CCR. The Basin Plan further states that, to protect all beneficial uses, the Central Valley Water Board may apply limits more stringent than MCLs. 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*."

A. Discharge Prohibitions

1. Prohibition III.A concerns a change in manner or location of the discharge, or a change in its character, from what was provided in the Report of Waste Discharge (RWD) and evaluated for compliance with the CWC and CWA.

2. Prohibition III.B prohibits bypass pursuant to 40 CFR 122.41(m)(4), with federal allowance for exceptions set forth in Section I.G. of Attachment D, Federal Standard Provisions. It also prohibits overflows, which concerns release of untreated and partially treated wastewater to surface waters.

3. Prohibition III.C is based on Basin Plan water quality objectives and Resolution No. 68-16, which prohibit conditions that create pollution or a nuisance. Prohibition III.C also reflects general situations that, if created, justify cleanup or abatement enforcement activities and assessment of administrative civil liabilities.

4. Prohibition III.D incorporates prohibitions set forth in the Basin Plan and not covered by the preceding prohibitions.

5. Prohibition III.E concerns two categories of waste that are subject to full containment as prescribed by Title 23 and Title 27 of the CCR and, if discharged, have high potential for creating a condition that would violate Prohibition III.C as well.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at 40 CFR 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR 133 and Best Professional Judgment (BPJ) in accordance with 40 CFR 125.3.

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

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

Based on this statutory requirement, USEPA developed secondary treatment regulations, which are specified in 40 CFR 133. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of 5-day biochemical oxygen demand (BOD_5), total suspended solids (TSS), and pH.

2. Applicable Technology-Based Effluent Limitations

a. **BOD_5 and TSS.** Federal regulations, 40 CFR 133, establish the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for BOD_5 and TSS. 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.

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

c. **Flow.** The Facility was designed to provide a secondary level of treatment for up to a design flow of 0.53 mgd. Therefore, this Order contains an average monthly flow effluent limitation of 0.53 mgd.

Summary of Technology-based Effluent Limitations
Discharge Point 001

Table F-3. Summary of Technology-based Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand (BOD) 5-day @ 20°C	mg/L	30	45		--	--
Total Suspended Solids (TSS)	mg/L	30	45		--	--
pH	standard units	--	--	--	6.0	9.0

a. **Flow.** The average monthly daily discharge flow shall not exceed 0.53 mgd.

b. **Percent Removal.** The average monthly percent removal of 5-day biochemical oxygen demand (BOD_5) and total suspended solids (TSS) shall not be less than 85 percent.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

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

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply.

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 provides for recreation in and on the water be achieved by July 1, 1983.*" Federal regulations, developed to implement the requirements of the CWA, create a rebuttable presumption that all waters be designated as fishable and swimmable. Federal regulations, 40 CFR sections 131.2 and 131.10, require that all waters of the State 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. Federal regulation, 40 CFR 131.3(e), defines existing beneficial uses as those uses actually attained after 28 November 1975, whether or not they are included in the water quality standards. Federal regulation, 40 CFR 131.10, requires that uses be obtained by implementing effluent limitations, requires that all downstream uses be protected and states that in no case shall a state adopt waste transport or waste assimilation as a beneficial use for any waters of the United States.

a. Receiving Water (Surface Water) and Beneficial Uses. Effluent from the Facility discharges to Miles Creek, a water of the United States and a tributary to the San Joaquin River between Sack Dam and the mouth of the Merced River. Approximately seven miles downstream of the discharge, Miles Creek joins Owens Creek. Thereafter, Owens Creek meanders for about 16 miles to its juncture with the Eastside Canal. At this point, water from Owens Creek can be diverted to the Eastside Canal or to the Eastside Bypass, both of which form a network of natural and manmade channels for agricultural irrigation and drainage that drains to the San Joaquin River.

The Basin Plan at 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 Miles Creek, but does identify present and potential uses for the San Joaquin River between Sack Dam and the mouth of the Merced River, to which Miles Creek, via Owens Creek, is tributary. In addition, the Basin Plan implements State Water Board Resolution No. 88-63,

which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply.

Order No. R5-2005-0009 considered shellfish harvesting (SHELL) an existing beneficial use. The reasoning for this was that the California Department of Fish and Game and Merced County Department of Public Health provided information that humans collect clams for consumption from Miles Creek and Owens Creek. Regulations concerning the federal antidegradation policy (40 CFR 131.12(a)) require that "Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected".

Beneficial uses applicable to Miles Creek are presented in Table F-4 below.

b. **Receiving Water (Groundwater) and Beneficial Uses.** The Basin Plan designates beneficial uses for the groundwater underlying the Facility. Groundwater underlying the Facility is in Detailed Analysis Unit No. 210, and the beneficial uses of this unit are presented in Table F-4 below.

Table F-4. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Miles Creek	Municipal and domestic supply (MUN); agricultural supply, including irrigation and stock watering (AGR); industrial process supply (PRO); water contact recreation, including canoeing and rafting (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); warm and cold fish migration habitat (MIGR); warm and cold spawning, reproduction, and/or early development (SPWN); wildlife habitat (WILD); shellfish harvesting (SHELL)
002	Groundwater	MUN; AGR; industrial service supply (IND); PRO

c. **Effluent and Ambient Background Data.** The reasonable potential analysis (RPA), as described in section IV.C.3 of this Fact Sheet, was based on data from 1 February 2005 through 30 June 2010, which includes effluent and ambient background data submitted in SMRs and the RWD. Additional priority pollutant data from April 2001 and October 2002 were also used for the RPA.

d. **Priority Pollutant Metals**

i. **Hardness-Dependent CTR Metals Criteria.** The *California Toxics Rule* and the *National Toxics Rule* contain water quality criteria for seven metals that vary as a function of hardness. The lower the hardness, the lower the water quality criteria. The metals with hardness-dependent criteria include cadmium, copper, chromium III, lead, nickel, silver, and zinc.

This Order has established the criteria for hardness-dependent metals based on the reasonable worst-case ambient hardness as required by the SIP[1], the

[1] The SIP does not address how to determine the hardness for application to the equations for the protection of aquatic life when using hardness-dependent metals criteria. It simply states, in Section 1.2, that the criteria shall be properly adjusted for hardness using the hardness of the receiving water.

CTR[1] and State Water Board Order WQ 2008-0008 (City of Davis). The SIP and the CTR require the use of "receiving water" or "actual ambient" hardness, respectively, to determine effluent limitations for these metals. (SIP § 1.2; 40 CFR 131.38(c)(4), Table 4, note 4.) The CTR does not define whether the term "ambient," as applied in the regulations, necessarily requires the consideration of upstream or downstream hardness conditions. Therefore, where reliable, representative data are available, the hardness value for calculating criteria can be the downstream receiving water hardness, after mixing with the effluent (Order WQ 2008-0008, p. 11). The Central Valley Water Board thus has considerable discretion in determining ambient hardness (*Id.*, p.10.).

The hardness values must also be protective under all flow conditions (*Id.*, pp. 10-11).

Reasonable Potential Analysis (RPA). The SIP in Section 1.3 states, "*The RWQCB shall…determine whether a discharge may: (1) cause, (2) have a reasonable potential to cause, or (3) contribute to an excursion above any applicable priority pollutant criterion or objective.*" Section 1.3 provides a step-by-step procedure for conducting the RPA. The procedure requires the comparison of the maximum effluent concentration (MEC) and maximum ambient background concentration to the applicable criterion that has been properly adjusted for hardness. Unless otherwise noted, for the hardness-dependent CTR metals criteria, the following procedure was followed for properly adjusting the criterion for hardness when conducting the RPA:

- For comparing the MEC and the Maximum Ambient Background Concentration to the applicable criterion, as allowed by the SIP, CTR, and Order WQ 2008-0008, the lowest reported upstream hardness was used to adjust the criterion.

Calculation of Water Quality-Based Effluent Limitations. The remaining discussion in this section relates to the development of water quality-based effluent limitations (WQBELs) when it has been determined that the discharge has reasonable potential to cause or contribute to an exceedance of the CTR hardness-dependent metals criteria in the receiving water.

The equation describing the total recoverable regulatory criterion, as established in the CTR, is as follows:

$$\text{CTR Criterion} = \text{WER} \times (e^{m[\ln(H)]+b}) \qquad \text{(Equation 1)}$$

Where:

H = hardness (as $CaCO_3$)

[1] The CTR requires that, for waters with a hardness of 400 mg/L (as $CaCO_3$), or less, the actual ambient hardness of the surface water must be used. It further requires that the hardness values used must be consistent with the design discharge conditions for design flows and mixing zones.

WER = water-effect ratio
m, b = metal- and criterion-specific constants

In accordance with the CTR, the default value for the WER is 1. A WER study must be conducted to use a value other than 1. The constants "m" and "b" are specific to both the metal under consideration and the type of total recoverable criterion (i.e., acute or chronic). The metal-specific values for these constants are provided in the CTR at paragraph (b)(2), Table 1.

The equation for the ECA is defined in Section 1.4, Step 2 of the SIP and is as follows:

$$ECA = C \text{ (when } C \leq B) \qquad \text{(Equation 2)}$$

Where:

C = the priority pollutant criterion/objective, adjusted for hardness (see Equation 1, above)
B = the ambient background concentration

The effluent hardness ranged from 132 mg/L to 258 mg/L (as $CaCO_3$), based on four samples collected between February 2005 to May 2009. The upstream receiving water hardness varied from 118 mg/L to 202 mg/L (as $CaCO_3$), based on three samples collected between February 2005 to May 2009. Due to the limited amount of hardness data available, the lowest observed upstream receiving water hardness of 118 mg/L (as $CaCO_3$) and Equation 1 were used to calculate the ECAs for all hardness-dependent metals. This will result in WQBELs that are protective under all potential effluent/receiving water mixing scenarios and under all known hardness conditions.

This approach for calculating hardness-dependent metals criteria differs from the "Concave Up/Concave Down" approach described in other recent Central Valley Water Board NPDES permits. This different approach is warranted because of the limited upstream and effluent hardness data. This approach is more conservative in this case because the lowest upstream receiving water hardness is lower than the lowest effluent hardness.

ii. **Conversion Factors.** The CTR contains aquatic life criteria for arsenic, cadmium, chromium III, chromium VI, copper, lead, nickel, silver, and zinc which are presented in dissolved concentrations. USEPA recommends conversion factors to translate dissolved concentrations to total concentrations. The default USEPA conversion factors contained in Appendix 3 of the SIP were used to convert the applicable dissolved criteria to total recoverable criteria.

e. **Assimilative Capacity/Mixing Zone.** Data in the SMRs show that there are periods where the upstream receiving water flow is zero. Thus, the worst-case

dilution is assumed to be zero to provide protection of the receiving water beneficial uses. The impact of assuming zero dilution/assimilative capacity within the receiving water is that the effluent limitations are end-of-pipe limitations with no allowance for dilution within the receiving water.

3. Determining the Need for WQBELs

a. The Central Valley 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 Central Valley Water Board may use the SIP as guidance for water quality-based toxics control.[1] The SIP states in the introduction "*The goal of this Policy is to establish a standardized approach for permitting discharges of toxic pollutants to non-ocean surface waters in a manner that promotes statewide consistency*." Therefore, in this Order the RPA procedures from the SIP were used to evaluate reasonable potential for both CTR and non-CTR constituents based on information submitted as part of the application, in studies, and as directed by monitoring and reporting programs.

b. Constituents with Limited Data. Reasonable potential cannot be determined for the following constituents because effluent data are limited or ambient background concentrations are not available. The Discharger is required to continue to monitor for these constituents in the effluent using analytical methods that provide the best feasible detection limits. When additional data become available, further analysis will be conducted to determine whether to add numeric effluent limitations or to continue monitoring.

i. Bis(2-ethylhexyl)phthalate. The Discharger collected three priority pollutant samples during the life of the permit. Bis(2-ethylhexyl)phthalate was detected in the effluent and upstream receiving water locations for one sampling event. The other two sampling events show bis(2-ethylhexyl)phthalate was not detected above the method detection limit in the effluent and upstream and downstream receiving water monitoring locations. Bis(2-ethylhexyl)phthalate is a common contaminant of sample containers, sampling apparatus, and analytical equipment, and sources of the detected bis(2-ethylhexyl)phthalate may be from plastics used for sampling or analytical equipment. The Discharger did not collect the samples using clean techniques for sampling and analysis to prevent contamination. The Central Valley Water Board is not establishing effluent limitations for bis(2-ethylhexyl)phthalate at this time. Instead of limitations, additional monitoring has been established for bis(2-ethylhexyl)phthalate; should monitoring results indicate that the discharge has the reasonable potential to cause or contribute to an exceedance of a water quality criterion, this Order may be reopened and modified by adding an appropriate effluent limitation.

[1] See Order WQ 2001-16 (Napa) and Order WQO 2004-0013 (Yuba City).

ii. **Copper.** The Discharger collected three priority pollutant samples during the life of the permit. Data from priority pollutant samples collected in April 2001 and October 2002 were also used to determine reasonable potential for copper. Copper was detected in the effluent at a maximum concentration of 92 µg/L and in the upstream receiving water at a maximum of 18 µg/L, both as total recoverable. The lowest, most stringent criterion for copper was calculated as 10.7 µg/L as total recoverable. The maximum effluent concentration and maximum receiving water concentration are suspect for the following reasons: (1) monitoring data show the majority of the maximum effluent and receiving water concentrations for CTR metals occurred during the same sampling event; (2) the Discharger has stated that there is only one industrial discharger in Planada, which is a grain mill; (3) the data show that both maximum concentrations are much greater than other results (the next highest copper results are 5.1 µg/L in the effluent and 5.4 µg/L in the receiving water); (4) the maximum effluent concentration is significantly higher than the majority of other POTWs with NPDES permits in the Central Valley Region. The laboratory reports show there are no QA/QC issues with the analytical results. For the reasons stated above and as allowed by Section 1.2 of the SIP, the maximum observed copper concentrations are considered inappropriate for inclusion in the reasonable potential analysis. This Order requires the Discharger to collect additional copper data; should monitoring results indicate that the discharge has the reasonable potential to cause or contribute to an exceedance of a water quality criterion, this Order may be reopened and modified by adding an appropriate effluent limitation.

iii. **Lead.** The Discharger collected three priority pollutant samples during the life of the permit. Data from priority pollutant samples collected in April 2001 and October 2002 were also used to determine reasonable potential for lead. Lead was detected in the effluent at a maximum concentration of 9.1 µg/L and in the upstream receiving water at a maximum of 6.1 µg/L, both as total recoverable. The lowest, most stringent criterion for lead was calculated as 3.93 µg/L as total recoverable. The maximum effluent concentration and maximum receiving water concentration are suspect for the following reasons: (1) monitoring data show the majority of the maximum effluent and receiving water concentrations for CTR metals occurred during the same sampling event; (2) the Discharger has stated that there is only one industrial discharger in Planada, which is a grain mill; (3) the data show that both maximum concentrations are much greater than other results (the next highest lead results are 0.52 µg/L in the effluent and 1.4 µg/L in the receiving water); (4) the maximum effluent concentration is significantly higher than the majority of other POTWs with NPDES permits in the Central Valley Region. The laboratory reports show there are no QA/QC issues with the analytical results. For the reasons stated above and as allowed by Section 1.2 of the SIP, the maximum observed lead concentrations are considered inappropriate for inclusion in the reasonable potential analysis. This Order requires the Discharger to collect additional lead data; should monitoring results indicate that the discharge has the reasonable potential to cause or

contribute to an exceedance of a water quality criterion, this Order may be reopened and modified by adding an appropriate effluent limitation.

iv. Diazinon and Chlorpyrifos. The San Joaquin River has been identified on the 303(d) list as an impaired waterbody due to elevated concentrations of diazinon and chlorpyrifos. The Central Valley Water Board completed a TMDL for diazinon and chlorpyrifos in the lower San Joaquin River and amended the Basin Plan to include water quality objectives and waste load allocations. The Basin Plan Amendment for the Control of Diazinon and Chlorpyrifos Runoff into the Lower San Joaquin River was adopted by the Central Valley Water Board on 21 October 2005, and was approved by the State Water Board on 2 May 2006. The Basin Plan amendment was approved by the Office of Administrative Law on 30 June 2006, and is now state law. The amendment was approved by USEPA and went into effect on 20 December 2006.

The amendment "…*modifies the Basin Plan Chapter III (Water Quality Objectives) to establish site specific numeric objectives for chlorpyrifos and diazinon in the San Joaquin River, and identifies the requirement to meet the additive toxicity formula already in Basin Plan Chapter IV (Implementation), for the additive toxicity of diazinon and chlorpyrifos.*"

The amendment provides that: "*The Waste Load Allocations (WLA's) for all NPDES-permitted dischargers.. shall not exceed the sum (S) of one (1) as defined below.*

where

$$S = \frac{C_D}{WQO_D} + \frac{C_C}{WQO_C} \leq 1.0$$

C_D = diazinon concentration in µg/L of point source discharge for the WLA.
C_C = chlorpyrifos concentration in µg/L of point source discharge for the WLA.
WQO_D = acute or chronic diazinon water quality objective in µg/L.
WQO_C = acute or chronic chlorpyrifos water quality objective in µg/L.

Available samples collected within the applicable averaging period for the water quality objective will be used to determine compliance with the allocations and loading capacity. For purposes of calculating the sum (S) above, analytical results that are reported as "non-detectable" concentrations are considered to be zero."

Water quality objectives for diazinon and chlorpyrifos to be used in the additive toxicity WLA were included in the amendment and are incorporated into the Basin Plan as shown below:

Chlorpyrifos

i. 0.025 µg/L; 1-hour average (acute
ii. 0.015 µg/L; 4-day average (chronic)
iii. Not to be exceeded more than once in a 3-year period.

Diazinon

i. 0.16 µg/L; 1-hour average (acute)
ii. 0.10 µg/L 4-day average (chronic)
iii. Not to be exceeded more than once in a 3-year period.

In terms of a schedule for compliance with the WLA, the Basin Plan amendment provides that "*Compliance with applicable water quality objectives, load allocations, and waste load allocations for diazinon and chlorpyrifos in the San Joaquin River is required by December 1, 2010*."

Previous Orders did not require the Discharger to monitor for chlorpyrifos and diazinon; therefore this Order does not include effluent limitations for these constituents. However, this Order includes new monitoring requirements for chlorpyrifos and diazinon. If diazinon and/or chlorpyrifos are detected in the effluent at a level with the reasonable potential to exceed water quality objectives, this Order may be reopened to include effluent limitations for diazinon and chlorpyrifos.

c. Constituents with No Reasonable Potential. WQBELs are not included in this Order for constituents that do not demonstrate reasonable potential (see Attachment G); however, monitoring for those pollutants is established in this Order as required by the SIP. If the results of effluent monitoring demonstrate reasonable potential, this Order may be reopened and modified by adding an appropriate effluent limitation.

d. Constituents with Reasonable Potential. The Central Valley 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 total ammonia nitrogen (as N), carbon tetrachloride, total residual chlorine, chlorodibromomethane, cyanide, dichlorobromomethane, total nitrate nitrogen (as N), total coliform, BOD_5, TSS, BOD_5 and TSS percent removal, pH, electrical conductivity, total dissolved solids, and settleable solids. WQBELs for these constituents are included in this Order. A summary of the RPA is provided in Attachment G, and a detailed discussion of the RPA for each constituent is provided below.

i. Ammonia

(a) WQO. The National Recommended Ambient Water Quality Criteria (NAWQC) for the protection of freshwater aquatic life for total ammonia nitrogen (as N), 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. USEPA also recommends that no 4-day average

concentration should exceed 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. Miles Creek has a beneficial use of cold spawning habitat; therefore, the recommended criteria for waters where salmonids and early life stages are present were used.

The maximum permitted effluent pH is 8.5, as the Basin Plan objective for pH in the receiving stream is the range of 6.5 to 8.5. In order to protect against the worst-case short-term exposure of an organism, a pH value of 8.5 was used to derive the acute criterion. The resulting acute criterion is 2.14 mg/L (as N).

The maximum observed 30-day rolling average temperature and the maximum observed 30-day rolling average pH of the effluent were used to calculate the 30-day CCC. The maximum observed 30-day average effluent temperature was 78.5°F (25.8°C). The maximum observed 30-day average effluent pH was 8.01. Using a pH value of 8.01 and the worst-case temperature value of 78.5°F (25.8°C) on a rolling 30-day basis, the resulting 30-day CCC is 1.16 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 the 30-day CCC of 1.16 mg/L (as N), the 4-day average concentration that should not be exceeded is 2.90 mg/L (as N).

(b) RPA Results. 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 at toxic concentrations would violate the Basin Plan narrative toxicity objective. The maximum effluent concentration (MEC) for ammonia was 20 mg/L while the maximum observed upstream receiving water concentration was 9 mg/L. Therefore, ammonia in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the NAWQC.

(c) WQBELs. The Central Valley 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 CCC. 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 CCC was calculated assuming a 30-day averaging period. The lowest LTA representing the acute, 4-day CCC, and 30-day CCC 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. This Order contains a final AMEL and final MDEL for total ammonia nitrogen (as N) of 0.74 mg/L and 2.2 mg/L, respectively, based on the NAWQC.

(d) Plant Performance and Attainability. Analysis of the effluent data shows that the MEC of 20 mg/L (as N) is greater than applicable WQBELs. Based on the sample results for the effluent, the limitations appear to put the Discharger in immediate non-compliance. The Discharger intends to cease discharging to Miles Creek within the next three years. As discussed in section IV.E of this Fact Sheet, a compliance schedule has been included in this Order.

ii. Carbon Tetrachloride

(a) WQO. The CTR includes a criterion of 0.25 µg/L for carbon tetrachloride for the protection of human health for waters from which both water and organisms are consumed.

(b) RPA Results. The MEC for carbon tetrachloride was 0.9 µg/L while the maximum observed upstream receiving water concentration was a non-detect. Therefore, carbon tetrachloride in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criterion for the protection of human health.

(c) WQBELs. No dilution credits are allowed for development of the WQBELs for carbon tetrachloride due to periods of no flow in the receiving water. This Order contains a final AMEL and final MDEL for carbon tetrachloride of 0.25 µg/L and 0.50 µg/L, respectively, based on the CTR criterion for the protection of human health.

(d) Plant Performance and Attainability. Analysis of the effluent data shows that the MEC of 0.9 µg/L is greater than applicable WQBELs. Based on the sample results for the effluent, the limitations appear to put the Discharger in immediate non-compliance. New or modified control measures may be necessary in order to comply with the effluent limitations, and the new or modified control measures cannot be designed installed and put into operation within 30 calendar days. The Discharger is currently under a time schedule order (TSO No. R5-2010-0900) to cease discharging to Miles Creek by 3 September 2012 or comply with

final effluent limitations for several constituents, including carbon tetrachloride. Monitoring data show the Discharger will not be able to immediately comply with the effluent limitations in this Order for carbon tetrachloride. Therefore, a time schedule for compliance with the final carbon tetrachloride effluent limitations is established in TSO No. R5-2011-**XXXX** in accordance with CWC section 13300. The Discharger submitted a pollution prevention plan in compliance with CWC section 13263.3 on 21 March 2011. TSO No. R5-2010-0900 was rescinded upon adoption of TSO No. R5-2011-**XXXX**.

iii. Chlorine Residual

(a) WQO. USEPA developed NAWQC for protection of freshwater aquatic life for chlorine residual. The recommended 4-day average (chronic) and 1-hour average (acute) criteria for chlorine residual are 0.011 µg/L and 0.019 µg/L, respectively. These criteria are protective of the Basin Plan's narrative toxicity objective.

(b) RPA Results. 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 Miles Creek. Due to the existing chlorine use and the potential for chlorine to be discharged, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the NAWQC.

(c) WQBELs. The USEPA *Technical Support Document for Water Quality-Based Toxics Control* [EPA/505/2-90-001] contains statistical methods for converting chronic (4-day) and acute (1-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. However, because chlorine is an acutely toxic constituent that can and will be monitored continuously, an average 1-hour limitation is considered more appropriate than an average daily limitation. This Order contains a 4-day average effluent limitation and 1-hour average effluent limitation for chlorine residual of 0.011 µg/L and 0.019 µg/L, respectively, based on USEPA's NAWQC, which implements the Basin Plan's narrative toxicity objective for protection of aquatic life. Order No. R5-2005-0009 contained effluent limitations for total residual chlorine of 0.01 mg/L as an average monthly and 0.02 mg/L as a maximum daily based on USEPA's NAWQC. This is inconsistent with current application of USEPA's recommended total residual chlorine criteria.

(d) Plant Performance and Attainability. Analysis of the effluent data shows that the Discharger was in compliance with the total residual chlorine effluent limitations during the term of Order No. R5-2005-0009. This Order requires the Discharger to begin continuous total residual chlorine monitoring beginning on the date specified in Provision VI.C.7.a., Task vi. Until then, the Discharger shall determine compliance with the

total residual chlorine effluent limitations by collecting and analyzing grab samples twice per day.

iv. Chlorodibromomethane

(a) WQO. The CTR includes a criterion of 0.41 µg/L for chlorodibromomethane for the protection of human health for waters from which both water and organisms are consumed.

(b) RPA Results. The MEC for chlorodibromomethane was 3.5 µg/L while the maximum observed upstream receiving water concentration was 0.6 µg/L. Therefore, chlorodibromomethane in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criterion for the protection of human health.

(c) WQBELs. No dilution credits are allowed for development of the WQBELs for chlorodibromomethane due to periods of no flow in the receiving water. This Order contains a final AMEL and final MDEL for chlorodibromomethane of 0.41 µg/L and 0.82 µg/L, respectively, based on the CTR criterion for the protection of human health.

(d) Plant Performance and Attainability. Analysis of the effluent data shows that the MEC of 3.5 µg/L is greater than applicable WQBELs. Based on the sample results for the effluent, the limitations appear to put the Discharger in immediate non-compliance. New or modified control measures may be necessary in order to comply with the effluent limitations, and the new or modified control measures cannot be designed installed and put into operation within 30 calendar days. The Discharger is currently under a time schedule order (TSO No. R5-2010-0900) to cease discharging to Miles Creek by 3 September 2012 or comply with final effluent limitations for several constituents, including chlorodibromomethane. Monitoring data show the Discharger will not be able to immediately comply with the effluent limitations in this Order for chlorodibromomethane. Therefore, a time schedule for compliance with the final chlorodibromomethane effluent limitations is established in TSO No. R5-2011-**XXXX** in accordance with CWC section 13300. The Discharger submitted a pollution prevention plan in compliance with CWC section 13263.3 on 21 March 2011. TSO No. R5-2010-0900 was rescinded upon adoption of TSO No. R5-2011-**XXXX**.

v. Cyanide

(a) WQO. The CTR includes maximum 1-hour average and 4-day average criteria of 22 µg/L and 5.2 µg/L, respectively, for cyanide for the protection of freshwater aquatic life.

(b) RPA Results. The MEC for cyanide was 22 µg/L while the maximum observed upstream receiving water concentration was 11 µg/L. Therefore,

cyanide in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the lowest CTR criteria for the protection of freshwater aquatic life.

(c) WQBELs. No dilution credits are allowed for development of the WQBELs for cyanide due to periods of no flow in the receiving water. This Order contains a final AMEL and final MDEL for cyanide of 4.2 µg/L and 8.5 µg/L, respectively, based on the lowest CTR criteria for the protection of freshwater aquatic life.

(d) Plant Performance and Attainability. Analysis of the effluent data shows that the MEC of 22 µg/L is greater than applicable WQBELs. Based on the sample results for the effluent, the limitations appear to put the Discharger in immediate non-compliance. New or modified control measures may be necessary in order to comply with the effluent limitations, and the new or modified control measures cannot be designed installed and put into operation within 30 calendar days. The Discharger is currently under a time schedule order (TSO No. R5-2010-0900) to cease discharging to Miles Creek by 3 September 2012 or comply with final effluent limitations for several constituents, including cyanide. Monitoring data show the Discharger will not be able to immediately comply with the effluent limitations in this Order for cyanide. Therefore, a time schedule for compliance with the final cyanide effluent limitations is established in TSO No. R5-2011-**XXXX** in accordance with CWC section 13300. The Discharger submitted a pollution prevention plan in compliance with CWC section 13263.3 on 21 March 2011. TSO No. R5-2010-0900 was rescinded upon adoption of TSO No. R5-2011-**XXXX**.

vi. Dichlorobromomethane

(a) WQO. The CTR includes a criterion of 0.56 µg/L for dichlorobromomethane for the protection of human health for waters from which both water and organisms are consumed.

(b) RPA Results. The MEC for dichlorobromomethane was 23 µg/L while the maximum observed upstream receiving water concentration was 3.7 µg/L. Therefore, dichlorobromomethane in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criterion for the protection of human health.

(c) WQBELs. No dilution credits are allowed for development of the WQBELs for dichlorobromomethane due to periods of no flow in the receiving water. This Order contains a final AMEL and final MDEL for dichlorobromomethane of 0.56 µg/L and 1.1 µg/L, respectively, based on the CTR criterion for the protection of human health.

(d) Plant Performance and Attainability. Analysis of the effluent data shows that the MEC of 23 µg/L is greater than applicable WQBELs.

Based on the sample results for the effluent, the limitations appear to put the Discharger in immediate non-compliance. New or modified control measures may be necessary in order to comply with the effluent limitations, and the new or modified control measures cannot be designed installed and put into operation within 30 calendar days. The Discharger is currently under a time schedule order (TSO No. R5-2010-0900) to cease discharging to Miles Creek by 3 September 2012 or comply with final effluent limitations for several constituents, including dichlorobromomethane. Monitoring data show the Discharger will not be able to immediately comply with the effluent limitations in this Order for dichlorobromomethane. Therefore, a time schedule for compliance with the final dichlorobromomethane effluent limitations is established in TSO No. R5-2011-**XXXX** in accordance with CWC section 13300. The Discharger submitted a pollution prevention plan in compliance with CWC section 13263.3 on 21 March 2011. TSO No. R5-2010-0900 was rescinded upon adoption of TSO No. R5-2011-**XXXX**.

vii. Nitrate and Nitrite

(a) WQO. DPH has adopted Primary MCLs for the protection of human health for nitrite and nitrate that are equal to 1 mg/L and 10 mg/L (measured as nitrogen), respectively. DPH has also adopted a primary MCL of 10 mg/L for the sum of nitrate and nitrite, measured as nitrogen.

USEPA has developed a primary MCL and an MCL goal of 1 mg/L for nitrite (as nitrogen). For nitrate, USEPA has developed Drinking Water Standards (10 mg/L as Primary MCL) and NAWQC 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.

(b) RPA Results. 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. Inadequate or incomplete denitrification may result in the discharge of nitrate and/or nitrite 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 nitrite and nitrate. Order No. R5-2005-0009 did not require the Discharger to monitor the effluent for nitrite (as N). The MEC for nitrate (as N) was 49 mg/L while the maximum observed upstream receiving water concentration was 9.9 mg/L. Therefore, nitrate (as N) in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the primary MCL.

(c) WQBELs. No dilution credits are allowed for development of the WQBELs for total nitrate nitrogen (as N) due to periods of no flow in the receiving water. This Order contains a final AMEL for total nitrate nitrogen (as N) of 10 mg/L, based on the protection of the Basin Plan's narrative chemical constituents objective and to assure the treatment process adequately nitrifies and denitrifies the waste stream. This Order also includes new effluent monitoring requirements for nitrite (as N).

(d) Plant Performance and Attainability. Monitoring data collected between February 2005 and June 2010 show that the monthly average for total nitrate nitrogen (as N) exceeded 10 mg/L only once. Therefore, immediate compliance with the new effluent limitation for total nitrate nitrogen (as N) is feasible.

viii. Pathogens

(a) WQO. DPH has developed reclamation criteria at Title 22, 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 mL 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 Central Valley Water Board finds that it is appropriate to apply an equivalent level of treatment to that required by the DPH'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.

Total coliform organisms are an indicator of the level of pathogens in the effluent. Therefore, effluent limitations for total coliform organisms are necessary to control the discharge of pathogens, and have been included in this Order. In site-specific situations where a discharge is occurring to a stream with a downstream water intake used as a domestic water supply

without treatment, the DPH has recommended the same Title 22 tertiary treatment requirements for the protection of MUN, as well as protecting REC-1 and AGR. DPH has also recommended a 20:1 dilution ratio in addition to the Title 22 tertiary treatment requirement where there are existing domestic water users of raw water near the treatment plant outfall. In this case, there are no such known uses that could be affected by the discharge, so tertiary treatment plus 20:1 dilution is not necessary to protect the MUN, REC-1 or AGR uses.

The chemical constituents narrative objective in the Basin Plan states, "[w]*aters shall not contain chemical constituents in concentrations that adversely affect beneficial uses*." The narrative toxicity objective states, "[a]*ll waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*" When necessary, the Central Valley Water Board adopts numeric effluent limitations to implement these objectives on a case-by-case basis implementing relevant numerical criteria and guidelines developed and/or published by other agencies and organizations (e.g., State Water Board, DPH, OEHHA, California Department of Toxic Substances Control, University of California Cooperative Extension, California Department of Fish and Game, USEPA, U.S. Food and Drug Administration, National Academy of Sciences, U.S. Fish and Wildlife Service, Food and Agricultural Organization of the United Nations). In considering such criteria, the Central Valley Water Board evaluates whether the specific numerical criteria, which are available through these sources and through other information supplied to the Central Valley Water Board, are relevant and appropriate to the situation at hand and, therefore, should be used in determining compliance with the narrative objective.

For public water supplies, State and federal law require residual chlorine and/or UV disinfection of surface water. (*See, e.g.,* Surface Water Treatment Rule, 40 CFR Part 141, Subpart H; Title 22, CCR, Section 64447.) Treating pathogens to a level more stringent than tertiary treatment requires a chlorine residual in the effluent that is toxic to aquatic life in the receiving water. Pathogens are not bio-accumulative, so discharges at the permitted levels in this Order do not threaten potential uses of the receiving water for untreated domestic use. Therefore, the requirement to implement tertiary treatment only when 20:1 dilution is not available adequately protects beneficial uses and is appropriate for this discharge under the case-by-case approach.

(b) RPA Results. The beneficial uses applicable to Miles Creek include municipal and domestic supply, water contact recreation, and agricultural irrigation supply, and there is, at times, less than 20:1 dilution. To protect these beneficial uses, the Central Valley Water Board finds that the wastewater must be disinfected and adequately treated to prevent

disease. The method of treatment is not prescribed by this Order; however, wastewater must be treated to a level equivalent to that recommended by DPH.

(c) WQBELs. In accordance with the requirements of Title 22, this Order includes effluent limitations for total coliform of 2.2 MPN/100 mL as a 7-day median; 23 MPN/100 mL, not to be exceeded more than once in a 30-day period; and 240 MPN/100 mL as an instantaneous maximum.

In addition to coliform limitations, turbidity operational specifications have 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 treatment 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 treatment system performance, allowing immediate detection of treatment system 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 DPH recommended Title 22 disinfection criteria, weekly average effluent limitations are impracticable for turbidity. This Order includes operational specifications for turbidity of 2 NTU as a daily average; 5 NTU, not to be exceeded more than 5% of the time within a 24-hour period; and 10 NTU as an instantaneous maximum.

Additionally, final WQBELs for BOD_5, TSS, and BOD_5 and TSS percent removal are based on the technical capability of the tertiary process, which is necessary to protect the beneficial uses of the receiving water. BOD_5 is a measure of the amount of oxygen used in the biochemical oxidation of organic matter. The tertiary treatment standards for BOD_5, TSS, and BOD_5 and TSS percent removal are indicators of the effectiveness of the tertiary treatment process. 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. The application of tertiary treatment processes results in the ability to achieve lower levels for BOD_5 and TSS and higher removal rates than the secondary standards currently prescribed. Therefore, this Order requires average monthly and average weekly effluent limitations for BOD_5 and TSS of 10 mg/L and 15 mg/L, respectively, and BOD_5 and TSS percent removal of 90%, which are 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 of 20 mg/L is included in the Order to ensure that the treatment works are not organically overloaded and operate in accordance with design capabilities.

This Order contains effluent limitations for BOD_5, total coliform, TSS, and BOD_5 and TSS percent removal, and a tertiary level of treatment, or equivalent, necessary to protect the beneficial uses of the receiving water. The Central Valley Water Board has previously considered the factors in CWC section 13241 (see Order No. R5-2005-0009) in establishing these requirements.

(d) Plant Performance and Attainability. Analysis of the effluent data shows that the MEC for total coliform of >1600 MPN/100 mL, the MEC for BOD_5 of 130 mg/L, and the MEC for TSS of 65 mg/L are greater than applicable WQBELs. Additionally, the effluent data show that the Facility, at times, provided removal of BOD_5 and TSS lower than the applicable WQBELs. Based on the sample results for the effluent, the limitations appear to put the Discharger in immediate non-compliance. New or modified control measures may be necessary in order to comply with the effluent limitations, and the new or modified control measures cannot be designed, installed and put into operation within 30 calendar days. The Discharger is currently under a time schedule order (TSO No. R5-2010-0900) to cease discharging to Miles Creek by 3 September 2012 or comply with several final effluent limitations for several constituents, including total coliform, BOD_5, TSS, and BOD_5 and TSS percent removal. Monitoring data show the Discharger will not be able to immediately comply with the effluent limitations in this Order for total coliform, BOD_5, TSS, and BOD_5 and TSS percent removal. Therefore, a time schedule for compliance with the final total coliform, BOD_5, TSS, and BOD_5 and TSS percent removal effluent limitations is established in TSO No. R5-2011-**XXXX** in accordance with CWC section 13300. The Discharger is not required to submit a pollution prevention plan and has met the requirements in CWC section 13263.3 for total coliform, BOD_5, TSS, and BOD_5 and TSS percent removal. TSO No. R5-2010-0900 was rescinded upon adoption of TSO No. R5-2011-**XXXX**.

ix. pH

(a) WQO. 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.*"

(b) RPA Results. The discharge of municipal treated wastewater has a reasonable potential to cause or contribute to an excursion above the Basin Plan's numeric objectives for pH.

(c) WQBELs. Effluent limitations for pH of 6.5 as an instantaneous minimum and 8.5 as an instantaneous maximum are included in this Order based on protection of the Basin Plan objectives for pH.

(d) Plant Performance and Attainability. The effluent pH was below the instantaneous minimum limit twice in 285 samples taken between

February 2005 and June 2010. While the discharge shows reasonable potential, monitoring data shows the discharge can generally comply with the pH effluent limitations.

x. Salinity

(a) WQO. There are no USEPA water quality criteria for the protection of aquatic organisms for electrical conductivity (EC), total dissolved solids (TDS), sulfate, and chloride. 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-5. Salinity Water Quality Criteria/Objectives

Parameter	Agricultural WQ Goal[1]	Secondary MCL[3]	Effluent	
			Average	Maximum
EC (µmhos/cm)	Varies[2]	900, 1600, 2200	638	919
TDS (mg/L)	Varies	500, 1000, 1500	474	743
Sulfate (mg/L)	Varies	250, 500, 600	52	203[4]
Chloride (mg/L)	Varies	250, 500, 600	57	94

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 The EC level in irrigation water that harms crop production depends on the crop type, soil type, irrigation methods, rainfall, and other factors. An EC level of 700 µmhos/cm is generally considered to present no risk of salinity impacts to crops. However, many crops are grown successfully with higher salinities.

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

4 Highest reported value of 279 mg/L appears to be an outlier.

(1) 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. The recommended agricultural water quality goal for chloride, that would apply the narrative chemical constituent objective, is 106 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). The 106 mg/L water quality goal is intended to protect against adverse effects on sensitive crops when irrigated via sprinklers.

(2) Electrical Conductivity. The secondary MCL for EC is 900 µmhos/cm as a recommended level, 1600 µmhos/cm as an upper level, and 2200 µmhos/cm as a short-term maximum. The agricultural water quality goal, that would apply the narrative chemical constituents objective, is 700 µmhos/cm as a long-term average based on *Water Quality for Agriculture*, Food and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers

and D.W. Westcot, Rome, 1985). The 700 µmhos/cm agricultural water quality goal is intended to prevent reduction in crop yield, i.e., a restriction on use of water, for salt-sensitive crops, such as beans, carrots, turnips, and strawberries. These crops are either currently grown in the area or may be grown in the future. 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.

(3) Sulfate. The secondary MCL for sulfate is 250 mg/L as a recommended level, 500 mg/L as an upper level, and 600 mg/L as a short-term maximum.

(4) Total Dissolved Solids. 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.

(b) RPA Results.

(1) Chloride. Chloride concentrations in the effluent ranged from 3.9 mg/L to 95 mg/L, with an average of 57 mg/L. These levels do not exceed the agricultural water goal. Background concentrations in Miles Creek ranged from 2.9 mg/L to 14 mg/L, with an average of 6.6 mg/L, for three samples collected by the Discharger from February 2005 through May 2009.

(2) Electrical Conductivity. A review of the Discharger's monitoring reports shows an average effluent EC of 638 µmhos/cm, with a range from 328 µmhos/cm to 919 µmhos/cm. These levels exceed the agricultural water goal and the effluent limitation contained in Order No. R5-2005-0009. The background receiving water EC averaged 290 µmhos/cm.

(3) Sulfate. The maximum effluent concentration (MEC) for sulfate was 279 mg/L on 16 September 2008. It appears that the 16 September 2008 sample result is an outlier as it is more than nine standard deviations from the mean. Excluding the 279 mg/L value, sulfate concentrations in the effluent ranged from 7.2 mg/L to 203 mg/L, with an average of 51 mg/L. Therefore, sulfate in the discharge does not have a reasonable potential to cause or contribute to an in-stream excursion above the secondary MCL. Background concentrations in Miles Creek ranged from 7.6 mg/L to 25 mg/L, with an average of 18 mg/L.

(4) Total Dissolved Solids. The average TDS effluent concentration was 474 mg/L with concentrations ranging from 290 mg/L to 743 mg/L. These levels exceed the applicable water quality objectives. Therefore, TDS in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the secondary MCL and recommended agricultural water quality goal. Order No. R5-2005-0009 did not require the Discharger to collect TDS samples in Miles Creek.

(c) WQBELs. This Order carries over the monthly average effluent EC limitation of 700 µmhos/cm contained in Order No. R5-2005-0009.

This Order includes a new effluent limitation for TDS based on the recommended agricultural water quality goal of 450 mg/L. The effluent limitation for TDS is set as an average monthly.

In order to ensure that the Discharger will continue to control the discharge of salinity, this Order includes a requirement to develop and implement a salinity evaluation and minimization plan. Water supply monitoring is required to evaluate the relative contribution of salinity from the source water to the effluent. This Order also requires the Discharger to conduct a salinity study to determine if 700 µmhos/cm for EC and 450 mg/L for TDS are appropriate effluent limitations for the protection of groundwater.

(d) Plant Performance and Attainability.

(1) Electrical Conductivity. Analysis of the effluent data shows that the discharge has not consistently complied with the 700 µmhos/cm effluent limitation. However, effluent data from the past year shows the discharge has been in compliance with the effluent limitation. Considering the Discharger intends to cease discharge to Miles Creek, this Order does not include a compliance schedule.

(2) Total Dissolved Solids. Analysis of the effluent data shows that the MEC of 743 mg/L is greater than the applicable WQBEL. Based on the sample results for the effluent, the limitation appears to put the

Discharger is immediate non-compliance. The Discharger intends to cease discharging to Miles Creek by the date specified in Provision VI.C.7.a., Task vi. As discussed in section IV.E of this Fact Sheet, a compliance schedule has been included in this Order.

xi. Settleable Solids

(a) WQO. 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.*"

(b) RPA Results. The discharge of treated municipal wastewater has a reasonable potential to cause or contribute to an excursion above the Basin Plan's narrative objective for settleable solids.

(c) WQBELs. This Order contains a maximum daily effluent limitation of 0.1 mL/L 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.

(d) Plant Performance and Attainability. Analysis of the effluent data shows that the MEC of <0.1 mL/L is less than the applicable WQBEL. The Central Valley Water Board concludes, therefore, that immediate compliance with this effluent limitation is feasible.

4. WQBELs Calculations

a. This Order includes WQBELs for total ammonia nitrogen (as N), carbon tetrachloride, total residual chlorine, chlorodibromomethane, cyanide, dichlorobromomethane, total nitrate nitrogen (as N), total coliform, BOD_5, TSS, BOD_5 and TSS percent removal, pH, electrical conductivity, total dissolved solids, and settleable solids. The general methodology for calculating WQBELs based on the different criteria/objectives is described in subsections IV.C.4.b through e, below. See Attachment H for the WQBELs calculations for total ammonia nitrogen (as N), carbon tetrachloride, chlorodibromomethane, cyanide, and dichlorobromomethane.

b. Effluent Concentration Allowance. For each water quality criterion/objective, the ECA is calculated using the following steady-state mass balance equation from Section 1.4 of the SIP:

$ECA = C + D(C - B)$ where $C>B$, and
$ECA = C$ where $C \leq B$

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

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

c. **Basin Plan Objectives and MCLs.** For WQBELs based on site-specific numeric Basin Plan objectives or MCLs, the effluent limitations are applied directly as the ECA as either an AMEL or MDEL, depending on the averaging period of the objective.

d. **Aquatic Toxicity Criteria.** WQBELs based on acute and chronic aquatic toxicity criteria are calculated in accordance with Section 1.4 of the SIP. The ECAs are converted to equivalent long-term averages (i.e., LTA_{acute} and $LTA_{chronic}$) using statistical multipliers and the lowest LTA is used to calculate the AMEL and MDEL using additional statistical multipliers.

e. **Human Health Criteria.** WQBELs based on human health criteria, are also calculated in accordance with Section 1.4 of the SIP. The 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:
multAMEL = statistical multiplier converting minimum LTA to AMEL
multMDEL = statistical multiplier converting minimum LTA to MDEL
MA = statistical multiplier converting acute ECA to LTA_{acute}
MC = statistical multiplier converting chronic ECA to $LTA_{chronic}$

Summary of Water Quality-Based Effluent Limitations
Discharge Point 001

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

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand (BOD) 5-day @ 20°C	mg/L	10	15	20	--	--
	lbs/day	44[1]	66[1]	88[1]	--	--
Total Suspended Solids (TSS)	mg/L	10	15	20	--	--
	lbs/day	44[1]	66[1]	88[1]	--	--
Ammonia Nitrogen, Total (as N)	mg/L	0.74	--	2.2	--	--
Carbon Tetrachloride	µg/L	0.25	--	0.50	--	--
Chlorodibromomethane	µg/L	0.41	--	0.82	--	--
Cyanide, Total Recoverable	µg/L	4.2	--	8.5	--	--
Dichlorobromomethane	µg/L	0.56	--	1.1	--	--
Nitrate Nitrogen, Total (as N)	mg/L	10	--	--	--	--
pH	standard units	--	--	--	6.5	8.5
Electrical Conductivity @ 25°C	µmhos/cm	700	--	--	--	--
Settleable Solids	mL/L	--	--	0.1	--	--
Total Dissolved Solids	mg/L	450	--	--	--	--

a. **Percent Removal.** The average monthly percent removal of 5-day biochemical oxygen demand (BOD_5) and total suspended solids (TSS) shall not be less than 90 percent.

b. **Total Residual Chlorine.** Effluent total residual chlorine shall not exceed:

   i. 0.011 mg/L, as a 4-day average; nor
   ii. 0.019 mg/L, as a 1-hour average.

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

   i. 2.2 most probable number (MPN) per 100 mL, as a 7-day median;
   ii. 23 MPN/100 mL, more than once in any 30-day period; nor
   iii. 240 MPN/100 mL, instantaneous maximum.

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 and chronic toxicity and requires the Discharger to implement best management practices to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity.

a. **Acute Aquatic Toxicity.** The Basin Plan contains a narrative toxicity objective that states, "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life*." (Basin Plan at page III-8.01) The Basin Plan also states that, "*…effluent limits based upon acute biotoxicity tests of effluents will be prescribed where appropriate…*" (Basin Plan at page III-9.00). USEPA Region 9 provided guidance for the development of acute toxicity effluent limitations in the absence of numeric water quality objectives for toxicity in its document titled "Guidance for NPDES Permit Issuance", dated February 1994. In section B.2. "Toxicity Requirements" (pgs. 14-15) it states that, "In the absence of specific numeric water quality objectives for acute and chronic toxicity, the narrative criterion 'no toxics in toxic amounts' applies. Achievement of the narrative criterion, as applied herein, means that ambient waters shall not demonstrate for acute toxicity: 1) less than 90% survival, 50% of the time, based on the monthly median, or 2) less than 70% survival, 10% of the time, based on any monthly median. For chronic toxicity, ambient waters shall not demonstrate a test result of greater than 1 TUc." Accordingly, effluent limitations for acute toxicity have been included in this Order as follows:

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

Minimum for any one bioassay ---------- 70%
Median for any three 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 page III-8.01) Based on chronic WET testing performed by the Discharger from March 2006 through March 2010, the discharge has reasonable potential to cause or contribute to an in-stream excursion above of the Basin Plan's narrative toxicity objective.

No dilution has been granted for the chronic condition. Therefore, chronic toxicity testing results exceeding 1 chronic toxicity unit (TUc) demonstrate 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. The SIP contains implementation gaps regarding the appropriate form and implementation of chronic toxicity limits. This has resulted in the petitioning of a NPDES permit in the Los Angeles Region[1] that contained numeric chronic toxicity effluent limitations. To address the petition, the State Water Board

[1] In the Matter of the Review of Own Motion of Waste Discharge Requirements Order Nos. R4-2002-0121 [NPDES No. CA0054011] and R4-2002-0123 [NPDES NO. CA0055119] and Time Schedule Order Nos. R4-2002-0122 and R4-2002-0124 for Los Coyotes and Long Beach Wastewater Reclamation Plants Issued by the California Regional Water Quality Control Board, Los Angeles Region, SWRCB/OCC FILES A-1496 and 1496(a).

adopted WQO 2003-0012 directing its staff to revise the toxicity control provisions in the SIP. The State Water Board states the following in WQO 2003-0012, "*In reviewing this petition and receiving comments from numerous interested persons on the propriety of including numeric effluent limitations for chronic toxicity in NPDES permits for publicly-owned treatment works that discharge to inland waters, we have determined that this issue should be considered in a regulatory setting, in order to allow for full public discussion and deliberation. We intend to modify the SIP to specifically address the issue. We anticipate that review will occur within the next year. We therefore decline to make a determination here regarding the propriety of the final numeric effluent limitations for chronic toxicity contained in these permits.*" The process to revise the SIP is currently underway. Proposed changes include clarifying the appropriate form of effluent toxicity limits in NPDES permits and general expansion and standardization of toxicity control implementation related to the NPDES permitting process. Since the toxicity control provisions in the SIP are under revision it is infeasible to develop numeric effluent limitations for chronic toxicity. Therefore, this Order includes a narrative chronic toxicity effluent limitation and requires that the Discharger meet best management practices for compliance with the Basin Plan's narrative toxicity objective, as allowed under 40 CFR 122.44(k).

To ensure compliance with the Basin Plan's narrative toxicity objective, the Discharger is required to conduct chronic WET testing, as specified in the Monitoring and Reporting Program (Attachment E, section V.). Furthermore, the Special Provision contained at 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 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 at which the Discharger is required to perform accelerated chronic toxicity monitoring, as well as, the threshold to initiate a TRE if effluent toxicity has been demonstrated.

D. Final Effluent Limitations

1. Mass-based Effluent Limitations

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

Mass-based effluent limitations were calculated based upon the design flow permitted in section IV.A.1 of this Order.

2. Averaging Periods for Effluent Limitations

Federal regulation, 40 CFR 122.45(d) requires average weekly and average monthly discharge limitations for publicly owned treatment works (POTWs) unless impracticable. However, for toxic pollutants and pollutant parameters in water quality permitting, USEPA recommends the use of a maximum daily effluent limitation in lieu of average weekly effluent limitations for two reasons. "*First, the basis for the 7-day average for POTWs derives from the secondary treatment requirements. This basis is not related to the need for assuring achievement of water quality standards. Second, a 7-day average, which could comprise up to seven or more daily samples, could average out peak toxic concentrations and therefore the discharge's potential for causing acute toxic effects would be missed*," (TSD, pg. 96). This Order utilizes maximum daily effluent limitations in lieu of average weekly effluent limitations for total ammonia nitrogen (as N), carbon tetrachloride, chlorodibromomethane, cyanide, and dichlorobromomethane as recommended by the TSD for the achievement of water quality standards and for the protection of the beneficial uses of the receiving stream. Furthermore, for total residual chlorine and total coliform, weekly average effluent limitations have been replaced or supplemented with effluent limitations utilizing shorter averaging periods. The rationale for using shorter averaging periods for these constituents is discussed in section IV.C.3. of this Fact Sheet.

For the nitrate (as N) effluent limitation based on the Primary MCL, this Order includes a monthly average effluent limitation. The Primary and Secondary MCLs are drinking water standards contained in Title 22 of the California Code of Regulations. Title 22 requires compliance with these standards on an annual average basis (except for nitrate and nitrite), when sampling at least quarterly.

For the electrical conductivity and total dissolved solids effluent limitations based on the agricultural water quality goals, this Order includes monthly average effluent limitations.

3. Satisfaction of Anti-Backsliding Requirements

The effluent limitations in this Order are at least as stringent as the effluent limitations in Order No. R5-2005-0009, with the exception of effluent limitations for turbidity. The effluent limitations for turbidity have not been retained from Order No. R5-2005-0009. The turbidity effluent limitations contained in Order No. R5-2005-0009 were solely an operational check to ensure the treatment system was functioning properly and could meet the final effluent limitations for solids and coliform. The turbidity effluent limitations in Order No. R5-2005-0009 were not intended to regulate turbidity in the receiving water. Rather, turbidity is an operational parameter to determine proper system functioning and not a WQBEL.

This Order contains performance-based operational turbidity specifications to be met in lieu of effluent limitations. The performance-based specifications in this Order are equivalent to and are not less stringent than the turbidity effluent limitations contained in Order No. R5-2005-0009, and therefore does not constitute backsliding. The new operational specifications are consistent with State regulations implementing recycled water requirements. The revision of the turbidity effluent limitations is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16 because this Order imposes equivalent or more stringent requirements than Order No. R5-2005-0009 and therefore does not allow degradation.

4. Satisfaction of Antidegradation Policy

This Order does not allow for an increase in flow or mass of pollutants to the receiving water. Therefore, a complete antidegradation analysis is not necessary. The Order requires compliance with applicable federal technology-based standards and with WQBELs where the discharge could have the reasonable potential to cause or contribute to an exceedance of water quality standards. The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. The impact on existing water quality will be insignificant.

5. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on flow. The WQBELs consist of restrictions on total ammonia nitrogen (as N), carbon tetrachloride, total residual chlorine, chlorodibromomethane, cyanide, dichlorobromomethane, total nitrate nitrogen (as N), total coliform, BOD_5, TSS, and BOD_5 and TSS percent removal, pH, electrical conductivity, total dissolved solids, settleable solids, acute toxicity, and chronic toxicity. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order includes new effluent limitations for total ammonia nitrogen (as N), total residual chlorine, total nitrate nitrogen (as N), total dissolved solids, and chronic toxicity to meet numeric objectives or protect beneficial uses.

Final effluent limitations were determined by comparing the technology-based effluent limitations and the WQBELs and applying the most stringent limitations for each individual parameter.

Summary of Final Effluent Limitations
Discharge Point 001

Table F-7. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations					Basis[1]
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Biochemical Oxygen Demand 5-day @ 20°C	mg/L	10	15	20	--	--	TTC
	lbs/day	44[1]	66[1]	88[1]	--	--	DC, TTC
Total Suspended Solids	mg/L	10	15	20	--	--	TTC
	lbs/day	44[1]	66[1]	88[1]	--	--	DC, TTC
pH	standard units	--	--	--	6.5	8.5	BP
Carbon Tetrachloride	µg/L	0.25	--	0.50	--	--	CTR
Chlorodibromomethane	µg/L	0.41	--	0.82	--	--	CTR
Cyanide, Total Recoverable	µg/L	4.2	--	8.5	--	--	CTR
Dichlorobromomethane	µg/L	0.56	--	1.1	--	--	CTR
Ammonia Nitrogen, Total (as N)	mg/L	0.74	--	2.2	--	--	NAWQC
Electrical Conductivity @ 25°C	µmhos/cm	700	--	--	--	--	BP
Nitrate Nitrogen, Total (as N)	mg/L	10	--	--	--	--	BP, MCL
Settleable Solids	mL/L	--	--	0.1	--	--	BP
Total Dissolved Solids	mg/L	450	--	--	--	--	BP

[1] DC – Based on the design capacity of the Facility.
TTC – Based on tertiary treatment capability. These effluent limitations reflect the capability of a properly operated tertiary treatment plant.
BP – Based on water quality objectives contained in the Basin Plan.
CTR – Based on water quality criteria contained in the California Toxics Rule and applied as specified in the SIP.
NAWQC – Based on USEPA's National Ambient Water Quality Criteria for the protection of freshwater aquatic life.
MCL – Based on the Primary Maximum Contaminant Level.

a. **Flow.** The average monthly daily discharge flow shall not exceed 0.53 mgd.

b. **Percent Removal.** The average monthly percent removal of 5-day biochemical oxygen demand (BOD_5) and total suspended solids (TSS) shall not be less than 90 percent.

c. **Total Residual Chlorine.** Effluent total residual chlorine shall not exceed:

   i. 0.011 mg/L, as a 4-day average; nor
   ii. 0.019 mg/L, as a 1-hour average.

d. Total Coliform. Effluent total coliform organisms shall not exceed:

i. 2.2 most probable number (MPN) per 100 mL, as a 7-day median;
ii. 23 MPN/100 mL, more than once in any 30-day period; nor
iii. 240 MPN/100 mL, instantaneous maximum.

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

i. Minimum for any one bioassay ---------- 70%
ii. Median for any three consecutive bioassays---------- 90%

f. Chronic Whole Effluent Toxicity. There shall be no chronic toxicity in the effluent discharge.

E. Interim Effluent Limitations

1. Compliance Schedule for Total Ammonia Nitrogen (as N) and Total Dissolved Solids. The effluent limitations for total ammonia nitrogen (as N) and total dissolved solids are new limitations that were not included in Order No. R5-2005-0009. These new limitations are based on the new application of the USEPA National Recommended Ambient Water Quality Criteria and the Ayers and Westcot Agricultural Water Quality Goal, respectively. The Discharger is unable to immediately comply with the new effluent limitations; therefore, a compliance schedule for compliance with the effluent limitations for total ammonia nitrogen (as N) and total dissolved solids is established in this Order.

A compliance schedule is necessary because the Discharger must implement actions, including design and construction-related activities, performance of environmental studies and reviews, identification of social and environmental mitigation, and purchase of additional land to cease discharging to Miles Creek. The Discharger has made diligent efforts to quantify pollutant levels in the discharge. The compliance schedule is as short as possible.

Interim performance-based effluent limitations have been established in this Order. The interim effluent limitations were determined as described in section IV.E.2., below, and are in effect until the final effluent limitations take effect. The interim numeric effluent limitations will result in the highest discharge quality that can reasonably be achieved until final compliance is attained.

2. Interim Effluent Limitation for Total Ammonia Nitrogen (as N) and Total Dissolved Solids. The Compliance Schedule Policy requires the Central Valley Water Board to establish interim requirements and dates for their achievement in the NPDES permit. Interim numeric effluent limitations are required for compliance schedules longer than one year. Interim effluent limitations must be based on current treatment plant performance or existing permit limitations, whichever is more stringent.

The interim effluent limitations for total ammonia nitrogen (as N) and total dissolved solids in this Order are based on the current treatment plant performance. In developing the interim limitations, where there are 10 sampling data points or more, sampling and laboratory variability is accounted for by establishing interim limits that are based on normally distributed data where 99.9% of the data points will lie within 3.3 standard deviations of the mean (*Basic Statistical Methods for Engineers and Scientists*, Kennedy and Neville, Harper and Row).

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

As shown in the table below, there are more than 10 data points available for total ammonia nitrogen (as N). However, using the mean plus 3.3 standard deviations to calculate an interim effluent limitation results in a limit lower than the maximum effluent concentration. Therefore, the interim effluent limitation for total ammonia nitrogen (as N) is set as the maximum observed effluent concentration.

The interim effluent limitation for total dissolved solids is set using the 3.3 standard deviations plus the mean. Both interim effluent limitations are set as maximum daily effluent limitations.

The Central Valley Water Board finds that the Discharger can undertake treatment plant measures to maintain compliance with the interim effluent limitations included in this Order. Interim effluent limitations are established when compliance with final 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 effluent limitations, however, establish an enforceable ceiling concentration until compliance with the final effluent limitations can be achieved.

The following table summarizes the calculations of the interim effluent limitations for total ammonia nitrogen (as N) and total dissolved solids:

Table F-8. Interim Effluent Limitations Calculation Summary

Parameter	Units	Maximum Observed Effluent Concentration	Mean	Standard Deviation	Number of Samples	Interim Limitation
Ammonia Nitrogen, Total (as N)	mg/L	20	2.96	4.64	280	20
Total Dissolved Solids	mg/L	743	474	83	67	750

F. Land Discharge Specifications – Not Applicable

G. Reclamation Specifications – Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Basin Plan water quality objectives to protect the beneficial uses of surface water and groundwater include numeric objectives and narrative objectives, including objectives for chemical constituents, toxicity, and tastes and odors. The toxicity objective requires that surface water and groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective requires that surface water and 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 tastes and odors objective states that surface water and groundwater shall not contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances in concentrations that adversely affect domestic drinking water supply, agricultural supply, or any other beneficial use.

A. Surface Water

1. CWA section 303(a-c), requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The Central Valley Water Board adopted water quality criteria as water quality objectives in the Basin Plan. 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 beneficial uses.*" The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This Order contains receiving surface water limitations based on the Basin Plan numerical and narrative water quality objectives for bacteria, biostimulatory substances, chemical constituents, color, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, settleable material, suspended sediment, suspended material, tastes and odors, temperature, toxicity, and turbidity.

a. Dissolved oxygen. Order No. R5-2005-0009 established protection of the cold water spawning (SPWN) beneficial use for the first time. Order No. R5-2005-0009 included a receiving water limitation for dissolved oxygen of no less than 7.0 mg/L effective 14 October 2009. In the interim, Order No. R5-2005-0009 set

the dissolved oxygen receiving water limitation as no less than 5.0 mg/L. This Order carries over the 7.0 mg/L dissolved oxygen receiving water limitation with an effective date of no later than the date specified in Provision VI.C.7.a., Task vi. In the interim, the receiving water limitation for dissolved oxygen is set as no less than 5.0 mg/L.

b. pH. Order No. R5-2005-0009 established a receiving water limitation for pH specifying that discharges from the Facility shall not cause the ambient pH to change by more than 0.5 units based on the water quality objective for pH in the Basin Plan. The Central Valley Water Board adopted Resolution No. R5-2007-0136 on 25 October 2007, amending the Basin Plan to delete the portion of the pH water quality objective that limits the change in pH to 0.5 units. The State Water Board, the Office of Administrative Law, and the USEPA have approved the Basin Plan amendment. Consistent with the revised water quality objective in the Basin Plan, this Order does not include a receiving water limitation for pH change.

In Finding No. 14 of Resolution No. R5-2007-0136, the Central Valley Water Board found that the change in the pH receiving water objective is consistent with State Water Board Resolution No. 68-16, in that the changes to water quality objectives (i) consider maximum benefit to the people of the State, (ii) will not unreasonably affect present and anticipated beneficial uses of waters, and (iii) will not result in water quality less than that prescribed in policies, and is consistent with the federal Antidegradation Policy (40 CFR 131.12).

Ammonia is the only constituent in the discharge regulated by this Order directly related to pH. The fixed ammonia effluent limitations in this Order are based on reasonable worst-case conditions. Although ammonia criteria are based on pH and the pH receiving water limitations are more lenient in this Order than in the previous Order, the fixed ammonia limits were developed to protect under worst-case pH conditions. Therefore, the relaxation of the pH receiving water limitation will protect aquatic life and other beneficial uses and will not unreasonably affect present and anticipated beneficial uses nor result in water quality less than prescribed in applicable policies. The relaxation of the receiving water limitation is not expected to cause other impacts on water quality. The Central Valley Water Board finds that the relaxation of the pH receiving water limitation in this Order is to the maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial uses of waters, will not result in water quality less than that prescribed in policies, and is consistent with the federal Antidegradation Policy.

The revised receiving water limitation for pH, which is based on the amendment to the Basin Plan's pH water quality objective, reflects current scientifically supported pH requirements for the protection of aquatic life and other beneficial uses. The revised receiving water limitation for pH is more consistent with the current USEPA recommended criteria and is fully protective of aquatic life and the other beneficial uses listed in the Basin Plan. Changes in pH when pH is maintained within the range of 6.5 to 8.5 are neither beneficial nor adverse and,

therefore, are not considered to be degradation in water quality. Attempting to restrict pH changes to 0.5 pH units would not incur substantial costs without demonstrable benefits to beneficial uses. Thus, any changes in pH that would occur under the revised pH limitation would not only be protective of beneficial uses, but also would be consistent with maximum benefit to the people of the State. Therefore, the proposed amendment will not violate antidegradation policies.

c. **Turbidity.** Order No. R5-2005-0009 established a receiving water limitation for turbidity specifying that discharges from the Facility shall not cause the turbidity to increase more than 1 NTU where natural turbidity is between 0 and 5 NTU based on the water quality objective for turbidity in the Basin Plan. The Central Valley Water Board adopted Resolution No. R5-2007-0136 on 25 October 2007, amending the Basin Plan to limit turbidity to increase no more than 2 NTU when the natural turbidity is less than 1 NTU. The State Water Board, the Office of Administrative Law, and the USEPA have approved the Basin Plan amendment. Consistent with the revised water quality objective in the Basin Plan, this Order limits an increase in turbidity to 2 NTU when the natural turbidity is less than 1 NTU.

In Finding No. 14 of Resolution No. R5-2007-0136 the Central Valley Water Board found that the change in the turbidity receiving water objective is consistent with State Water Board Resolution No. 68-16, in that the changes to water quality objectives (i) consider maximum benefit to the people of the State, (ii) will not unreasonably affect present and anticipated beneficial uses of waters, and (iii) will not result in water quality less than that prescribed in policies, and is consistent with the federal Antidegradation Policy.

This Order includes operational specifications that require the Discharger to operate the treatment system to ensure that turbidity shall not exceed 2 NTU as a daily average, 5 NTU more than 5 percent of the time within a 24-hour period, and 10 NTU at any time. Because this Order limits the average daily discharge of turbidity to 2 NTU, the Order will be protective of the receiving water under all natural background conditions as defined in the Basin Plan's revised water quality objective for turbidity. The relaxation of the turbidity receiving water limitation will protect aquatic life and other beneficial uses and will not unreasonably affect present and anticipated beneficial uses nor result in water quality less than prescribed in applicable policies. The relaxation of the receiving water limitation is not expected to cause other impacts on water quality. The Central Valley Water Board finds that the relaxation of the turbidity receiving water limitation in this Order is to the maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial uses of waters, will not result in water quality less than that prescribed in policies, and is consistent with the federal Antidegradation Policy.

The revised receiving water limitation for turbidity, which is based on the amendment to the Basin Plan's turbidity water quality objective, reflects current scientifically supported turbidity requirements for the protection of aquatic life and

other beneficial uses and, therefore, will be fully protective of aquatic life and the other beneficial uses listed in the Basin Plan. Changes in turbidity allowed by the revised receiving water limitation, when ambient turbidity is below 1 NTU, would not adversely affect beneficial uses and would maintain water quality at a level higher than necessary to protect beneficial uses. Restricting low-level turbidity changes further may require costly upgrades, which would not provide any additional protection of beneficial uses. Thus, any changes in turbidity that would occur under the amended turbidity receiving water limitation would not only be protective of beneficial uses, but also would be consistent with maximum benefit to the people of the State. Therefore, the relaxed receiving water limitations for turbidity will not violate antidegradation policies.

B. Groundwater

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

2. Basin Plan water quality objectives include narrative objectives for chemical constituents, tastes and odors, and toxicity of groundwater. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective states groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use. The tastes and odors objective prohibits taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan also establishes numerical water quality objectives for chemical constituents and radioactivity in groundwaters designated as municipal supply. These include, at a minimum, compliance with MCLs in Title 22 of the CCR. The bacteria objective prohibits coliform organisms at or above 2.2 MPN/100 mL. The Basin Plan requires the application of the most stringent objective necessary to ensure that waters do not contain chemical constituents, toxic substances, radionuclides, taste- or odor-producing substances, or bacteria in concentrations that adversely affect municipal or domestic supply, agricultural supply, industrial supply or some other beneficial use.

3. Groundwater limitations are required to protect the beneficial uses of the underlying groundwater.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Federal regulation, 40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC sections 13267 and 13383 authorize the Central Valley Water Board 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 the Facility.

A. Influent Monitoring

1. Influent monitoring is required to collect data on the characteristics of the wastewater and to assess compliance with effluent limitations (e.g., BOD_5 and TSS reduction requirements). The monitoring frequencies for flow (continuous), BOD_5 and TSS (weekly), and pH (weekdays) have been retained from Order No. R5-2005-0009. Carbon tetrachloride, chlorodibromomethane, dichlorobromomethane, and dioxin monitoring has not been retained because data show these constituents were not detected in the influent. Cyanide monitoring has also not been retained because influent monitoring conducted as required by Order No. R5-2005-0009 has yielded enough data to appropriately characterize cyanide concentrations in the influent.

B. Effluent Monitoring

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

2. Effluent monitoring frequencies and sample types for flow and sulfate (continuous); BOD_5, TSS, pH, settleable solids, total ammonia nitrogen (as N), total kjeldahl nitrogen, and total nitrate nitrogen (as N) (weekly); temperature (weekdays); BOD_5 and TSS percent removal, cyanide, and total dissolved solids (monthly); carbon tetrachloride, chlorodibromomethane, and dichlorobromomethane (quarterly); and general minerals and dioxin (annual) have been retained from Order No. R5-2005-0009.

3. Monitoring for total coliform, total residual chlorine, turbidity, electrical conductivity, hardness (as $CaCO_3$), and priority pollutants has been increased. However, the new frequencies for total coliform, total residual chlorine, and turbidity do not become effective until the date specified in Provision VI.C.7.a., Task vi. New monitoring requirements for nitrite (as N) have been included in this Order to determine whether nitrite (as N) has reasonable potential to cause or contribute to an exceedance of a water quality objective.

4. Monitoring for chlorpyrifos and diazinon (2/permit cycle) has been included in this Order to determine compliance with the Basin Plan waste load allocations.

C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity.** Annual 96-hour bioassay testing is required to demonstrate compliance with the effluent limitation for acute toxicity. Acute toxicity testing has been reduced because the testing conducted during Order No. R5-2005-0009 shows the discharge is not acutely toxic.

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.

Chronic toxicity testing has been reduced because this Order requires the Discharger to conduct accelerated monitoring if a chronic toxicity test results show the discharge is toxic.

D. Receiving Water Monitoring

1. Surface Water

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

2. Groundwater

a. CWC section 13267 states, in part, "*(a) A regional 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 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 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.*" In requiring those reports, the Central Valley 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 Monitoring and Reporting Program is issued pursuant to CWC section 13267. The groundwater monitoring and reporting required by this Order and the Monitoring and Reporting Program are necessary to assure compliance with these waste discharge requirements. The Discharger is responsible for the discharges of waste at the Facility subject to this Order.

b. Monitoring of the groundwater must be conducted to determine if the discharge has caused an increase in constituent concentrations, when compared to background. The monitoring must allow the Discharger to conduct a complete assessment of groundwater impacts including the vertical and lateral extent of degradation, conduct an assessment of all wastewater-related constituents which may have migrated to groundwater, and conduct an analysis of whether additional or different methods of treatment or control of the discharge are necessary to provide best practicable treatment or control to comply with Resolution No. 68-16. Economic analysis is only one of many factors considered in determining best practicable treatment or control. If monitoring indicates that the discharge has incrementally increased constituent concentrations in groundwater above background, this Order may be reopened and modified to include specific numeric limitations established consistent with Resolution No. 68-16 and the Basin Plan. Until groundwater monitoring is sufficient, this Order contains Groundwater Limitations that allow groundwater quality to be degraded for certain constituents when compared to background groundwater quality, but not to exceed water quality objectives.

c. This Order requires the Discharger to continue groundwater monitoring and includes a regular schedule of groundwater monitoring in the attached Monitoring and Reporting Program. The groundwater monitoring reports are necessary to evaluate impacts to waters of the State to assure protection of beneficial uses and compliance with Central Valley Water Board plans and policies, including Resolution No. 68-16. Evidence in the record includes effluent monitoring data that indicates the presence of constituents that may degrade groundwater.

E. Other Monitoring Requirements

1. Pond Monitoring

Pond monitoring is required to assess compliance with conditions in this Order.

2. Water Supply Monitoring

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

3. Tertiary Treatment Filters Monitoring

Turbidity monitoring after the tertiary treatment filters but prior to disinfection is required to determine the effectiveness of the treatment process and to assure compliance with the required level of disinfection. Continuous monitoring is not required until the date specified in Provision VI.C.7.a., Task vi. In the interim, the Discharger is required to collect grab samples at the effluent monitoring location.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42.

Federal regulations, 40 CFR 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 CFR 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 122.41(j)(5) and (k)(2) because the enforcement authority under the CWC is more stringent. In lieu of these conditions, this Order incorporates by reference CWC section 13387(e).

B. Special Provisions

1. Reopener Provisions

a. **Whole Effluent Toxicity.** This Order requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity through a Toxicity Reduction Evaluation (TRE). This Order may be reopened to include a numeric chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened to include a numeric chronic toxicity limitation based on that objective.

2. Special Studies and Additional Monitoring Requirements

a. **Chronic Whole Effluent Toxicity Requirements.** The Basin Plan contains a narrative toxicity objective that states, "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life*," (Basin Plan at page III-8.01). Based on whole effluent chronic toxicity testing performed by the Discharger from March 2006 through March 2010, the discharge has reasonable potential to cause or contribute to an in-stream excursion above of the Basin Plan's narrative toxicity objective.

This provision requires the Discharger to develop a TRE work plan in accordance with USEPA guidance. In addition, the provision provides a numeric toxicity monitoring trigger and requirements for accelerated monitoring, as well as, requirements for TRE initiation if there is adequate evidence of toxicity.

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 toxicity at 100% effluent.

Accelerated Monitoring. The provision requires accelerated WET testing when a regular WET test result exceeds the monitoring trigger. The purpose of accelerated monitoring is to determine, in an expedient manner, whether toxicity is repeatedly present before requiring the implementation of a TRE.

The provision requires accelerated monitoring consisting of four chronic toxicity tests in a six-week period (i.e., one test every two weeks) using the species that exhibited toxicity. Due to possible seasonality of the toxicity, the accelerated monitoring should be performed in a timely manner, preferably taking no more than 2 to 3 months to complete. Guidance regarding accelerated monitoring and TRE initiation is provided in the *Technical Support Document for Water Quality-based Toxics Control*, EPA/505/2-90-001, March 1991 (TSD). The TSD at page 118 states, "*EPA recommends if toxicity is repeatedly or periodically present at levels above effluent limits more than 20 percent of the time, a TRE should be*

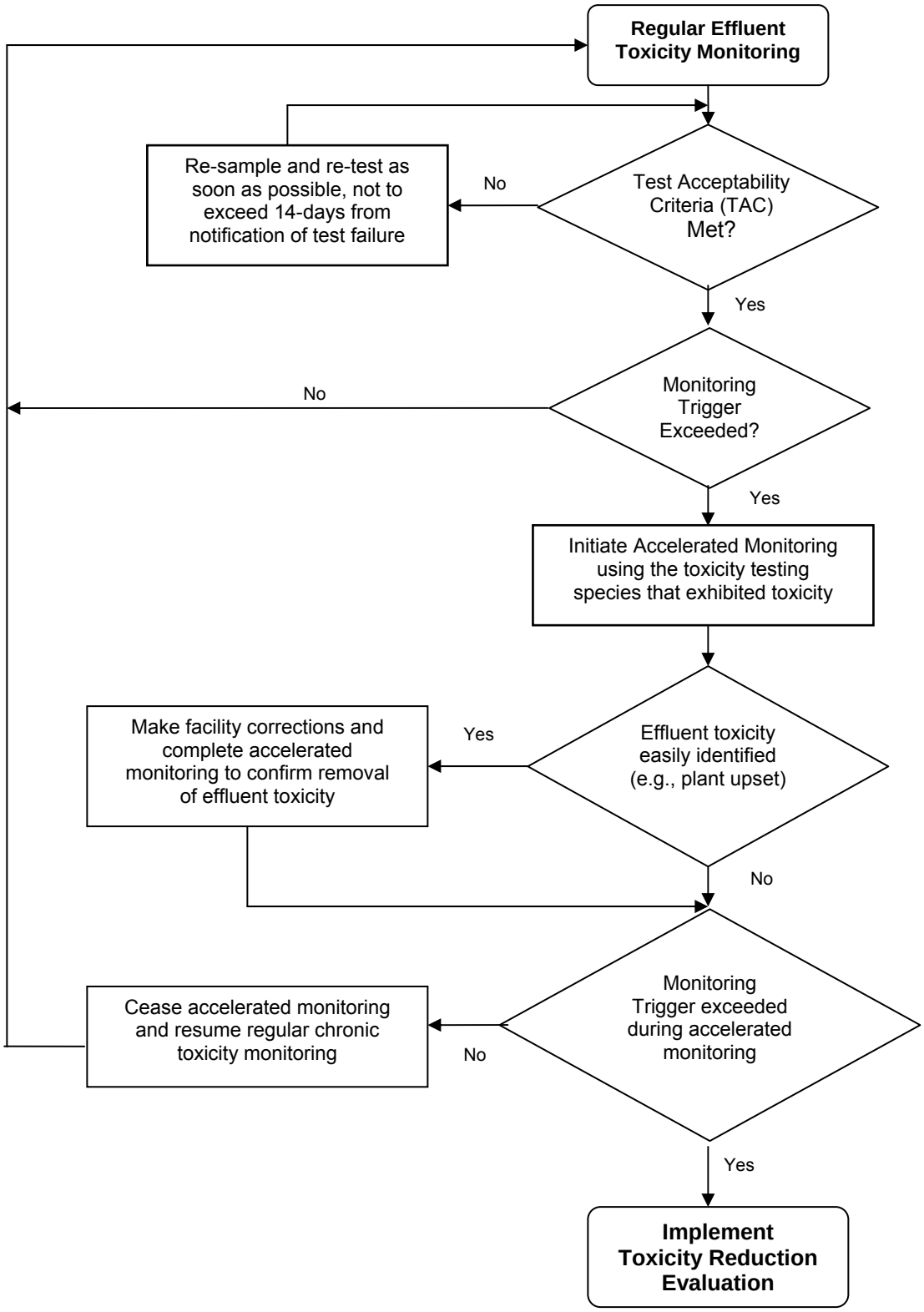
required." Therefore, four accelerated monitoring tests are required in this provision. If no toxicity is demonstrated in the four accelerated tests, then it demonstrates that toxicity is not present at levels above the monitoring trigger more than 20 percent of the time (only 1 of 5 tests are toxic, including the initial test). However, notwithstanding the accelerated monitoring results, if there is adequate evidence of 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 detailed TRE work plan in accordance with USEPA guidance, per the requirements of this provision. Numerous guidance documents are available, as identified below:

- *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants*, EPA/833-B-99/002, August 1999.
- *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (TREs)*, EPA/600/2-88/070, April 1989.
- *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures, Second Edition*, EPA 600/6-91/003, February 1991.
- *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I*, EPA/600/6-91/005F, May 1992.
- *Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity, Second Edition*, EPA/600/R-92/080, September 1993.
- *Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity, Second Edition*, EPA 600/R-92/081, September 1993.
- *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition*, EPA-821-R-02-012, October 2002.
- *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition*, EPA-821-R-02-013, October 2002.
- *Technical Support Document for Water Quality-based Toxics Control*, EPA/505/2-90-001, March 1991.

Figure F-1
WET Accelerated Monitoring Flow Chart



b. **Salinity Site-Specific Studies.** As previously described, the Discharger intends to cease discharges to Miles Creek and recycle its effluent on cropland. Effluent data shows the discharge has exceeded the most stringent agricultural objectives for EC and TDS. The agricultural objectives are site-specific and different objectives and/or effluent limitations may be appropriate for the proposed land discharge. This Order requires the Discharger to prepare and submit a report on the results of salinity (i.e., EC and TDS) site-specific studies to determine appropriate salinity levels necessary to protect groundwater beneficial uses. The study shall evaluate how climate, crop types grown or that could be grown, irrigation management practices, soil types, background water quality, rainfall, and flooding affect salinity requirements. Based on these and other relevant factors, the study shall recommend site-specific numeric values for salinity that fully protect the agricultural irrigation and municipal and domestic supply use designations of groundwater in the vicinity of the Facility. Central Valley Water Board staff will evaluate the recommendations when drafting waste discharge requirements for the proposed land discharge and include appropriate effluent limitations and/or groundwater limitations for these constituents. The study shall be completed and submitted to the Central Valley Water Board within nine months following submittal of the study work plan and time schedule.

3. Best Management Practices and Pollution Prevention

a. **Salinity Evaluation and Minimization Plan.** An Evaluation and Minimization Plan for salinity is required in this Order to ensure adequate measures are developed and implemented by the Discharger to reduce the discharge of salinity to Miles Creek and groundwater.

4. Construction, Operation, and Maintenance Specifications

a. **Turbidity Operational Specifications.** Turbidity specifications have been included in this Order as a second indicator of the effectiveness of the treatment process to ensure compliance with the required level of treatment. Failure of the treatment 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 treatment system performance, allowing immediate detection of system failure and rapid corrective action. These operational turbidity specifications are necessary to assess compliance with the DPH recommended Title 22 disinfection criteria.

b. **Treatment Pond Operating Requirements.** This Order requires the Discharger to properly maintain the ponds to prevent nuisance conditions.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. **Pretreatment Requirements – Not Applicable**

b. **Sludge/Biosolids Treatment or Discharge Specifications.** The sludge/biosolids provision is required to ensure compliance with State disposal

requirements (Title 27, CCR, Division 2, Subdivision 1, section 20005, et seq) and USEPA sludge/biosolids use and disposal requirements at 40 CFR 503.

c. **Collection System.** The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ (General Order) on 2 May 2006. The General Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans (SSMPs) and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions.

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

6. Other Special Provisions – Not Applicable

7. Compliance Schedules

a. This Order establishes a compliance schedule for the new WQBELs for total ammonia nitrogen (as N) and total dissolved solids and requires full compliance by the date specified in the compliance schedule included in this Provision.

VIII. PUBLIC PARTICIPATION

The Central Valley Water Board is considering the issuance of WDRs that will serve as an NPDES permit for the Facility. As a step in the WDR adoption process, the Central Valley Water Board staff has developed tentative WDRs. The Central Valley Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Central Valley 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 posting at the Facility, the Discharger's main office, and on the Central Valley Water Board's web site.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person or by mail to the Executive Officer at the Central Valley Water Board at the address on the cover page of this Order.

To be fully responded to by staff and considered by the Central Valley Water Board, written comments must be received at the Central Valley Water Board offices by 5:00 p.m. on **9 May 2011**.

C. Public Hearing

The Central Valley 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: 8/9/10 June 2011
Time: 8:30 a.m.
Location: Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Dr., Suite #200
Rancho Cordova, CA 95670

Interested persons are invited to attend. At the public hearing, the Central Valley 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.

D. Waste Discharge Requirements Petitions

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

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

E. Information and Copying

The Report of Waste Discharge, 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 8:00 a.m. and 4:00 p.m., Monday through Friday. Copying of documents may be arranged through the Central Valley

Water Board by calling (559) 445-5116. Our office is at 1685 “E” Street, Fresno, CA 93706.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Central Valley Water Board, reference this Facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Aide Ortiz at (559) 445-6083.

ATTACHMENT G – SUMMARY OF REASONABLE POTENTIAL ANALYSIS

Constituent	Units	MEC	B	C	CMC	CCC	Water & Org	Org. Only	Ag. Goal	MCL	Reasonable Potential
Antimony	µg/L	0.3[1]	0.3[1]	6	--	--	14	4300	--	6	No
Arsenic	µg/L	8	9.1	10	340	150	--	--	100	10	No
Cadmium	µg/L	0.06[1]	0.2[1]	2.8	5.4	2.8	--	--	10	5	No
Copper	µg/L	92	18	11	16	11	1300	--	200	1000	Indeterminate
Lead	µg/L	9.1	6.1	3.9	101	3.9	--	--	5000	15	Indeterminate
Mercury	ng/L	9.9	4.4	50	--	--	50	51	--	--	No
Nickel	µg/L	4.5	17	60	540	60	610	4600	200	100	No
Selenium	µg/L	2	0.26[1]	5	20	5.0	--	--	20	50	No
Silver	µg/L	0.04[1]	0.06[1]	5	5	--	--	--	--	100	No
Thallium	µg/L	0.07[1]	0.1	1.7	--	--	1.7	6.3	--	2	No
Zinc	µg/L	94	44	138	138	138	--	--	2000	5000	No
Cyanide	µg/L	22	11	5.2	22	5.2	700	220000	--	150	Yes
Acrolein	µg/L	15	ND	21	--	--	320	780	--	--	No
Carbon Tetrachloride	µg/L	0.9	ND	0.25	--	--	0.25	4.4	--	0.5	Yes
Chlorodibromomethane	µg/L	3.5	0.6	0.41	--	--	0.41	34	--	80[2]	Yes
Chloroform	µg/L	78	23	80[2]	--	--	--	--	--	80[2]	No
Dichlorobromomethane	µg/L	23	3.7	0.56	--	--	0.56	46	--	80[2]	Yes
Methyl Bromide	µg/L	0.13[1]	ND	48	--	--	48	4000	--	--	No
Methyl Chloride	µg/L	0.8	ND	--	--	--	--	--	--	--	No
Methylene Chloride	µg/L	0.26[1]	0.1[1]	4.7	--	--	4.7	1600	--	5	No
Toluene	µg/L	9.2	1.2	150	--	--	6800	200000	--	150	No
Vinyl Chloride	µg/L	0.2[1]	ND	0.5	--	--	2	525	--	0.5	No
Bis(2-ethylhexyl)phthalate	µg/L	6.8	21	1.8	--	--	1.8	5.9	--	4	Indeterminate
Ammonia (as N)	mg/L	20	9	1.16[3,4]	2.14[3]	1.16[3,4]	--	--	--	--	Yes
Chloride	mg/L	95	13.6	106	--	--	--	--	106	250	No
Total Chromium	µg/L	1.4	24	50	--	--	--	--	--	50	No
Electrical Conductivity	µmhos/cm	919	1570	700	--	--	--	--	700	900	Yes
Iron	µg/L	140	204	300	--	--	--	--	5000	300	No
Manganese	µg/L	20	30	50	--	--	--	--	200	50	No
Nitrate (as N)	mg/L	49	9.9	10	--	--	--	--	--	10	Yes
Sulfate	mg/L	203[5]	25	250	--	--	--	--	--	250	No
Total Dissolved Solids	mg/L	743	--	450	--	--	--	--	450	500	Yes

Constituent	Units	MEC	B	C	CMC	CCC	Water & Org	Org. Only	Ag. Goal	MCL	Reasonable Potential

General Note: All inorganic concentrations are given as a total recoverable.
MEC = Maximum Effluent Concentration
B = Maximum Receiving Water Concentration or lowest detection level, if non-detect
C = Criterion used for Reasonable Potential Analysis
CMC = Criterion Maximum Concentration (CTR or NTR)
CCC = Criterion Continuous Concentration (CTR or NTR)
Water & Org = Human Health Criterion for Consumption of Water & Organisms (CTR or NTR)
Org. Only = Human Health Criterion for Consumption of Organisms Only (CTR or NTR)
MCL = Drinking Water Standards Maximum Contaminant Level

ND = Non-detect
Footnotes:
[1] Estimated concentration
[2] Total trihalomethanes
[3] National Recommended Water Quality Criteria
[4] 30-day chronic criterion
[5] Highest reported value of 279 mg/L appears to be an outlier

ATTACHMENT H – CALCULATION OF WQBELS

Parameter	Units	Most Stringent Criteria			Dilution Factors			HH Calculations			Aquatic Life Calculations									Final Effluent Limitations	
		HH	CMC	CCC	HH	CMC	CCC	ECA_{HH} = $AMEL_{HH}$	AMEL/MDEL $Multiplier_{HH}$	$MDEL_{HH}$	ECA $Multiplier_{acute}$	LTA_{acute}	ECA $Multiplier_{chronic}$	$LTA_{chronic}$	Lowest LTA	AMEL $Multiplier_{95}$	$AMEL_{AL}$	MDEL $Multiplier_{99}$	$MDEL_{AL}$	Lowest AMEL	Lowest MDEL
Ammonia Nitrogen, Total (as N)	mg/L	--	2.14[1]	1.16[1,2] 2.90[1,3]	--	--	--	--	--	--	0.14	0.30	0.54[2] 0.25[3]	0.63[2] 0.73[3]	0.30	2.46	0.74	7.18	2.15	0.74	2.2
Carbon Tetrachloride	µg/L	0.25	--	--	--	--	--	0.25	2.01	0.50	--	--	--	--	--	--	--	--	--	0.25	0.50
Chlorodibromomethane	µg/L	0.41	--	--	--	--	--	0.41	2.01	0.82	--	--	--	--	--	--	--	--	--	0.41	0.82
Cyanide	µg/L	150	22	5.2	--	--	--	150	2.01	301	0.321	32.4	0.527	2.74	2.74	1.55	4.26	3.11	8.54	4.3	8.5
Dichlorobromomethane	µg/L	0.56	--	--	--	--	--	0.56	2.01	1.12	--	--	--	--	--	--	--	--	--	0.56	1.1

[1] USEPA Ambient Water Quality Criteria
[2] 30-day
[3] 4-day