

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

CENTRAL VALLEY REGION

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**ORDER NO. R5-2009-XXXX
 NPDES NO. CA0079987**

**WASTE DISCHARGE REQUIREMENTS FOR THE
 MAXWELL PUBLIC UTILITIES DISTRICT
 MAXWELL PUBLIC UTILITIES DISTRICT WASTEWATER TREATMENT PLANT
 COLUSA COUNTY**

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

Table 1. Discharger Information

Discharger	Maxwell Public Utilities District
Name of Facility	Maxwell Public Utilities District Wastewater Treatment Plant, Maxwell
Facility Address	Section 3 T16N R3W, Intersection of East Avenue and South Avenue
	Maxwell, CA 95955
	Colusa County
The U.S. Environmental Protection Agency and the California Regional Water Quality Control Board have classified this discharge as a minor discharge.	

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

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Treated Wastewater	39°, 15', 55" N	122°, 11', 4" W	Unnamed Tributary to Lurline Creek

Table 3. Administrative Information

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

IT IS HEREBY ORDERED, that Order No. **R5-2002-0022** is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

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

PAMELA C. CREEDON, Executive Officer

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I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	Maxwell Public Utilities District
Name of Facility	Maxwell Public Utilities District Wastewater Treatment Plant
Facility Address	Section 3 T16N R3W, Intersection of East Avenue and South Avenue
	Maxwell, CA 95955
	Colusa County
Facility Contact, Title, and Phone	Carmen Mason, General Manger (530) 438-2505
Mailing Address	54 N. San Francisco Street (P.O. Box 294) Maxwell, CA 95955
Type of Facility	Publicly Owned Treatment Works
Facility Design Flow	0.2 (in million gallons per day)

II. FINDINGS

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

A. Background. Maxwell Public Utilities District (hereinafter Discharger) is currently discharging pursuant to Order No. R5-2002-0022 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0079987. The Discharger submitted a Report of Waste Discharge, dated 26 July 2007, and applied for a NPDES permit renewal to discharge up to 0.2 million gallons per day (mgd) of treated wastewater from Maxwell Public Utilities District Wastewater Treatment Plant (hereinafter Facility). The application was deemed complete on 7 August 2007.

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

B. Facility Description. The Discharger owns and operates a Publicly Owned Treatment Works (POTW). The treatment system consists of comminution, aeration, oxidation pond treatment, chlorination, and dechlorination. Sludge is continuously treated through the stabilization pond system and may be dewatered as necessary and disposed off-site. Wastewater is discharged from Discharge Point No. 001 (see table on cover page) to an unnamed tributary of Lurline Creek, a water of the United States, and a tributary to Colusa Basin Drain within the Colusa Basin Hydrologic Unit, Colusa Trough Hydrologic Subarea (520.21). Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

- C. Legal Authorities.** This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (CWC) (commencing with section 13370). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the CWC (commencing with section 13260).
- D. Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. Attachment F (Fact Sheet), 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 are also incorporated into this Order.
- E. California Environmental Quality Act (CEQA).** Under CWC section 13389, this action to adopt an NPDES permit is exempt from the provisions of 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 (CFR) require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at Part 133 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.** Section 301(b) of the CWA and 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. This Order contains requirements, expressed as a technology equivalence requirement, more stringent than secondary treatment requirements that are necessary to meet applicable water quality standards. The Regional Water Board has considered the factors listed in CWC Section 13241 in establishing these requirements. The rationale for these requirements, which consist of tertiary treatment or equivalent requirements, is discussed in the Fact Sheet.

Section 122.44(d)(1)(i) of 40 CFR mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) EPA criteria guidance under CWA section 304(a), supplemented where necessary by other

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

H. Water Quality Control Plans. The Regional Water Board adopted a *Water Quality Control Plan, Fourth Edition (Revised October 2007), for the Sacramento and San Joaquin River Basins* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. 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 the unnamed tributary to Lurline Creek, but does identify present and potential uses for Colusa Basin Drain, to which the unnamed tributary to Lurline Creek, via Lurline Creek and Colusa Trough, is tributary. These beneficial uses are as follows: agricultural supply; water contact recreation; warm freshwater habitat, cold freshwater habitat (potential use); warm migration of aquatic organisms; warm spawning, reproduction, and/or early development; and wildlife habitat. Other beneficial uses identified in the Basin Plan apply to Lurline Creek, including groundwater recharge and freshwater replenishment.

In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. The unnamed water bodies, through which the Facility’s wastewater flows, and Lurline Creek qualify for the State Water Board Resolution No. 88-63 exceptions. Thus, as discussed in detail in the Fact Sheet, beneficial uses applicable to the unnamed tributary to Lurline Creek are as follows:

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Unnamed Tributary to Lurline Creek	<p><u>Existing:</u> Agricultural supply, including irrigation and stock watering (AGR); water contact recreation, including canoeing and rafting (REC-1); warm freshwater habitat (WARM); warm spawning, reproduction, and/or early development (SPWN); wildlife habitat (WILD); ground water recharge (GWR); and freshwater replenishment (FRSH)</p> <p><u>Potential:</u> Cold freshwater habitat (COLD)</p> <p><u>Groundwater:</u> Municipal and domestic supply (MUN); industrial service supply (IND); industrial process supply (PRO); and agricultural supply (AGR)</p>

Requirements of this Order implement the Basin Plan.

- I. National Toxics Rule and California Toxics Rule.** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. On May 18, 2000, USEPA adopted the California Toxics Rule (CTR). The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.
- J. State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
- K. Compliance Schedules and Interim Requirements.** In general, an 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 has concluded that where the Regional Water Board's Basin Plan allows for schedules of compliance and the Regional Water Board is newly interpreting a narrative standard, it may include schedules of compliance in the permit to meet effluent limits that implement a narrative standard. See *In the Matter of Waste Discharge Requirements for Avon Refinery* (State Board Order WQ 2001-06 at pp. 53-55). See also *Communities for a Better Environment et al. v. State Water Resources Control Board*, 34 Cal.Rptr.3d 396, 410 (2005). The Basin Plan for the Sacramento and San Joaquin Rivers includes a provision that authorizes the use of compliance schedules in NPDES permits for water quality objectives that are adopted after the date of adoption of the Basin Plan, which was September 25, 1995 (See Basin Plan at page IV-16). Consistent with the State Water Board's Order in the *Communities for a Better Environment* matter, the Regional Water Board has the discretion to include compliance schedules in NPDES permits when it is including an effluent limitation that is a "new interpretation" of a narrative water quality objective. This conclusion is also consistent with the USEPA policies and administrative decisions. See, e.g., *Whole Effluent Toxicity (WET) Control Policy*. The Regional Water Board, however, is not required to include a schedule of compliance, but may issue a Time Schedule Order pursuant to CWC section 13300 or a Cease and Desist Order pursuant to CWC section 13301 where it finds that the discharger is violating or threatening to violate the permit. The Regional Water Board will consider the merits of each case in determining whether it is appropriate to include a

compliance schedule in a permit, and, consistent with the Basin Plan, should consider feasibility of achieving compliance, and must impose a schedule that is as short as practicable to achieve compliance with the objectives, criteria, or effluent limit based on the objective or criteria.

For CTR constituents, Section 2.1 of the SIP provides that, based on a Discharger's request and demonstration that it is infeasible for an existing Discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation that exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order includes compliance schedules and interim effluent limitations and discharge specifications. A detailed discussion of the basis for the compliance schedules, interim effluent limitations, and discharge specifications is included in the Fact Sheet.

- L. Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes. (40 CFR 131.21; 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.
- M. Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum, federal technology-based requirements that are necessary to meet water quality standards. These limitations are more stringent than required by the CWA. Specifically, this Order includes effluent limitations for BOD₅, TSS, and pathogens that are more stringent than applicable federal standards, but that are nonetheless necessary to meet numeric objectives or protect beneficial uses. The rationale for including these limitations is explained in the Fact Sheet. In addition, the Regional Water Board has considered the factors in CWC section 13241 in establishing these requirements.

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 water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on May 1, 2001. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "*applicable water quality standards for purposes of the [Clean Water] Act*" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

- N. Antidegradation Policy.** Section 131.12 of 40 CFR requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 is consistent with the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet the permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.
- O. Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.
- P. Endangered Species Act.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.
- Q. Monitoring and Reporting.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in Attachment E.

- R. Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.
- S. Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections IV.B, IV.C, V.B, and VI.C 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 Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.
- U. Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

III. DISCHARGE PROHIBITIONS

- A. Discharge of wastewater at a location or in a manner different from that described in the Findings is prohibited.
- B. The by-pass or overflow of wastes to surface waters is prohibited, except as allowed by Federal Standard Provisions I.G. and I.H. (Attachment D).
- C. Neither the discharge nor its treatment shall create a nuisance as defined in CWC section 13050.
- D. The Discharger shall not allow pollutant-free wastewater to be discharged into the collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point No. 001

1. Final Effluent Limitations – Discharge Point No. 001

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

- a. The Discharger shall maintain compliance with the effluent limitations specified in Table 6:

Table 6. Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Ammonia Nitrogen, Total (as N)	mg/L	0.6	--	1.5	--	--
	lbs/day ¹	1.0	--	2.5	--	--
Biochemical Oxygen Demand (5-day @ 20 °C)	mg/L	10	15	20	--	--
	lbs/day ¹	17	25	33	--	--
Chlorodibromomethane	µg/L	34	--	68	--	--
Cyanide	µg/L	4.3	--	8.5	--	--
Dichlorobromomethane	µg/L	46	--	92	--	--
pH	standard Units	--	--	--	6.5	8.5
Total Coliform	MPN/100 mL	--	--	--	--	240
Total Suspended Solids	mg/L	10	15	20	--	--
	lbs/day ¹	17	25	33	--	--

¹ Based on a average dry weather flow of 0.2 mgd.

- b. **Percent Removal:** The average monthly percent removal of BOD₅ and TSS shall not be less than 85 percent.
- c. **Acute Whole Effluent Toxicity.** Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:
 - i. 70%, minimum for any one bioassay; and
 - ii. 90%, median for any three consecutive bioassays.
- d. **Total Residual Chlorine.** Effluent total residual chlorine shall not exceed:
 - i. 0.011 mg/L, as a 4-day average;
 - ii. 0.019 mg/L, as a 1-hour average;

- e. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed:
 - i. 2.2 most probable number (MPN) per 100 mL, as a 7-day median; and
 - ii. 23 MPN/100 mL, more than once in any 30-day period.
- f. **Average Daily Discharge Flow.** The Average Daily Discharge Flow shall not exceed 0.2 mgd.
- g. **Chronic Whole Effluent Toxicity.** There shall be no chronic whole effluent toxicity in the effluent discharge.

2. Interim Effluent Limitations

- a. **Effective immediately and ending on 18 May 2010**, the Discharger shall maintain compliance with the following limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the attached MRP. These interim effluent limitations shall apply in lieu of the corresponding final effluent limitations specified for the same parameters during the time period indicated in this provision.

Table 7. Interim Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Ammonia Nitrogen, Total (as N)	mg/L	--	--	8	--	--
Chlorodibromomethane	µg/L	--	--	124	--	--
Cyanide	µg/L	--	--	205	--	--
Dichlorobromomethane	µg/L	--	--	228	--	--

- b. **Effective immediately**, the electrical conductivity of the discharge shall not exceed 2000 µmhos/cm as an annual average.

B. Land Discharge Specifications

[Not applicable]

C. Reclamation Specifications

[Not applicable]

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in the unnamed tributary to Lurline Creek:

1. **Bacteria.** The fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, to exceed a geometric mean of 200 MPN/100 mL, nor more than ten percent of the total number of fecal coliform samples taken during any 30-day period to exceed 400 MPN/100 mL.
2. **Biostimulatory Substances.** Water to contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.
3. **Chemical Constituents.** Chemical constituents to be present in concentrations that adversely affect beneficial uses.
4. **Color.** Discoloration that causes nuisance or adversely affects beneficial uses.
5. **Dissolved Oxygen:**
 - a. The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass;
 - b. The 95 percentile dissolved oxygen concentration to fall below 75 percent of saturation; nor
 - c. The dissolved oxygen concentration to be reduced below 7.0 mg/L at any time.
6. **Floating Material.** Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.
7. **Oil and Grease.** Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.
8. **pH.** The pH to be depressed below 6.5, raised above 8.5, nor changed by more than 0.5 units.
9. **Pesticides:**
 - a. Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses;
 - b. Pesticides to be present in bottom sediments or aquatic life in concentrations that adversely affect beneficial uses;

- c. Total identifiable persistent chlorinated hydrocarbon pesticides to be present in the water column at concentrations detectable within the accuracy of analytical methods approved by USEPA or the Executive Officer;
- d. Pesticide concentrations to exceed those allowable by applicable antidegradation policies (see State Water Board Resolution No. 68-16 and 40 CFR §131.12.).
- e. Pesticide concentrations to exceed the lowest levels technically and economically achievable.
- f. Pesticides to be present in concentration in excess of the maximum contaminant levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15/specified in Table 64444-A (Organic Chemicals) of Section 64444 of Title 22 of the California Code of Regulations.
- g. Thiobencarb to be present in excess of 1.0 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) of Section 64443 of Title 22 of the California Code of Regulations.

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

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

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

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

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

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

17. Turbidity. The turbidity to increase as follows:

- a. More than 1 Nephelometric Turbidity Unit (NTU) where natural turbidity is between 0 and 5 NTUs.
- b. More than 20 percent where natural turbidity is between 5 and 50 NTUs.
- c. More than 10 NTU where natural turbidity is between 50 and 100 NTUs.
- d. More than 10 percent where natural turbidity is greater than 100 NTUs.

B. Groundwater Limitations

1. Release of waste constituents from any storage, treatment, or disposal component associated with the WWTP, in combination with other sources, shall not cause the underlying groundwater to contain waste constituents in concentrations greater than background water quality. Any increase in total dissolved solids (TDS) or electrical conductivity @ 25 °C (EC) concentrations within the monitoring points, when compared to background, ~~shall not exceed the increase typically caused by the percolation discharge of domestic wastewater, and~~ shall not violate water quality objectives, impact beneficial uses, or cause pollution or nuisance. For purposes of this limitation, the monitoring points are the five existing groundwater monitoring wells within the property owned or controlled by the Discharger.

~~2. Resolution No. 68-16 requires that the Discharger provide best practicable treatment or control prior to a discharge to groundwater. If monitoring of the groundwater indicates that the discharge has caused an increase in constituent concentrations, when compared to background, the Discharger is required in Section VI.C.2.b of this Order to conduct a study of the extent of groundwater degradation.~~

VI. PROVISIONS

A. Standard Provisions

1. The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.
2. The Discharger shall comply with the following provisions:
 - a. If the Discharger's wastewater treatment 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, California Code of Regulations (CCR), Division 3, Chapter 26.
 - b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
 - i. violation of any term or condition contained in this Order;

- ii. obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;
- iii. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and
- iv. a material change in the character, location, or volume of discharge.

The causes for modification include:

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

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

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

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

- d. This Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under CWA sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2), 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 CWA section 307, or amendment thereto, for any discharge to the municipal system.
- h. The discharge of any radiological, chemical or biological warfare agent or high-level, radiological waste is prohibited.
- i. A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.
- j. Safeguard to electric power failure:
 - i. The Discharger shall provide safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharge shall comply with the terms and conditions of this Order.
 - ii. Upon written request by the Regional Water Board the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past five years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Regional Water Board.
 - iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Regional Water Board not approve the existing safeguards, the Discharger shall, within ninety days of having been advised in writing by the Regional Water Board that the existing safeguards are inadequate, provide to the Regional Water Board and USEPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms

and conditions of this Order. The schedule of compliance shall, upon approval of the Regional Water Board, become a condition of this Order.

- k. The Discharger, upon written request of the Regional Water Board, shall file with the Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. This report may be combined with that required under Regional Water Board Standard Provision VI.A.2.m.

The technical report shall:

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

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

- l. A POTW whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the Discharger shall notify the Regional Water Board by 31 January. A copy of the notification shall be sent to appropriate local elected officials, local permitting agencies and the press. Within 120 days of the notification, the Discharger shall submit a technical report showing how it will prevent flow volumes from exceeding capacity or how it will increase capacity to handle the larger flows. The Regional Water Board may extend the time for submitting the report.
- m. The Discharger shall submit technical reports as directed by the Executive Officer. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, sections 415 and 3065, all technical

- reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional(s) responsible for the work.
- n. Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Regional Water Board and USEPA.
 - o. The Discharger shall conduct analysis on any sample provided by USEPA as part of the Discharge Monitoring Quality Assurance (DMQA) program. The results of any such analysis shall be submitted to USEPA's DMQA manager.
 - p. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.
 - q. All monitoring and analysis instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their continued accuracy.
 - r. The Discharger shall file with the Regional Water Board technical reports on self-monitoring performed according to the detailed specifications contained in the MRP attached to this Order.
 - s. The results of all monitoring required by this Order shall be reported to the Regional Water Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. Unless otherwise specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.
 - t. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, sections 13385, 13386, and 13387.
 - u. For POTWs, prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (CWC section 1211).
 - v. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, maximum daily effluent limitation, 1-hour average effluent limitation, or receiving water limitation contained in this Order, the Discharger shall notify the Regional Water Board by telephone (916) 464-3291 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board

waives confirmation. The written notification shall include the information required by Attachment D, Section V.E.1 [40 CFR 122.41(l)(6)(i)].

B. Monitoring and Reporting Program Requirements

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

C. Special Provisions

1. Reopener Provisions

- a. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.
- b. Conditions that necessitate a major modification of a permit are described in 40 CFR 122.62, including:
 - i. If new or amended applicable water quality standards are promulgated or approved pursuant to CWA section 303, or amendments thereto, this permit may be reopened and modified in accordance with the new or amended standards.
 - ii. When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.
- c. **Pollution Prevention.** This Order requires the Discharger prepare pollution prevention plans following CWC section 13263.3(d)(3) for chlorodibromomethane, cyanide, and dichlorobromomethane. Based on a review of the pollution prevention plans, this Order may be reopened for addition and/or modification of effluent limitations and requirements for these constituents.
- d. **Whole Effluent Toxicity.** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if the State Water Board revises the SIP's toxicity control provisions that would require the establishment of numeric chronic toxicity effluent limitations, this Order may be reopened to include a numeric chronic toxicity effluent limitation based on the new provisions.
- e. **Water Effects Ratios (WER) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority

pollutant inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for inorganic constituents. If the Discharger performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

- a. **Chronic Whole Effluent Toxicity.** For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct chronic whole effluent toxicity testing, as specified in the MRP (Attachment E, Section V.). Furthermore, this Provision requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge exceeds the toxicity numeric monitoring trigger established in this Provision, the Discharger is required to initiate a Toxicity Reduction Evaluation (TRE), in accordance with an approved TRE Work Plan, and take actions to mitigate the impact of the discharge and prevent reoccurrence of toxicity. A TRE is a site-specific study conducted in a stepwise process to identify the source(s) of toxicity and the effective control measures for effluent toxicity. TREs are designed to identify the causative agents and sources of whole effluent toxicity, evaluate the effectiveness of the toxicity control options, and confirm the reduction in effluent toxicity. This Provision includes requirements for the Discharger to develop and submit a TRE Work Plan and includes procedures for accelerated chronic toxicity monitoring and TRE initiation.
 - i. **Initial Investigative Toxicity Reduction Evaluation Work Plan. Within 90 days of the effective date of this Order,** the Discharger shall submit to the Regional Water Board an Initial Investigative TRE Work Plan for approval by the Executive Officer. This should be a one to two page document including, at minimum:
 - a) A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of effluent toxicity, effluent variability, and treatment system efficiency;
 - b) A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility; and
 - c) A discussion of who will conduct the Toxicity Identification Evaluation, if necessary (i.e. an in-house expert or outside contractor).
 - ii. **Accelerated Monitoring and TRE Initiation.** When the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity monitoring, and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring as required in the Accelerated Monitoring Specifications. WET testing results exceeding the monitoring trigger during

accelerated monitoring demonstrates a pattern of toxicity and requires the Discharger to initiate a TRE to address the effluent toxicity.

- iii. **Numeric Monitoring Trigger.** The numeric toxicity monitoring trigger is $> 1 \text{ TUc}$ (where $\text{TUc} = 100/\text{NOEC}$). The monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to begin accelerated monitoring and initiate a TRE.
- iv. **Accelerated Monitoring Specifications.** If the monitoring trigger is exceeded during regular chronic toxicity testing, within 14-days of notification by the laboratory of the test results, the Discharger shall initiate accelerated monitoring. Accelerated monitoring shall consist of four (4) chronic toxicity tests in a 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 a pattern of effluent toxicity, the Executive Officer may require that the Discharger initiate a TRE.
 - b) If the source(s) of the toxicity is easily identified (i.e. temporary plant upset), the Discharger shall make necessary corrections to the facility and shall continue accelerated monitoring until four (4) consecutive accelerated tests do not exceed the monitoring trigger. Upon confirmation that the effluent toxicity has been removed, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring.
 - c) If the result of any accelerated toxicity test exceeds the monitoring trigger, the Discharger shall cease accelerated monitoring and initiate a TRE to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity. Within thirty (30) days of notification by the laboratory of the test results exceeding the monitoring trigger during accelerated monitoring, the Discharger shall submit a TRE Action Plan to the Regional Water Board including, at minimum:
 - 1) Specific actions the Discharger will take to investigate and identify the cause(s) of toxicity, including TRE WET monitoring schedule;
 - 2) Specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and
 - 3) A schedule for these actions.

Within sixty (60) days of notification by the laboratory of the test results, the Discharger shall submit to the Regional Water Board a TRE Work Plan for approval by the Executive Officer. The TRE Work Plan shall outline

the procedures for identifying the source(s) of, and reducing or eliminating effluent toxicity. The TRE Work Plan must be developed in accordance with USEPA guidance¹.

b. Site-Specific Receiving Water Salinity Study: If the surface water discharge from the Facility has not ceased by 18 May 2010 (in accordance to Time Schedule Order No. R5-2007-0073), the Discharger shall complete and submit a report on the results of a site-specific receiving water study identifying the appropriate salinity levels (including EC, TDS, boron, sodium, and chloride levels) to protect agricultural beneficial use in areas irrigated with water from the unnamed tributary of Lurline Creek, Lurline Creek and the Colusa Basin Drain in the vicinity of the discharge. The study shall, at minimum, determine the sodium adsorption ratio of soils in the affected area, the effects of rainfall and flood-induced leaching, and background water quality. The study shall evaluate how climate, soil chemistry, background water quality, rainfall, and flooding affect salinity requirements. Based on these factors, the study shall recommend site-specific numeric levels for EC, TDS, boron, sodium, and chloride that fully protect agricultural uses.

If surface water discharge is not ceased by 18 May 2010, the Discharger shall comply with the following time schedule to complete the study:

<u>Task</u>	<u>Compliance Date</u>
<u>Submit Work plan and Time Schedule</u>	<u>1 November 2010</u>
<u>Complete Study</u>	<u>1 May 2013</u>
<u>Submit Study Report</u>	<u>Submit as part of the Report of Waste Discharge (as required on the Cover Page for the Order)</u>

3. Best Management Practices and Pollution Prevention

a. **Salinity Evaluation and Minimization Plan.** The Discharger shall prepare and implement a salinity evaluation and minimization plan to address sources of salinity from the Facility. The plan shall be completed and submitted to the Regional Water Board within 2 years of the effective date of this Order for approval by the Executive Officer. .

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

4. Construction, Operation and Maintenance Specifications

a. Treatment Pond Operating Requirements.

- i. 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*).
 - ii. As a means of discerning compliance with Treatment Pond Operating Requirement No. 1, the dissolved oxygen content in the upper zone (1 foot) of wastewater in ponds shall not be less than 1.0 mg/L.
 - iii. Ponds shall not have a pH less than 6.5 or greater than 8.5
 - iv. 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.
 - v. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.
 - vi. Freeboard shall never be less than two feet (measured vertically to the lowest point of overflow).
- b. **Turbidity.** The Discharger shall operate the treatment system to insure 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.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. Sludge/Biosolids Discharge Specifications

- i. Collected screenings, residual sludge, biosolids, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer, and consistent with *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste*, as set forth in Title 27, CCR, Division 2, Subdivision 1, section 20005, et seq. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, composting sites, soil amendment sites) that are operated in accordance with valid waste discharge requirements issued by a regional water quality control board will satisfy these specifications.

- ii. Sludge and solid waste shall be removed from screens, sumps, ponds, clarifiers, etc. as needed to ensure optimal plant performance.
- iii. The treatment of sludge generated at the Facility shall be confined to the Facility property and conducted in a manner that precludes infiltration of waste constituents into soils in a mass or concentration that will violate Groundwater Limitations V.B. In addition, the storage of residual sludge, solid waste, and biosolids on Facility property shall be temporary and controlled, and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate Groundwater Limitations V.B.
- iv. The use and disposal of biosolids shall comply with existing Federal and State laws and regulations, including permitting requirements and technical standards included in 40 CFR 503. If the State Water Board and the Regional Water Board are given the authority to implement regulations contained in 40 CFR 503, this Order may be reopened to incorporate appropriate time schedules and technical standards. The Discharger must comply with the standards and time schedules contained in 40 CFR 503 whether or not they have been incorporated into this Order.

b. Biosolids Disposal Requirements

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

c. Biosolids Storage Requirements

- i. Facilities for the storage of Class B biosolids shall be located, designed and maintained to restrict public access to biosolids.
- ii. Biosolids storage facilities shall be designed and maintained to prevent washout or inundation from a storm or flood with a return frequency of 100 years.
- iii. Biosolids storage facilities, which contain biosolids, shall be designed and maintained to contain all storm water falling on the biosolids storage area during a rainfall year with a return frequency of 100 years.

- iv. Biosolids storage facilities shall be designed, maintained and operated to minimize the generation of leachate.
- d. **Collection System.** On 2 May 2006, the State Water Board adopted State Water Board Order 2006-0003, a Statewide General WDR for Sanitary Sewer Systems. The Discharger shall be subject to the requirements of Order 2006-0003 and any future revisions thereto. Order 2006-0003 requires that all public agencies that currently own or operate sanitary sewer systems apply for coverage under the General WDR.

Regardless of the coverage obtained under Order 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

- a. **Effective 18 May 2010**, wastewater shall be oxidized, coagulated, filtered, and adequately disinfected pursuant to the California Department of Public Health (DPH, formerly known as California Department of Health Services or DHS) reclamation criteria, California Code of Regulations, Title 22, Division 4, Chapter 3, (Title 22), or equivalent.
- b. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Regional Water Board.

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

7. Compliance Schedules

a. Compliance Schedules for Final Effluent Limitations for Chlorodibromomethane, Cyanide, and Dichlorobromomethane.

- i. **By 18 May 2010**, the Discharger shall comply with the final effluent limitations for chlorodibromomethane, cyanide, and dichlorobromomethane. As this compliance schedule is greater than one year, the Discharger shall submit annual progress reports in accordance with the MRP (Attachment E, Section X.D.1.)
- ii. **Corrective Action Plan/Implementation Schedule.** The Discharger shall submit to the Regional Water Board a corrective action plan and implementation schedule **within 4 months of the effective date of this Order** to assure compliance with the final effluent limitations for chlorodibromomethane, cyanide, and dichlorobromomethane by 18 May 2010.
- iii. **Pollution Prevention Plan.** The Discharger shall prepare and implement a pollution prevention plan for chlorodibromomethane, cyanide, and dichlorobromomethane, in accordance with CWC section 13263.3(d)(3). The minimum requirements for the pollution prevention plan are outlined in the Fact Sheet, Attachment F, section VII.B.3.d. The Pollution Prevention Plan shall be completed and submitted to the Regional Water Board **within 9 months following the effective date of this Order**

b. Compliance Schedule for Final Effluent Limitations for Ammonia.

- i. **By 18 May 2010**, the Discharger shall comply with the final effluent limitations for ammonia. Until full compliance, the Discharger shall submit progress reports in accordance with the MRP (Attachment E, Section X.D.1.).
- ii. Until full compliance the Discharger shall operate the Facility in a nitrification mode to the maximum extent practicable.

VII. COMPLIANCE DETERMINATION

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

- A. **BOD₅ and TSS Effluent Limitations.** Compliance with the final effluent limitations for BOD₅ and TSS required in sections IV.A.1. shall be ascertained by 24-hour composite samples. Compliance with effluent limitations IV.A.1. for percent removal shall be calculated using the arithmetic mean of BOD₅ and TSS in effluent samples collected over a monthly period as a percentage of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.

- B. Average Daily Discharge Flow Effluent Limitations.** The Average Daily Discharge Flow represents the daily average flow when groundwater is at or near normal and runoff is not occurring. Compliance with the Average Daily Discharge Flow effluent limitations will be measured at times when groundwater is at or near normal and runoff is not occurring.
- C. Total Coliform Organisms Effluent Limitations.** For each day that an effluent sample is collected and analyzed for total coliform organisms, the 7-day median shall be determined by calculating the median concentration of total coliform bacteria in the effluent utilizing the bacteriological results of the last seven days for which analyses have been completed. If the 7-day median of total coliform organisms exceeds a most probable number (MPN) of 2.2 per 100 milliliters, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period.
- D. Total Residual Chlorine Effluent Limitations.** 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.

- E. Chronic Whole Effluent Toxicity Effluent Limitation. Compliance with the accelerated monitoring and TRE/TIE provisions of Provision VI.C.2.a shall constitute compliance with effluent limitations contained in sections IV.A.1.g of this Order for chronic whole effluent toxicity.**

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

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

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

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

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

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

arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

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

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

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

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

Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration is the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

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

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

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

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

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

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

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

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

Not Detected (ND) are those sample results less than the laboratory's MDL.

Ocean Waters are the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

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

Pollutant Minimization Program (PMP) means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The

goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

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

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

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

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

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

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

where:

x is the observed value;

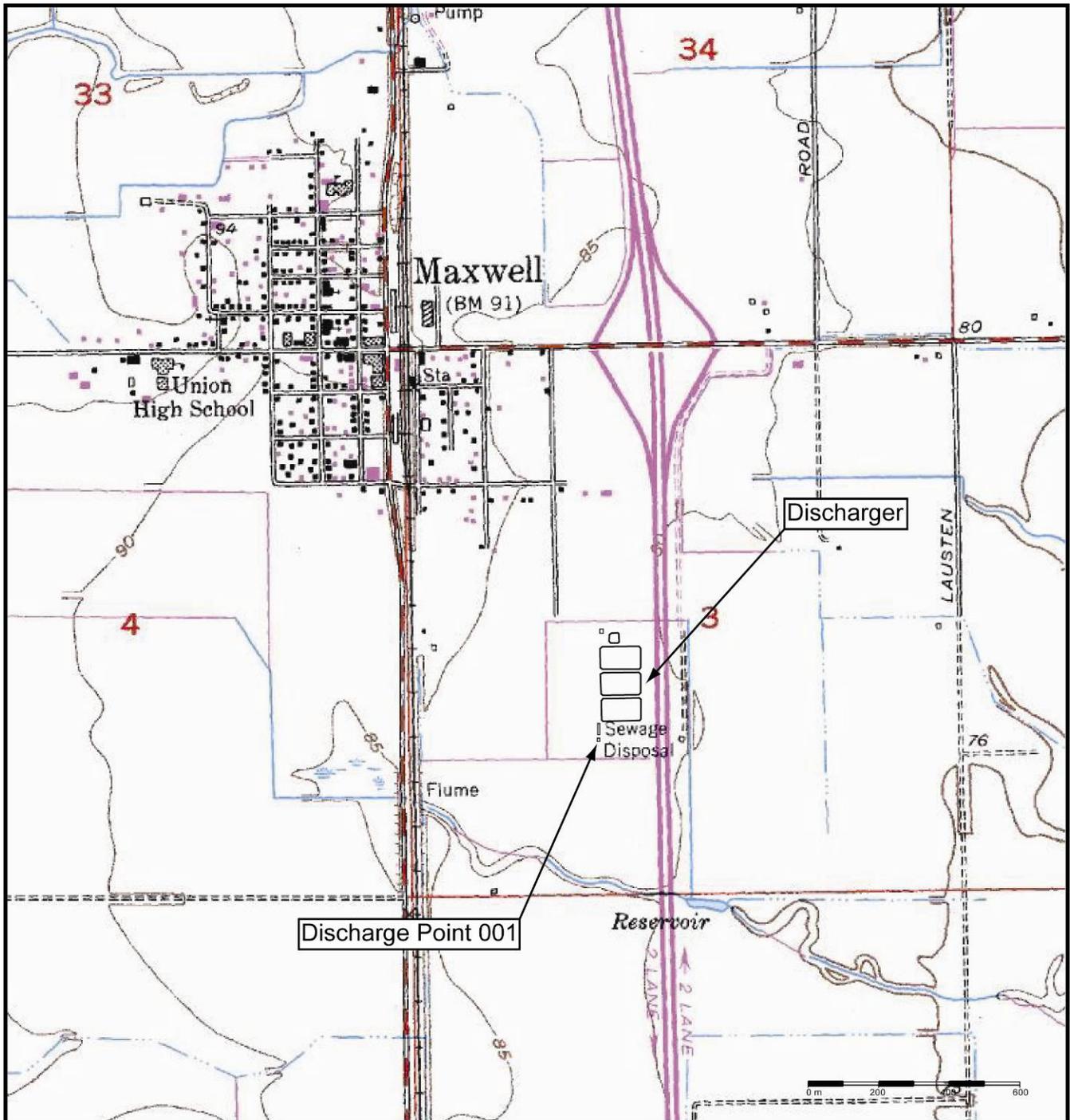
μ is the arithmetic mean of the observed values; and

n is the number of samples.

Toxicity Reduction Evaluation (TRE) is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity,

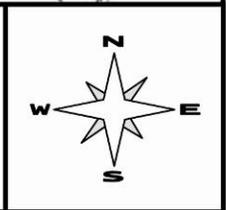
evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best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

ATTACHMENT B – MAP

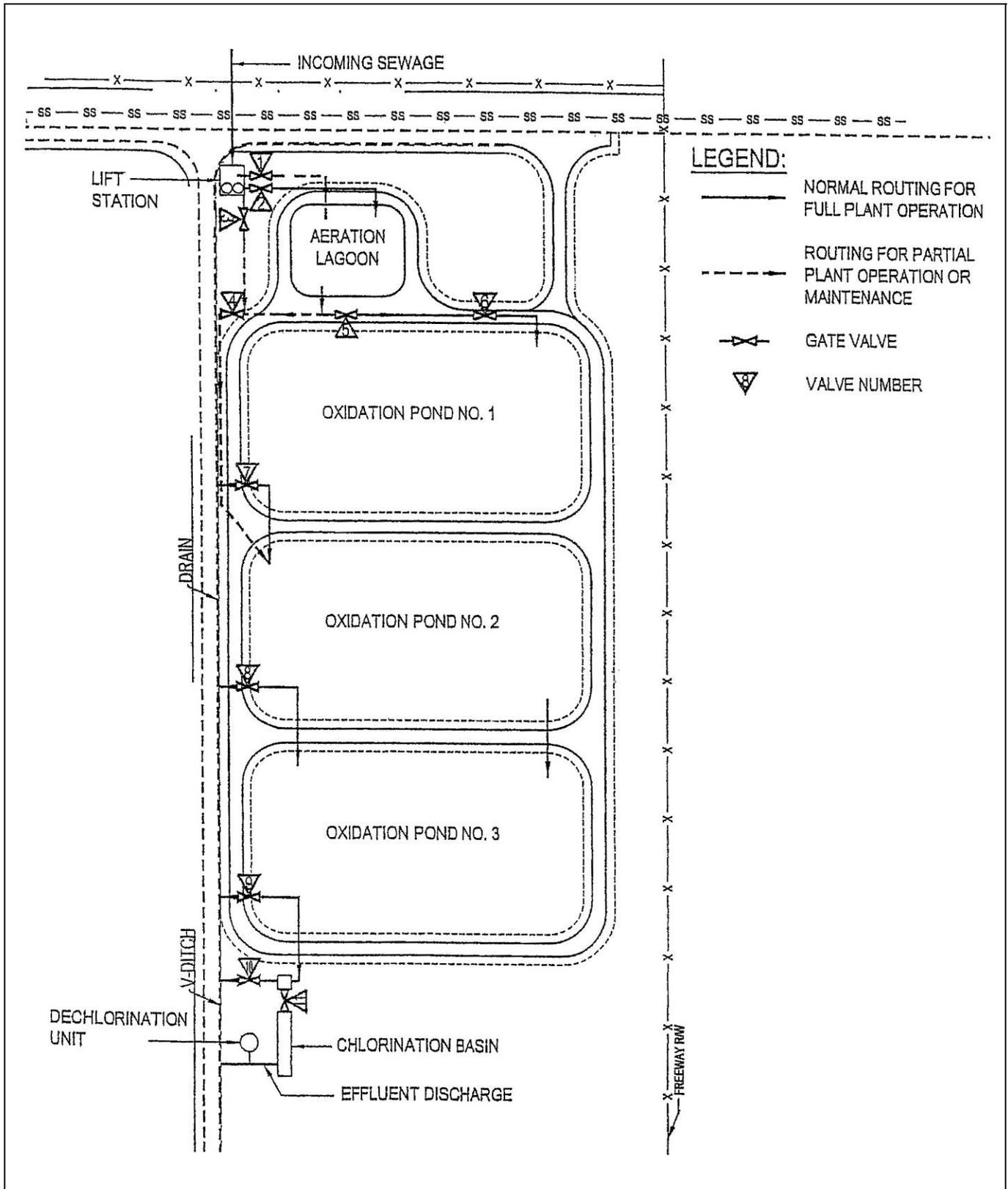


Drawing Reference:
MAXWELL
U.S.G.S TOPOGRAPHIC MAP
7.5 MINUTE QUADRANGLE
Topographic Map
Dated 7/1/1994

SITE LOCATION MAP
MAXWELL PUBLIC UTILITIES DISTRICT
WASTEWATER TREATMENT PLANT
COLUSA COUNTY



ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D –STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 CFR 122.41(a).)
2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 CFR 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

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

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

F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 CFR 122.41(i); 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 Water Code, any substances or parameters at any location. (40 CFR 122.41(i)(4).)

G. Bypass

1. Definitions
 - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR 122.41(m)(1)(i).)
 - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR 122.41(m)(1)(ii).)
2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 CFR 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR 122.41(m)(4)(i)):
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR 122.41(m)(4)(i)(A));
 - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR 122.41(m)(4)(i)(B)); and
 - c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 CFR 122.41(m)(4)(i)(C).)
4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 CFR 122.41(m)(4)(ii).)
5. Notice
 - a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 CFR 122.41(m)(3)(i).)
 - b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 CFR 122.41(m)(3)(ii).)

H. Upset

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

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

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

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR 122.41(n)(3)):
 - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR 122.41(n)(3)(i));
 - b. The permitted facility was, at the time, being properly operated (40 CFR 122.41(n)(3)(ii));
 - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 CFR 122.41(n)(3)(iii)); and
 - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 CFR 122.41(n)(3)(iv).)
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 CFR 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the CWC. (40 CFR 122.41(l)(3); 122.61.)

III. STANDARD PROVISIONS – MONITORING

- A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR 122.41(j)(1).)
- B. Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order. (40 CFR 122.41(j)(4); 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

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

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 CFR 122.41(j)(3)(i));
2. The individual(s) who performed the sampling or measurements (40 CFR 122.41(j)(3)(ii));
3. The date(s) analyses were performed (40 CFR 122.41(j)(3)(iii));
4. The individual(s) who performed the analyses (40 CFR 122.41(j)(3)(iv));
5. The analytical techniques or methods used (40 CFR 122.41(j)(3)(v)); and
6. The results of such analyses. (40 CFR 122.41(j)(3)(vi).)

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

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

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

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 CFR 122.41(k).)
2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR 122.22(a)(3).)
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 CFR 122.22(b)(1));
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR 122.22(b)(2)); and

- c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 CFR 122.22(b)(3).)
4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR 122.22(c).)
5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

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

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR 122.22(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 CFR 122.41(l)(4)(i).)
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 CFR 122.41(l)(4)(ii).)
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR 122.41(l)(4)(iii).)

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 CFR 122.41(l)(6)(i).)
2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 CFR 122.41(l)(6)(ii)):
 - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR 122.41(l)(6)(ii)(A).)
 - b. Any upset that exceeds any effluent limitation in this Order. (40 CFR 122.41(l)(6)(ii)(B).)
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR 122.41(l)(6)(iii).)

F. Planned Changes

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

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 CFR 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR 122.41(l)(1)(ii).)
3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the

application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 CFR 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

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

H. Other Noncompliance

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

I. Other Information

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

VI. STANDARD PROVISIONS – ENFORCEMENT

- A.** The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the 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 Regional Water Board of the following (40 CFR 122.42(b)):

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 CFR 122.42(b)(1)); and
2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order. (40 CFR 122.42(b)(2).)

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

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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

I. GENERAL MONITORING PROVISIONS

- A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of this Regional Water Board.
- B. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services. In the event a certified laboratory is not available to the Discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Regional Water Board staff. The Quality Assurance-Quality Control Program must conform to USEPA guidelines or to procedures approved by the Regional Water Board.
- C. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services. Laboratories that perform sample analyses shall be identified in all monitoring reports.
- D. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.
- E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program.

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude when available)
--	INF-001	A location where a representative sample of the influent into the Wastewater Treatment Plant can be collected prior to any treatment processes.
001	EFF-001	Represents the final effluent from the Wastewater Treatment Plant after treatment (39°, 15', 55" N; 122°, 11', 4" W).
--	RSW-001	Approximately 50 feet upstream of the outfall.
--	RSW-002	Approximately 100 feet downstream of the outfall.
--	RGW-001	Groundwater monitoring well (identified as GMW-01). This is an existing monitoring location.
--	RGW-002	Groundwater monitoring well (identified as GMW-02). This is an existing monitoring location.
--	RGW-003	Groundwater monitoring well (identified as GMW-03). This is an existing monitoring location.
--	RGW-004	Groundwater monitoring well (identified as GMW-04). This is an existing monitoring location.
--	RGW-005	Groundwater monitoring well (identified as GMW-05). This is an existing monitoring location.
--	BIO-001	Representative sample location for biosolids.
--	SPL-001	Station shall be established where a representative sample of the municipal water supply can be obtained.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

1. The Discharger shall monitor 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	1
Biochemical Oxygen Demand (BOD) (5-day @ 20 °C) ²	mg/L	24-hr Composite ³	1/week	1
Total Suspended Solids (TSS) ²	mg/L	24-hr Composite ³	1/week	1

¹ Pollutants shall be analyzed using the analytical methods described in 40 CFR 136.

² BOD₅ and TSS samples shall be collected on the same day as the effluent samples.

³ 24-hour flow proportional composite.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF- 001

1. The Discharger shall monitor treated wastewater 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 and (Minimum Level, units), respectively
Flow	mgd	Meter	Continuous	1
Chlorine, Total Residual ²	mg/L, lbs/day	Meter	Continuous	1
Turbidity	NTU	Meter	Continuous	1
Total Coliform Organisms	MPN/100 mL	Grab	3/week	1
pH	standard units	Grab	2/week	1
Ammonia (as N) ^{3,4}	mg/L	Grab	1/week	1
BOD (5-day 20 °C) ⁵	mg/L, lbs/day	24-hr Composite ⁶	1/week	1
Total Suspended Solids ⁵	mg/L, lbs/day	24-hr Composite ⁶	1/week	1
Settleable Solids	mL/L	24-hr Composite ⁶	1/week	1
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/week	1
Temperature ⁷	°F	Grab	1/week	1
Whole Effluent Toxicity	8	8	8	8
Bis (2-Ethylhexyl)Phthalate	µg/L	Grab	1/month	1, 942
Chloride	µg/L	Grab	1/month	1
Chlorodibromomethane	µg/L	Grab	1/month	1, 109
Cyanide, Total (as CN)	µg/L	Grab	1/month	1, 109
Dichlorobromomethane	µg/L	Grab	1/month	1, 109
Fluoride	µg/L	Grab	1/quarter	4
Tributyltin	µg/L	Grab	1/ quarter ¹¹	1
Hardness (as CaCO ₃)	mg/L	Grab	1/ quarter	1
Total Dissolved Solids	mg/L	Grab	1/quarter	1
Persistent Chlorinated Hydrocarbon Pesticides	µg/L,	Grab	1/year	1, 109
Priority Pollutants ¹²⁴⁰	µg/L	1344	1443	1

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
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- ¹ Pollutants shall be analyzed using the analytical methods described in 40 CFR 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Appendix 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by the California Regional Water Quality Control Board or the State Water Quality Control Board.
- ² Total residual chlorine must be monitored with a method sensitive to and accurate at the permitted level of 0.01 mg/L.
- ³ Concurrent with whole effluent toxicity monitoring.
- ⁴ pH and temperature data shall be collected on the same date and at the same time as the ammonia sample.
- ⁵ 24-hour flow proportioned composite.
- ⁶ BOD₅ and TSS samples shall be collected on the same day as the influent samples.
- ⁷ Effluent temperature monitoring shall be at the outfall location
- ⁸ See Attachment E, Section V.
- ⁹ 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.
- ⁹¹⁰ 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.
- ¹¹ Monitoring may be discontinued after 2 years.
- ¹² Upstream and downstream receiving water hardness shall be collected on the same time as the priority pollutants sample.
- ¹¹³ Volatile samples shall be grab samples; the remainder shall be 24-hour composite samples.
- ¹² 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.
- ¹³¹⁴ Priority pollutant monitoring shall be required quarterly during the third year of the permit term.

2. If the discharge is intermittent rather than continuous, then on the first day of each such intermittent discharge, the Discharger shall monitor and record data for all of the constituents listed above, after which the frequencies of analysis given in the schedule shall apply for the duration of each such intermittent discharge. In no event shall the Discharger be required to monitor and record data more often than twice the frequencies listed in the schedule.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity Testing. The Discharger shall conduct acute toxicity testing to determine whether the effluent is contributing acute toxicity to the receiving water. The Discharger shall meet the following acute toxicity testing requirements:

1. Monitoring Frequency – The Discharger shall perform 2/year acute toxicity testing, concurrent with effluent ammonia sampling.

2. Sample Types – For static non-renewal and static renewal testing, the samples shall be grab samples and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location EFF-001.
3. Test Species – Test species shall be fathead minnows (*Pimephales promelas*).
4. Methods – The acute toxicity testing samples shall be analyzed using EPA-821-R-02-012, Fifth Edition. Temperature, total residual chlorine, and pH shall be recorded at the time of sample collection. No pH adjustment may be made unless approved by the Executive Officer.
5. Test Failure – If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.
6. Ammonia Toxicity – The acute toxicity testing may be modified to eliminate ammonia-related toxicity until 18 May 2010, 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 2/year three species chronic toxicity testing.
2. Sample Types – Effluent samples shall be grab samples and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location specified in the Monitoring and Reporting Program. The receiving water control shall be a grab sample obtained from the RSW-001 sampling location, as identified in the Monitoring and Reporting Program.
3. Sample Volumes – Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.
4. Test Species – Chronic toxicity testing measures sublethal (e.g. reduced growth, reproduction) and/or lethal effects to test organisms exposed to an effluent compared to that of the control organisms. The Discharger shall conduct chronic toxicity tests with:
 - 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. Methods – The presence of chronic toxicity shall be estimated as specified in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA/821-R-02-013, October 2002.*
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. For 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).
8. Test Failure –The Discharger must re-sample and re-test as soon as possible, but no later than fourteen (14) days after receiving notification of a test failure. A test failure is defined as follows:
 - a. The reference toxicant test or the effluent test does not meet all test acceptability criteria as specified in the *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA/821-R-02-013, October 2002 (Method Manual),* and its subsequent amendments or revisions; or
 - b. The percent minimum significant difference (PMSD) measured for the test exceeds the upper PMSD bound variability criterion in Table 6 on page 52 of the Method Manual. (A retest is only required in this case if the test results do not exceed the monitoring trigger specified in Special Provisions VI.2.a.iii.)
9. Ammonia Toxicity – The chronic toxicity testing may be modified to eliminate ammonia-related toxicity until 18 May 2010, at which time the Discharger shall be required to implement the test without modifications to eliminate ammonia toxicity.

Table E-4. Chronic Toxicity Testing Dilution Series

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

- C. **WET Testing Notification Requirements.** The Discharger shall notify the Regional Water Board within 24-hrs after the receipt of test results exceeding the monitoring trigger during regular or accelerated monitoring, or an exceedance of the acute toxicity effluent limitation.
- D. **WET Testing Reporting Requirements.** All toxicity test reports shall include the contracting laboratory's complete report provided to the Discharger and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals. At a minimum, whole effluent toxicity monitoring shall be reported as follows:
1. **Chronic WET Reporting.** Regular chronic toxicity monitoring results shall be reported to the Regional Water Board within 30 days following completion of the test, and shall contain, at minimum:
 - a. The 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 with the monthly discharger self-monitoring reports and reported as percent survival.
 3. **TRE Reporting.** Reports for Toxicity Reduction Evaluations shall be submitted in accordance with the schedule contained in the Discharger's approved TRE Work Plan.
 4. **Quality Assurance (QA).** The Discharger must provide the following information for QA purposes:
 - a. Results of the applicable reference toxicant data with the statistical output page giving the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD, and dates tested.
 - b. The reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory.
 - c. Any information on deviations or problems encountered and how they were dealt with.

VI. LAND DISCHARGE MONITORING REQUIREMENTS [NOT APPLICABLE]

VII. RECLAMATION MONITORING REQUIREMENTS [NOT APPLICABLE]

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Monitoring Locations RSW-001, RSW-002

1. The Discharger shall monitor the unnamed tributary to Lurline 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
Dissolved Oxygen ¹	mg/L, % saturation ²	Grab	1/week	3
pH	standard units	Grab	1/week	3
Turbidity	NTU	Grab	1/week	3
Temperature	°F (°C)	Grab	1/week	3
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/week	3
Fecal Coliform	MPN/100 mL	Grab	1/quarter	3
Radionuclides	pCi/L	Grab	1/year	3
Priority Pollutants	µg/L	Grab	6	3

¹ Temperature shall be determined at the time of sample collection for use in determining saturation concentration. Any additional factors or parameters used in determining saturation concentration shall also be reported.

² Report both saturation and saturation concentration.

³ Pollutants shall be analyzed using the analytical methods described in 40 CFR 136.

⁴ Volatile samples shall be grab samples; the remainder shall be 24-hour composite samples.

⁵ Upstream and downstream receiving water hardness shall be collected on the same time as the priority pollutants sample.

⁶ Receiving water monitoring for priority pollutants is required quarterly during the third year of the permit term and only at Monitoring Location RSW-001.

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, RSW-002, and RSW-003. 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 receiving water conditions shall be summarized in the monitoring report.

B. Monitoring Locations RGW-001, RGW-002, RGW-003, RGW-004, and RGW-005

1. The Discharger shall monitor groundwater at RGW-001, RGW-002, RGW-003, RGW-004, and RGW-005 as follows:

Table E-6. Groundwater Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Depth to Groundwater ¹	feet	--	1/month	2
Groundwater Elevation ¹	feet	--	1/month	2
pH	standard units	Grab	1/month	2
Electrical Conductivity @ 25 °C	µmhos/cm	Grab	1/month	2
Nitrate Nitrogen, Total, (as N)	mg/L	Grab	1/quarter	2
Total Coliform	MPN/100 mL	Grab	1/quarter	2

¹ The groundwater elevation shall be used to calculate the direction and gradient of groundwater flow. Elevations shall be measured to the nearest one-hundredth of a foot from mean sea level. The groundwater elevation shall be measured prior to purging the wells.

2. Groundwater monitoring results shall be submitted monthly; the monthly report shall include a site map showing the location and surveyed elevation (to the nearest one-hundredth of foot above mean sea level) of the wells and the current direction of groundwater.

IX. OTHER MONITORING REQUIREMENTS

A. Biosolids

1. Monitoring Location BIO-001

1. A composite sample of sludge shall be collected annually at Monitoring Location BIO-001 in accordance with EPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989, and tested for priority pollutants listed in 40 CFR section 122 Appendix D, Tables II and III (excluding total phenols).
2. A composite sample of sludge shall be collected when sludge is removed from the ponds for disposal in accordance with USEPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989, and tested for the metals listed in Title 22.
3. Sampling records shall be retained for a minimum of 5 years. A log shall be kept of sludge quantities generated and of handling and disposal activities. The

frequency of entries is discretionary; however, the log should be complete enough to serve as a basis for part of the annual report.

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

B. Municipal Water Supply

1. Monitoring Location SPL-001

The Discharger shall monitor the Municipal Water Supply at SPL-001 as follows. A sampling station shall be established where a representative sample of the municipal water supply can be obtained. Municipal water supply samples shall be collected at approximately the same time as effluent samples.

Table E-7. Municipal Water Supply Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Dissolved Solids	mg/L	Grab	1/year	²
Electrical Conductivity @ 25 °C ¹	µmhos/cm	Grab	1/year	²

¹ If the water supply is from more than one source, the total dissolved solids and electrical conductivity at 20 °C shall be reported as a weighted average and include copies of supporting calculations.

² Pollutants shall be analyzed using the analytical methods described in 40 CFR 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Appendix 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by the California Regional Water Quality Control Board or the State Water Quality Control Board.

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

3. **Compliance Time Schedules.** For compliance time schedules included in the Order, the Discharger shall submit to the Regional Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the compliance time schedule.
4. The Discharger shall report to the Regional Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986.
5. **Reporting Protocols.** The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in Part 136.

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

- a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

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

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
 - d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.
6. **Multiple Sample Data.** When determining compliance with an AMEL, AWEL, or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not

Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

- a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
- b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.
2. Monitoring results shall be submitted to the Regional Water Board by the **first day** of the second month following sample collection. Quarterly and annual monitoring results shall be submitted by the **first day of the second month following each calendar quarter, semi-annual period, and year**, respectively.
3. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly whether the discharge complies with waste discharge requirements. The highest daily maximum for the month, monthly and weekly averages, and medians, and removal efficiencies (%) for BOD and Total Suspended Solids, shall be determined and recorded as needed to demonstrate compliance.
4. With the exception of flow, all constituents monitored on a continuous basis (metered), shall be reported as daily maximums, daily minimums, and daily averages; flow shall be reported as the total volume discharged per day for each day of discharge.
5. If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the calculation and reporting of the values required in the discharge monitoring report form. Such increased frequency shall be indicated on the discharge monitoring report form.

6. A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions.
7. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

Regional Water Quality Control Board
 Central Valley Region
 11020 Sun Center Dr., Suite #200
 Rancho Cordova, CA 95670-6114

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

Table E-8. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	First day of second calendar month following month of sampling.
1/day	Permit effective date	Any 24-hour period that reasonably represents a calendar day for purposes of sampling.	First day of second calendar month following month of sampling.
1/week	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	First day of second calendar month following month of sampling.
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	1 st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling.
1/quarter	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	1 May 1 August 1 November 1 February
2/year	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	1 August 1 February
1/year	January 1 following (or on) permit effective date	January 1 through December 31	1 February

C. Discharge Monitoring Reports (DMRs)

[Not Applicable]

D. Other Reports

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

Table E-9. Reporting Requirements for Special Provisions Progress Reports

Special Provision	Reporting Requirements
Compliance Schedules for Final Effluent Limitations for Chlorodibromomethane, Cyanide, and Dichlorobromomethane, compliance with final effluent limitations.	1 June , annually, until final compliance
Compliance Schedules for Final Effluent Limitations for Ammonia	1 June , annually, until final compliance

2. Within **60 days** of permit adoption, the Discharger shall submit a report outlining minimum levels, method detection limits, and analytical methods for approval, with a goal to achieve detection levels below applicable water quality criteria. At a minimum, the Discharger shall comply with the monitoring requirements for CTR constituents as outlined in Section 2.3 and 2.4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, adopted 2 March 2000 by the State Water Resources Control Board. All peaks identified by analytical methods shall be reported.
3. 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.
4. **Annual Operations Report.** By **30 January** of each year, the Discharger shall submit a written report to the Executive Officer containing the following:

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

Duplicate signed copies of these reports shall be submitted to the Regional Water Board and the:

State Water Resources Control Board
Division of Water Quality
P.O. Box 944213
Sacramento, CA 94244-2130

and the

Regional Administrator
U.S. Environmental Protection Agency W-5
75 Hawthorne Street
San Francisco, CA 94105

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ATTACHMENT F – FACT SHEET

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	5A060102001
Discharger	Maxwell Public Utilities District
Name of Facility	Maxwell Public Utilities District Wastewater Treatment Plant
Facility Address	Section 3 T16N R3W, Intersection of East Avenue and South Avenue
	Maxwell, CA 95955
	Colusa County
Facility Contact, Title and Phone	Carmen Mason, General Manager (530) 438-2505
Authorized Person to Sign and Submit Reports	Carmen Mason, General Manager (530) 438-2505
Mailing Address	54 N. San Francisco Street (P.O. Box 294) Maxwell, CA 95955
Billing Address	Same as Mailing Address
Type of Facility	Publicly Owned Treatment Works
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	B
Pretreatment Program	No
Reclamation Requirements	No
Facility Permitted Flow	0.2 (in million gallons per day)
Facility Design Flow	0.2 (in million gallons per day)
Watershed	Colusa Basin Hydrologic Unit, Colusa Trough Hydrologic Subarea (520.21)
Receiving Water	Unnamed Tributary To Lurline Creek
Receiving Water Type	Inland Surface Water – Ephemeral Stream

- A.** Maxwell Public Utilities District (hereinafter Discharger) is the owner and operator of the Maxwell Public Utilities District Wastewater Treatment Plant (hereinafter Facility), a Publicly Owned Treatment Works (POTW).

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

- B.** The Facility discharges wastewater to an unnamed tributary to Lurline Creek, a water of the United States, and is currently regulated by Order R5-2002-0022 which was adopted on 1 March 2002 and expired on 1 March 2007. 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 26 July 2007.

II. FACILITY DESCRIPTION

The Discharger provides sewerage service for the community of Maxwell and serves a population of approximately 1,060. The wastewater treatment plant (WWTP) design daily average flow capacity is 0.2 million gallons per day (mgd).

A. Description of Wastewater and Biosolids Treatment or Controls

The treatment system at the Facility consists of comminution, aeration pond treatment, oxidation pond treatment, chlorination, and dechlorination. Sludge is continuously treated through the stabilization pond system and as necessary disposed off-site.

B. Discharge Points and Receiving Waters

1. The Facility is located in Section 3, T16N, R3W, MDB&M, as shown in Attachment B, a part of this Order.
2. Treated municipal wastewater is discharged at Discharge Point No. 001 to an unnamed tributary to Lurline Creek, a water of the United States and a tributary to Colusa Basin Drain at a point latitude 39^o, 15', 55" N and longitude 122^o, 11', 4" W.

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

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

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation (From Adoption To January 2007)			Monitoring Data (From February 2002 To April 2007)		
		Average Monthly	Average Weekly	Average Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
BOD ₅ ¹	mg/L	60	90	120	57	70	70
	lbs/day	100	150	200	71	127	127
Total Suspended Solids	mg/L	160	240	320	195	220	220
	lbs/day	267	401	534	175	225	225
Settleable Solids	ml/L	0.1	--	0.2	1.5	--	1.5
Total Coliform	MPN/ 100 mL	--	--	500 ²	--	--	1600
Total Residual Chlorine	mg/L	0.010	--	0.012	2.01	--	2.20
	lbs/day	0.017	--	0.020	1.47	--	1.70
Ammonia	mg/L	Attachment ³	--	--	1.63	--	--
	lbs/day	Attachment ³	--	--	2	--	--
pH	standard unit	--	--	[6.5-8.5] ⁴	--	--	[6.8-10] ⁴

Table F-2. Historic Effluent Limitations and Monitoring Data (continued...)

Parameter	Units	Effluent Limitation (From Adoption To January 2007)			Monitoring Data (From February 2002 To April 2007)		
		30-Day Median	Average 4-Day	Average 1-Hour	Highest 30-Day Median Discharge	Highest Average 4-Day Discharge	Highest Average 1-Hour Discharge
Total Coliform	MPN/ 100 mL	23	--	--	1600	--	--
Total Residual Chlorine	mg/L	--	0.011	0.019	--	2.07	2.20
	lbs/day	--	0.018	0.032	--	1.57	1.70
Ammonia	mg/L	--	Attachment ³	Attachment ³	--	12	12
	lbs/day	--	Attachment ³	Attachment ³	--	33	33

¹ Biochemical Oxygen Demand (5-day @ 20 °C)

² Daily Maximum

³ Temperature- and pH-, or pH-dependent effluent limitations

⁴ Minimum to maximum pH range of values between the first and second numbers shown

Table F-3. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation (After January 2007)			Monitoring Data (From February 2007 To April 2007)		
		Average Monthly	Average Weekly	Average Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
BOD ₅ ¹	mg/L	10	15	20	37	48	48
	lbs/day	17	25	33	32	49	49
Total Suspended Solids	mg/L	10	15	20	99	118	118
	lbs/day	17	25	33	68	79	79
Turbidity	NTU	--	--	2	--	--	71

Table F-3. Historic Effluent Limitations and Monitoring Data (continued...)

Parameter	Units	Effluent Limitation (After January 2007)			Monitoring Data (From February 2007 To April 2007)		
		7-Day Median	Instana- neous Maximum	Other	Highest 7-Day Median Discharge	Highest Instanta- neous Maximum Discharge	Other
Total Coliform	MPN/ 100 mL	2.2	23	240 ²	1600	1600	--
Turbidity	NTU	--	5	10 ³	--	71	--

¹ Biochemical Oxygen Demand (5-day @ 20 °C)

² The total coliform concentration shall not exceed 23 MPN/100 mL more than once in any 30-day period.
 No sample shall exceed a concentration of 240 MPN/100 mL

³ The turbidity shall not exceed 5 NTU more than 5 percent of the time within a 24-hour period. At no time shall turbidity exceed 10 NTU.

⁴ Minimum to maximum pH range of values between the first and second numbers shown

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

Design Flow:	0.2	mgd
Average Daily Flow Rate:	0.01	mgd
Maximum Daily Flow Rate:	0.82	mgd
Average Temperature, Summer:	21.8	°C
Average Temperature, Winter:	11.2	°C
Average BOD (5-day @ 20 °C):	23	mg/L
Maximum BOD (5-day @ 20 °C):	55	mg/L
Average Total Suspended Solids:	44	mg/L
Maximum Total Suspended Solids:	157	mg/L

D. Compliance Summary

1. The Discharger received a Notice of Violation from the Regional Water Board dated 30 June 2003. The Discharger was discharging treated wastewater to surface waters in violation of the Waste Discharge Requirements. The effluent pH, total coliform, total residual chlorine, ammonia, and total suspended solids were not in compliance with the requirements found in Order R5-2002-0022. In addition, the Discharger was found to have potential of violating the receiving water requirements for dissolved oxygen. As a result, the Regional Water Board adopted Administrative Civil Liability (ACL) Complaint No. 2003-0505 on 5 August 2003 with a penalty of \$588,000. The ACL Order allowed an alternative for the Discharger to spend an amount equivalent to the penalty toward the completion of a project to achieve compliance with WDRs.
2. The Discharger received a Notice of Violation from the Regional Water Board dated 8 June 2006. The Discharger was operating the Facility with personnel who do not have the appropriate State operator certification.
3. On 22 June 2007, the Regional Water Board adopted Time Schedule Order No. R5-2007-0073 which provided a compliance schedule for several pollutants. Full compliance is to be achieved by 18 May 2010 or sooner.

E. Planned Changes

The Discharger plans to dispose of all the Facility's wastewater via land disposal (subsurface irrigation or other land disposal operations) and cease the discharge to the unnamed tributary to Lurline Creek. During the term of this Order the Discharger will be evaluating the feasibility of land disposal options and the need for future discharges to the unnamed tributary to Lurline Creek during extremely high precipitation years.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authority

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

B. California Environmental Quality Act (CEQA)

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

C. State and Federal Regulations, Policies, and Plans

- 1. Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan, Fourth Edition (Revised October 2007), for the Sacramento and San Joaquin River Basins* (Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. One of the exceptions provided in State Water Board Resolution No. 88-63 includes surface waters "...in systems designed or modified for the primary purpose of conveying or holding agricultural drainage waters..." The unnamed water bodies through which the Facility's wastewater flows were constructed for the purpose of conveying agricultural drainage waters. Lurline Creek, although originally a natural water body, has been modified for the purpose of conveying agricultural drainage waters. Therefore, the unnamed water body and Lurline Creek meets the criteria for a municipal exception under the State Water Board Resolution No. 88-63. If the Discharger does not cease the surface water discharge as planned, a Basin Plan amendment will be necessary to correct the beneficial use designations of Lurline Creek and the unnamed tributary.

The beneficial uses of the unnamed tributary to Lurline Creek downstream of the discharge are agricultural irrigation, agricultural stock watering, water contact recreation including canoeing and rafting, warm freshwater aquatic habitat, cold freshwater aquatic habitat (potential use), warm fish migration habitat, warm spawning habitat, and wildlife habitat. Other beneficial uses identified in the Basin Plan apply to Lurline Creek, including groundwater recharge and freshwater replenishment.

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 Clean Water Act (CWA) section 101(a)(2), states: "*it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983.*" Federal Regulations, developed to implement the requirements of the CWA, create a rebuttable presumption that all waters be designated as fishable and swimmable. Sections 131.2 and 131.10 of 40 Code of Federal Regulations (CFR) require that all waters of the State regulated to protect the beneficial uses of public water supply, protection and propagation of fish, shell fish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. Section 131.3(e) of 40 CFR, defines existing beneficial uses as those uses actually attained after 28 November 1975, whether or

not they are included in the water quality standards. Section 131.10 of 40 CFR 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.

This Order contains effluent limitations requiring a tertiary level of treatment, or equivalent, which is necessary to protect the beneficial uses of the receiving water. The Regional Water Board has considered the factors listed in California Water Code (CWC) section 13241 in establishing these requirements, as discussed in more detail in Section IV.C.3.n of this Fact Sheet.

2. **Antidegradation Policy.** Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. As discussed in detail in Section IV.D.4 of this Fact Sheet, the discharge is consistent with the antidegradation provisions of 40 CFR section 131.12 and State Water Board Resolution 68-16.
3. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and section 122.44(l) of 40 CFR prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. Compliance with the anti-backsliding requirements is discussed in Section IV.D.3.
4. **Emergency Planning and Community Right to Know Act.** Section 13263.6(a) of CWC, requires that *"the Regional Water Board shall prescribe effluent limitations as part of the waste discharge requirements of a POTW for all substances that the most recent toxic chemical release data reported to the state emergency response commission pursuant to Section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. Sec. 11023) indicate as discharged into the POTW, for which the State Water Board or the Regional Water Board has established numeric water quality objectives, and has determined that the discharge is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective"*.

The most recent toxic chemical data report does not indicate any reportable off-site releases or discharges to the collection system for this Facility. Therefore, a reasonable potential analysis based on information from Emergency Planning and Community Right to Know Act (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.

5. **Stormwater Requirements.** United State Environmental Protection Agency (USEPA) promulgated Federal Regulations for storm water on November 16, 1990 in 40 CFR Parts 122, 123, and 124. The NPDES Industrial Storm Water Program regulates storm water discharges from wastewater treatment facilities. Wastewater treatment plants are applicable industries under the stormwater program and are obligated to comply with the Federal Regulations.
6. **Endangered Species Act.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

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

1. Under Section 303(d) of the 1972 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 30 November 2006 USEPA gave final approval to California's 2006 Section 303(d) List of Water Quality Limited Segments. The Basin Plan references this list of 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." The unnamed tributary to Lurline Creek is tributary to Lurline Creek, Colusa Trough, and Colusa Basin Drain. The listing for the Colusa Basin Drain includes: azinphos-methyl, carbofuran, diazinon, Group A pesticides, malathion, methyl parathion, molinate/ordram, and unknown toxicity.

2. **Total Maximum Daily Loads.** The USEPA requires the Regional Water Board to develop total maximum daily loads (TMDLs) for each 303(d) listed pollutant and water body combination. No applicable TMDL has been developed for the unnamed tributary to Lurline Creek.

E. Other Plans, Polices and Regulations

1. The discharge authorized herein and the treatment and storage facilities associated with the discharge of treated municipal wastewater, except for discharges of residual sludge and solid waste, are exempt from the requirements of Title 27, California Code of Regulations (CCR), section 20005 *et seq.* (hereafter Title 27). The exemption, pursuant to Title 27 CCR section 20090(a), is based on the following:
 - a. The waste consists primarily of domestic sewage and treated effluent;
 - b. ~~The~~ For the reasons stated in Section IV.D.4.b, below, the waste discharge requirements are consistent with water quality objectives. This Order includes groundwater limitations which require that the Discharger not cause the underlying groundwater to contain waste constituents in concentrations greater than background water quality or violate water quality objectives, impact beneficial uses, or cause pollution or nuisance. The Discharger is required to monitor groundwater to ensure the discharge does not degrade groundwater or cause an exceedence of water quality objectives; and
 - c. The treatment and storage facilities described herein are associated with a municipal wastewater treatment plant.
2. The State Water Board adopted the *Water Quality Control Policy for the Enclosed Bays and Estuaries of California*. The requirements within this Order are consistent with the Policy.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

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

The federal CWA mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state or federal law [33 U.S.C., § 1311(b)(1)(C); 40 CFR 122.44(d)(1)]. NPDES permits must incorporate discharge limits necessary to ensure that water quality standards are met. This requirement applies to narrative criteria as well as to criteria specifying maximum amounts of particular pollutants. Pursuant to Federal Regulations, 40 CFR 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that “*are or may be discharged at a level which will cause, have the reasonable potential to cause,*

or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality.” Federal Regulations, 40 CFR 122.44(d)(1)(vi), further provide that “[w]here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits.”

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

A. Discharge Prohibitions

1. As stated in section I.G of Attachment D, Standard Provisions, this Order prohibits bypass from any portion of the treatment facility. Federal Regulations, 40 CFR 122.41

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

B. Technology-Based Effluent Limitations

1. Scope and Authority

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

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

Based on this statutory requirement, USEPA developed secondary treatment regulations, which are specified in 40 CFR Part 133. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of biochemical oxygen demand (BOD₅), total suspended solids (TSS), and pH.

2. Applicable Technology-Based Effluent Limitations

- a. **BOD₅ and TSS.** Federal Regulations, 40 CFR 133, establish the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for BOD₅ and TSS. Tertiary treatment is necessary to protect the beneficial uses of the receiving stream and the final effluent limitations for BOD₅ and TSS are based on the technical capability of the tertiary process. BOD₅ is a measure of the amount of oxygen used in the biochemical oxidation of organic matter. The secondary and tertiary treatment standards for BOD₅ and TSS are indicators of the effectiveness of the treatment processes. The principal design parameter for wastewater treatment plants is the daily BOD₅ and TSS loading rates and the corresponding removal rate of the system. In applying 40 CFR 133 for weekly and monthly average BOD₅ and TSS limitations, the application of tertiary treatment processes results in the ability to achieve lower levels for BOD₅ and TSS than the secondary standards currently prescribed; the 30-day average BOD₅ and TSS limitations have been revised to 10 mg/L, which is technically based on the capability of a tertiary system. In addition to the average weekly and average monthly effluent limitations, a daily maximum effluent limitation for BOD₅ and TSS is included in the Order to ensure that the treatment works are

not organically overloaded and operate in accordance with design capabilities. Monthly average, weekly average, and maximum daily BOD₅ and TSS effluent limitations (10 mg/L, 15 mg/L, 20 mg/L, respectively) have been carried over from the previous Order. See Table F-4 for final technology-based effluent limitations (TBELs) required by this Order. In addition, 40 CFR 133.102, in describing the minimum level of effluent quality attainable by secondary treatment, states that the 30-day average percent removal shall not be less than 85 percent. If 85 percent removal of BOD₅ and TSS must be achieved by a secondary treatment plant, it must also be achieved by a tertiary (i.e., treatment beyond secondary level) treatment plant. This Order contains a limitation requiring an average of 85 percent removal of BOD₅ and TSS over each calendar month.

- a. **Flow.** The Facility is to provide a tertiary level of treatment for up to a design flow of 0.2 mgd. Therefore, this Order contains an Average Daily Discharge Flow effluent limit of 0.2 mgd.
- b. **pH.** Federal Regulations, 40 CFR 133, also establish technology-based effluent limitations for pH. The secondary treatment standards require the pH of the effluent to be no lower than 6.0 and no greater than 9.0 standard units.

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

Table F-4. Summary of Technology-based Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	mgd	--	--	0.2	--	--
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	10	15	20	--	--
	lbs/day ¹	17	25	33	--	--
Total Suspended Solids	mg/L	10	15	20	--	--
	lbs/day ¹	17	25	33	--	--
pH	standard units	--	--	--	6.0	9.0

¹ Based on a design treatment capacity of 0.2 mgd.

- a. **Percent Removal:** The average monthly percent removal of BOD₅ and TSS shall not be less than 85 percent.

C. Water Quality-Based Effluent Limitations

1. Scope and Authority

As specified in section 122.44(d)(1)(i), permits are required to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an in-stream excursion above any state water quality standard. The process for determining reasonable potential

and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the California Toxics Rule (CTR) and National Toxics Rule (NTR).

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

- a. **Receiving Water.** The Discharger discharges to an unnamed tributary to Lurline Creek, which is tributary to Lurline Creek, the Colusa Trough, and Colusa Basin Drain. The beneficial uses of the unnamed tributary to Lurline Creek are summarized in Section III.C.1 of this Fact Sheet.
- b. **Hardness.** While no effluent limitation for hardness is necessary in this Order, hardness is critical to the assessment of the need for, and the development of, effluent limitations for certain metals. The *California Toxics Rule* and the *National Toxics Rule* contain water quality criteria for seven metals that vary as a function of hardness, i.e., as the hardness value decreases, the corresponding water quality criteria also decrease. The hardness-dependent metal criteria include cadmium, copper, chromium III, lead, nickel, silver, and zinc. Effluent limitations for the discharge must be set to protect the beneficial uses of the receiving water for all discharge conditions. In the absence of the option of including condition-dependent, “floating” effluent limitations that are reflective of actual hardness conditions at the time of discharge, effluent limitations must be set using a reasonable worst-case condition in order to protect beneficial uses for all discharge conditions.

The SIP does not address how to determine 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. The CTR requires that, for waters with a hardness of 400 mg/L (as CaCO₃), 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.¹ The CTR does not define whether the term “ambient,” as applied in the regulations, necessarily requires the consideration of upstream as opposed to downstream hardness conditions. The point in the receiving water affected by the discharge is downstream of the discharge. As the effluent mixes with the receiving water, the hardness of the receiving water can change. Therefore, it is appropriate to use the ambient hardness downstream of the discharge that is a mixture of the effluent and receiving water for the determination of the CTR hardness-dependent metals criteria. Recent studies indicate that using the lowest recorded receiving water hardness for establishing water quality criteria is not always protective of the receiving water under various mixing conditions (e.g. when the effluent hardness is less than the receiving water hardness). The studies evaluated the relationships between hardness and the CTR metals criterion that is calculated

using the CTR metals equation. The equation describing the total recoverable regulatory criterion is as follows:

Total Recoverable Criterion = $e^{m[\ln(H)] + b}$, where
m= criterion specific constant,
H = effluent hardness, and
b= criterion specific constant

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.

Effluent limitations for the discharge must be set to protect the beneficial uses of the receiving water for all discharge conditions. The State Water Board, in footnote 19 to Water Quality Order No. 2004-0013, stated: “We note that...the Regional Water Board...applied a variable hardness value whereby effluent limitations will vary depending on the actual, current hardness values in the receiving water. We recommend that the Regional Water Board establish either fixed or seasonal effluent limitations for metals, as provided in the SIP, rather than ‘floating’ effluent limitations.”

In the absence of the option of including condition-dependent, “floating” effluent limitations that are reflective of actual conditions at the time of discharge, effluent limitations must be set using a reasonable worst-case condition in order to protect beneficial uses for all discharge conditions. Recent studies indicate that using the receiving water lowest hardness for establishing water quality criteria is not the most protective for the receiving water. The Regional Water Board has evaluated these studies and concurs that for some parameters the beneficial uses of the receiving water are best protected using the lowest hardness value of the effluent as representative of worse-case receiving water hardness, while for some parameters, the use of both the lowest hardness value of the receiving water and the lowest hardness value of the effluent is is the represents receiving water hardness that is most protective.

Because of the non-linearity of the Total Recoverable Criterion equation, the relationship can either be concave upward or concave downward depending in the criterion-specific constants. For those contaminants whereby the regulatory criteria exhibit a concave downward relationship as a function of hardness (e.g., acute and chronic copper, chromium(III), nickel, and zinc; and chronic cadmium), the use of the lowest recorded effluent hardness for establishment of water quality objectives is fully protective of all beneficial uses regardless of whether the effluent or receiving water hardness is higher. No receiving water hardness data was available for the Facility. Hardness of the effluent ranged from 157 mg/L to 429 mg/L with an average of 282 mg/L based on 27 samples collected between June 2002 and December 2006. Since the unnamed tributary to Lurline Creek is an intermittent stream, the reasonable lowest effluent hardness of 157 mg/L as CaCO₃ (recorded on June 2005) was used to represent the reasonable

lowest downstream receiving water hardness for purposes of establishing WQBELs.

- c. Assimilative Capacity/Mixing Zone.** The unnamed tributary to Lurline Creek is an intermittent stream and there are periods of no flow available for dilution. Therefore, no dilution credits have been granted for the effluent discharge. Hence, all effluent limitations must be met at the point of the discharge into the receiving water.

3. Determining the Need for WQBELs

- a. CWA section 301(b)(1) requires NPDES permits to include effluent limitations that achieve technology-based standards and any more stringent limitations necessary to meet water quality standards. Water quality standards include Regional Water Board Basin Plan beneficial uses and narrative and numeric water quality objectives, State Water Board-adopted standards, and federal standards, including the CTR and NTR. The Basin Plan includes numeric site-specific water quality objectives and narrative objectives for toxicity, chemical constituents, and tastes and odors. The narrative toxicity objective states: *“All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.”* (Basin Plan at III-8.00.) With regards to the narrative chemical constituents objective, the Basin Plan states that waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. At minimum, *“... water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs)”* in Title 22 of CCR. The narrative tastes and odors objective states: *“Water shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.”*
- b. Federal regulations require effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause, or contribute to an in-stream excursion above a narrative or numerical water quality standard. Based on information submitted as part of the application, in studies, and as directed by monitoring and reporting programs, the Regional Water Board finds that the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard for ammonia, chlorodibromomethane, cyanide, dichlorobromomethane, pH, salinity (chloride, electrical conductivity @ 20 °C, and total dissolved solids), and tributyltin. A summary of the reasonable potential analysis (RPA) is provided in Attachment G, and a detailed discussion of the RPA for each constituent is provided below.
- c. The Regional Water Board conducted the RPA in accordance with Section 1.3 of the SIP. Although the SIP applies directly to the control of CTR priority pollutants, the State Water Board has held that the Regional Water Board may

use the SIP as guidance for water quality-based toxics control.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.

- d. WQBELs were calculated in accordance with section 1.4 of the SIP, as described in Attachment F, Section IV.C.4.
- e. **Ammonia.** Untreated domestic wastewater contains ammonia. Nitrification is a biological process that converts ammonia to nitrite and nitrite to nitrate. Denitrification is a process that converts nitrate to nitrite or nitric oxide and then to nitrous oxide or nitrogen gas, which is then released to the atmosphere. The Discharger does not currently use nitrification to remove ammonia from the waste stream. Inadequate or incomplete nitrification may result in the discharge of ammonia to the receiving stream. Ammonia is known to cause toxicity to aquatic organisms in surface waters. Discharges of ammonia would violate the Basin Plan narrative toxicity objective. Applying 40 CFR section 122.44(d)(1)(vi)(B), it is appropriate to use USEPA’s Ambient National Water Quality Criteria for the Protection of Freshwater Aquatic Life for ammonia, which was developed to be protective of aquatic organisms.

USEPA’s *Ambient Water Quality Criteria for the Protection of Freshwater Aquatic Life*, for total ammonia, recommends acute (1-hour average; criteria maximum concentration) standards based on pH and chronic (30-day average, criteria continuous concentration) standards based on pH and temperature. It also recommends a maximum 4-day average concentration of 2.5 times the criteria continuous concentration. USEPA found that as pH increased, both the acute and chronic toxicity of ammonia increased. Salmonids were more sensitive to acute toxicity effects than other species. However, while the acute toxicity of ammonia was not influenced by temperature, it was found that invertebrates and young fish experienced increasing chronic toxicity effects with increasing temperature. USEPA’s recommended criteria are show below:

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

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

where *T* is in degrees Celsius

The previous Order contained “floating” effluent limitations for ammonia. In the absence of the option of including condition-dependant, “floating” effluent

¹ See, Order WQO 2001-16 (Napa) and Order WQO 2004-0013 (Yuba City)

limitations, effluent limitations must be set using a reasonable worst-case condition in order to protect beneficial uses.

The maximum permitted effluent pH is 8.5. The Basin Plan objective for pH in the receiving stream is the range of 6.5 to 8.5. The maximum observed 30-day average effluent temperature was 80.4 °F (26.9 °C), for the 30-day periods ending April 2007. Due to periods of no flow in the upstream receiving water (RSW-001) no data is available for RSW-001. The maximum observed 30-day downstream receiving water (RSW-002) temperature was 76.6°F (24.8 °C), for the 30-day periods ending April 2007.

Using a pH value of 8.5, the resulting 1-hour average CMC is 2.14 mg/L (as N). Using a pH value of 8.5 and the worst-case temperature values of 80.4 °F (26.9 °C) on a 30-day basis, the resulting 30-day average CCC is 0.49 mg/L (as N). The 4-day average concentration is derived in accordance with the USEPA criterion as 2.5 times the 30-day CCC. Based on a 30-day average CCC of 0.49 mg/L (as N), the 4-day average concentration that should not be exceeded is 1.23 mg/L (as N).

The MEC for ammonia was 12 mg/L, based on 274 samples collected between February 2002 and October 2006. Therefore, ammonia in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a level necessary to protect aquatic life resulting in a violation of the Basin Plan's narrative toxicity objective.

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

This Order contains a final AMEL and MDEL for ammonia of 0.6 mg/L and 1.5 mg/L, respectively, based on USEPA's National Ambient Water Quality Criteria for the Protection of Freshwater Aquatic Life and to assure the treatment process adequately nitrifies the waste stream to protect the aquatic habitat beneficial uses (see Table F-67 for WQBEL calculations).

Based on the sample results in the effluent, it appears that the Discharger may be in immediate non-compliance upon issuance of the permit. 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 Basin Plan for the Sacramento and San Joaquin River Basins includes a provision that authorizes the use of compliance schedules in NPDES permits for water quality objectives adopted after 25 September 1995 (see Basin Plan at page IV-16). The WQBELs for ammonia are based on a new interpretation of the narrative standard for protection of receiving water beneficial uses. Therefore, a compliance schedule for compliance with the ammonia effluent limitations is established in the Order.

An interim performance-based maximum daily effluent limitation of 8 mg/L has been established in this Order. The interim limitation was determined as described in Section IV.E.1 of this Fact Sheet, and is in effect through 17 May 2010. As part of the compliance schedule, this Order requires the Discharger to submit a corrective action plan and implementation schedule to assure compliance with the final ammonia effluent limitations. In addition, the Discharger shall submit an engineering treatment feasibility study and prepare and implement a pollution prevention plan that is in compliance with CWC section 13263.3(d)(3).

- f. **Bis (2-ethylhexyl) phthalate.** Bis (2-ethylhexyl) phthalate is used primarily as one of several plasticizers in polyvinyl chloride (PVC) resins for fabricating flexible vinyl products. According to the Consumer Product Safety Commission, USEPA, and the Food and Drug Administration, these PVC resins are used to manufacture many products, including soft squeeze toys, balls, raincoats, adhesives, polymeric coatings, components of paper and paperboard, defoaming agents, animal glue, surface lubricants, and other products that must stay flexible and noninjurious for the lifetime of their use. The State MCL for bis (2-ethylhexyl) phthalate is 4 µg/L and the USEPA MCL is 6 µg/L. The NTR criterion for human health protection for consumption of water and aquatic organisms is 1.8 µg/L and for consumption of aquatic organisms only is 5.9 µg/L.

The MEC for bis (2-ethylhexyl) phthalate was 7 µg/L, based on seven samples collected between March 2002 and October 2006 (three samples were non-detects, two DNQ samples were 0.8 µg/L and 1 µg/L, and one sample with bis(2-ethylhexyl) phthalate found in method blank was 4 µg/L).

Since 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 Regional Water Board has determined there is uncertainty in the available data. Consequently, there is insufficient information to complete a reasonable potential analysis at this time. In accordance with Section 1.2 of the SIP Regional Water Board staff shall have discretion to consider if any data are inappropriate or insufficient for use in implementing the policy. Where Regional Water Board staff have found the data are insufficient to determine reasonable potential. Section 1.3 of the SIP allows the Board to implement monitoring for the parameter of concern. Therefore, 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 standard, then this Order may be reopened and modified by adding an appropriate effluent limitation.

- g. **Chlorine, Total Residual.** The Discharger uses chlorine for disinfection, which is extremely toxic to aquatic organisms. The Discharger uses sodium bisulfate to dechlorinate the effluent prior to discharge to the unnamed tributary to Lurline Creek. Due to the existing chlorine use and the potential for chlorine to be discharged, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan's narrative toxicity objective.

The USEPA *Technical Support Document for Water Quality-Based Toxics Control* (EPA/505/2-90-001) contains statistical methods for converting chronic (4-day) and acute (1-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. However, because chlorine is an acutely toxic constituent that can and will be monitored continuously, an average one-hour limitation is considered more appropriate than an average daily limitation. Average 1-hour and 4-day limitations for chlorine, based on these criteria, are included in this Order. The previous Order contained chlorine residual effluent limitations of 0.011 mg/L (0.018 lbs/day) for a 4-day average, 0.019 mg/L (0.032 lbs/day) for a 1-hour average, 0.010 mg/L (0.017 lbs/day) for an average monthly, and 0.012 mg/L (0.020 lbs/day) for an average daily. The application of the 1-hour and 4-day average criteria as effluent limitations and requiring an MDEL and AMEL based on these criteria is redundant. Since applying the 1-hour and 4-day average criteria is more stringent, the less stringent MDEL and AMEL included in the previous Order have not been carried forward. The previous Order also included mass limitations, which are unnecessary and have not been carried forward. This Order does not allow for an increase in flow, therefore, removing the mass limits complies with federal antibacksliding regulations. Based on evaluation of effluent data, the Discharger can immediately comply with these effluent limitations for total residual chlorine.

The total residual chlorine limitations required in this Order are protective of aquatic organisms in the undiluted discharge. If compliance is maintained, the Regional Water Board does not anticipate residual chlorine impacts to benthic organisms.

- h. **Chlorodibromomethane.** The CTR includes a chlorodibromomethane criterion of 34 µg/L for the protection of human health and is based on a one-in-a-million cancer risk for waters from which organisms are consumed. The MEC for chlorodibromomethane was 39.7 µg/L, based on eight samples collected between March 2002 and October 2006. Therefore, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criterion for chlorodibromomethane.

No dilution is allowed due to periods of no flow in the receiving water. An AMEL and MDEL for chlorodibromomethane of 34 µg/L and 68 µg/L, respectively, are included in this Order based on based on the CTR criterion for the protection of human health (see Table F-7-8 for WQBEL calculations).

The Discharger is unable to comply with the new chlorodibromomethane effluent limitations. Section 2.1 of the SIP allows for compliance schedules within the permit for existing discharges where it is demonstrated that it is infeasible for a Discharger to achieve immediate compliance with a CTR criterion. Using the statistical methods for calculating interim effluent limitations described in Section IV.E.1. of this Fact Sheet, an interim performance-based maximum daily limitation of 124 µg/L was calculated.

Section 2.1 of the SIP provides that: “Based on an existing discharger’s request and demonstration that it is infeasible for the discharger to achieve immediate compliance with a CTR criterion, or with an effluent limitation based on a CTR criterion, the RWQCB may establish a compliance schedule in an NPDES permit.” Section 2.1, further states that compliance schedules may be included in NPDES permits provided that the following justification has been submitted: ...“(a) documentation that diligent efforts have been made to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream; (b) documentation of source control measures and/or pollution minimization measures efforts currently underway or completed; (c) a proposal for additional or future source control measures, pollutant minimization actions, or waste treatment (i.e., facility upgrades); and (d) a demonstration that the proposed schedule is as short as practicable.” The Discharger has not provided this information. This Order requires the Discharger to submit this information by the effective date of this Order. As long as the Discharger submits an acceptable infeasibility analysis, the final water quality-based effluent limitations for chlorodibromomethane become effective on **18 May 2010**.

This Order requires the Discharger to submit a corrective action plan and implementation schedule to assure compliance with the final chlorodibromomethane effluent limitations. The interim effluent limitations are in effect through **17 May 2010**. As part of the compliance schedule for chlorodibromomethane, the Discharger shall develop a pollution prevention program in compliance with CWC section 13263.3(d)(3) and submit an engineering treatment feasibility study.

- i. **Cyanide.** The CTR includes maximum 1-hour average and 4-day average cyanide concentrations of 22 µg/L and 5.2 µg/L, respectively, for the protection of freshwater aquatic life. The MEC for cyanide was 66 µg/L, based on eight samples collected between March 2002 and October 2006. Therefore, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria for cyanide. No dilution is allowed due to periods of no flow in the receiving water. An AMEL and MDEL for cyanide of 4.3 µg/L and 8.5 µg/L, respectively, are included in this Order based on CTR

criteria for the protection of freshwater aquatic life (see Table F-[8-9](#) for WQBEL calculations).

The Discharger is unable to comply with the new cyanide effluent limitations. Section 2.1 of the SIP allows for compliance schedules within the permit for existing discharges where it is demonstrated that it is infeasible for a Discharger to achieve immediate compliance with a CTR criterion. Using the statistical methods for calculating interim effluent limitations described in Section IV.E.1. of this Fact Sheet, an interim performance-based maximum daily limitation of 205 µg/L was calculated.

Section 2.1 of the SIP provides that: *“Based on an existing discharger’s request and demonstration that it is infeasible for the discharger to achieve immediate compliance with a CTR criterion, or with an effluent limitation based on a CTR criterion, the RWQCB may establish a compliance schedule in an NPDES permit.”* Section 2.1, further states that compliance schedules may be included in NPDES permits provided that the following justification has been submitted: *...“(a) documentation that diligent efforts have been made to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream; (b) documentation of source control measures and/or pollution minimization measures efforts currently underway or completed; (c) a proposal for additional or future source control measures, pollutant minimization actions, or waste treatment (i.e., facility upgrades); and (d) a demonstration that the proposed schedule is as short as practicable.”* This Order requires the Discharger to submit this information by the effective date of this Order. As long as the Discharger submits an acceptable infeasibility analysis, the final water quality-based effluent limitations for cyanide become effective on **18 May 2010**.

This Order requires the Discharger to submit a corrective action plan and implementation schedule to assure compliance with the final cyanide effluent limitations. The interim effluent limitations are in effect through **17 May 2010**. As part of the compliance schedule for cyanide, the Discharger shall develop a pollution prevention program in compliance with CWC section 13263.3(d)(3) and submit an engineering treatment feasibility study.

- j. **Dichlorobromomethane.** The CTR includes a dichlorobromomethane criterion of 46 µg/L for the protection of human health and is based on a one-in-a-million cancer risk for waters from which organisms are consumed. The MEC for dichlorobromomethane was 73.4 µg/L, based on eight samples collected between March 2002 and October 2006. Therefore, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criterion for dichlorobromomethane.

No dilution is allowed due to periods of no flow in the receiving water. An AMEL and MDEL for dichlorobromomethane of 46 µg/L and 92 µg/L, respectively, are included in this Order based on based on the CTR criterion for the protection of human health (See Attachment F, Table F-[9-10](#) for WQBEL calculations).

The Discharger is unable to comply with these limitations. Section 2.1 of the SIP allows for compliance schedules within the permit for existing discharges where it is demonstrated that it is infeasible for a Discharger to achieve immediate compliance with a CTR criterion. Using the statistical methods for calculating interim effluent limitations described in Attachment F, Section IV.E.1., an interim performance-based maximum daily limitation of 228 µg/L was calculated.

Section 2.1 of the SIP provides that: *“Based on an existing discharger’s request and demonstration that it is infeasible for the discharger to achieve immediate compliance with a CTR criterion, or with an effluent limitation based on a CTR criterion, the RWQCB may establish a compliance schedule in an NPDES permit.”* Section 2.1, further states that compliance schedules may be included in NPDES permits provided that the following justification has been submitted: *...“(a) documentation that diligent efforts have been made to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream; (b) documentation of source control measures and/or pollution minimization measures efforts currently underway or completed; (c) a proposal for additional or future source control measures, pollutant minimization actions, or waste treatment (i.e., facility upgrades); and (d) a demonstration that the proposed schedule is as short as practicable.”* This Order requires the Discharger to submit this information by the effective date of this Order. As long as the Discharger submits an acceptable infeasibility analysis, the final water quality-based effluent limitations for dichlorobromomethane become effective on **18 May 2010**.

This Order requires the Discharger to submit a corrective action plan and implementation schedule to assure compliance with the final dichlorobromomethane effluent limitations. The interim effluent limitations are in effect through **17 May 2010**. As part of the compliance schedule for dichlorobromomethane, the Discharger shall develop a pollution prevention program in compliance with CWC section 13263.3(d)(3) and submit an engineering treatment feasibility study.

- k. **Electrical Conductivity. (see Subsection for Salinity)**
- l. **Fluoride.** *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), recommends that the fluoride concentration in waters used for agricultural irrigation not exceed 1,000 µg/L. The agricultural water quality goal for fluoride was established in Ayers and Westcot “because of concern for long-term build-up of trace elements in the soil and for protection of the agricultural soil resource from irreversible damage.” The Regional Water Board uses the agricultural water goal as a screening level to evaluate reasonable potential to cause or contribute to an exceedance of the Basin Plan’s narrative toxicity objective.*

The MEC for fluoride was 1,600 µg/L, based on eight samples collected between

March 2002 and October 2006. ~~This MEC was the only sample that exceeded 1000 µg/L.~~ Two of the remaining seven samples were non-detect, one was an estimated value, and the others ranged in concentrations of 290 to 800 µg/L (the average of the four detected values was 314 µg/L). ~~In accordance with Section 1.2 of the SIP Regional Water Board staff shall have discretion to consider if any data are inappropriate or insufficient for use in implementing the policy. Where Regional Board staff have found the data are insufficient to determine reasonable potential, Section 1.3 of the SIP allows the Board to implement monitoring for the parameter of concern. In order to determine the appropriate fluoride levels necessary to protect agricultural beneficial use, the Discharger is required to monitor for fluoride in the effluent and gather additional data to use for determining reasonable potential. The agricultural water quality goal was developed to be protective of long-term effects on agricultural soil resources, therefore, Regional Water Board staff finds that it is appropriate to evaluate reasonable potential for the discharge to cause or contribute to an exceedance of the agricultural water quality goal using the observed annual average effluent concentration. The maximum annual average fluoride concentration in the effluent was 780 µg/L, which was observed in 2002 as shown in the table below.~~

Table F-5. Effluent Fluoride Concentrations

<u>Date</u>	<u>Fluoride Concentration (µg/L)</u>	<u>Annual Average Fluoride Concentration (µg/L)</u>
<u>March 2002</u>	<u>1,600</u>	<u>780</u>
<u>May 2002</u>	<u>800</u>	
<u>August 2002</u>	<u>290</u>	
<u>November 2002</u>	<u>420</u>	
<u>October 2003</u>	<u>750 (DNQ)</u>	<u>750</u>
<u>October 2004</u>	<u>520</u>	<u>520</u>
<u>October 2005</u>	<u>ND</u>	<u>ND</u>
<u>October 2006</u>	<u>ND</u>	<u>ND</u>

Additionally, as shown in the table above, concentrations of fluoride have generally decreased since 2002 to levels below detection limits. Therefore, Regional Water Board staff concludes that (1) the effluent does not exhibit reasonable potential to cause or contribute to the Basin Plan’s narrative toxicity objective for fluoride, and (2) effluent limitations and compliance monitoring for fluoride are not necessary in this Order.

- m. **Persistent Chlorinated Hydrocarbon Pesticides.** 4,4'-DDE was detected in one sample out of a total of seven samples at a concentration of 0.024 µg/L. 4,4-DDE is a chlorinated hydrocarbon pesticide. The Basin Plan requires that no individual pesticides shall be present in concentrations that adversely affect beneficial uses; discharges shall not result in pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses; total chlorinated hydrocarbon pesticides shall not be present in the water column at detectable concentrations; and pesticide concentrations shall not exceed those allowable by applicable antidegradation policies. In addition to 4,4'-DDE, chlorinated hydrocarbon pesticides include aldrin, chlordane, dieldrin, endrin, endrin aldehyde, heptachlor, heptachlor epoxide, alpha BHC, beta BHC, delta BHC,

gamma BHC (lindane), 4,4'-DDD, 4,4'-DDT, alpha endosulfan, beta endosulfan, endosulfan sulfate, and toxaphene. Effluent limitations for persistent chlorinated hydrocarbon pesticides are not included in this Order as the pollutant is not expected in the discharge; the Regional Water Board has determined there is insufficient information to complete a reasonable potential analysis at this time. In accordance with Section 1.2 of the SIP Regional Water Board staff shall have discretion to consider if any data are inappropriate or insufficient for use in implementing the policy. Where Regional Water Board staff have found the data are insufficient to determine reasonable potential. Section 1.3 of the SIP allows the Board to implement monitoring for the parameter of concern. Therefore, additional monitoring has been established for **bis (2-ethylhexyl) phthalate4,4-DDE**. Should monitoring results indicate that the discharge has the reasonable potential to cause or contribute to an exceedance of a water quality standard, then this Order may be reopened and modified by adding an appropriate effluent limitation.

- n. **Pathogens.** The beneficial uses of the receiving water include water contact recreation, and agricultural irrigation supply. To protect these beneficial uses, the Regional Water Board finds that the wastewater must be disinfected and adequately treated to prevent disease. The principal infectious agents (pathogens) that may be present in raw sewage may be classified into three broad groups: bacteria, parasites, and viruses. Tertiary treatment, consisting of chemical coagulation, sedimentation, and filtration, has been found to remove approximately 99.5% of viruses. Filtration is an effective means of reducing viruses and parasites from the waste stream. The wastewater must be treated to tertiary standards (filtered), or equivalent, to protect contact recreational and food crop irrigation uses.

The California Department of Public Health (DPH, formerly know as California Department of Health Services or DHS) has developed reclamation criteria, CCR, Division 4, Chapter 3 (Title 22), for the reuse of wastewater. Title 22 requires that for spray irrigation of food crops, parks, playgrounds, schoolyards, and other areas of similar public access, wastewater be adequately disinfected, oxidized, coagulated, clarified, and filtered, and that the effluent total coliform levels not exceed 2.2 MPN/100 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 Regional Water Board finds that it is appropriate to apply an equivalent level of treatment to that

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

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

This Order contains effluent limitations and a tertiary level of treatment, or equivalent, necessary to protect the beneficial uses of the receiving water. In accordance with CWC section 13241, the Regional Water Board previously considered the following in Order No. R5-2002-0022:

- i. The past, present and probable future beneficial uses of the receiving stream include agricultural irrigation, agricultural stock watering, water contact recreation, including canoeing and rafting, warm freshwater habitat, cold freshwater habitat, warm migration of aquatic organisms, warm spawning, reproduction, and/or early development, wildlife habitat, groundwater recharge and freshwater replenishment.
- ii. The environmental characteristics of the hydrographic unit, including the quality of the available water, will be improved by the requirement to provide tertiary treatment for this wastewater discharge. Tertiary treatment will allow for the reuse of the undiluted wastewater for food crop irrigation and contact recreation activities that would otherwise be unsafe according to recommendations from the DPH.
- iii. Fishable and swimmable water quality conditions can be reasonably achieved through the coordinated control of all factors that affect water quality in the area.
- iv. The economic impact of requiring an increased level of treatment has been considered. The Discharger has estimated that the increased level of treatment will cost approximately \$6.5 million. The loss of beneficial uses

within downstream waters, without the tertiary treatment requirement, which includes prohibiting the irrigation of food crops and prohibiting public access for contact recreational purposes, would have a detrimental economic impact. In addition to pathogen removal to protect irrigation and recreation, tertiary treatment may also aid in meeting discharge limitations for other pollutants, such as heavy metals, reducing the need for advanced treatment specific for those pollutants.

- v. The requirement to provide tertiary treatment for this discharge will not adversely impact the need for housing in the area. The potential for developing housing in the area will be facilitated by improved water quality, which protects the contact recreation and irrigation uses of the receiving water. DPH recommends that, in order to protect the public health, relatively undiluted wastewater effluent must be treated to a tertiary level for contact recreational and food crop irrigation uses. Without tertiary treatment, the downstream waters could not be safely utilized for contact recreation or the irrigation of food crops.
- vi. It is the Regional Water Board’s policy, (Basin Plan, page IV-12.00, Policy 2) to encourage the reuse of wastewater. The Regional Water Board requires dischargers to evaluate how reuse or land disposal of wastewater can be optimized. The need to develop and use recycled water is facilitated by providing a tertiary level of wastewater treatment that will allow for a greater variety of uses in accordance with CCR, Title 22.
- vii. The Regional Water Board has considered the factors specified in CWC section 13263, including considering the provisions in CWC section 13241, in adopting the disinfection and filtration requirements under Title 22 criteria. The Regional Water Board finds, on balance, that these requirements are necessary to protect the beneficial uses of the receiving water, including water contact recreation and irrigation uses.
- o. **pH.** The Basin Plan includes a water quality objective for surface waters (except for Goose Lake) that the “...pH shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters with designated COLD or WARM beneficial uses.” Effluent Limitations for pH are included in this Order based on the Basin Plan objectives for pH.
- p. **Salinity.** The discharge contains total dissolved solids (TDS), chloride, and electrical conductivity (EC). These are water quality parameters that are indicative of the salinity of the water. Their presence in water can be growth limiting to certain agricultural crops and can affect the taste of water for human consumption. The Basin Plan contains a chemical constituent objective that contains a narrative objective for EC, TDS, and chloride.

Table F-6. Salinity Water Quality Criteria/Objectives

	Agricultural	Effluent
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		Average	Maximum
EC (µmhos/cm)	Varies ²	1770	4030
TDS (mg/L)	Varies	1023	1280
Chloride (mg/L)	Varies	255	307

- 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 umhos/cm is generally considered to present no risk of salinity impacts to crops. However, many crops are grown successfully with higher salinities.

i. **Chloride.** The recommended agricultural water quality goal for chloride, that is used as a screening level for the reasonable potential analysis, 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.

Chloride concentrations in the effluent ranged from 194 mg/L to 307 mg/L, with an average of 255 mg/L, for eight samples collected by the Discharger from March 2002 through October 2006. The effluent exceeds the agricultural water quality goal of 106 mg/L.

ii. **Electrical Conductivity @ 20 °C (EC).** The agricultural water quality goal, that is used as a screening level for the reasonable potential analysis, 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.

The Regional Water Board uses the agricultural water quality goal for electrical conductivity of 700 µmhos/cm as a screening value for conducting a reasonable potential analysis. A review of the Discharger’s monitoring reports from February 2002 through April 2007 shows an annual average effluent EC of 1770 µmhos/cm, with a range from 750 µmhos/cm to 4030 µmhos/cm for 287 samples. These levels exceed the agricultural water quality goal, or screening value, of 700 µmhos/cm.

iii. **Total Dissolved Solids (TDS).** The recommended agricultural water quality goal for TDS, that is used as a screening level for the reasonable potential

analysis, is 450 mg/L as a long-term average based on Water Quality for Agriculture, Food and Agriculture Organization of the United Nations— Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers and D.W. Westcot, Rome, 1985). Water Quality for Agriculture evaluates the impacts of salinity levels on crop tolerance and yield reduction, and establishes water quality goals that are protective of the agricultural uses. The 450 mg/L water quality goal is intended to prevent reduction in crop yield, i.e. a restriction on use of water, for salt-sensitive crops. Only the most salt sensitive crops require irrigation water of 450 mg/L or less to prevent loss of yield. Most other crops can tolerate higher TDS concentrations without harm, however, as the salinity of the irrigation water increases, more crops are potentially harmed by the TDS, or extra measures must be taken by the farmer to minimize or eliminate any harmful impacts.

The average TDS effluent concentration was 1023 mg/L and a ranged from 790 mg/L to 1280 mg/L for 27 samples collected by the Discharger from June 2002 through October 2006. These concentrations exceed the applicable water quality objectives. These data indicate the effluent exceeds the agricultural water quality goal for TDS.

- iv. **Salinity Effluent Limitations.** The Regional Water Board, with cooperation of the State Water Board, has begun the process to develop a new policy for the regulation of salinity in the Central Valley. In a statement issued at the March 16, 2006, Regional Water Board meeting, Board Member Dr. Karl Longley recommended that the Regional Water Board continue to exercise its authority to regulate discharges of salt to minimize salinity increases within the Central Valley. Dr. Longley stated, *“The process of developing new salinity control policies does not, therefore, mean that we should stop regulating salt discharges until a salinity Policy is developed. In the meantime, the Board should consider all possible interim approaches to continue controlling and regulating salts in a reasonable manner, and encourage all stakeholder groups that may be affected by the Regional Board’s policy to actively participate in policy development.”*

Effluent concentrations of electrical conductivity exceed the applicable screening level. However, site-specific numerical salinity objectives or receiving water information regarding the levels of salinity necessary to protect beneficial uses is not available. Therefore, final effluent limitations are not established in this Order. If the Discharger does not cease discharge to surface water in accordance with Time Schedule Order No. R5-2007-0073, this Order requires the Discharger to conduct a site-specific studies to determine the appropriate electrical conductivity level to protect beneficial uses. It is the intent of the Regional Water Board to include a final electrical conductivity effluent limitation in a subsequent permit renewal or amendment (if applicable), based on the results of an approved site-specific salinity receiving water study.

The Antidegradation Policy (Resolution No. 68-16) requires that the Discharger implement best practicable treatment or control (BPTC) of its discharge. For salinity, the Regional Water Board is considering limiting effluent salinity of municipal wastewater treatment plants to an increment of 500 $\mu\text{mhos/cm}$ over the salinity of the municipal water supply or at existing level. This Order includes an annual average performance-based effluent limitation of 2000 $\mu\text{mhos/cm}$ (rounded up from 1942 $\mu\text{mhos/cm}$, which is the highest annual average effluent electrical conductivity) for EC to protect the receiving water from further salinity degradation. Final effluent limitations for salinity based on BPTC will be established subsequent to the collection and analysis by the Discharger of EC in the Discharger's water supply. This Order requires quarterly monitoring of EC and TDS of the Discharger's water supply (see Attachment E, Section IX.B).

This Order also requires the Discharger to implement salinity reduction measures to reduce the salinity in its discharge to the unnamed tributary of Lurline Creek. Special Provision VI.C.3.b of the Order requires the Discharger to prepare and implement a Salinity Evaluation and Minimization Plan for salinity. Implementation measures to reduce salt loading may include source control, mineralization reduction, chemical addition reductions, changing to water supplies with lower salinity, and limiting the salt load from domestic and industrial dischargers. Compliance with these requirements will result in a salinity reduction in the effluent discharged to the receiving water.

- q. **Toxicity.** See Section IV.C.5. of the Fact Sheet regarding whole effluent toxicity.
- r. **Tributyltin.** USEPA developed National Recommended Ambient Water Quality Criteria for protection of freshwater aquatic life for tributyltin. The recommended maximum 1-hour average and 4-day average tributyltin concentrations are 0.46 $\mu\text{g/L}$ and 0.072 $\mu\text{g/L}$, respectively. Tributyltin was detected at a concentration of 0.294 $\mu\text{g/L}$ in one of four samples. All other samples were non-detect. Tributyltin is normally associated with antifungal agents used in cooling tower and refrigeration water systems, and/or associated with metal coating operations or other metal plating type industries. Although the measured sample was greater than the 4-day average criterion, there are no known industrial dischargers to the Facility that might be a source of the constituent. Section 1.2 of the SIP states that when implementing the provisions of the policy, the Regional Water Board shall use all available, valid, relevant, representative data and information, as determined by the Regional Water Board. In accordance with Section 1.2 of the SIP The SIP also states that the Regional Water Board staff shall have discretion to consider if any data are inappropriate or insufficient for use in implementing the policy. Instances where such consideration is warranted include, but are not limited to, the following: evidence that a sample has been erroneously reported or is not representative of the effluent or ambient receiving water quality; questionable quality control/quality assurance practices; and varying seasonal conditions. Given that tributyltin is not expected in the discharge from the Facility, the representation of the detected sample for this

~~discharge is questionable. Where Regional Board staff have found the data are insufficient to determine reasonable potential, Section 1.3 of the SIP allows the Board to implement monitoring for the parameter of concern. Therefore, the~~ Regional Water Board has determined there is insufficient information to complete a reasonable potential analysis at this time. ~~In accordance with Section 1.2 of the SIP Regional Water Board staff shall have discretion to consider if any data are inappropriate or insufficient for use in implementing the policy. Where Regional Water Board staff have found the data are insufficient to determine reasonable potential. Where Regional Board staff have found the data are insufficient to determine reasonable potential, Section 1.3 of the SIP allows the Regional Water Board to implement monitoring for the parameter of concern. Section 1.3 of the SIP allows the Board to implement monitoring for the parameter of concern.~~ Therefore, ~~additional~~ the Discharger is required to conduct quarterly monitoring for 2 years has been established for tributyltin. Should monitoring results indicate that the discharge has the reasonable potential to cause or contribute to an exceedance of a water quality standard, then this Order may be reopened and modified by adding an appropriate effluent limitation.

4. WQBEL Calculations

- a. As discussed in Section IV.C.3 above, effluent limitations for total residual chlorine ~~and, pH, and settleable solids~~ were based on Basin Plan objectives and applied directly as effluent limitations. Effluent limitations for pathogens (total coliform) were based on DPH's reclamation criteria and the previous Order.
- b. Effluent limitations for ammonia, chlorodibromomethane, cyanide, and dichlorobromomethane were calculated in accordance with section 1.4 of the SIP. The following paragraphs describe the methodology used for calculating effluent limitations.
- c. **Effluent Limitation Calculations.** In calculating maximum effluent limitations, the effluent concentration allowances were set equal to the criteria/standards/objectives.

$$ECA_{acute} = CMC \qquad ECA_{chronic} = CCC$$

For the human health, agriculture, or other long-term criterion/objective, a dilution credit can be applied. The ECA is calculated as follows:

$$ECA_{HH} = HH + D(HH - B)$$

where:

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

Table F-7. WQBEL Calculations for Ammonia

	Acute	Chronic (30-day)	Chronic (4-day)
pH ⁽¹⁾	8.5	8.5	N/A
Temperature °C ⁽²⁾	N/A	26.9	N/A
Criteria (mg/L) ⁽³⁾	2.14	0.49	1.23
Dilution Credit	No Dilution	No Dilution	No Dilution
ECA	2.14	0.49	1.23
ECA Multiplier	0.23	0.70	0.41
LTA ⁽⁴⁾	0.49	0.34	0.5
AMEL Multiplier (95th%)	⁽⁵⁾	1.82	⁽⁵⁾
AMEL (mg/L)	⁽⁵⁾	0.6	⁽⁵⁾
MDEL Multiplier (99th%)	⁽⁵⁾	4.33	⁽⁵⁾
MDEL (mg/L)	⁽⁵⁾	1.5	⁽⁵⁾

- ⁽¹⁾ Acute design pH = 8.5 (max. allowed effluent pH), Chronic design pH = 10 (max. effluent pH)
- ⁽²⁾ Temperature = Maximum 30-day average seasonal effluent temperature
- ⁽³⁾ USEPA Ambient Water Quality Criteria
- ⁽⁴⁾ LTA developed based on Acute and Chronic ECA Multipliers calculated at 99th percentile level per sections 5.4.1 and 5.5.4 of TSD.
- ⁽⁵⁾ Limitations based on chronic (30-day) LTA

Table F-8. WQBEL Calculations for Chlorodibromomethane

	Acute	Chronic
Criteria (mg/L)	N/A	34
Dilution Credit	N/A	No Dilution
ECA	N/A	34
AMEL (mg/L) ⁽¹⁾	N/A	34
MDEL/AMEL Multiplier ⁽²⁾	N/A	2.01
MDEL (mg/L)	N/A	68

- ⁽¹⁾ AMEL = ECA per section 1.4.B, Step 6 of SIP
- ⁽²⁾ Assumes sampling frequency n<=4. Uses MDEL/AMEL multiplier from Table 2 of SIP.

Table F-9. WQBEL Calculations for Cyanide

	Acute	Chronic
Criteria (µg/L)	22	5.2
Dilution Credit	No Dilution	No Dilution
ECA	22	5.2
ECA Multiplier	0.32	0.48
LTA	7.1	2.7
AMEL Multiplier (95 th %)	⁽¹⁾	1.55
AMEL (µg/L)	⁽¹⁾	4.3
MDEL Multiplier (99 th %)	⁽¹⁾	3.11
MDEL (µg/L)	⁽¹⁾	8.5

- ⁽¹⁾ Limitations based on chronic LTA.

Table F-10. WQBEL Calculations for Dichlorobromomethane

	Acute	Chronic
Criteria (mg/L)	N/A	46
Dilution Credit	N/A	No Dilution
ECA	N/A	46
AMEL (mg/L) ⁽¹⁾	N/A	46
MDEL/AMEL Multiplier ⁽²⁾	N/A	2.01
MDEL (mg/L)	N/A	92

⁽¹⁾ AMEL = ECA per section 1.4.B, Step 6 of SIP

⁽²⁾ Assumes sampling frequency n<=4. Uses MDEL/AMEL multiplier from Table 2 of SIP.

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

Table F-11. Summary of Water Quality-based Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Ammonia Nitrogen, Total (as N)	mg/L	0.6	--	1.5	--	--
Chlorodibromomethane	µg/L	34	--	68	--	--
Cyanide	µg/L	4.3	--	8.5	--	--
Dichlorobromomethane	µg/L	46	--	92	--	--
pH	standard units	--	--	--	6.5	8.5

5. Whole Effluent Toxicity (WET)

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

- a. **Acute Aquatic Toxicity.** The Basin Plan contains a narrative toxicity objective that states, “*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*” (Basin Plan at III-8.00) The Basin Plan also states that, “*...effluent limits based upon acute biotoxicity tests of effluents will be prescribed where appropriate...*”. USEPA Region 9 provided guidance for the development of acute toxicity effluent limitations in the absence of numeric water quality objectives for toxicity in its document titled "Guidance for NPDES Permit Issuance", dated February 1994. In section B.2. "Toxicity Requirements" (pgs. 14-15) it states that, "*In the absence of specific numeric water quality objectives for acute and chronic toxicity, the narrative criterion 'no toxics in toxic amounts'*

applies. Achievement of the narrative criterion, as applied herein, means that ambient waters shall not demonstrate for acute toxicity: 1) less than 90% survival, 50% of the time, based on the monthly median, or 2) less than 70% survival, 10% of the time, based on any monthly median. For chronic toxicity, ambient waters shall not demonstrate a test result of greater than 1 TUc." Accordingly, 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 bioassays -----	70%
Median for any three or more consecutive bioassays -----	90%

- b. **Chronic Aquatic Toxicity.** The Basin Plan contains a narrative toxicity objective that states, "All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life." (Basin Plan at III-8.00) Chronic WET data from May 2004 through November 2006 indicate that the discharge does not have reasonable potential to cause or contribute to an in-stream excursion above of the Basin Plan's narrative toxicity objective. However, this Order contains effluent limitations for ammonia based on the protection of freshwater aquatic life with which the Discharger is not able to comply. Although chronic WET data does not indicate toxicity in the discharge, the Regional Water Board finds that the discharge exhibits reasonable potential to cause or contribute to an in-stream excursion above the narrative toxicity objective based on the presence of ammonia in the discharge at levels that are toxic to aquatic life. Therefore, a narrative effluent limit is included in this Order that requires that there shall be no chronic toxicity in the effluent discharge.

Numeric chronic WET effluent limitations have 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 Region² that contained numeric chronic toxicity effluent limitations. To address the petition, the State Water Board adopted WQO 2003-012 directing its staff to revise the toxicity control provisions in the SIP. The State Water Board states the following in WQO 2003-012, "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

² 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).

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. However, the State Water Board found in WQO 2003-012 that, while it is not appropriate to include final numeric effluent limitations for chronic toxicity in NPDES permits for POTWs, permits must contain a narrative effluent limitation, numeric benchmarks for triggering accelerated monitoring, rigorous Toxicity Reduction Evaluation (TRE)/Toxicity Identification Evaluation (TIE) conditions, and a reopener to establish numeric effluent limitations for either chronic toxicity or the chemical(s) causing toxicity. Therefore, this Order includes a narrative effluent limitation for chronic toxicity 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). This Order also includes a reopener that allows the Regional Water Board to reopen the permit and include a numeric chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE.

Attachment E of this Order requires semi-annual chronic WET monitoring for demonstration of compliance with the narrative toxicity objective and the narrative chronic WET effluent limitation contained in this Order.

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

D. Final Effluent Limitations

1. Mass-based Effluent Limitations.

Title 40 CFR 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 CFR 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of mass and concentration. In

addition, pursuant to the exceptions to mass limitations provided in 40 CFR 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g. CTR criteria and MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

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

2. Averaging Periods for Effluent Limitations.

Title 40 CFR 122.45 (d) requires average weekly and average monthly discharge limitations for publicly owned treatment works (POTWs) unless impracticable. However, for toxic pollutants and pollutant parameters in water quality permitting, the US EPA 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 ammonia, total residual chlorine, chlorodibromomethane, dichlorobromomethane, and cyanide 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 BOD, TSS, pH, and 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 Attachment F, Section IV.C.3., above.

3. Satisfaction of Anti-Backsliding Requirements.

The CWA specifies that a revised permit may not include effluent limitations that are less stringent than the previous permit unless a less stringent limitation is justified based on exceptions to the anti-backsliding provisions contained in CWA sections 402(o) or 303(d)(4), or, where applicable, 40 CFR 122.44(l).

Order No. R5-2002-0022 contained effluent limitations for turbidity. The limitations were solely an operational check to ensure the treatment system was functioning properly and could meet the limits for total suspended solids and total coliform organisms. The effluent limitations 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 does not include effluent limitations for turbidity. However, the performance-based specification in this Order is an equivalent limitation that is not less stringent, and therefore does not constitute backsliding.

The revision in the turbidity limitation is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16 because this Order imposes equivalent or more stringent requirements than Order No. R5-2002-0210 and therefore does not allow degradation.

Some effluent limitations in this Order are less stringent than those in Order No. R5-2002-0022. As discussed below this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

Order No. R5-2002-0022 established effluent limitations for settleable solids. Monitoring data over the term of Order No. R5-2002-0022 indicated that concentrations of settleable solids in the effluent from Discharge Point No. 001 were below the levels of detection for 499 of 500 sampling events. Therefore, the discharge no longer exhibits reasonable potential to exceed water quality objectives for settleable solids and the effluent limitations are not retained in this Order. The monitoring data submitted by the Facility is considered new information by the Regional Water Board.

The removal of limitations for settleable solids is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Resources Control Board Resolution 68-16. Any impact on existing water quality will be insignificant.

4. Satisfaction of Antidegradation Policy

- a. **Surface Water.** The permitted surface water discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16. 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. 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.
- b. **Groundwater.** The Discharger utilizes aeration and oxidation ponds. Domestic wastewater contains constituents such as TDS, specific conductivity, pathogens, and nitrate. Groundwater data collected from December 2002 to March 2007 do not show a pattern of increasing concentrations of these constituents in the downgradient groundwater. Any increase in the concentration of these constituents in groundwater must be consistent with Resolution 68-16. Any increase in pollutant concentrations in groundwater must be shown to be necessary to allow wastewater utility service necessary to accommodate housing and economic expansion in the area and must be consistent with maximum benefit to the people of the State of California. Some degradation of groundwater by the Discharger is consistent with State Water Board Resolution

68-16 provided that:

- i. the degradation is limited in extent;
- ii. the degradation after effective source control, treatment, and control is limited to waste constituents typically encountered in municipal wastewater as specified in the groundwater limitations in this Order;
- iii. the Discharger minimizes the degradation by fully implementing, regularly maintaining, and optimally operating best practicable treatment and control (BPTC) measures; and
- iv. the degradation does not result in water quality less than that prescribed in the Basin Plan.

**Summary of Final Effluent Limitations
 Discharge Point 001**

Table F-12. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations					Basis ²
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Average Daily Discharge Flow	mgd	--	--	0.2	--	--	TBEL
Ammonia Nitrogen, Total (as N)	mg/L	0.6	--	1.5	--	--	WQBEL
	lbs/day ¹	0.18	--	0.5	--	--	
Biochemical Oxygen Demand 5-day @ 20°C	mg/L	10	15	20	--	--	TBEL
	lbs/day ¹	17	25	33	--	--	
Chlorodibromomethane	µg/L	34	--	68	--	--	WQBEL
Cyanide	µg/L	4.3	--	8.5	--	--	WQBEL
Dichlorobromomethane	µg/L	46	--	92	--	--	WQBEL
pH	standard Units	--	--	--	6.5	8.5	WQBEL
Total Coliform	MPN/100 mL	--	--	--	--	240	WQBEL
Total Suspended Solids	mg/L	10	15	20	--	--	TBEL
	lbs/day ²	17	25	33	--	--	

¹ Based on a design flow of 0.2 mgd.

² TBEL – Technology-Based Effluent Limitations (See Attachment F, Section IV.B.2)
 WQBEL – Water Quality-Based Effluent Limitations (See Attachment F, Section IV.C.3)

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

- b. **Acute Whole Effluent Toxicity.** Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:
 - i. 70%, minimum for any one bioassay; and
 - ii. 90%, median for any three consecutive bioassays.
- c. **Total Residual Chlorine.** Effluent total residual chlorine shall not exceed:
 - i. 0.011 mg/L, as a 4-day average;
 - ii. 0.019 mg/L, as a 1-hour average;
- d. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed:
 - i. 2.2 most probable number (MPN)/100 mL, as a 7-day median; and
 - ii. 23 MPN/100 mL, more than once in any 30-day period;
- e. **Chronic Whole Effluent Toxicity.** There shall be no chronic whole effluent toxicity in the effluent discharge.

E. Interim Effluent Limitations

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

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

When there are less than ten sampling data points available, the *Technical Support Document for Water Quality- Based Toxics Control* ((EPA/505/2-90-001), TSD) recommends a coefficient of variation of 0.6 be utilized as representative of wastewater effluent sampling. The TSD recognizes that a minimum of ten data points is necessary to conduct a valid statistical analysis. The multipliers contained in Table 5-2 of the TSD are used to determine a maximum daily limitation based on

a long-term average objective. In this case, the long-term average objective is to maintain, at a minimum, the current plant performance level. Therefore, when there are less than ten sampling points for a constituent, interim limitations are based on 3.11 times the maximum observed effluent concentration to obtain the daily maximum interim limitation (TSD, Table 5-2).

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

Table F-12 summarizes the calculations of the interim effluent limitations for ammonia, cyanide, chlorodibromomethane, and dichlorobromomethane:

Table F-13. Interim Effluent Limitation Calculation Summary

Parameter	MEC		Standard Deviation	Number of Samples	Interim Limitation	
	µg/L	Mean			µg/L	lbs/day
Ammonia (mg/L)	12	2.2	1.9	274	8	--
Cyanide	66	--	--	8	205	--
Dichlorobromomethane	73.4	--	--	8	228	--
Chlorodibromomethane	39.7	--	--	8	124	--

F. Land Discharge Specifications

1. The Land Discharge Specifications are necessary to protect the beneficial uses of the groundwater. The specifications included in this Order are carried over from Order No. R5-2002-0022.

G. Reclamation Specifications

Treated wastewater discharged for reclamation is regulated under separate waste discharge requirements and must meet the requirements of California Code of Regulations, Title 22.

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), CWA section 303(a-c), requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The Regional 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 the 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, sediment, settleable material, suspended material, taste and odors, temperature, toxicity, and turbidity.

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

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

A. Influent Monitoring

1. Influent monitoring is required to collect data on the characteristics of the wastewater and to assess compliance with effluent limitations (e.g., BOD and TSS reduction requirements).

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 of the discharge to the unnamed tributary to Lurline Creek (Discharge Point No. 001) at Monitoring Location EFF-001 has been established as follows:
 - a. Effluent monitoring frequencies and sample types for flow (continuous), total residual chlorine (continuous), turbidity (continuous), total coliform (three times weekly), pH (twice weekly), ammonia (weekly), BOD (5-day @ 20 °C) (weekly), TSS (weekly), settleable solids (weekly), electrical conductivity @ 25 °C (weekly), temperature (weekly), hardness (quarterly), total dissolved solids (quarterly), acute toxicity (semiannually), and priority pollutants (annually) have been retained from Order No. R5-2002-0022 to determine compliance with effluent limitations.
 - b. Monitoring data collected over the term of the previous Order for chloride, chlorodibromomethane, cyanide, and dichlorobromomethane indicate reasonable potential to exceed water quality criteria for these pollutants. Therefore, monthly effluent monitoring for chloride, chlorodibromomethane, cyanide, and dichlorobromomethane has been added to this Order.

- c. ~~Due to the L~~limited monitoring data available for bis (2-ethylhexyl) phthalate, ~~fluoride,~~ persistent chlorinated hydrocarbon, pesticides, and tributyltin, ~~indicated~~ reasonable potential to exceed water quality criteria cannot be determined. ~~Though-Therefore,~~ effluent limitations for bis (2-ethylhexyl) phthalate, ~~fluoride,~~ persistent chlorinated hydrocarbon pesticides, and tributyltin have not been established in this Order. ~~m~~Monthly monitoring has been established for bis (2-ethylhexyl) phthalate, ~~fluoride, and tributyltin;~~ quarterly monitoring for 2 years has been established for tributyltin; and annual monitoring has been established for persistent chlorinated hydrocarbon pesticides. A reopener provision is included in this Order should monitoring results indicate that the discharge has the reasonable potential for bis (2-ethylhexyl) phthalate, ~~fluoride,~~ persistent chlorinated hydrocarbon pesticides, and tributyltin to cause an exceedance of water quality objectives.

C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity.** 2/year 96-hour bioassay testing is required to demonstrate compliance with the effluent limitation for acute toxicity. This Order contains effluent limitations for ammonia based on the protection of freshwater aquatic life with which the Discharger is not able to comply. Therefore, acute toxicity testing may be modified to eliminate ammonia-related toxicity until 18 May 2010, at which time the Discharger shall be required to implement the test without modifications to eliminate ammonia toxicity.
2. **Chronic Toxicity.** 2/year chronic whole effluent toxicity testing is required in order to demonstrate compliance with the Basin Plan's narrative toxicity objective. This Order contains effluent limitations for ammonia based on the protection of freshwater aquatic life with which the Discharger is not able to comply. Therefore, chronic toxicity testing may be modified to eliminate ammonia-related toxicity until 18 May 2010, at which time the Discharger shall be required to implement the test without modifications to eliminate ammonia toxicity.

D. Receiving Water Monitoring

1. Surface Water

- a. Receiving water monitoring is necessary to assess compliance with receiving water limitations and to assess the impacts of the discharge on the receiving stream. Based on a review of monitoring data, the farthest downstream receiving water monitoring location is being removed. Monitoring at this location is unnecessary and imposes an economic burden to the Discharger.
- b. Annual monitoring for priority pollutants is required to collect the necessary data to determine reasonable potential as required in section 1.2 of the SIP. The hardness (as CaCO₃) of the upstream receiving water shall also be monitoring concurrently with the priority pollutants as well as pH to ensure the water quality

criteria/objectives are correctly adjusted for the receiving water when determining reasonable potential as specified in section 1.3 of the SIP.

2. Groundwater

- a. Section 13267 of the California Water Code states, in part, *“(a) A Regional Water Board, in establishing...waste discharge requirements... may investigate the quality of any waters of the state within its region”* and *“(b) (1) In conducting an investigation..., the Regional Water Board may require that any person who... discharges... waste...that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Regional Water Board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports.”* The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the Regional Water Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports. The Monitoring and Reporting Program (Attachment E) is issued pursuant to California Water Code Section 13267. The groundwater monitoring and reporting program 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, at a minimum, require a complete assessment of groundwater impacts including the vertical and lateral extent of degradation, an assessment of all wastewater-related constituents which may have migrated to groundwater, 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 permit may be reopened and modified. 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. If groundwater quality has been degraded by the discharge, the incremental change in pollutant concentration (when compared with background) may not be increased. If groundwater quality has been or may be degraded by the discharge, this Order may be reopened and specific numeric limitations established consistent with Resolution 68-16 and the Basin Plan.

- c. This Order requires the Discharger to continue groundwater monitoring as was required in Order R5-2002-0022, 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 Regional Board plans and policies, including Resolution 68-16. Evidence in the record includes effluent monitoring data that indicates the presence of constituents that may degrade groundwater and surface water.

E. Other Monitoring Requirements

1. Biosolids Monitoring

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

2. Water Supply Monitoring

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

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

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

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

B. Special Provisions

1. Reopener Provisions

- a. **Special Provisions VI.C.1.a.** This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.
- b. **Special Provisions VI.C.1.b.** Conditions that necessitate a major modification of a permit are described in 40 CFR section 122.62, including:
 - i. If new or amended applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA, or amendments thereto, this permit may be reopened and modified in accordance with the new or amended standards.
 - ii. When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.
- c. **Pollution Prevention (Special Provisions VI.C.1.c.).** This Order requires the Discharger prepare pollution prevention plans following CWC section 13263.3(d)(3) for cyanide, chlorodibromomethane, and dichlorobromomethane. This reopener provision allows the Regional Water Board to reopen this Order for addition and/or modification of effluent limitations and requirements for these constituents based on a review of the pollution prevention plans.
- d. **Whole Effluent Toxicity. (Special Provisions VI.C.1.d.).** This Order requires the Discharger to investigate the causes of, and to 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.
- e. **Water Effects Ratio (WER) and Metal Translators (Special Provisions VI.C.1.e.).** A default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for inorganic constituents. If the Discharger performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

2. Special Studies and Additional Monitoring Requirements

- a. **Chronic Whole Effluent Toxicity Requirements.** The Basin Plan contains a narrative toxicity objective that states, “All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.” (Basin Plan at III-8.00.) WET data from the previous Order term indicate that the discharge does not have reasonable potential to cause or contribute to an in-stream excursion above of the Basin Plan’s narrative toxicity objective. Attachment E of this Order requires 2/year chronic WET monitoring for demonstration of compliance with the narrative toxicity objective.

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

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

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

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

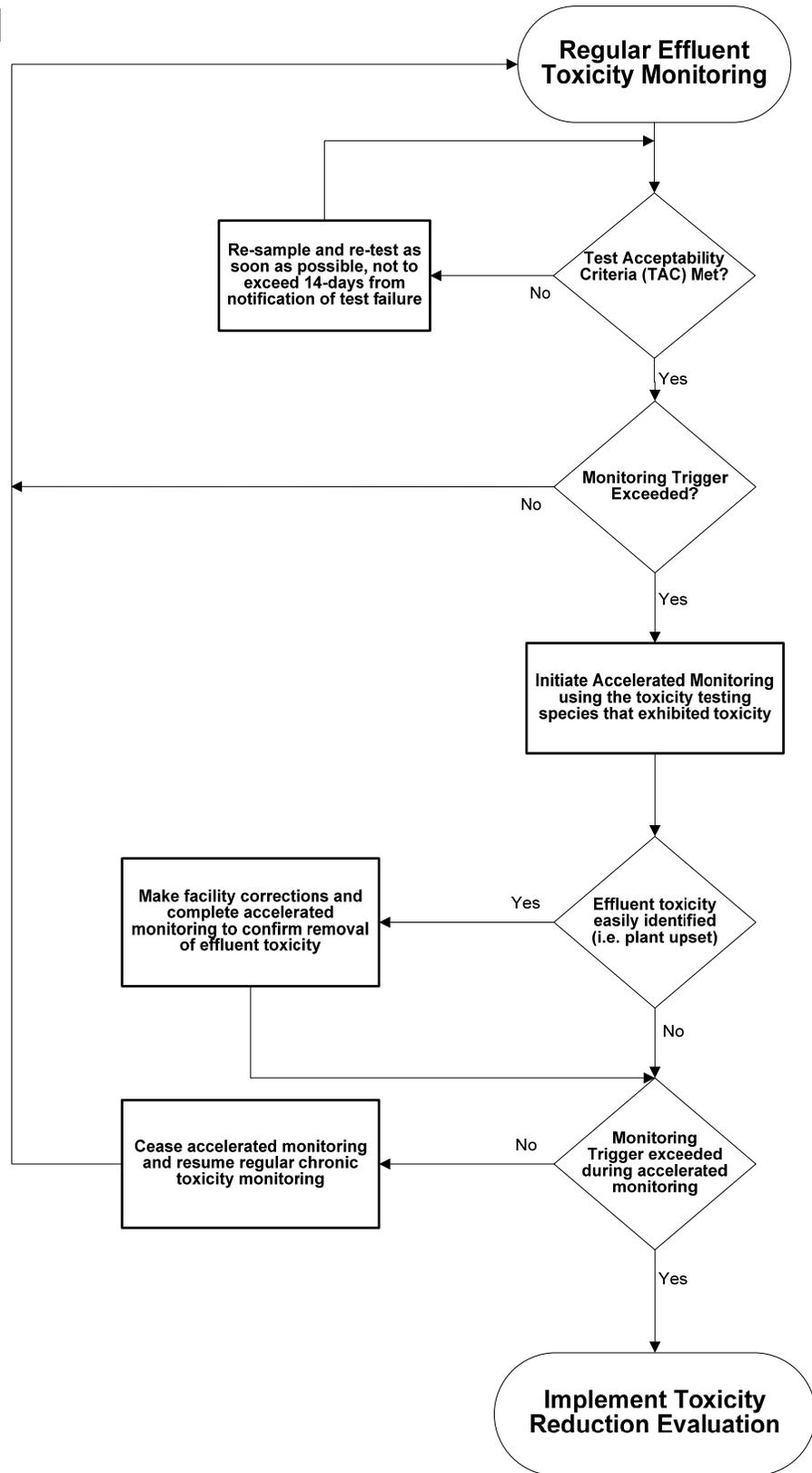
20 percent of the time), the Executive Officer may require that the Discharger initiate a TRE.

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

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

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

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



b. **Salinity Study.** The Ayers and Westcot 1985 Study indicates that site-specific factors, such as rainfall and flooding, should be considered in determining protective EC levels in irrigation water. This Order requires the Discharger to conduct a site-specific study that assesses the influence of soil chemistry, climatic conditions, rainfall and flooding, and background water quality on EC/salinity requirements for irrigation waters downstream of the discharge.

In order to meet the requirements of the proposed Order and Time Schedule Order No. R5-2007-0073, which contains time schedules requiring compliance with final effluent limitations by 18 May 2010, the Discharger is proposing to dispose of all the Facility's wastewater via land disposal (subsurface irrigation or other land disposal operations) and cease the discharge to the unnamed tributary to Lurline Creek. Given the planned cessation of the surface water discharge by 18 May 2010, and that site-specific studies would not be completed prior to that date, Regional Water Board staff finds that it is not appropriate to require the Discharger to expend additional resources to conduct a study that will be moot upon its completion. Therefore, the time schedule for completing the study has been established such that the Discharger is required to complete the study only if the surface water discharge has not been discontinued by 18 May 2010. The proposed Order requires submittal of the final study with the Report of Waste Discharge (as required on the Cover Page for the Order) to ensure that the study is available for the next permit renewal.

3. Best Management Practices and Pollution Prevention

- a. **CWC section 13263.3(d)(3) Pollution Prevention Plans.** The pollution prevention plans required for cyanide, dichlorobromomethane, and dichlorobromomethane, shall, at a minimum, meet the requirements outlined in CWC section 13263.3(d)(3). The minimum requirements for the pollution prevention plans include the following:
- i. An estimate of all of the sources of a pollutant contributing, or potentially contributing, to the loadings of a pollutant in the treatment plant influent.
 - ii. An analysis of the methods that could be used to prevent the discharge of the pollutants into the Facility, including application of local limits to industrial or commercial dischargers regarding pollution prevention techniques, public education and outreach, or other innovative and alternative approaches to reduce discharges of the pollutant to the Facility. The analysis also shall identify sources, or potential sources, not within the ability or authority of the Discharger to control, such as pollutants in the potable water supply, airborne pollutants, pharmaceuticals, or pesticides, and estimate the magnitude of those sources, to the extent feasible.
 - iii. An estimate of load reductions that may be attained through the methods identified in subparagraph ii.
 - iv. A plan for monitoring the results of the pollution prevention program.

- v. A description of the tasks, cost, and time required to investigate and implement various elements in the pollution prevention plan.
 - vi. A statement of the Discharger's pollution prevention goals and strategies, including priorities for short-term and long-term action, and a description of the Discharger's intended pollution prevention activities for the immediate future.
 - vii. A description of the Discharger's existing pollution prevention programs.
 - viii. An analysis, to the extent feasible, of any adverse environmental impacts, including cross-media impacts or substitute chemicals that may result from the implementation of the pollution prevention program.
 - ix. An analysis, to the extent feasible, of the costs and benefits that may be incurred to implement the pollution prevention program.
- b. **Salinity Evaluation and Minimization Plan.** In order to control salinity in the Central Valley, the Facility is required to complete a salinity evaluation and minimization plan to address sources of salinity from the Facility.

4. Construction, Operation, and Maintenance Specifications

- a. The treatment pond operating requirements are based on the requirements of 40 CFR 122.41(e) and the previous Order.
- b. **Turbidity.** Operations specifications for turbidity are included as an indicator of the effectiveness of the treatment process and to assure compliance with effluent limitations for total coliform organisms. The tertiary treatment process 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 filter performance, allowing immediate detection of filter failure and rapid corrective action. The operational specification requires 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 an instantaneous maximum of 10 NTU.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. Sludge/Biosolids Discharge Specifications.

The sludge/biosolids provisions are 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.

b. Collection System.

The provision is included to ensure compliance with the requirements in the State Water Board adopted State Water Board Order 2006-0003, a Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.

6. Other Special Provisions

- a. **Effective 18 May 2010**, wastewater shall be oxidized, coagulated, filtered, and adequately disinfected pursuant to the DPH's reclamation criteria, California Code of Regulations, Title 22, Division 4, Chapter 3, (Title 22), or equivalent.
- b. Prior to making any change in the discharge point, place of use, or purpose of use of the wastewater, the Discharger must obtain approval of, or clearance from the State Water Resources Control Board (Division of Water Rights).

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

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory paragraph of Federal Standard Provision V.B.5 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

7. Compliance Schedules

- a. **Title 22 Disinfection Requirements.** The Discharger shall comply with Time Schedule Order No. R5-2007-0073 to ensure compliance with the final requirements and effluent limitations.
- b. **Compliance Schedules for Final Effluent Limitations for Ammonia, Cyanide, Chlorodibromomethane, and Dichlorobromomethane.** The Discharger has not submitted a request, and justification for compliance schedules for ammonia, cyanide, chlorodibromomethane, and dichlorobromomethane. Therefore, this Order requires the Discharger to submit an infeasibility analysis in accordance with Paragraph 3, items (a) through (d), of Section 2.1 of the SIP. This Order establishes compliance schedules for the new, final, water quality-based effluent limitations for ammonia, cyanide, chlorodibromomethane, and dichlorobromomethane and requires full compliance by 18 May 2010. However,

these compliance schedules are contingent on the submittal of acceptable infeasibility analyses by the effective date of this Order.

VIII. PUBLIC PARTICIPATION

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

A. Notification of Interested Parties

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

B. Written Comments

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

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on 31 December 2008.

C. Public Hearing

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

Date: 5 February 2009
Time: 8:30 am
Location: Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Dr., Suite #200
Rancho Cordova, CA 95670

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

Please be aware that dates and venues may change. Our Web address is <http://www.waterboards.ca.gov/rwqcb5/> where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

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

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

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling 916-464-3291.

F. Register of Interested Persons

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

G. Additional Information

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

ATTACHMENT G – REASONABLE POTENTIAL ANALYSIS

I. REASONABLE POTENTIAL ANALYSIS FOR PRIORITY POLLUTANTS

Constituent, Unit CTR #	Antimony, µg/L #1	Arsenic, µg/L #2	Be, µg/L #3	Cadmium, µg/L #4	Cr (III), µg/L # 5a	Cr (VI), µg/L # 5b	Cu, µg/L #6	Lead, µg/L #7	Hg, µg/L #8	Nickel, µg/L #9	Se, µg/L #10	Silver, µg/L #11	Thallium, µg/L #12	Zinc, µg/L #13	Cyanide, µg/L #14	Asb, MFL #15
LEC	ND	1.6	ND	ND	ND	ND	1.5	ND	0.00598	2	1	ND	ND	4.5	ND	ND
MEC	0.3 DNQ	6.1	ND	ND	1.2	4 DNQ	4.4	1.3	0.0121	3.7	3.6	0.3	ND	10	66	ND
Maximum Background	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Numeric Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Narrative Basin Plan Objective		Ag WQ Goal 100	Ag WQ Goal 100	Ag WQ Goal 10		Ag WQ Goal 100	Ag WQ Goal 200	Ag WQ Goal 5000		Ag WQ Goal 200	Ag WQ Goal 20			Ag WQ Goal 2000		
CMC Freshwater, Total @ 157 mg/L Hardness (as CaCO ₃)	None est.	340 i,m,w	None est.	7.5	2510	16 i,m,w	21.4	145	None est.	690		8.8	None est.	176	22 o	None Est.
CCC Freshwater, Total @ 157 mg/L Hardness (as CaCO ₃)	None est.	150 i,m,w	None est.	3.5	299	11 i,m,w	13.7	5.7	None est.	76	5 q	None est.	None est.	176	5.2 o	None Est.
Human Health, Total Water + Org.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Human Health, Total Organisms Only	4300 a,t	None Est.	n	n	n	n	None Est.	n	0.051 a	4600 a	n	None Est.	6.3 a,t	None Est.	220,000 a,j	None Est.
Other factors (303d listing, bioaccum ...)																
Reasonable Potential	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	N

Notes: Footnotes, abbreviations, and other notations from Final Rule, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California, 40 CFR 131, FR/Vol. 65, No. 97, May 18, 2000/Rules and Regulations. **MFL**= Million fibers per Liter, **LEC**= Lowest Effluent concentration; **MEC**= Maximum effluent concentration. **(based on last 5 years of data)**

Reasonable Potential: (Y) when MEC>most stringent criterion or Max Background concentration >most stringent criterion (and the pollutant is detected in the effluent).

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

Reasonable Potential: (N) when both MEC and Max Background concentration are < most stringent criterion.

Cadmium, Chromium (III), Copper, Lead, Nickel, Silver, Zinc CMC and CCC criteria were based on a minimum effluent hardness of 157 mg/L as CaCO₃. No receiving water hardness available.

REASONABLE POTENTIAL ANALYSIS FOR PRIORITY POLLUTANTS

Constituent, Unit CTR #	2, 3, 7, 8-TCDD (Dioxin), µg/L # 16	Acrolein, µg/L # 17	Acrylonitrile, µg/L # 18	Benzene, µg/L # 19	Bromoform, µg/L # 20	Carbon Tetrachloride, µg/L # 21	Chlorobenzene (Monochloro-benzene), µg/L # 22	Chlorodibromo- methane, µg/L # 23	Chloroethane, µg/L # 24	2-Chloro-ethylvinyl Ether, (chloroalkylether), µg/L # 25
LEC	ND	ND	ND	ND	ND	ND	ND	2	ND	ND
MEC	ND	0.8 DNQ	0.5 DNQ	0.07 DNQ	8.4	4	ND	39.7	2.2	ND
Maximum Background	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Numeric Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Narrative Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CMC Freshwater, Total	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
CCC Freshwater, Total	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
Human Health, Total Water +Org Only	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Human Health, Total Org Only	1.4E-08 c	780 t	0.66 a,c,t	71 a,c	360 a,c	4.4 a,c,t	21,000 a,j,t	34 a,c	None Est.	None Est.
Other factors (303d listing, bioaccum)										
Reasonable Potential	N	N	N	N	N	N	N	Y	N	N

Constituent, Unit CTR #	Chloroform, µg/L # 26	Dichlorobromo- methane, µg/L # 27	1,1-Dichloroethane, µg/L # 28	1,2-Dichloro- ethane, µg/L # 29	1,1-Dichloro- ethylene, µg/L # 30	1,2-Dichloro- propane, µg/L # 31	1,3-Dichloro- propylene, µg/L # 32	Ethylbenzene, µg/L # 33	Methyl Bromide (Bromomethane), µg/L # 34	Methyl Chloride (Chloromethane), µg/L # 35
LEC	4.3	4.4	ND	ND	ND	ND	ND	ND	ND	ND
MEC	112	73.4	ND	ND	0.2 DNQ	ND	ND	ND	ND	0.4 DNQ
Maximum Background	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Numeric Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Narrative Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CMC Freshwater, Total	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
CCC Freshwater, Total	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
Human Health, Total Water +Org Only	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Human Health, Total Org Only	(CTR reserved)USEPA 470	46 a,c	None Est.	99 a,c,t	3.2 a,c,t	39 a	1,700 a,t	29,000 a,t	4,000 a	n
Other factors (303d listing, bioaccum)										
Reasonable Potential	N	Y	N	N	N	N	N	N	N	N

REASONABLE POTENTIAL ANALYSIS FOR PRIORITY POLLUTANTS

Constituent, Unit CTR #	Methylene Chloride, µg/L # 36	1,1,2,2-Tetra- chloroethane µg/L # 37	Tetrachloro- ethylene, µg/L # 38	Toluene, µg/L # 39	1,2-Trans- Dichloro ethylene, µg/L # 40	1,1,1-Trichloro- ethane, µg/L # 41	1,1,2-Trichloro- ethane, µg/L # 42	Trichloro- ethylene, µg/L # 43	Vinyl Chloride, µg/L # 44	2-Chloro- phenol, µg/L # 45
LEC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MEC	ND	ND	ND	4.4	ND	ND	ND	ND	ND	ND
Maximum Background	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Numeric Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Narrative Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CMC Freshwater, Total	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
CCC Freshwater, Total	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
Human Health, Total Water +Org Only										
Human Health, Total Org Only	1,600 a,c	11 a,c,t	8.85 c,t	200,000 a	140,000 a	n	42 a,c,t	81 c,t	525 c,t	400 a
Other factors (303d listing, bioaccum ...)										
Reasonable Potential	N	N	N	N	N	N	N	N	N	N

Constituent, Unit CTR #	2, 4 Dichlorophenol, µg/L # 46	2,4-Dimethylphenol, µg/L # 47	2-Methyl 4,6-Di- nitrophenol, µg/L # 48	2,4-Dinitrophenol, µg/L # 49	2-Nitrophenol, µg/L # 50	4-Nitrophenol, µg/L # 51	4-chloro-3-methyl phenol, µg/L # 52	Pentachloro- phenol, µg/L # 53	Phenol, µg/L # 54
LEC	ND	ND	ND	ND	ND	ND	ND	ND	ND
MEC	ND	ND	ND	ND	ND	ND	ND	ND	0.9 DNQ
Maximum Background	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Numeric Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Narrative Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CMC Freshwater, Total At pH=6.5	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	5.3 f,w	None Est.
CCC Freshwater, Total At pH=6.5	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	4 f,w	None Est.
Human Health, Total Water +Org Only									
Human Health, Total Org Only	790 a,t	2,300 a	765 t	14,000 a,t	None Est.	None Est.	None Est.	8.2 a,c,j	4,600,000 a,j,t
Other factors (303d listing, bioaccum ...)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Reasonable Potential	N	N	N	N	N	N	N	N	N

REASONABLE POTENTIAL ANALYSIS FOR PRIORITY POLLUTANTS

Constituent, Unit CTR #	2, 4, 6 Trichloro- phenol, µg /L # 55	Acenaphthene, µg/L # 56	Acenaphthylene, µg/L # 57	Anthracene, µg/L # 58	Benzidine, µg/L # 59	Benzo(a) anthracene, µg/L # 60	Benzo(a) Pyrene, µg/L # 61	Benzo(b) fluoranthene, µg/L # 62	Benzo(ghi) perylene, µg/L # 63
LEC	ND	ND	ND	ND	ND	ND	ND	ND	ND
MEC	0.5 DNQ	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Background	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Numeric Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Narrative Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CMC Freshwater, Total	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
CCC Freshwater, Total	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
Human Health, Total Water +Org Only	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Human Health, Total Org Only	6.5 a,c	2,700 a	None established	110,000 a	0.00054 a,c,t	0.049 a,c	0.049 a,c	0.049 a,c	None established
Other factors (303d listing, bioaccum ...)									
Reasonable Potential	N	N	N	N	N	N	N	N	N

Constituent, Unit CTR #	Benzo(k) fluoranthene, µg/L # 64	Bis (2-Chloro- ethoxy) Methane, µg/L # 65	Bis (2-Chloroethyl) Ether, µg/L # 66	Bis (2-Chloroiso- propyl) Ether, µg/L # 67	Bis (2-Ethylhexyl) Phthalate, µg/L # 68	4-Bromophenyl Phenyl Ether, µg/L # 69	Butyl benzyl Phthalate, µg/L # 70	2-Chloro- naphthalene, µg/L # 71	4-Chlorophenyl Phenyl Ether, µg/L # 72
LEC	ND	ND	ND	ND	ND	ND	ND	ND	ND
MEC	ND	ND	ND	ND	7	ND	0.2 DNQ	ND	ND
Maximum Background	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Numeric Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Narrative Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CMC Freshwater, Total	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
CCC Freshwater, Total	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
Human Health, Total Water +Org Only									
Human Health, Total Org Only	0.049 a,c	None est	1.4 a,c,t	170,000 a,t	5.9 a,c,t	None est	5,200 a	4,300 a	None Est.
Other factors (303d listing, bioaccum ...)									
Reasonable Potential	N	N	N	N	I	N	N	N	N

REASONABLE POTENTIAL ANALYSIS FOR PRIORITY POLLUTANTS

Constituent, Unit CTR #	Chrysene, µg/L # 73	Dibenzo (ah) anthracene, µg/L # 74	1,2 Dichloro- benzene, µg/L # 75	1, 3 Dichloro- benzene, µg/L # 76	1, 4 Dichloro- benzene, µg/L # 77	3,3-Dichloro- benzidine, µg/L # 78	Diethyl Phthalate, µg/L # 79	Dimethyl Phthalate, µg/L # 80	Di-n-Butyl Phthalate, µg/L # 81
LEC	ND	ND	ND	ND	ND	ND	ND	ND	ND
MEC	ND	ND	ND	ND	ND	ND	0.1 DNQ	ND	2 DNQ
Maximum Background	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Numeric Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Narrative Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CMC Freshwater, Total	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
CCC Freshwater, Total	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
Human Health, Total Water +Org Only	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Human Health, Total Org Only	0.049 a,c	0.049 a,c	17,000 a	2,600	2,600	0.077 a,c,t	120,000 a,t	2,900,000 t	12,000 a,t
Other factors (303d listing, bioaccum ...)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Reasonable Potential	N	N	N	N	N	N	N	N	N

Constituent, Unit CTR #	2,4-Dinitrotoluene, µg/L # 82	2,6-Dinitrotoluene, µg/L # 83	Di-n-Octyl Phthalate, µg/L # 84	1,2-Diphenyl- hydrazine, µg/L # 85	Fluoranthene, µg/L # 86	Fluorene, µg/L # 87	Hexachloro- benzene, µg/L # 88	Hexachloro- butadiene, µg/L # 89	Hexachloro- cyclopentadiene, µg/L # 90
LEC	ND	ND	ND	ND	ND	ND	ND	ND	ND
MEC	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Background	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Numeric Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Narrative Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CMC Freshwater, Total	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
CCC Freshwater, Total	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
Human Health, Total Water +Org Only	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Human Health, Total Org Only	9.1 c,t	None Est.	None Est.	0.54 a,c,t	370 a	14,000 a	0.00077 a,c	50 a,c,t	17,000 a,j,t
Other factors (303d listing, bioaccum ...)									
Reasonable Potential	N	N	N	N	N	N	N	N	N

REASONABLE POTENTIAL ANALYSIS FOR PRIORITY POLLUTANTS

Constituent, Unit CTR #	Hexachloroethane, µg/L # 91	Indeno (1,2,3-cd) pyrene, µg/L # 92	Isophorone, µg/L # 93	Naphthalene, µg/L # 94	Nitrobenzene, µg/L # 95	N-Nitrosodimethyl- amine, µg/L # 96	N-Nitrosodi- Propylamine, µg/L # 97	N-Nitrosodiphenyl- amine µg/L # 98
LEC	ND	ND	ND	ND	ND	ND	ND	ND
MEC	ND	ND	ND	0.06 DNQ	ND	ND	ND	ND
Maximum Background	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Numeric Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Narrative Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CMC Freshwater, Total	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
CCC Freshwater, Total	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
Human Health, Total Water +Org Only	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Human Health, Total Org Only	8.9 a,c,t	0.049 a,c	600 c,t	None Est.	1,900 a,j,t	8.1 a,c,t	1.4 a	16 a,c,t
Other factors (303d listing, bioaccum ...)								
Reasonable Potential	N	N	N	N	N	N	N	N

Constituent, Unit CTR #	Phenanthrene µg/L # 99	Pyrene, µg/L # 100	1,2,4-Trichlorobenzene, µg/L # 101	Aldrin, µg/L # 102	α-BHC, µg/L # 103	β-BHC, µg/L # 104	γ-BHC (Lindane), µg/L # 105	δ-BHC, µg/L # 106	Chlordane, µg/L # 107	4,4' DDT, µg/L # 108
LEC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MEC	ND	ND	ND	ND	ND	ND	ND	0.053 DNQ	ND	ND
Maximum Background	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Numeric Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Narrative Basin Plan Objective				ND, <0.005	ND, <0.01	ND, <0.014	ND, <0.019	ND, <0.005	ND, <0.1	ND, <0.01
CMC Freshwater, Total	None Est.	None Est.	None Est.	3 g	None Est.	None Est.	0.95 w	None Est.	2.4 g	1.1 g
CCC Freshwater, Total	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	0.0043 g	0.001 g
Human Health, Total Water +Org Only	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Human Health, Total Org Only	None established	11,000 a	None established	0.00014 a,c	0.013 a,c	0.046 a,c	0.063 c	None established	0.00059 a,c	0.00059 a,c
Other factors (303d listing, bioaccum ...)				PCHC	PCHC	PCHC	PCHC	PCHC	PCHC	PCHC
Reasonable Potential	N	N	N	N	N	N	N	I	N	N

REASONABLE POTENTIAL ANALYSIS FOR PRIORITY POLLUTANTS

Constituent, Unit CTR #	4, 4'-DDE, µg/L # 109	4,4'-DDD, µg/L # 110	Dieldrin, µg/L # 111	alpha-Endo- sulfan, µg/L # 112	beta-Endo- sulfan, µg/L # 113	Endosulfan Sulfate, µg/L # 114	Endrin, µg/L # 115	Endrin Aldehyde, µg/L # 116	Heptachlor, µg/L # 117	Heptachlor Epoxide, µg/L # 118	PCBs, µg/L # 119-125	Toxaphene, µg/L # 126
LEC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MEC	0.024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Background	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Numeric Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Narrative Basin Plan Objective	ND, <0.05	ND, <0.05	ND, <0.01	ND, <0.02	ND, <0.01	ND, <0.05	ND, <0.01	ND, <0.01	ND, <0.01	ND, <0.01	N/A	N/A
CMC Freshwater, Total	None Est.	None Est.	0.24 w	0.22 g	0.22 g	None Est.	0.086 w	None Est.	0.52 g	0.52 g	None Est.	0.73
CCC Freshwater, Total	None Est.	None Est.	0.056 w	0.056 g	0.056 g	None Est.	0.036 w	None Est.	0.0038 g	0.0038 g	0.014u	0.0002
Human Health, Total Water +Org Only	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Human Health, Total Org Only	0.00059 a,c	0.00084 a,c	0.00014 a,c	240 a	240 a	240 a	0.81 a,j	0.81 a,j	0.00021 a,c	0.00011 a,c	0.00017c,v	0.00075a,c
Other factors (303d listing, bioaccum ...)	PCHC	PCHC	PCHC	PCHC	PCHC	PCHC	PCHC	PCHC	PCHC	PCHC		
Reasonable Potential	I	N	N	N	N	N	N	N	N	N	N	N

Notes: Footnotes, abbreviations, and other notations from Final Rule, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California, 40 CFR 131, FR/Vol. 65, No. 97, May 18, 2000/Rules and Regulations. **MFL**= Million fibers per Liter, **LEC**= Lowest Effluent concentration; **MEC**= Maximum effluent concentration. **(based on last 5 years of data)**

Reasonable Potential: (Y) when MEC>most stringent criterion or Max Background concentration >most stringent criterion (and the pollutant is detected in the effluent).

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

Reasonable Potential: (N) when both MEC and Max Background concentration are < most stringent criterion.

Pentachlorophenol CMC and CCC criteria based on a minimum effluent pH limitation of 6.5.

PCHC= Persistent chlorinated hydrocarbon pesticides

II. REASONABLE POTENTIAL ANALYSIS FOR OTHER POLLUTANTS OF CONCERN

Constituent, Unit	Aluminum, µg/L	Ammonia as N, mg/L	Barium, µg/L	Boron, µg/L	Chloride, mg/L	Electrical Conductivity, µmhos/cm	Fluoride µg/L	Iron, µg/L	Mn, µg/L	Nitrate as N, mg/L	Nitrite as N, mg/L	Sodium, mg/L	Sulfate, mg/L	TDS, mg/L	Tributyltin, µg/L
LEC	8.7	ND	17.8	ND	194	750	ND	ND	14.9	ND	ND	N/A	120	790	ND
MEC	70	12	45	ND	307	4030	1600	100	57	12	0.09	N/A	221	1150	0.294
Average Background	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Maximum Background	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Numeric Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Narrative Basin Plan Objective	USEPA 87 CCC 750 CMC	USEPA 1.09 CCC 2.14 CMC	N/A	Ag WQ Goal 700	USEPA 230 CCC 860 CMC	Ag WQ Goal 700	Ag WQ Rome Paper 1,000	USEPA 1000 CCC	Ag WQ Goal 200	N/A	N/A	N/A	N/A	Ag WQ Goal 450	USEPA 0.072 CCC 0.46 CMC
Other factors (303d listing, bioaccum ...)					Ag WQ Goal 106			Ag WQ Goal 5000							
Reasonable Potential	N	Y	N	N	Y	Y	I	N	N	N	N	N	N	Y	I

Constituent, Unit	Alachlor, µg/L	Atrazine, µg/L	Bentazon, µg/L	Carbofuran, µg/L	Chlorpyrifos, µg/L	Cis-1,2-dichloro- ethene, µg/L	Dalapon, µg/L	Di(2-ethylhexyl) adipate, µg/L	Diazinon µg/L	1,2-Dibromo- 3-chloro- propane (DBCP) µg/L	Dinose, µg/L	Diquat, µg/L	Endothal, µg/L	Ethylene Dibromide, µg/L
LEC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MEC	ND	ND	ND	2.75 DNQ	ND	ND	4.15 DNQ	0.5 DNQ	ND	0.011	ND	ND	ND	ND
Average Background	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Maximum Background	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Numeric Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Narrative Basin Plan Objective	N/A	N/A	N/A	N/A	USEPA 0.041 CCC 0.083 CMC	N/A	N/A	N/A	USEPA 0.17 CCC 0.17 CMC	N/A	N/A	N/A	N/A	N/A
Other factors (303d listing, bioaccum ...)														
Reasonable Potential	N	N	N	N	N	N	N	N	N	N	N	N	N	N

REASONABLE POTENTIAL ANALYSIS FOR OTHER POLLUTANTS OR CONCERN

Constituent, Unit	Foaming Agents (MBAS), µg/L	Glyphosate, µg/L	Methoxy-chlor, µg/L	Methyl-tert-butyl ether (MTBE), µg/L	Molinate (Ordram), µg/L	Oxamyl, µg/L	Picloram, µg/L	Simazine, µg/L	Styrene, µg/L	Trichloro-fluoro methane, µg/L	1,1,2-Trichloro-1,2,2-Trifluoroethane, µg/L	2,4,5-TP (Silvex), µg/L	2,4-D, µg/L	Thiobencarb, µg/L	Xylenes, µg/L
LEC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MEC	430	ND	ND	ND	2.1	ND	ND	ND	0.1 DNQ	ND	ND	ND	ND	ND	ND
Average Background	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Maximum Background	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Numeric Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Narrative Basin Plan Objective	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other factors (303d listing, bioaccum ...)															
Reasonable Potential	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Constituent, Unit	Aldicarb Sulfoxide, µg/L	Chlorine, Total Residual µg/L	pH, standard units	Phosphorus, µg/L	Phosphate µg/L	Sulfide µg/L	Sulfite µg/L	OCDD (Dioxin) TEF=0.0001 µg/L					
LEC	ND	ND	6.8	1800	2000	ND	ND	ND					
MEC	350	2200	10	2350	2400	400	2000	0.00000000731 DNQ					
Average Background	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A					
Maximum Background	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A					
Numeric Basin Plan Objective	N/A	N/A	6.5 to 8.5	N/A	N/A	N/A	N/A	N/A					
Narrative Basin Plan Objective	N/A	USEPA 11 CCC 19 CMC	N/A	N/A	N/A	N/A	N/A	N/A					
Other factors (303d listing, bioaccum ...)			Ag WQ Goal 6.5 to 8.4					Human Health, Total Org Only 0.000000014					
Reasonable Potential	N	Y	Y	N	N	N	N	N					

LEC= Lowest Effluent concentration; MEC= Maximum effluent concentration. (based on last 5 years of data)

Reasonable Potential: (Y) when MEC>most stringent criterion or Max Background concentration >most stringent criterion (and the pollutant is detected in the effluent).

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

Reasonable Potential: (N) when both MEC and Max Background concentration are < most stringent criterion.

Ammonia's USEPA criteria based on a maximum effluent pH limitation of 8.5 and a maximum monthly average receiving water temperature of 14.4 °C.