

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

CENTRAL VALLEY REGION

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ORDER NO. R5-2008-XXXX
NPDES NO. CA0080489

**WASTE DISCHARGE REQUIREMENTS FOR THE
STALLIONS SPRINGS COMMUNITY SERVICES DISTRICT
WASTEWATER TREATMENT FACILITY
KERN COUNTY**

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

Table 1. Discharger Information

Discharger	Stallion Springs Community Services District
Name of Facility	Wastewater Treatment Facility
Facility Address	28500 Stallion Springs Drive
	Tehachapi, California 93561
	Kern County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge.	

The discharge by the Owner from the discharge points 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	Domestic wastewater	35°04'52" N	118°38'14" W	Chanac Creek, tributary to Tejon 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:	<Adoption Date or 50 after if contested>
This Order shall expire on:	<5 Years from Adoption 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IT IS HEREBY ORDERED, that Order No. R5-2002-0054 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on **<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	Stallion Springs Community Services District
Name of Facility	Wastewater Treatment Facility
Facility Address	28500 Stallion Springs Drive
	Tehachapi, California 93561
	Kern County
Facility Contact, Title, and Phone	David Aranda, General Manager, (661) 822-3268
Mailing Address	Same
Type of Facility	Publicly Owned Treatment Works
Facility Design Flow	0.5 million gallons per day (mgd)

II. FINDINGS

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

A. Background. The Stallion Springs Community Services District (hereinafter Discharger) is currently discharging pursuant to Waste Discharge Requirements (WDRs) Order No. R5-2002-0054 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0080489. The Discharger submitted a Report of Waste Discharge, dated September 21, 2006 and applied for a NPDES permit renewal to discharge up to 0.10 mgd of treated wastewater from the Wastewater Treatment Facility (hereinafter Facility). Supplemental information was requested on October 31, 2006 and February 28, 2007 and submitted on February 8, 2007 and April 3, 2007. The application was deemed complete on August 1, 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 wastewater collection, treatment, and disposal system. The treatment system consists of a bar screen, two oxidation ditches/clarifier units, a chlorine feed system, a chlorine contact chamber, a dechlorination agent feed system, four concrete-lined sludge drying beds, and a 1.5 million gallon concrete-lined effluent storage pond. Wastewater is discharged from Discharge Point 001 (see table on cover page) to Chanac Creek, a water of the United States, in the Grapevine Hydrologic Unit, Tejon Creek Hydrologic Area (556.20) and the South Valley Floor Water Hydrologic Unit, Arvin-Wheeler Ridge Hydrologic Unit (557.30). Chanac Creek is tributary to Tejon Creek within the Tejon Creek Hydrologic

Area in the Tulare Lake Basin. 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 WDRs pursuant to Article 4, Chapter 4, Division 7 of the CWC (commencing with Section 13260).
- D. Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A-E, G, and H 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 Title 40, Code of Federal Regulations, Part 122.44, (40 CFR 122.44) require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR 133. 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 22.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

40 CFR 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) 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 for the Tulare Lake Basin, Second Edition, revised January 2004 (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. Chanac Creek is a West Side Stream with the following designated beneficial uses: agricultural supply (AGR), industrial service supply (IND), industrial process supply (PRO), water contact recreation (REC-1), non-contact water recreation (REC-2), warm freshwater habitat (WARM); and rare, threatened, or endangered species (RARE); wildlife habitat (WILD); and groundwater recharge (GWR).

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Chanac Creek	AGR, IND, PRO, REC-1, REC-2, WARM, RARE, WILD, and GWR.

Requirements of this Order implement the Basin Plan.

- I. National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.
- J. State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
- K. Compliance Schedules and Interim Requirements.** In general, an NPDES permit must include final effluent limitations that are consistent with Clean Water Act section 301 and with 40 CFR 122.44(d). There are exceptions to this general rule. The State Water Board has concluded that where the Regional Water Board’s Basin Plan allows for schedules of compliance and the Regional Water Board is newly interpreting a narrative standard, it may include schedules of compliance in the permit to meet effluent limits that implement a narrative standard. See *In the Matter of Waste Discharge Requirements for Avon Refinery* (State Board Order WQ 2001-06 at pp. 53-55). See also *Communities for a Better Environment et al. v. State Water Resources Control Board*, 34 Cal.Rptr.3d 396, 410 (2005). The Basin Plan for the Sacramento and San

Joaquin Rivers includes a provision that authorizes the use of compliance schedules in NPDES permits for water quality objectives that are adopted after the date of adoption of the Basin Plan, which was September 25, 1995 (See Basin Plan at page IV-16). Consistent with the State Water Board's Order in the CBE matter, the Regional Water Board has the discretion to include compliance schedules in NPDES permits when it is including an effluent limitation that is a "new interpretation" of a narrative water quality objective. This conclusion is also consistent with the United States Environmental Protection Agency policies and administrative decisions. See, e.g., Whole Effluent Toxicity (WET) Control Policy. The Regional Water Board, however, is not required to include a schedule of compliance, but may issue a Time Schedule Order pursuant to 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.

- 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. The technology-based effluent limitations consist of restrictions on BOD₅, TSS, and settleable solids. The water quality-based effluent limitations consist of restrictions on ammonia, total residual chlorine, pH, pathogens, copper, and EC. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 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.** 40 CFR 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California’s antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 is consistent with the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board’s Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet the permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution No. 68-16.
- O. Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. The incremental EC limit in this Order is less stringent than that in the previous Order. As discussed in detail in the Fact Sheet the relaxation of this effluent limitation is consistent with the anti-backsliding requirements of the CWA and federal regulations.
- P. Monitoring and Reporting.** 40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.
- Q. Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to

specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.

- R. Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections IV.B, IV.C, and V.B. of this Order are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.
- S. Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.
- T. Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

III. DISCHARGE PROHIBITIONS

- A. Discharge of wastewater at a location or in a manner different from that described in the Findings is prohibited.
- B. The by-pass or overflow of wastes from the Facility is prohibited, except as allowed by Federal Standard Provisions I.G. and I.H. (Attachment D).
- C. Discharge or treatment that creates a nuisance or pollution as defined in Section 13050 of the California Water Code are prohibited.
- D. Discharges of pollutant-free wastewater into the collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Order are prohibited. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.
- E. Discharge of waste classified as "hazardous" as defined in section 2521(a) of Title 23, CCR, or "designated" as defined in CWC section 13173, is prohibited.
- F. Discharge of oil or any residuary product of petroleum, or of chemicals known to cause cancer or reproductive toxicity, is prohibited except as specifically authorized herein.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations – Discharge Point 001

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001 with compliance measured at Monitoring Locations EFF-001A and EFF-001C 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
BOD 5-day @ 20°C	mg/L	30	45	90
	lbs/day ¹	25	38	75
Total Suspended Solids	mg/L	30	45	90
	lbs/day ¹	25	38	75
Copper, Total Recoverable	µg/L	10.3	--	20.6
Ammonia, Total (as N) (April 1 – October 31)	mg/L	0.60	--	1.5
Settleable Solids	ml/L	0.1	--	--

¹ Based on a flow limit of 0.10 mgd.

- b. **Percent Removal:** The average monthly percent removal of BOD 5-day 20°C and total suspended solids shall not be less than 85 percent.
- c. **pH:** The pH shall not be less than 6.5 or greater than 8.3 standard units.
- d. **Acute Whole Effluent Toxicity:** Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:
 - i. 70% for any one bioassay; and
 - ii. 90% for the median for any three consecutive bioassays.
- e. **Total Residual Chlorine.** Effluent total residual chlorine shall not exceed:
 - i. 0.01 mg/L, as a 4-day average;
 - ii. 0.02 mg/L, as a 1-hour average;
- f. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed:
 - i. 23 most probable number (MPN) per 100 mL, as a 7-day median; and
 - ii. 240 MPN/100 mL, more than once in any 30-day period.

- g. **Average Dry Weather Flow.** The monthly average daily dry weather flow (May through October) shall not exceed 0.10 mgd.
- h. **Electrical Conductivity.** The average annual electrical conductivity @ 25°C (EC) of the effluent shall not exceed the flow-weighted average annual EC of the source water plus 500 umhos/cm, or a maximum of 1,000 umhos/cm, whichever is more stringent. When source water is from more than one source, the EC shall be a flow-weighted average of all sources. Compliance shall be evaluated based on water supply monitoring and effluent monitoring at EFF-001A (see Monitoring and Reporting Program, Attachment E).

2. Interim Effluent Limitations

From **<Permit Effective Date >** to the specified End Dates, the Discharger shall maintain compliance with the following limitations at Discharge Point 001 with compliance measured at EFF-001A, as described in the attached MRP, in lieu of the corresponding final effluent limitations specified for the same parameters in Subsection 1, above.

Table 7. Interim Effluent Limitations

Parameter	Units	Maximum Daily	End Date
Ammonia	mg/L	1.5	<permit expiration date>
Copper	µg/L	62.2	17 May 2010

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 Chanac Creek:

- 1. **Un-ionized Ammonia.** Un-ionized ammonia to be present in amounts that adversely affect beneficial uses nor to be present in excess of 0.025 mg/L (as N).
- 2. **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.

3. **Biostimulatory Substances.** Water to contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.
4. **Chemical Constituents.** Chemical constituents to be present in concentrations that adversely affect beneficial uses.
5. **Color.** Discoloration that causes nuisance or adversely affects beneficial uses.
6. **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 at centroid of flow;
 - b. The 95 percentile dissolved oxygen concentration to fall below 75 percent of saturation; nor
 - c. The dissolved oxygen concentration to be reduced below 5.0 mg/L at any time.

The monthly median of the mean daily dissolved oxygen concentration and the 95-percentile concentration shall be determined as follows: (1) calculate the percent of saturation for each monitoring event during the month (based on the temperature for each monitoring event), (2) calculate the median of all the percent of saturation values computed during the month, and (3) calculate the 95th percentile of all the percent of saturation values computed during the month.

Where ambient DO is less than these objectives, discharges shall not cause a further decrease in DO concentrations.

7. **Floating Material.** Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.
8. **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.
9. **pH.** The pH to be depressed below 6.5 raised above 8.3 nor changed by more than 0.3 units.
10. **Pesticides:**
 - a. Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses; and
 - b. Pesticide increases in bottom sediments or aquatic life in concentrations that adversely affect beneficial uses.

11. **Radioactivity:** Radionuclides to be present in concentrations that are deleterious 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.
12. **Sediments.** The suspended sediment load and suspended sediment discharge rate of surface waters to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
13. **Settleable Material.** Substances to be present in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.
14. **Suspended Material.** Suspended material to be present in concentrations that cause nuisance or adversely affect beneficial uses.
15. **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 to domestic or municipal water supplies.
16. **Temperature.** The natural temperature to be increased by more than 5°F.
17. **Toxicity.** Toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.
18. **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 – Not applicable

VI. PROVISIONS

A. Standard Provisions

1. The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.
2. The Discharger shall comply with the following provisions:
 - a. If the Discharger's wastewater treatment plant is publicly owned or subject to regulation by California Public Utilities Commission, it shall be supervised and

operated by persons possessing certificates of appropriate grade according to Title 23, CCR, Division 3, Chapter 26.

- b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
 - i. violation of any term or condition contained in this Order;
 - ii. obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;
 - iii. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and
 - iv. a material change in the character, location, or volume of discharge.

The causes for modification include:

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

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

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

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

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

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

- e. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.
- f. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.
- g. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by USEPA under Section 307 of the CWA, or amendment thereto, for any discharge to the municipal system.
- h. The discharge of any radiological, chemical or biological warfare agent or high-level, radiological waste is prohibited.
- i. A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.
- j. Safeguard to electric power failure:
 - i. The Discharger shall provide safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharge shall comply with the terms and conditions of this Order.
 - ii. Upon written request by the Regional Water Board the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past five years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Regional Water Board.

- iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Regional Water Board not approve the existing safeguards, the Discharger shall, within ninety days of having been advised in writing by the Regional Water Board that the existing safeguards are inadequate, provide to the Regional Water Board and USEPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. The schedule of compliance shall, upon approval of the Regional Water Board, become a condition of this Order.
- k. The Discharger, upon written request of the Regional Water Board, shall file with the Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. This report may be combined with that required under Regional Water Board Standard Provision VI.A.2.j.

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 publicly owned treatment works (POTW) whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the Discharger shall notify the Regional Water Board by 31 January. A copy of the notification shall be sent to appropriate local elected officials, local permitting agencies and the press. Within 120 days of the notification, the Discharger shall submit a technical report showing how it will prevent flow volumes from exceeding capacity or how it will increase capacity to

handle the larger flows. The Regional Water Board may extend the time for submitting the report.

- m. The Discharger shall submit technical reports as directed by the Executive Officer. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.
- n. Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Regional Water Board and USEPA.
- o. The Discharger shall conduct analysis on any sample provided by USEPA as part of the Discharge Monitoring Quality Assurance (DMQA) program. The results of any such analysis shall be submitted to USEPA's DMQA manager.
- p. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.
- q. All monitoring and analysis instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their continued accuracy.
- r. The Discharger shall file with the Regional Water Board technical reports on self-monitoring performed according to the detailed specifications contained in the Monitoring and Reporting Program attached to this Order.
- s. The results of all monitoring required by this Order shall be reported to the Regional Water Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. Unless otherwise specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.
- t. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, sections 13385, 13386, and 13387.
- u. For POTWs, prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any

portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (CWC Section 1211).

- v. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, maximum daily effluent limitation, 1-hour average effluent limitation, or receiving water limitation contained in this Order, the Discharger shall notify the Regional Water Board by telephone (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)].
- w. The Discharger shall ensure that the treatment facilities are designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

B. Monitoring and Reporting Program (MRP) Requirements

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

C. Special Provisions

1. Reopener Provisions

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

- c. **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.
- d. **Water Effects Ratios (WER) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for copper. If the Discharger performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.
- e. **REC-1 Evaluation.** This Order may be reopened to modify the disinfection requirements should results of the REC-1 Evaluation study below indicate it is necessary to protect the beneficial uses of Chanac Creek.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

- a. **Chronic Whole Effluent Toxicity.** For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct chronic whole effluent toxicity testing, as specified in the Monitoring and Reporting Program (Attachment E, Section V.). Furthermore, this Provision requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge exceeds the toxicity numeric monitoring trigger established in this Provision, the Discharger is required to initiate a Toxicity Reduction Evaluation (TRE), in accordance with an approved TRE Work Plan, and take actions to mitigate the impact of the discharge and prevent reoccurrence of toxicity. A TRE is a site-specific study conducted in a stepwise process to identify the source(s) of toxicity and the effective control measures for effluent toxicity. TREs are designed to identify the causative agents and sources of whole effluent toxicity, evaluate the effectiveness of the toxicity control options, and confirm the reduction in effluent toxicity. This Provision includes requirements for the Discharger to develop and submit a TRE Work Plan and includes procedures for accelerated chronic toxicity monitoring and TRE initiation.
- i. **Initial Investigative Toxicity Reduction Evaluation (TRE) Work Plan.** By **<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 EPA guidance¹.

- b. **Reclamation Feasibility Study.** Any request for an increase in flow must be accompanied by a study in the form of a technical report that describes a proposed reclamation project or detailed descriptions of what the Discharger has done to investigate reclamation opportunities and the reasons why reclamation is not feasible.
- c. **REC-1 Evaluation.** By **<One year after adoption of this Order>**, the Discharger shall submit a technical report containing results of an evaluation of existing and potential level of REC-1 uses of water in and from Chanac Creek, as well as the level of disinfection necessary to ensure full protection of existing and potential REC-1 uses.

3. Best Management Practices and Pollution Prevention

- a. **Pollutant Minimization Program.** The Discharger shall develop and conduct a Pollutant Minimization Program (PMP) as further described below when there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either: 1) A sample result is reported as DNQ and the effluent limitation is less than the RL; or 2) A sample result is reported as ND and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in MRP section X.

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

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

- i. An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;
- ii. Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;
- iii. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;
- iv. Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and
- v. An annual status report that shall be sent to the Regional Water Board including:
 - (1) All PMP monitoring results for the previous year;
 - (2) A list of potential sources of the reportable priority pollutant(s);
 - (3) A summary of all actions undertaken pursuant to the control strategy; and
 - (4) A description of actions to be taken in the following year.

4. Construction, Operation and Maintenance Specifications

- a. The dissolved oxygen content in the upper zone (1 foot) of effluent in the effluent storage pond shall not be less than 1.0 mg/L for three consecutive sampling events. Should the DO be below 1.0 mg/L for three consecutive sampling events, the Discharger shall report the findings to the Regional Water Board and propose a remedial approach to resolve the low DO results within 30 days.
- b. Public contact with wastewater at the Facility shall be precluded through such means as fences, signs, and other acceptable alternatives.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. Pretreatment Requirements.

Not applicable

b. 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 proper 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 that causes exceedences of Basin Plan groundwater quality objectives. 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 Basin Plan groundwater quality objectives.
- 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.
- v. Use of biosolids as a soil amendment shall comply with valid waste discharge requirements issued by a Regional Water Quality Control Board. In most cases, this will mean General Biosolids Order (SWRCB Water Quality Order No. 2000-10-DWQ, General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities). For a biosolids use project to be covered by the General Biosolids Order, the Discharger must file a complete Notice of Intent and receive a Notice of Applicability for each project.

c. Biosolids Disposal Requirements

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.

- d. **Collection System.** On May 2, 2006, the State Water Board adopted State Water Board Order 2006-0003, a Statewide General WDR for Sanitary Sewer Systems. The Discharger is subject to the requirements of Order 2006-0003 and any future revisions thereto. The Discharger has applied for and has been approved for coverage under State Water Board Order 2006-0003 for operation of its wastewater collection system.

Requirements of this Order concerning operation and maintenance do not apply to the Discharger's collection system.

6. Other Special Provisions

- a. 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.
- b. 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 California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.
- c. The Discharger shall for each fiscal year (July-June) pay the required annual filing fee in accordance with the current fee schedule established by the State Water Board by the due date specified in the annual invoice (typically issued during October of each fiscal year). The fee is for privilege of discharge authorized by this Order.

7. Compliance Schedules

- a. **Compliance Schedules for Final Effluent Limitations for Copper**
 - i. **By 18 May 2010**, the Discharger shall comply with the final effluent limitations for copper. On 8 May 2008, the Discharger submitted a compliance schedule justification for copper. The compliance schedule justification included all items specified in Paragraph 3, items (a) through (d), of section 2.1 of the SIP. As this compliance schedule is greater than one year, the Discharger shall submit annual progress reports in

accordance with the Monitoring and Reporting Program (Attachment E, Section X.D.1.)

- ii **Implementation Schedule.** The Discharger shall submit to the Regional Water Board a corrective action plan and implementation schedule to assure compliance with the final effluent limitations for copper by **18 May 2010**.
- iii **Corrective Action Plan/Treatment Feasibility Study.** The Discharger shall implement a corrective action plan and an engineering treatment feasibility study examining the feasibility, costs and benefits of different treatment options that may be required to remove copper discharge. A work plan and time schedule for preparation of the corrective action plan and treatment feasibility study shall be completed and submitted to the Regional Water Board **<within 90 days of the adoption date of this Order>** for approval by the Executive Officer. The plan and study shall be completed and submitted to the Regional Water Board **<within 12 months of the adoption date of this Order>**, and progress reports shall be submitted in accordance with the Monitoring and Reporting Program (Attachment E, Section X.D.1.).

b. Compliance Schedule for Ammonia

The Discharger shall complete measures to ensure compliance with the Ammonia Effluent Limitations Section IV.A.1.a., as follows:

<u>Task</u>	<u>Compliance Date</u>
i. Submit a work plan and time schedule to propose compliance measures.	By (120 days after the adoption date of Order)
ii. Implement approved work plan.	Within 60 days of Executive Officer approval of work plan.
iii. Full Compliance	Not to exceed <5 years from adoption of Order.>

Technical reports submitted pursuant to this Provision are subject to the requirements of Standard Provision VI.A.2.m. and Executive Officer approval.

Until final compliance, the Discharger shall submit progress reports in accordance with the Monitoring and Reporting Program (Attachment E, Section X.D.1.).

VII. COMPLIANCE DETERMINATION

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

- A. **BOD and TSS Effluent Limitations.** Compliance with the final effluent limitations for BOD and TSS required in sections IV.A.1. shall be ascertained by grab samples. Compliance with effluent limitations IV.A.1 for percent removal shall be calculated using the arithmetic mean of 20°C BOD (5-day) and total suspended solids in effluent samples collected over a monthly period as a percentage of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.
- B. **Monthly Average Daily Dry Weather Flow Effluent Limitations.** The monthly average daily dry weather flow represents the monthly average daily flow during the months of May through October. Compliance with the monthly average daily flow limitation shall be ascertained for the dry weather months of May through the end of October.
- C. **Total Coliform Organisms Effluent Limitations (Section IV.A.1.).** 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 23 per 100 milliliters, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period.

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:

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

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).

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.

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.

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.

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:

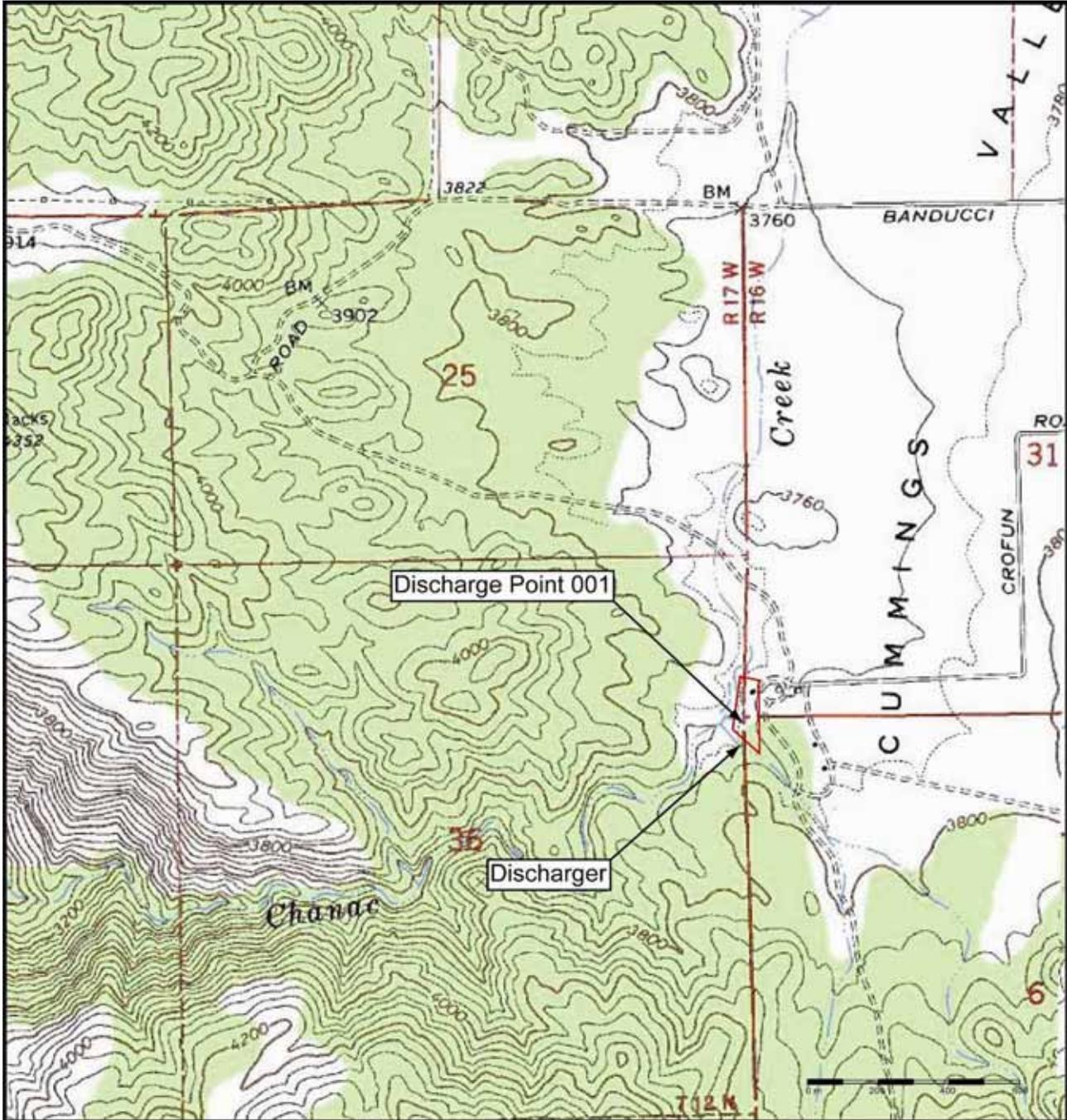
x is the observed value;

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

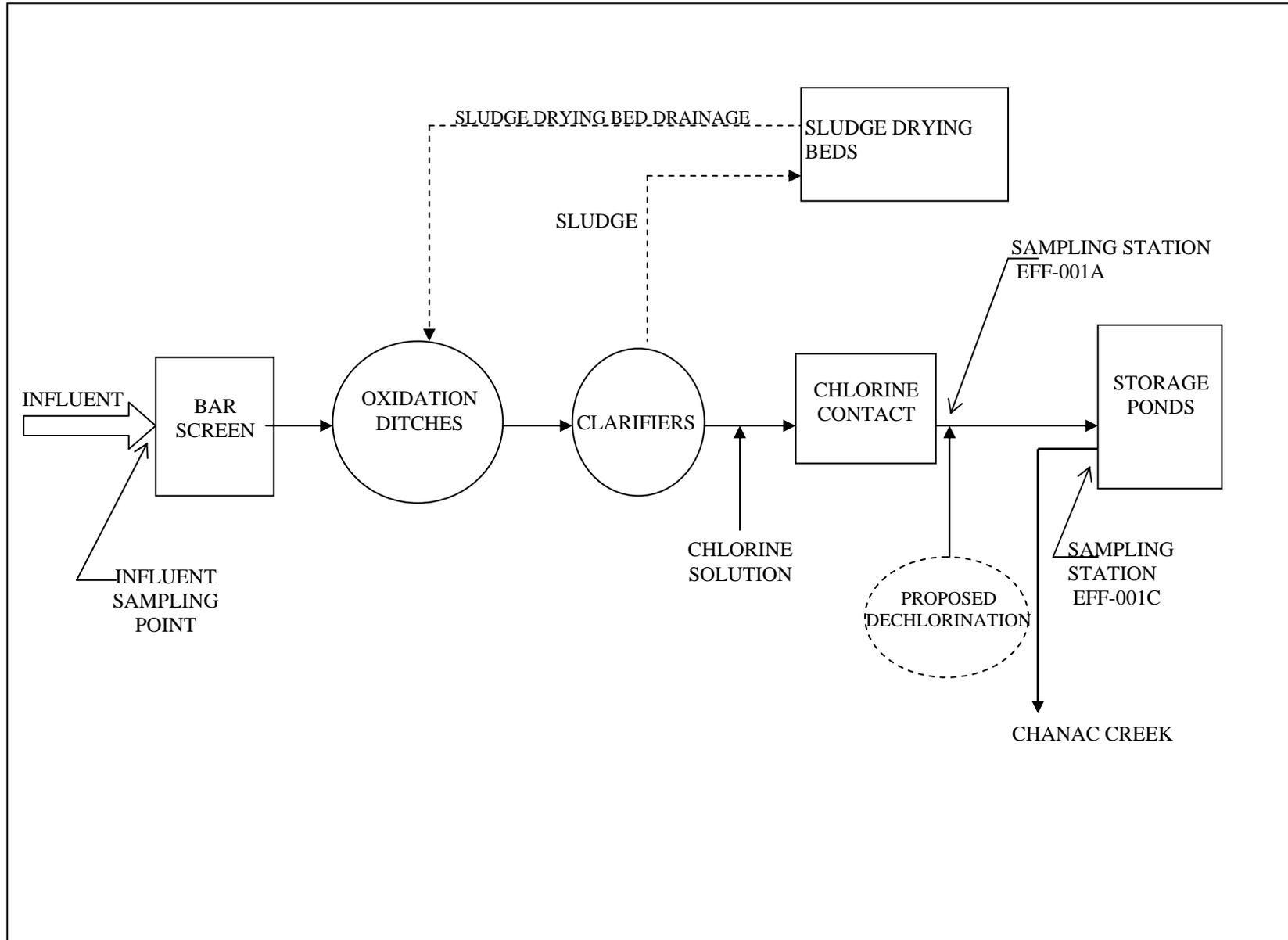


Drawing Reference:
CUMMINGS MOUNTAIN
U.S.G.S TOPOGRAPHIC MAP
7.5 MINUTE QUADRANGLE
Topographic Map
Dated 7/1/1994

SITE LOCATION MAP
STALLION SPRINGS
COMMUNITY SERVICES DISTRICT
WASTEWATER TREATMENT FACILITY
KERN 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(i); Wat. Code, § 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(m)(4)(i)):
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(n)(3)):
 - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));
 - b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 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 C.F.R. § 122.41(n)(3)(iii)); and
 - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(j)(2).)

B. Records of monitoring information shall include:

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

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

1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and
2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 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 C.F.R. § 122.41(h); Wat. Code, § 13267.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.22(b)(2)); and
 - c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(l)(6)(i).)
2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 C.F.R. § 122.41(l)(6)(ii)):
 - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)
 - b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

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

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.42(b)(3).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

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

I. GENERAL MONITORING PROVISIONS

- A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of this Regional Water Board.
- B. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Department of Public Health. In the event a certified laboratory is not available to the Discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Regional Water Board staff. The Quality Assurance-Quality Control Program must conform to USEPA guidelines or to procedures approved by the Regional Water Board.
- C. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Public Health. Laboratories that perform sample analyses shall be identified in all monitoring reports.
- D. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.
- E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this 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
--	INF-001	Influent shall be sampled prior to entering headworks of WWTF
001	EFF-001A	Treated effluent shall be sampled after dechlorination, prior to discharge to the storage pond
001	EFF-001B	Treated effluent shall be sampled in the storage pond at a depth of one foot, opposite the inlet
001	EFF-001C	Treated effluent shall be sampled at the outlet of the storage pond during discharge to the receiving water
--	RSW-001U	100 feet upstream of point of discharge
--	RSW-001D	100 feet downstream of point of discharge
--	BIO-001	Sludge shall be composited and sampled
--	SPL-001	Potable water shall be sampled where a representative sample 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
BOD 5-day 20°C	mg/L	Grab	1/week	1
Total Suspended Solids	mg/L	Grab	1/week	1
Settleable Solids	ml/L	Grab	1/week	1

¹ Approved methods per 40 CFR 136

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001A

1. The Discharger shall monitor treated domestic wastewater at EFF-001A, 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-3a. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Meter	Continuous	1
BOD 5-day 20°C	mg/L	Grab	1/week ²	1
pH	s.u.	Grab	5/week	1
Total Suspended Solids	mg/L	Grab	1/week ²	1
Total Coliform Organisms	MPN/100 mL	Grab	2/week	1
Settleable Solids	mL/L	Grab	5/week	1
Turbidity	NTU	Grab	5/week	1
Ammonia (as N) ^{3, 4}	mg/L	Grab	1/week	1
Chloride	mg/L	Grab	2/year	1
Hardness (as CaCO ₃)	mg/L	Grab	1/quarter	1
Cyanide	µg/L	Grab	1/quarter	1
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/month	1
Total Dissolved Solids	mg/L	Grab	1/year	1
Copper, Total ⁵	µg/L	Grab	1/quarter	1
Standard Minerals ⁶	mg/L	Grab	1/year	1
Priority Pollutants ^{5, 7}	µg/L	Grab	3 times ⁸	1

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. Concurrent with influent sampling
3. Concurrent with biotoxicity monitoring, pH, temperature, and nitrate monitoring.
4. Report as total.
5. For priority pollutant constituents with effluent limitations, detection limits shall be below the effluent limitations. If the lowest minimum level (ML) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP) is not below the effluent limitation, the detection limit shall be the lowest ML. For priority pollutant constituents without effluent limitations, the detection limits shall be equal to or less than the lowest ML published in Appendix 4 of the SIP.
6. Standard minerals shall include the following: aluminum, bicarbonate (as CaCO₃) boron, calcium, carbonate, chloride, iron, magnesium, nitrate, potassium, sodium, sulfate, manganese, phosphorus, total alkalinity (including alkalinity series), and include verification that the analysis is complete (i.e., cation/anion balance).
7. Concurrent with hardness effluent sampling and receiving surface water sampling.
8. During the first, third, and fourth years of the permit term.

B. Monitoring Location EFF-001B

1. The Discharger shall monitor treated domestic wastewater at EFF-001B as follows:

Table E-3b. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Dissolved Oxygen	mg/L	Grab	1/week ^{1,2}	³
Freeboard	Feet ⁴	Measurement	1/week	³

1. If results of monitoring appear to violate the requirements of this permit, but monitoring frequency is not sufficient to validate violation or indicate a violation and potential upset of the treatment process (e.g. less than minimum dissolved oxygen concentration), the frequency of sampling shall be increased to confirm the magnitude and duration of violation, if any, and aid in identification and resolution of the problem.
2. Samples shall be collected between 0700 and 0900 hours.
3. Pollutants shall be analyzed using the analytical methods described in 40 CFR 136.
4. Freeboard shall be measured to the nearest tenth of a foot.

C. Monitoring Location EFF-001C

1. The Discharger shall monitor treated domestic wastewater at EFF-001C as follows:

Table E-3c. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Meter	Continuous	²
pH ¹	s.u.	Grab	1/week	²
Total Residual Chlorine ³	mg/L	Meter	1/day	²
Temperature ⁴	°F	Meter	1/month	²

1. Compliance with pH effluent limitation will be assessed at EFF-001A.
2. Pollutants shall be analyzed using the analytical methods described in 40 CFR 136.
3. Total chlorine residual must be monitored with a method sensitive to and accurate at the permitted level of 0.01 mg/L.
4. Effluent Temperature monitoring shall be at the Outfall location and shall be concurrent with pH monitoring.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

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

1. Monitoring Frequency – the Discharger shall perform semi-annual acute toxicity testing, concurrent with effluent ammonia sampling.
2. Sample Types – For static non-renewal and static renewal testing, the samples shall be 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-001C.

3. Test Species – Test species shall be fathead minnows (*Pimephales promelas*).
4. Methods – The acute toxicity testing samples shall be analyzed using EPA-821-R-02-012, Fifth Edition. Temperature, total residual chlorine, and pH shall be recorded at the time of sample collection. No pH adjustment may be made unless approved by the Executive Officer.
5. Test Failure – If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.

B. Chronic Toxicity Testing. The Discharger shall conduct three species chronic toxicity testing to determine whether the effluent is contributing chronic toxicity to the receiving water. The Discharger shall meet the following chronic toxicity testing requirements:

1. Monitoring Frequency – the Discharger shall perform three species chronic toxicity testing annually, beginning with the first test within 3 months of permit adoption.
2. Sample Types – Effluent samples shall be grab samples taken at the effluent monitoring location EFF-001C. The receiving water control shall be a grab sample obtained from the RSW-001U sampling location, as identified in the Monitoring and Reporting Program.
3. Sample Volumes – Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.
4. Test Species – Chronic toxicity testing measures sublethal (e.g. reduced growth, reproduction) and/or lethal effects to test organisms exposed to an effluent compared to that of the control organisms. The Discharger shall conduct chronic toxicity tests with:
 - 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** – The chronic toxicity testing shall be performed using 100% effluent and two controls. If toxicity is found in any effluent test, the Discharger must immediately retest using the dilution series identified in Table E-5, 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.C.2.a.iii.

Table E-4. Chronic Toxicity Testing Dilution Series

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

- C. **WET Testing Notification Requirements.** The Discharger shall notify the Regional Water Board within 24-hrs after the receipt of test results exceeding the monitoring trigger during regular or accelerated monitoring, or an exceedance of the acute toxicity effluent limitation.
- D. **WET Testing Reporting Requirements.** All toxicity test reports shall include the contracting laboratory’s complete report provided to the Discharger and shall be in accordance with the appropriate “Report Preparation and Test Review” sections of the method manuals. At a minimum, whole effluent toxicity monitoring shall be reported as follows:
 1. **Chronic WET Reporting.** Regular chronic toxicity monitoring results shall be reported to the Regional Water Board within 30 days following completion of the test, and shall contain, at minimum:
 - a. The results expressed in TUC, measured as 100/NOEC, and also measured as 100/LC₅₀, 100/EC₂₅, 100/IC₂₅, and 100/IC₅₀, as appropriate.
 - b. The statistical methods used to calculate endpoints;

- c. The statistical output page, which includes the calculation of the percent minimum significant difference (PMSD);
- d. The dates of sample collection and initiation of each toxicity test; and
- e. The results compared to the numeric toxicity monitoring trigger.

Additionally, the monthly discharger self-monitoring reports shall contain an updated chronology of chronic toxicity test results expressed in TUc, and organized by test species, type of test (survival, growth or reproduction), and monitoring frequency, i.e., either quarterly, monthly, accelerated, or TRE.

- 2. **Acute WET Reporting.** Acute toxicity test results shall be submitted with the monthly discharger self-monitoring reports and reported as percent survival.
- 3. **TRE Reporting.** Reports for Toxicity Reduction Evaluations shall be submitted in accordance with the schedule contained in the Discharger's approved TRE Work Plan.
- 4. **Quality Assurance (QA).** The Discharger must provide the following information for QA purposes:
 - a. Results of the applicable reference toxicant data with the statistical output page giving the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD, and dates tested.
 - b. The reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory.
 - c. Any information on deviations or problems encountered and how they were dealt with.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

Not applicable

VII. RECLAMATION MONITORING REQUIREMENTS

Not applicable

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER

A. Monitoring Locations RSW-001U and RSW-001D

- 1. The Discharger shall monitor Chanac Creek at RSW-001U and RSW-001D when there is sufficient stream flow to mix with the effluent. When there is no stream flow upstream of the discharge, the Discharger shall sample only at RSW-001D. Sample requirements are as follows:

Table E-5. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	s.u.	Grab	1/week	1
Fecal Coliform	MPN/ 100 ml	Grab	1/week	1
Temperature	°F	Grab	1/week	1
Turbidity	NTU	Grab	1/week	1
Dissolved Oxygen	mg/L	Grab	1/week	1
Ammonia, Total (as N)	mg/L	Grab	1/week ²	1
Ammonia, Unionized (as N)	mg/L	Grab	1/week ²	1
Chlorine Residual	mg/L	Grab	1/week	1
Electrical Conductivity @ 25°C	µmhos/ cm	Grab	1/month	1
Hardness (as CaCO ₃)	mg/L	Grab	1/quarterly	1
Priority Pollutants ^{3,4}	µg/L	Grab	3 times ⁵	1

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. Concurrent with pH and temperature sampling.
3. 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.
4. Concurrent with hardness effluent sampling and receiving surface water sampling.
5. During the first, third, and fourth years of the permit term at RSW-001U during periods of flow.

In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reaches bounded by Stations RSW-001U and RSW-001D. Attention shall be given to the presence or absence of:

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

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

IX. OTHER MONITORING REQUIREMENTS

A. Biosolids

1. Monitoring Location BIO-001

- a. 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 122 Appendix D, Tables II and III (excluding total phenols).
- b. 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.
- c. Sampling records shall be retained for a minimum of **five years**. A log shall be kept of sludge quantities generated and of handling and disposal activities. The frequency of entries is discretionary; however, the log should be complete enough to serve as a basis for part of the annual report.
- d. 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-6. Municipal Water Supply Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Dissolved Solids	mg/L	Grab	1/year	1
Electrical Conductivity @ 25°C ²	µmhos/cm	Grab	1/year	1
Standard Minerals ³	mg/L	Grab	1/year	1

-
- ¹ Pollutants shall be analyzed using the analytical methods described in 40 CFR 136.
² If the water supply is from more than one source, the EC shall be reported as a weighted average and include copies of supporting calculations.
³ Standard minerals shall include all major cations and anions and include verification that the analysis is complete (i.e., cation/anion balance).

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and record keeping.
2. Upon written request of the Regional Water Board, the Discharger shall submit a summary monitoring report. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).
3. **Compliance Time Schedules.** For compliance time schedules included in the Order, the Discharger shall submit to the Regional Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the compliance time schedule
4. The Discharger shall report to the Regional Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986.
5. **Reporting Protocols.** The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 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
 1685 "E" Street
 Fresno, CA 93706

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

Table E-7. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	Submit with monthly SMR
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1 st day of calendar month through last day of calendar month	Submit with monthly SMR

Quarterly	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	Submit with monthly SMR
Semiannually	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	Submit with monthly SMR
Annually	January 1 following (or on) permit effective date	January 1 through December 31	Submit with monthly SMR

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-8. Reporting Requirements for Special Provisions Progress Reports

Special Provision	Reporting Requirements
Compliance Schedules for Final Effluent Limitations for Copper compliance with final effluent limitations (Order section VI.C.7.)	1 June , annually, until final compliance
Compliance Schedule for Ammonia (Order section VI.C.7.)	1 June , annually, until final compliance

- 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.
- Annual Operations Report.** By **30 January** of each year, the Discharger shall submit a written report to the Executive Officer containing the following:
 - The names, certificate grades, and general responsibilities of all persons employed at the Facility.
 - 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.
4. By **30 January** of each year, the Discharger shall submit the most recent Stallion Springs CSD annual water quality report.
 5. By **30 January** of each year, the Discharger shall submit a summary of the compliance record. Include the results of any corrective actions taken or planned to be taken that have brought the Discharger into full compliance, or will bring the Discharger into full compliance, with waste discharge requirements.
 6. **Biosolids/Sludge Monitoring Summary.** By **30 January** of each year, the Discharger shall submit a summary of sludge monitoring to include:
 - a. Annual biosolids/sludge production in dry tons and percent tons.
 - b. A schematic diagram showing sludge handling facilities and solids flow diagram.
 - c. A description of disposal methods, including the following information related to the disposal methods used at the WWTF. If more than one method is used, include the percentage of annual sludge production disposed of by each method.
 - i. For landfill disposal, include the Order numbers of the WDRs that regulate the landfill(s) used, the present classifications of the landfill(s) used, and the names and locations of the facilities receiving sludge.
 - ii. For land application, include the locations of the site(s), and the Order numbers for any WDRs that regulate the site(s).
 - iii. For incineration, include the names and locations of the site(s) where incineration occurs, the Order numbers of WDRs that regulate the site(s), the disposal method of ash, and the names and locations of the facilities receiving the ash (if applicable).
 - iv. For composting, include the location of the site(s), and the Order numbers of and WDRs that regulate the site(s).

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	5D150118002
Discharger	Stallion Springs Community Services District
Name of Facility	Wastewater Treatment Facility
Facility Address	28500 Stallion Springs Drive
	Tehachapi, California 93561
	Kern County
Facility Contact, Title and Phone	David Aranda, General Manager, (661) 822-3268
Authorized Person to Sign and Submit Reports	Same
Mailing Address	Same
Billing Address	Same
Type of Facility	POTW
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	B
Pretreatment Program	N
Reclamation Requirements	Not applicable
Facility Permitted Flow	0.1 mgd
Facility Design Flow	0.5 mgd
Watershed	Tulare Lake Basin
Receiving Water	Chanac Creek, a tributary of Tejon Creek
Receiving Water Type	Inland Surface Water

A. Stallion Springs Community Services District (hereinafter Discharger) is the owner and operator of a wastewater treatment facility (hereinafter Facility), a wastewater collection, treatment, and disposal system.

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 Chanac Creek, a water of the United States and a tributary of Tejon Creek, and is currently regulated by Order R5-2002-0054 which was adopted on April 26 2002. The terms and conditions of the current Order have been automatically continued and remain in effect until new Waste Discharge Requirements and NPDES permit are adopted pursuant to this Order.
- C.** The Discharger filed a report of waste discharge (RWD) and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on September 21, 2006. Supplemental information was requested on October 31, 2006 and received on February 8, 2007. A site visit was conducted in January 2008, to observe operations and collect additional data to develop permit limitations and conditions.

II. FACILITY DESCRIPTION

The Discharger provides sewerage service for the unincorporated community of Stallion Springs and serves a population of approximately 1,300. The average daily flow of the Facility during the previous permit term was 0.04 mgd. The flows increased slightly during the previous permit term (0.032 mgd monthly average in 2002 to 0.04 mgd monthly average in 2006).

The Discharger also supplies source water for Stallion Springs from eight groundwater wells ranging in depth from 265 to 600 feet below ground surface. The Discharger’s 2005 Consumer Confidence Report indicates the source water has the following average concentrations: 310 mg/L total dissolved solids, 38 mg/L chloride, 58 mg/L sodium, 25.5 nitrate (as NO_3^-).

A. Description of Wastewater and Biosolids Treatment or Controls

The WWTF design daily average flow capacity is 0.50 mgd. The WWTF is a oxidation ditch package treatment plant. It consists of a bar screen, two oxidation ditches/clarifier units, a chlorine feed system, a chlorine contact chamber, a dechlorination agent feed system, four concrete-lined sludge drying beds, and a concrete-lined effluent storage pond. Dried biosolids/sludge and screenings are disposed of off site in the Bakersfield Metropolitan (Bena) Sanitary Landfill, which is regulated by Waste Discharge Requirements Order No. R5-2002-0178, adopted on 18 October 2002.

The Discharger requested in the RWD that the Regional Water Board approve a treatment system change. The Discharger requested that the Regional Water Board authorize the addition of a dechlorination system using sodium bisulfate be added to the system for use during high times of high flows, then in a letter dated August 31, 2007 the Discharger indicated the desire to use this dechlorination system full time.

B. Discharge Points and Receiving Waters

1. The Facility is in Section 6, T11N, R16W, SBB&M, as shown in Attachment B, a part of this Order.
2. Treated municipal wastewater is discharged at Discharge Point 001 to Chanac Creek, a water of the United States and a tributary to Tejon Creek at a point latitude 35°04'52" N and longitude 118°38'14" W.
3. The Facility is in the Tulare Lake Basin within the Tejon Creek Hydrologic Area (HA 556.20) at the easterly end of Cummings Valley in the Tehachapi Mountains. The elevation is about 4,000 feet above sea level. Chanac Creek is a West Side Stream that originates in the Tejon Creek Hydrologic Area (556.20) and ends in the South Valley Floor Hydrologic Unit, Arvin-Wheeler Ridge Hydrologic Area (557.30). Tejon Creek is a West Side Stream/Valley Floor Water that terminates on the San Joaquin Valley Floor in the Arvin-Wheeler Ridge Hydrologic Area.
4. Chanac Creek flows seasonally and originates in the small northwestern portion of Brite Valley and flows through Cummings Valley. It exits the Cummings Valley about 1000 feet downstream from the WWTF. The reach downstream of the discharge and prior to exiting the Cummings Valley has limited access for recreational use. Once it exits the Cummings Valley, Chanac Creek drops from an elevation of 3900 to 1200 feet above sea level in nine miles where it converges with Tejon Creek. Most of Chanac Creek in this reach has a rocky streambed traversing steep and rough terrain that is inaccessible by road and supports little recreational use. The lower reach of Tejon Creek is relatively flat, has no nearby habitation, but is accessible for recreation use.
5. Federal Emergency Management Agency maps indicate the Facility is not within a 100-year floodplain.

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

Effluent limitations contained in the existing Order for discharges from Discharge Point 001 and representative monitoring data (Monitoring Locations EFF-001A and EFF-001C) from the term of the previous Order are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitations							Detected Values (5/02 – 12/07)	
		Monthly Median	Instant. Min.	Instant. Max.	7-Day Median	Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly ¹	Highest Daily Average ¹
BOD ₅	mg/L	--	--	--	--	30	45	90	7.48	20
	lbs/day ²	--	--	--	--	25	38	75	0.31	0.94
TSS	mg/L	--	--	--	--	30	45	90	10	15
	lbs/day ²	--	--	--	--	25	38	75	0.05	0.78
pH	s.u.	--	6.5	8.3	--	--	--	--	8.02*	
Acute Toxicity	% survival	3							100♦	
Electrical Conductivity @ 25°C	µmhos/cm	4							483.4	
Flow	MGD	--	--	--	--	0.1 ⁵	--	--	0.1	0.082
Settleable Solids	ml/L	--	--	--	--	0.1	--	0.2	<0.1	<0.1
Total Coliform Organisms	MPN/100 mL	--	--	--	23	--	--	240	50†	1600*
Total Residual Chlorine	mg/L	--	--	--	--	--	0.02	0.01	<0.1 ⁶	<0.1 ⁶
Removal, BOD	% removal	85 ⁷	--	--	--	--	--	--	95.8♦	
Removal, TSS	% removal	85 ⁷	--	--	--	--	--	--	94.3♦	

¹ Unless otherwise noted as follows: ♦ Minimum Value; † 7-Day Median; * Instantaneous Maximum

² Based on upon a design treatment capacity of 0.1 MGD.

³ Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than 70 percent (one bioassay) or 90 percent (as a median of three or more bioassays).

⁴ Maximum EC of the discharge shall no exceed the source water EC plus 400 µmhos/cm.

⁵ Limit is a monthly average daily dry weather discharge flow (May through October).

⁶ Discharger did not achieve the method detection limit necessary to determine compliance with the weekly average or daily maximum until May 2007.

⁷ The arithmetic mean of BOD and TSS in effluent samples collected over a calendar month shall not exceed 15 percent of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period (85 percent removal).

D. Compliance Summary

The Discharger exceeded the daily maximum effluent coliform limit of 240 MPN/100 mL seven (7) times and the seven-day median limit of 23 MPN/100 mL three (3) times from May 2002 through May 2007. The discharge has been compliant with coliform limits since October of 2006. The Discharger exceeded the effluent incremental increase in EC of 400 umhos/cm plus the average source water EC 12 times from May 2002 through February 2008.

E. Planned Changes

The Discharger requested in the RWD that the Regional Water Board authorize the addition of a dechlorination system using sodium bisulfate be added to the system for use during high times of high flows, then in a letter dated August 31, 2007, the Discharger indicated the desire to use this dechlorination system full time. This Order approves this change.

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, Second Edition, for the Tulare Lake Basin* (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. Chanac Creek is a West Side Stream. The designated beneficial uses of West Side Streams are agricultural supply (AGR), industrial service supply (IND), industrial process supply (PRO), water contact recreation (REC-1); non-contact water recreation (REC-2); groundwater recharge (GWR); wildlife habitat (WILD); warm freshwater habitat (WARM); and rare, threatened, or endangered species (RARE).

The Basin Plan on page II-1 states: *“Protection and enhancement of beneficial uses of water against quality degradation is a basic requirement of water quality planning under the Porter-Cologne Water Quality Control Act. In setting water quality*

objectives, the Regional Water Board must consider past, present, and probable future beneficial uses of water.” and with respect to disposal of wastewaters states that “...use of waters for disposal of wastewaters is not included as a beneficial use...and are subject to regulation as activities that may harm protected uses.”

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

2. **Antidegradation Policy.** 40 CFR 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California’s antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board’s Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. As discussed in detail in the Fact Sheet (Attachment F, Section IV.D.4.) the discharge is consistent with the antidegradation provisions of 40 CFR 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 federal regulations at title 40 CFR122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. 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), California Water Code, requires that “*the Regional Water Board shall prescribe effluent limitations as part of the waste discharge requirements of a POTW for all substances that the most recent toxic chemical release data reported to the state emergency response commission pursuant to Section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. Sec. 11023) (EPCRA) indicate as discharged into the POTW, for which the State Water Board or the Regional Water Board has established numeric water quality objectives, and*

has determined that the discharge is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective”.

The most recent toxic chemical data report does not indicate any reportable off-site releases or discharges to the collection system for this Facility. 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. **Storm Water Requirements.** USEPA promulgated Federal Regulations for storm water on 16 November 1990 in 40 CFR Parts 122, 123, and 124. The NPDES Industrial Storm Water Program regulates storm water discharges from wastewater treatment facilities. Wastewater treatment plants are applicable industries under the storm water program and are obligated to comply with the Federal Regulations.

This Facility is not required to obtain coverage under the State Water Board, Water Quality Order No. 97-03-DWQ, National NPDES General Permit No. CAS000001 (General Permit), WDRS For Discharges Of Storm Water Associated With Industrial Activities as the discharge is less than 1.0 mgd.

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

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

1. Under Section 303(d) of the 1972 Clean Water Act, states, territories and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. On July 25, 2003 USEPA gave final approval to California's 2002 Section 303(d) List of Water Quality Limited Segments. The Basin Plan references this list of Water Quality Limited Segments (WQLSs), which are defined as “...those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is

not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 CFR 130, et seq.).” The Basin Plan also states, *“Additional treatment beyond minimum federal standards will be imposed on dischargers to [WQLSs]. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment.”* Neither Chanac Creek nor Tejon Creek are listed as impaired on the 2006 Section 303(d) List of Impaired Water Quality Limited Segments.

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 TMDLs are scheduled for Chanac Creek or Tejon 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 waste discharge requirements are consistent with water quality objectives; and
 - c. The treatment and storage facilities described herein are associated with a municipal wastewater treatment plant.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

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

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.”* 40 CFR, §122.44(d)(1)(vi) further provides that *“[w]here a state has not established a water quality criterion for a specific chemical*

pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits.”

The CWA requires point source discharges to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations: 40 CFR 122.44(a) requires that permits include applicable technology-based limitations and standards, and 40 CFR 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water where numeric water quality objectives have not been established. The Regional Water Board’s Basin Plan, page IV-21, contains an implementation policy (“Application of Water Quality Objectives”) that specifies that the Regional Water Board “*will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives.*” This Policy complies with 40 CFR 122.44(d)(1). With respect to narrative objectives, the Regional Water Board must establish effluent limitations using one or more of three specified sources, including (1) EPA’s published water quality criteria, (2) a proposed state criterion (*i.e.*, water quality objective) or an explicit state policy interpreting its narrative water quality criteria (*i.e.*, the Regional Water Board’s “Policy for Application of Water Quality Objectives”)(40 CFR 122.44(d)(1) (vi) (A), (B) or (C)), or (3) an indicator parameter. The Basin Plan contains a narrative objective requiring that: “*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life*” (narrative toxicity objective). The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, discoloration, toxic substances, radionuclides, or taste and odor producing substances that adversely affect beneficial uses. The Basin Plan states that material and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The Basin Plan also limits chemical constituents in concentrations that adversely affect surface water beneficial uses. 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. Prohibition A concerns a substantial change in location or manner of the discharge, or a change in its character, from what was provided in the RWD and evaluated for compliance with the Water Code and CWA. Discharge requirements in this Order may not be protective of water quality if there is a substantial change, and hence such is prohibited.
2. Prohibition B prohibits bypass pursuant to 40 CFR 122.41 (m)(4), with federal allowance for exceptions set forth in section 1.G of Attachment D, Standard Provisions.

3. Prohibition C reflects two general situations that, if created, justify cleanup or abatement enforcement activities and assessment of administrative civil liabilities.
4. Prohibition D incorporates prohibitions as set forth in the Basin Plan and not covered by the preceding prohibitions.
5. Prohibition E concerns two categories of waste that are subject to full containment as prescribed by Title 23 and Title 27 of the California Code of Regulations and, if discharged, have high potential for creating a condition that would violate Prohibition C as well.

B. Technology-Based Effluent Limitations

1. Scope and Authority

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

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

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

2. Applicable Technology-Based Effluent Limitations

- a. **BOD₅ and TSS.** 40 CFR 133 establish the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for BOD₅ and TSS. A daily maximum effluent limitation for BOD₅ and TSS is also included in the Order to ensure that the treatment works are not organically overloaded and operate in accordance with design capabilities. In addition, 40 CFR 133.102, in describing the minimum level of effluent quality attainable by secondary treatment, states that the 30-day average percent removal shall not be less than 85 percent. This Order contains a limitation requiring an average of 85 percent removal of BOD₅ and TSS over each calendar month.
- b. **Flow.** The Facility was designed to provide a secondary level of treatment for up to a design flow of 0.50 mgd. However, Order No. R5-2002-0054 limits the discharge flow to 0.10 mgd. As previously mentioned, actual flows average 0.04 mgd. This Order carries over the discharge flow limit from Order No. R5-2002-0054.

- c. **Settleable Solids.** Settleable solids provides a direct measure of the performance of the WWTF clarification systems. The settleable solids limits in this Order are carried over from the previous Order.

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

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

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

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
BOD 5-day @ 20°C	mg/L	30	45	90	--	--
	lbs/day ¹	25	38	75	--	--
pH	s.u.	--	--	--	6.0	9.0
Total Suspended Solids	mg/L	30	45	90	--	--
	lbs/day ¹	25	38	75	--	--
Settleable solids	ml/L	0.1	--	0.2	--	--

¹ Based on a design flow of 0.10 mgd.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

- a. **Receiving Water.** The receiving stream is Chanac Creek, which is tributary to Tejon Creek. The applicable beneficial uses of Chanac Creek are described above in Attachment F, Section III.C.1.
- 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.

Effluent limitations for the discharge must be set to protect the beneficial uses of the receiving water for all discharge conditions. For purposes of establishing water quality-based effluent limitations, a reported hardness value of 151 mg/L as CaCO₃ was used.

c. Assimilative Capacity/Mixing Zone.

Not applicable

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. The narrative tastes and odors objective states: *“Water shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.”*
- b. Federal regulations require effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause, or contribute to an in-stream excursion above a narrative or numerical water quality standard. Based on information submitted as part of the application, in studies, and as directed by monitoring and reporting programs, the Regional Water Board finds that the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard for copper and ammonia. Water quality-based effluent limitations (WQBELs) for these constituents are included in this Order. 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 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 four-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. 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 maximum recorded receiving water (R-2) pH during the April 1 through October 31 time periods between 2002 and 2007 was 8.92. Using this value, the resulting acute ammonia criterion is 1.51 mg/L. The maximum observed 30-day average R-2 pH, temperature pair was 8.63 and 61.9°F (16.6°C), respectively

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

during the April 1 through October 31 time periods between 2002 and 2007. Using this pH, temperature pair, the resulting chronic ammonia criterion is 0.77 mg/L. As shown in Table F-5, the resulting seasonal effluent limitations using a SIP-like procedure are 0.6 mg/L (as N) for the average monthly effluent limitation and 1.5 mg/L (as N) for the maximum daily effluent limit. The maximum effluent concentration recorded during the summer season between 2002 and 2007 was 2.7 mg/L. Seasonal effluent limitations for ammonia are included in this Order to assure the treatment process adequately nitrifies the waste stream to protect the aquatic habitat beneficial uses.

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

The USEPA Technical Support Document for Water Quality-Based Toxics Control [EPA/505/2-90-001] contains statistical methods for converting chronic (four-day) and acute (one-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. However, because chlorine is an acutely toxic constituent, an average one-hour limitation is considered more appropriate than an average daily limitation. Average one-hour and four-day limitations for chlorine, based on these criteria, are included in this Order. The Discharger can immediately comply with these new effluent limitations for chlorine residual.

- g. **Copper.** The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for copper. The criteria for copper are presented in dissolved concentrations. USEPA recommends conversion factors to translate dissolved concentrations to total concentrations. The USEPA default conversion factors for copper in freshwater are 0.96 for both the acute and the chronic criteria. Using the worst-case measured hardness from the effluent (151 mg/L as CaCO₃) and the USEPA recommended dissolved-to-total translator, the applicable chronic criterion (maximum four-day average concentration) is 13.27 µg/L and the applicable acute criterion (maximum one-hour average concentration) is 20.64 µg/L, as total recoverable.

The MEC for total copper was 20 µg/L, based on 7 samples collected between October 2001 and November 2006, while the maximum observed upstream receiving water total copper concentration was 1.6 µg/L, based on 1 sample collected 16 November 2006. Therefore, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria for copper. No dilution is allowed due to periods of no flow in the receiving water. An AMEL and MDEL for total copper of 10.3 µg/L and 20.6 µg/L, respectively, are included in this Order based on CTR criteria for the protection of freshwater aquatic life (See Table F-4 for WQBEL calculations). Based on the sample

results in the effluent, it appears the Discharger cannot meet these new limitations, therefore, an interim effluent limitation has been established.

- h. **Electrical Conductivity.** Order No. R5-2002-0054 contains an EC limitation of 400 umhos/cm over source water where the source water is a weighted moving average of the most recent four quarters. This Order replaces the limit with the performance based Basin Plan limitation of 500 umhos/cm over source water as an annual average. Compliance with anti-backsliding requirements is discussed in Section IV.D.3. below.
- i. **Pathogens.** The existing Order requires effluent limitations for 7-day median and daily maximum total coliform organisms of 23 and 240 MPN/100 mL, respectively, for discharge to Chanac Creek. Uniform Guidelines for Wastewater Disinfection from the California Department of Public Health (DPH) recommends that effluent discharged to accessible ephemeral streams with little or no natural flow during part or all of the year must not have a median coliform MPN exceeding 23/100 mL. This Order carries over the existing coliform limits.
- j. **pH.** The Basin Plan includes a water quality objective for surface waters that the "...pH shall not be depressed below 6.5 nor raised above 8.3. Effluent Limitations for pH are included in this Order based on the Basin Plan objectives for pH.
- k. **Toxicity.** See Section IV.C.5. of the Fact Sheet regarding whole effluent toxicity.

4. WQBEL Calculations

- a. Effluent limitations for copper and ammonia were calculated in accordance with section 1.4 of the SIP. The following paragraphs describe the methodology used for calculating effluent limitations.
- b. **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

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

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

CMC = criteria maximum concentration (one-hour average)

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

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

D = dilution credit

B = maximum receiving water concentration

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

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

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

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

Water quality-based effluent limitations were calculated for copper and ammonia as follows in Tables F-4 through F-5, below.

Table F-4. WQBEL Calculations for Copper

	Acute	Chronic
Criteria, dissolved ($\mu\text{g/L}$) ⁽¹⁾	19.82	12.74
Dilution Credit	No Dilution	No Dilution
Translator ⁽²⁾	0.96	0.96
ECA, total recoverable ⁽³⁾	20.64	13.27
ECA Multiplier ⁽⁴⁾	0.32	0.52
LTA	6.63	7.0
AMEL Multiplier (95 th %) ⁽⁵⁾⁽⁶⁾	1.55	⁽⁸⁾
AMEL ($\mu\text{g/L}$)	10.29	⁽⁸⁾
MDEL Multiplier (99 th %) ⁽⁷⁾	3.11	⁽⁸⁾
MDEL ($\mu\text{g/L}$)	20.64	⁽⁸⁾

⁽¹⁾ CTR aquatic life criteria, based on a hardness of 151 mg/L as CaCO₃.

- (2) EPA Translator used as default.
- (3) ECA calculated per section 1.4.B, Step 2 of SIP. This allows for the consideration of dilution.
- (4) Acute and Chronic ECA Multiplier calculated at 99th percentile per section 1.4.B, Step 3 of SIP or per sections 5.4.1 and 5.5.4 of the TSD.
- (5) Assumes sampling frequency n=>4.
- (6) The probability basis for AMEL is 95th percentile per section 1.4.B, Step 5 of SIP or section 5.5.4 of the TSD.
- (7) The probability basis for MDEL is 99th percentile per section 1.4.B, Step 5 of SIP or section 5.5.4 of the TSD.
- (8) Limitations based on acute LTA (Acute LTA < Chronic LTA)

**Table F-5. WQBEL Calculations for Ammonia
(April 1 – October 31)**

	Acute	Chronic
Criteria (mg/L) ⁽¹⁾	1.51	0.77
Dilution Credit	No Dilution	No Dilution
ECA	1.51	0.77
ECA Multiplier	0.187	0.642
LTA ⁽²⁾	0.28	0.49
AMEL Multiplier (95 th %)	2.04	⁽³⁾
AMEL (mg/L)	0.57	⁽³⁾
MDEL Multiplier (99 th %)	5.34	⁽³⁾
MDEL (mg/L)	1.5	⁽³⁾

⁽¹⁾ USEPA Ambient Water Quality Criteria

⁽²⁾ 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 and per TSD modification presented in the 22 December 1999 Federal Register notice where $\sigma^2 = \ln(CV^2/30 + 1)$.

⁽³⁾ Limitations based on acute LTA ($LTA_{acute} < LTA_{chronic}$)

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

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

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	s.u.	--	--	--	6.5	8.3
Copper	µg/L	10.3	--	20.6	--	--
Ammonia (April 1 – October 31)	mg/L	0.60	--	1.5	--	--

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

- i. 0.01 mg/L, as a 4-day average; and
- ii. 0.02 mg/L, as a 1-hour average.

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

- i. 23 most probable number (MPN) per 100 mL, as a 7-day median; and
- ii. 240 MPN/100 mL, more than once in any 30-day period.

- c. **Electrical Conductivity.** The average annual electrical conductivity @ 25°C (EC) of the effluent shall not exceed the flow-weighted average annual EC of the source water plus 500 umhos/cm, or a maximum of 1,000 umhos/cm, whichever is more stringent. When source water is from more than one source, the EC shall be a flow-weighted average of all sources. Compliance shall be evaluated based on water supply monitoring and effluent monitoring at EFF-A (see Monitoring and Reporting Program, Attachment E).

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-6) 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-6) Adequate WET data is not available to determine if the discharge has reasonable potential to cause or contribute to an in-stream excursion above of the Basin Plan’s narrative toxicity objective.

Attachment E of this Order requires annual chronic WET monitoring for demonstration of compliance with the narrative toxicity objective.

In addition to WET monitoring, 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.

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 and copper 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, coliform, and turbidity, weekly average effluent limitations have been replaced or supplemented with effluent limitations utilizing shorter averaging periods. The rationale for using shorter averaging periods

for these constituents is discussed in Attachment F, Section IV.C.3., above, where applicable.

3. Satisfaction of Anti-Backsliding Requirements.

With the exception of the incremental effluent limit for EC, all limits in this Order are as stringent as those in the previous Order.

As discussed below, the relaxation of effluent limitations for EC is consistent with the anti-backsliding requirements of the CWA and federal regulations.

Order No. R5-2002-0054 contains an EC limitation of 400 umhos/cm over source or 1000 umhos/cm, whichever is less, where source water is a weighted moving average of the most recent four quarters. This Order replaces this limitation with the Basin Plan limitation of 500 umhos/cm over source water, or 1,000 umhos/cm, which ever is more stringent as an annual average.

Review of Order No. R5-2002-0054 and applicable self-monitoring data provides new information that indicates technical mistakes were made during the formulation of the Order.

Order No. R5-2002-0054 indicates that the EC limit therein was set based on the assumptions that the source water EC ranged from 350 to 400 umhos/cm, the effluent incremental increase over source water ranged from 280 to 330 umhos/cm, and the effluent incremental increase over source water would be less than 400 umhos/cm. The Order does not indicate what data were used to make these assumptions, but as described below, they are incorrect. There is also no evidence that a statistical analysis of available data was conducted to determine the probable range of source water EC or effluent incremental increase over the source water EC, thus the existing Order fails to capture the true range of the source water EC and the effluent incremental increase.

Self-monitoring data for 1 January 1998 through March of 2002 (the range that should have been considered during the formulation of Order No. R5-2002-0054) is presented in Attachment H. The data indicates that the source water EC ranges from 200 umhos/cm to 525 umhos/cm, not 350 umhos/cm to 400 umhos/cm.

The incremental increase over source has ranged from -40 umhos/cm to 500 umhos/cm, not 280 umhos/cm to 330 umhos/cm. It has equaled 400 umhos/cm three times and exceeded 400 umhos/cm three times during the period under consideration; it has not remained less than 400 umhos/cm. Assuming the data is normally distributed, the projected (mean plus 3.3 standard deviations) maximum incremental increase would be 598 umhos/cm. Assuming the data is lognormally distributed and employing a TSD type projection, the maximum incremental increase would be 800 umhos/cm. Given this, the assumption that the incremental increase over source water was less than 400 umhos/cm at the time of permit issuance was technically incorrect.

Attachment H also presents the data in graphical form. The graph shows that the effluent EC exceeded the four quarter average source water EC plus 400 umhos/cm at least 17 times. If the EC limit in Order No. R5-2002-0054 would have been implemented in the Order preceding Order No. R5-2002-0054 previous Order, the Discharger would have violated it at least 17 times. The failure to capture this when drafting Order No. R5-2002-0054 is a technical mistake.

As described above, since adoption of Order No. R5-2002-0054, Discharger exceeded the incremental EC effluent limitation 12 times between April 2003 and December 2007.

In addition to the above, Discharger has in the last six months implemented effluent dechlorination to consistently comply with effluent chlorine residual limits. This will increase the EC of its effluent by an as of yet undetermined amount.

Backsliding in the case of EC is appropriate pursuant to 40 CFR 122.44 (l)(1) which states:

Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued, interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit **(unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62.)**

40 CFR 122.62 states in part:

When the Director receives any information (for example, inspects the facility, receives information submitted by the permittee as required in the permit (see §122.41), receives a request for modification or revocation and reissuance under §124.5, **or conducts a review of the permit file**) he or she may determine whether or not one or more of the causes listed in paragraphs (a) and (b) of this section for **modification or revocation and reissuance or both exist. If cause exists**, the Director may modify or revoke and reissue the permit accordingly...

(a) *Causes for modification.* The following are causes for modification but not revocation and reissuance of permits except when the permittee requests or agrees.

(1) *Alterations.* There are material and substantial alterations or additions to the permitted facility or activity (including a change or changes in the permittee's sludge use or disposal practice) which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit.

(2) *Information.* The Director has received new information. Permits may be modified during their terms for this cause only if the information was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and would have justified the application of different permit conditions at the time of issuance.

(15) To correct technical mistakes, such as errors in calculation, or mistaken interpretations of law made in determining permit conditions.

Backsliding is justified under one if not all of the above sections of 40 CFR 122.62. As described above, the Discharger has implemented dechlorination, which will increase the incremental increase in effluent EC. This meets section (a)(1).

New information ((a)(2)) in the form of a review of the record and applicable monitoring data reveal that the underlying assumptions used to calculate the incremental EC increase allowable under Order No. R5-2002-0054 were erroneous ((a)(15)). The change in the EC effluent limitation 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

The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16. The Regional Water Board conducted an antidegradation analysis and concluded that the discharge was consistent with State and federal antidegradation requirements when it adopted Order No. R5-2002-0054. The Order specifically found that the WWTF provides best practicable treatment and control (BPTC), that the discharge is consistent with policies and plans implemented by the Regional Water Board, and that any degradation associated with the discharge would not cause a condition of nuisance or pollution, would not adversely impact beneficial uses of the water in Chanac Creek or groundwater, and would be to the maximum benefit to the people of the State.

The proposed Order authorizes an increase in the salinity of the discharge to Chanac Creek, as it allows a 100 umhos/cm increase in the incremental effluent EC limit to 500 umhos/cm over that of source water. The proposed limit is based on limits in the Basin Plan for municipal and domestic wastewater discharges (Basin Plan Pages IV-10 and IV-11. When these limitations were adopted as policy in the Basin Plan, it was within the context of the balance of the Basin Plan. The Basin Plan contains water quality objectives that limit the rate of groundwater salinity degradation from all sources and contains narrative water quality objectives for surface water. The cumulative salinity affects from all discharges were considered at the time and implementation of the maximum authorized effluent limits does not warrant a complete reevaluation for consistency whenever a permit with the Basin Plan effluent limits is considered. As described above, the proposed limit corrects mistakes made in the derivation of incremental EC limitation in Order No. R5-2002-0054. The proposed increase in effluent salinity is consistent with the Basin Plan and will not cause exceedences of water quality objectives or conditions of nuisance or pollution. Authorization of the proposed increase will change the previous finding by the Regional Water Board that the authorization of this ongoing discharge is to the maximum benefit of the people of the State.

The proposed Order is consistent with Resolution 68-16, as it requires BPTC, proscribes the discharge from causing a pollution or nuisance, and will maintain the highest water quality consistent with maximum benefit to the people of the State.

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

Table F-7. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Maximum Daily
BOD 5-day @ 20°C	mg/L	30	45	90
	lbs/day ¹	25	38	75
Total Suspended Solids	mg/L	30	45	90
	lbs/day ¹	25	38	75
Copper	µg/L	10.3	--	20.6
Ammonia (April 1 – October 31)	mg/L	0.57	--	1.5
Settleable Solids	ml/L	0.1	--	--

¹ Based on a discharge limit of 0.10 mgd.

- a. **BOD and TSS Removal.** The average monthly percent removal of BOD 5-day 20°C and total suspended solids shall not be less than 85 percent.
- b. **Total Residual Chlorine.** Effluent total residual chlorine shall not exceed:
 - i. 0.01 mg/L, as a 4-day average; and
 - ii. 0.02 mg/L, as a 1-hour average.
- c. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed:
 - i. 23 most probable number (MPN) per 100 mL, as a 7-day median; and
 - ii. 240 MPN/100 mL, more than once in any 30-day period.
- d. **Electrical Conductivity.** The average annual electrical conductivity @ 25°C (EC) of the effluent shall not exceed the flow-weighted average annual EC of the source water plus 500 umhos/cm, or a maximum of 1,000 umhos/cm, whichever is more stringent. When source water is from more than one source, the EC shall be a flow-weighted average of all sources. Compliance shall be evaluated based on water supply monitoring and effluent monitoring at EFF-001A (see Monitoring and Reporting Program, Attachment E).

E. Interim Effluent Limitations

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

The interim limitations for copper and ammonia in this Order are based on the current Facility performance. The interim limitation for ammonia is based on the maximum daily effluent limitation developed for this Order. Monitoring data indicate the Discharger can comply with this limitation. In developing the interim limitation for copper, 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 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-8 summarizes the calculations of the interim effluent limitations for copper:

Table F-8 Interim Effluent Limitation Calculation Summary

Parameter	MEC	Mean	TSD Multiplier	# of Samples	Interim Limitation
Copper	20	13.0	3.11	<10	62.2

F. Land Discharge Specifications

Not applicable.

G. Reclamation Specifications

Reclamation Specifications are not included in this Order. Orders for the subject site previous to this Order included requirements for reclaiming wastewater on the Horsethief Country Club golf course. Order No. 96-261 prescribed minimum setback distance between the golf course areas that received recycled water and structures occupied by humans. The Discharger was unable to comply with the minimum set back distance because it did not own or manage the golf course and the golf course owner was reportedly unwilling to modify the sprinkler system due to the high cost and small volume of water reclamation would provide. At the Discharger’s request, Order No. R5-2002-0054 allows the Discharger to discharge all of its effluent to Chanac Creek. The basis for the allowance was that flows to the WWTF had not significantly increased during recent years, the Discharger lacks of control or authority over the golf course, and the golf course owner’s unwillingness to modify the sprinkler system. Order No. R5-2002-0054 recognizes that ceasing reclamation was inconsistent with Regional Water Board reclamation policies, but was reasonable under the circumstances. The R5-2002-0054 Order includes a provision requiring the Discharger to submit a technical report describing a water recycling project should the Discharger propose to discharge in excess of the permitted flow of 0.1 mgd. The same circumstances with the golf course exist today. The golf course owner is unwilling to make the necessary sprinkler system modifications given that flows from the WWTF would provide such a small percentage of the irrigation demand (approximately 6 percent of the summer demand). The Discharger has not requested a flow increase for the permit renewal; however, to address the Regional Water Board’s reclamation policies, this Order requires the Discharger to include with any request to discharge in excess of 0.1 mgd a technical report that describes a water recycling project or reasons why such a project is infeasible.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Basin Plan includes narrative and numeric water quality objectives to protect the beneficial uses of surface water and groundwater.

A. Surface Water

1. Narrative and numeric Basin Plan objectives for surface waters and the resulting rational for receiving water limits are as follows:
 - a. **Ammonia.** The Basin Plan states that, “[w]alters shall not contain un-ionized ammonia in amounts which adversely affect beneficial uses. In no case shall the discharge of wastes cause concentrations of un-ionized ammonia (NH₃) to exceed 0.025 mg/l (as N) in receiving waters.”

- b. **Bacteria.** The Basin Plan includes a water quality objective that “[I]n waters designated REC-1, the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400/100 ml.” Numeric Receiving Water Limitations for bacteria are included in this Order and are based on the Basin Plan objective.
- c. **Biostimulatory Substances.** The Basin Plan includes a water quality objective that “[W]ater shall not contain biostimulatory substances that promote aquatic growths to the extent such growths cause nuisance or adversely affect beneficial uses.” Receiving Water Limitations for biostimulatory substances are included in this Order and are based on the Basin Plan objective.
- d. **Color.** The Basin Plan includes a water quality objective that “[W]ater shall be free of discoloration that causes nuisance or adversely affects beneficial uses.” Receiving Water Limitations for color are included in this Order and are based on the Basin Plan objective.
- e. **Chemical Constituents.** The Basin Plan includes a water quality objective that “[W]aters shall not contain chemical constituents in concentrations that adversely affect beneficial uses.” Receiving Water Limitations for chemical constituents are included in this Order and are based on the Basin Plan objective.
- f. **Dissolved Oxygen.** For water bodies designated as having WARM as a beneficial use, the Basin Plan includes a water quality objective of maintaining a minimum of 5.0 mg/L of dissolved oxygen. Numeric Receiving Water Limitations for dissolved oxygen are included in this Order and are based on the Basin Plan objective.
- g. **Floating Material.** The Basin Plan includes a water quality objective that “[W]aters shall not contain floating material, including but not limited to solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.” Receiving Water Limitations for floating material are included in this Order and are based on the Basin Plan objective.
- h. **Oil and Grease.** The Basin Plan includes a water quality objective that “[W]aters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.” Receiving Water Limitations for oil and grease are included in this Order and are based on the Basin Plan objective.
- i. **pH.** The Basin Plan includes water quality objective that “[T]he pH of water shall not be depressed below 6.5, raised above 8.3, or changed at any time more than 0.3 units from normal ambient pH.” This Order includes receiving water limitations for both pH range and pH change.

The Basin Plan allows an appropriate averaging period for pH change in the receiving stream.

- j. **Pesticides.** The Basin Plan includes a water quality objective for pesticides beginning on page III-3. Receiving Water Limitations for pesticides are included in this Order and are based on the Basin Plan objective.
- k. **Radioactivity.** The Basin Plan includes a water quality objective that *“[R]adionuclides shall not be present in concentrations that are harmful to human, plant, animal or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life.”* Receiving Water Limitations for radioactivity are included in this Order and are based on the Basin Plan objective.
- l. **Sediment.** The Basin Plan includes a water quality objective that *“[T]he suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses”* Receiving Water Limitations for suspended sediments are included in this Order and are based on the Basin Plan objective.
- m. **Settleable Material.** The Basin Plan includes a water quality objective that *“[W]aters shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.”* Receiving Water Limitations for settleable material are included in this Order and are based on the Basin Plan objective.
- n. **Suspended Material.** The Basin Plan includes a water quality objective that *“[W]aters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.”* Receiving Water Limitations for suspended material are included in this Order and are based on the Basin Plan objective.
- o. **Taste and Odors.** The Basin Plan includes a water quality objective that *“[W]aters shall not contain taste- or odor-producing substances in concentrations that cause nuisance, adversely affect beneficial uses, or impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin or to domestic or municipal water supplies.”* Receiving Water Limitations for taste- or odor-producing substances are included in this Order and are based on the Basin Plan objective.
- p. **Temperature.** The Basin Plan includes the objective that *“[e]levated temperature wastes shall not cause the temperature of waters designated COLD or WARM to increase by more than 5°F above natural receiving water temperature.”* This Order includes a receiving water limitation based on this objective.
- q. **Toxicity.** The Basin Plan includes a water quality objective that *“[A]ll waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.”* Receiving

Water Limitations for toxicity are included in this Order and are based on the Basin Plan objective.

- r. **Turbidity.** The Basin Plan includes a water quality objective that “[I]ncreases in turbidity attributable to controllable water quality factors shall not exceed the following limits:
- *Where natural turbidity is between 0 and 5 Nephelometric Turbidity Units (NTUs), increases shall not exceed 1 NTU.*
 - *Where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20 percent.*
 - *Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs.*
 - *Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent.”*

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

B. Groundwater

1. WWTF units (e.g., oxidation ditches, sludge drying beds, effluent storage pond) are concrete lined and are not expected to produce leachate/percolate in quantities that cause groundwater degradation. Thus, this Order does not include groundwater limitations.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

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

A. Influent Monitoring

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

C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity.** Annual 96-hour bioassay testing is required to demonstrate compliance with the effluent limitation for acute toxicity.
2. **Chronic Toxicity.** Annual chronic whole effluent toxicity testing is required to demonstrate compliance with the Basin Plan's narrative toxicity objective. The previous Order required that chronic toxicity testing be performed once within 6 months of permit adoption and once at nine months prior to permit expiration. The testing frequency has been increased to provide the necessary data to demonstrate compliance with the Basin Plan's narrative toxicity object over the course of the permit term.

D. Receiving Water Monitoring

1. Surface Water

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

2. Groundwater

Not applicable

E. Other Monitoring Requirements

1. Biosolids Monitoring

Biosolids monitoring is required to ensure compliance with the biosolids disposal requirements (Special Provisions VI.C.5.b. and c.). 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 40 CFR 122.41, and additional conditions applicable to specified categories of permits

in accordance with 40 CFR 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42.

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

B. Special Provisions

1. Reopener Provisions

- a. **Whole Effluent Toxicity.** This Order requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity through a Toxicity Reduction Evaluation (TRE). This Order may be reopened to include a numeric chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened to include a numeric chronic toxicity limitation based on that objective.
- b. **Water Effects Ratio (WER) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for copper. If the Discharger performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

2. Special Studies and Additional Monitoring Requirements

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

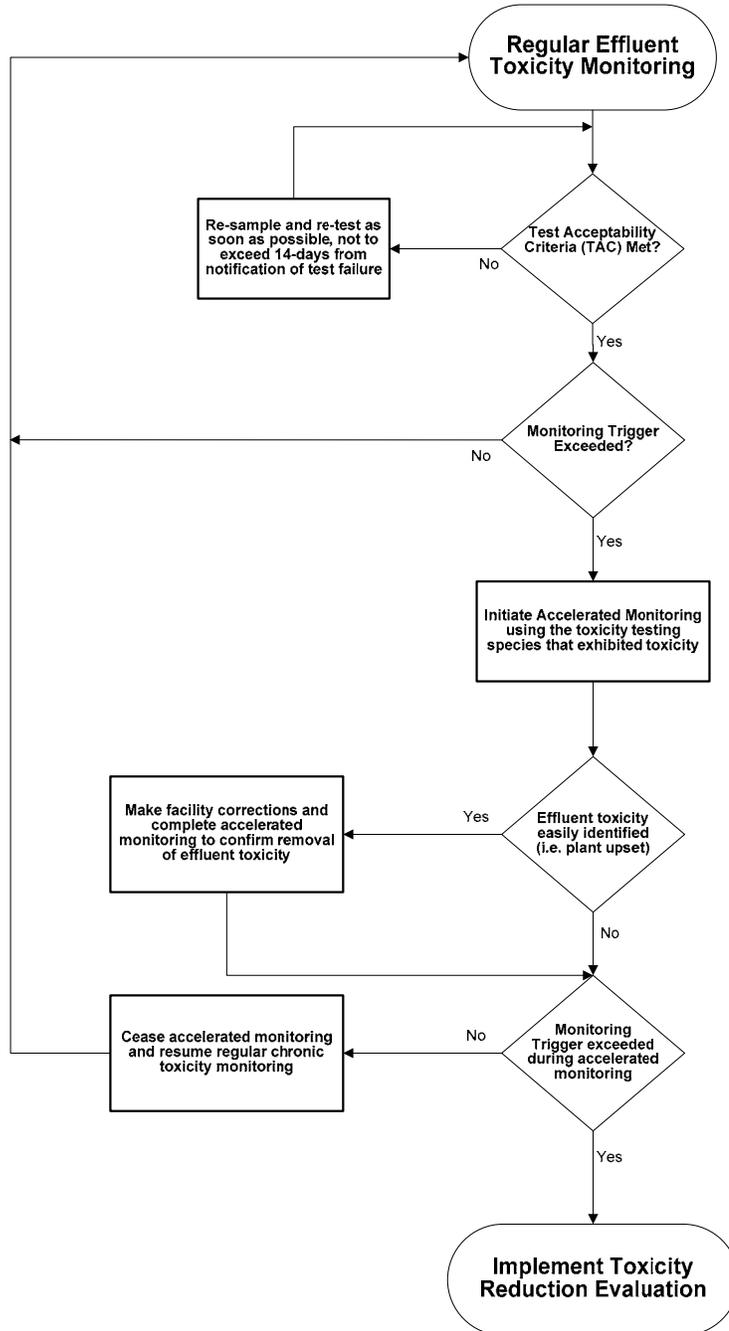
See the WET Accelerated Monitoring Flow Chart (Figure F-1), below, for further clarification of the accelerated monitoring requirements and for the decision points for determining the need for TRE initiation.

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. **Reclamation Feasibility Study.** The Basin Plan states that discharges to surface water will not be considered a permanent discharge solution where opportunities for reclamation exist. The Discharger has demonstrated that under current conditions of discharge, reclamation is infeasible. Additional flows may increase the opportunity for reclamation. This Order includes a requirement for the Discharger to reevaluate reclamation opportunities if it intends to request an increase in discharge flow.

3. Best Management Practices and Pollution Prevention

Pollutant Minimization Program. This Order requires the Discharger to develop and conduct a Pollutant Minimization Program (PMP) when there is evidence that a priority pollutant is present in the effluent above an effluent limitation and either: 1) A sample result is reported as DNQ and the effluent limitation is less than the RL; or 2) A sample result is reported as ND and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in MRP section X.

4. Construction, Operation, and Maintenance Specifications

This Order contains operation and maintenance provisions that require the Discharger to maintain an adequate dissolved oxygen content in the upper zone of in the effluent storage pond to prevent the generation of nuisance conditions, and that require the Discharger to preclude public contact with wastewater at the Facility to protect public health.

5. Special Provisions for Municipal Facilities (POTWs Only)

This Order includes Biosolids/Sludge handling requirements to protect surface and groundwater and to ensure Biosolids/Sludge are handled in a manner consistent with both State and federal regulations.

6. Other Special Provisions

This Order includes requirements describing notification procedures in the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger.

7. Compliance Schedules

- a. **Compliance Schedules for Final Effluent Limitations for Copper.** This Order includes a compliance schedule that requires the Discharger to comply with final effluent limitation for copper by the SIP deadline of 18 May 2010. The compliance schedule is appropriate because these are new limitations and the Discharger may need to construct additional treatment units to comply with the limitation. On 8 May 2008, the Discharger submitted a compliance schedule justification for copper. The compliance schedule justification includes all items specified in Paragraph 3, items (a) through (d), of section 2.1 of the SIP and

concludes that compliance before 18 May 2010 is infeasible. As the compliance schedule is greater than one year, this Order requires Discharger shall submit annual progress reports. These reports are interim requirements that will allow the Regional Water Board to evaluate the Discharger's progress towards completing the planned project.

- b. **Compliance Schedule for Ammonia.** This Order includes a compliance schedule that requires the Discharger to comply with final effluent limit for ammonia by **<expiration date of permit>**. The compliance schedule is appropriate because these are new limitations and the Discharger may need to construct additional treatment units to comply with the limitation. As the compliance schedule is greater than one year, this Order requires Discharger shall submit annual progress reports. These reports are interim requirements that will allow the Regional Water Board to evaluate the Discharger's progress towards completing the planned project.

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 Stallion Springs Community Services District. 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: mailing to interested persons and posting on the Regional Water Board internet, at the Stallion Springs Community Services District's office, and the nearest U.S. Postal Service office on 7 April 2008.

B. Written Comments

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

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 12:00 noon on 7 May 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: 12/13 June 2008
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 Fresno address on the cover page of this Order any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (559) 445-5116.

F. Register of Interested Persons

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

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Matt Scroggins at (559) 445-6042.

ATTACHMENT G – REASONABLE POTENTIAL ANALYSIS SUMMARY

Min Effluent Hardness (mg/L)	151
Min Eff pH (s.u.)	6.9
Max Eff pH (s.u.)	8.0
Max Temp (*F)	81.1
Effluent Flow (mgd)	0.04

CTR #	Parameter	Units	n	MEC	WQO	Source	RP
1	Antimony	ug/L	2	15	4300	California Toxics Rule (USEPA) for consumption of aquatic organisms	N
		ug/L			6	California Primary MCL	
		ug/L			20	California Public Health Goal for Drinking Water	
		ug/L			14	California Toxics Rule (USEPA) for sources of drinking water	
		ug/L			4300	California Toxics Rule (USEPA) for consumption of aquatic organisms	
		ug/L			610	USEPA National Water Quality Aquatic Toxicity Information	
2	Arsenic	ug/L	7	2.2	100	Water Quality for Agriculture (Ayers & Westcot)	N
		ug/L			50	California Primary MCL	
		ug/L			10	Federal Primary MCL	
		ug/L			0.004	California Public Health Goal for Drinking Water	
		ug/L			100	Water Quality for Agriculture (Ayers & Westcot)	
		ug/L			150	California Toxics Rule (USEPA) / 4-day average (total recoverable)	
4	Cadmium	ug/L	3	0.1	3.4	California Toxics Rule (USEPA) / 4-day average (total recoverable)	N
		ug/L			5	California Primary MCL	
		ug/L			10	Water Quality for Agriculture (Ayers & Westcot)	
		ug/L			0.07	California Public Health Goal for Drinking Water	
		ug/L			3.4	California Toxics Rule (USEPA) / 4-day average (total recoverable)	
		ug/L			6.9	California Toxics Rule (USEPA) / 1-hour average (total recoverable)	
5b	Chromium (VI)	ug/L	7	6.9	11	California Toxics Rule (USEPA) / 4-day average (dissolved)	N
		ug/L			100	Water Quality for Agriculture (Ayers & Westcot)	
		ug/L			11	California Toxics Rule (USEPA) / 4-day average (dissolved)	
		ug/L			16	California Toxics Rule (USEPA) / 1-hour average (dissolved)	
6	Copper	ug/L	7	20	13.2	California Toxics Rule (USEPA) / 4-day average (total recoverable)	Y
		ug/L			1300	California Primary MCL	
		ug/L			1000	California Secondary MCL	
		ug/L			200	Water Quality for Agriculture (Ayers & Westcot)	
		ug/L			1000	California Secondary MCL	
		ug/L			170	California Public Health Goal for Drinking Water	

CTR #	Parameter	Units	n	MEC	WQO	Source	RP
		ug/L			1300	California Toxics Rule (USEPA) for sources of drinking water	
		ug/L			13.2	California Toxics Rule (USEPA) / 4-day average (total recoverable)	
		ug/L			20.6	California Toxics Rule (USEPA) / 1-hour average (total recoverable)	
7	Lead	ug/L	8	0.6	4.7	California Toxics Rule (USEPA) / 4-day average (total recoverable)	N
		ug/L			15	California Primary MCL	
		ug/L			5000	Water Quality for Agriculture (Ayers & Westcot)	
		ug/L			2	California Public Health Goal for Drinking Water	
		ug/L			4.7	California Toxics Rule (USEPA) / 4-day average (total recoverable)	
		ug/L			122	California Toxics Rule (USEPA) / 1-hour average (total recoverable)	
8	Mercury	ug/L	2	ND	0.051	California Toxics Rule (USEPA) for consumption of aquatic organisms	N
		ug/L			2	California Primary MCL	
		ug/L			1.2	California Public Health Goal for Drinking Water	
		ug/L			0.77	USEPA National Ambient W Q Criteria / 4-day average	
		ug/L			1.4	USEPA National Ambient W Q Criteria / 1-hour average	
		ug/L			0.051	California Toxics Rule (USEPA) for consumption of aquatic organisms	
		ug/L			0.05	California Toxics Rule (USEPA) for sources of drinking water	
10	Selenium	ug/L	8	1.6	5	National Toxics Rule (USEPA) / 4-day average (total)	N
		ug/L			50	California Primary MCL	
		ug/L			20	Water Quality for Agriculture (Ayers & Westcot)	
		ug/L			35	USEPA IRIS Reference Dose (c)	
		ug/L			5	National Toxics Rule (USEPA) / 4-day average (total)	
13	Zinc	ug/L	7	58	170	California Toxics Rule (USEPA) / 4-day average (dissolved)	N
		ug/L			5000	California Secondary MCL	
		ug/L			2000	Water Quality for Agriculture (Ayers & Westcot)	
		ug/L			5000	California Secondary MCL	
		ug/L			2100	USEPA IRIS Reference Dose (c)	
		ug/L			170	California Toxics Rule (USEPA) / 4-day average (total recoverable)	
		ug/L			170	California Toxics Rule (USEPA) / 1-hour average (total recoverable)	
14	Cyanide	ug/L	3	29	5.2	National Toxics Rule (USEPA) / 4-day average (total)	I
		ug/L			150	California Primary MCL	
		ug/L			170	Odor threshold (Amoore and Hautala)	
		ug/L			150	California Public Health Goal for Drinking Water	
		ug/L			700	California Toxics Rule (USEPA) for sources of drinking water	
		ug/L			5.2	National Toxics Rule (USEPA) / 4-day average (total)	
		ug/L			22	National Toxics Rule (USEPA) / 1-hour average (total)	
20	Bromoform	ug/L	2	0.32	360	California Toxics Rule (USEPA) for consumption of aquatic organisms	N
		ug/L			80	California Primary MCL (total trihalomethanes)	
		ug/L			80	USEPA Primary MCL (total trihalomethanes)	
		ug/L			510	Odor threshold (Amoore and Hautala)	
		ug/L			4	USEPA IRIS Cancer Risk Level	
		ug/L			360	California Toxics Rule (USEPA) for consumption of aquatic organisms	

CTR #	Parameter	Units	n	MEC	WQO	Source	RP
		ug/L			4.3	California Toxics Rule (USEPA) for sources of drinking water	
23	Chlorodibromomethane	ug/L	2	7.6	34	California Toxics Rule (USEPA) for consumption of aquatic organisms	N
	(Dibromochloromethane)	ug/L			80	California Primary MCL (total trihalomethanes)	
		ug/L			80	USEPA Primary MCL (total trihalomethanes)	
		ug/L			0.37	Cal/EPA Cancer Potency Factor as a drinking water level (b)	
		ug/L			34	California Toxics Rule (USEPA) for consumption of aquatic organisms	
		ug/L			0.41	California Toxics Rule (USEPA) for sources of drinking water	
26	Chloroform	ug/L	2	82	1240	USEPA National Ambient W Q Criteria / chronic toxicity info	N
		ug/L			100	California Primary MCL (total trihalomethanes)	
		ug/L			80	USEPA Primary MCL (total trihalomethanes)	
		ug/L			2400	Odor threshold (Amoore and Hautala)	
		ug/L			1.1	Cal/EPA Cancer Potency Factor as a drinking water level (b)	
		ug/L			1240	USEPA National Ambient W Q Criteria / chronic toxicity info	
27	Dichlorobromomethane	ug/L	2	27	46	California Toxics Rule (USEPA) for consumption of aquatic organisms	N
	(Bromodichloromethane)	ug/L			80	California Primary MCL (total trihalomethanes)	
		ug/L			80	USEPA Primary MCL (total trihalomethanes)	
		ug/L			0.27	Cal/EPA Cancer Potency Factor as a drinking water level (b)	
		ug/L			46	California Toxics Rule (USEPA) for consumption of aquatic organisms	
		ug/L			0.56	California Toxics Rule (USEPA) for sources of drinking water	
36	Dichloromethane	ug/L	2	0.68	1600	California Toxics Rule (USEPA) for consumption of aquatic organisms	N
	(Methylene chloride)	ug/L			5	California Primary MCL	
		ug/L			9,100	Odor threshold (Amoore and Hautala)	
		ug/L			4	California Public Health Goal for Drinking Water	
		ug/L			1600	California Toxics Rule (USEPA) for consumption of aquatic organisms	
		ug/L			4.7	California Toxics Rule (USEPA) for sources of drinking water	
39	Toluene	ug/L	2	0.14	200000	California Toxics Rule (USEPA) for consumption of aquatic organisms	N
		ug/L			150	California Primary MCL	
		ug/L			42	Taste & Odor Threshold (USEPA)	
		ug/L			150	California Public Health Goal for Drinking Water	
		ug/L			200,000	California Toxics Rule (USEPA) for consumption of aquatic organisms	
		ug/L			6,800	California Toxics Rule (USEPA) for sources of drinking water	
NON-CTR CONSTITUENTS							
	Ammonia (Apr-Oct)	mg/L		2.7	0.8	USEPA National Ambient Water Quality Criteria / 30-day average	Y
		mg/L			1.5	USEPA National Ambient Water Quality Criteria / 1 hour average	
	Ammonia (Nov-Mar)	mg/L		0.9	1.5	USEPA National Ambient Water Quality Criteria / 30-day average	N
		mg/L			1.3	USEPA National Ambient Water Quality Criteria / 1 hour average	
	Aluminum	ug/L	3	85	87	USEPA National Recomm. W Q Criteria / 4-day avg	N

CTR #	Parameter	Units	n	MEC	WQO	Source	RP
						(total) (f)	
		ug/L			1000	California Primary MCL	
		ug/L			5000	Water Quality for Agriculture (Ayers & Westcot)	
		ug/L			200	California Secondary MCL	
		ug/L			600	California Public Health Goal for Drinking Water	
		ug/L			87	USEPA National Recomm. W Q Criteria / 4-day avg (total) (f)	
		ug/L			750	USEPA National Recomm. W Q Criteria / 1-hour avg (total) (f)	
	Chloride	ug/L	6	130,000	175,000	Basin Plan Maximum	N
		ug/L			250,000	California Secondary MCL	
		ug/L			106,000	Water Quality for Agriculture (Ayers & Westcot)	
		ug/L			250,000	California Secondary MCL	
		ug/L			230,000	USEPA National Ambient W Q Criteria / 4-day average	
		ug/L			860,000	USEPA National Ambient W Q Criteria / 1-hour average	
		ug/L			175,000	Basin Plan Maximum	
	Boron	ug/L	7	370	1,000	Basin Plan Maximum	N
		ug/L			700	Water Quality for Agriculture (Ayers & Westcot)	
		ug/L			1000	California DHS Action Level for drinking water	
		ug/L			90	USEPA Drinking Water Health Advisory - non-cancer	

ATTACHMENT H – HISTORIC EFFLUENT EC DATA

Date	Effluent EC (umhos/cm)	Source EC (umhos/cm)	Effluent EC (+/-) Source (umhos/cm)	Source EC + 400 (umhos/cm)	Source 4 Quarter Average + 400 (umhos/cm)
1/5/98	600	360	240	760	
1/12/98	610	360	250	760	
1/19/98	600	370	230	770	
1/26/98	670	370	300	770	
2/2/98	670	330	340	730	
2/9/98	570	300	270	700	
2/16/98	550	400	150	800	
2/23/98	410	310	100	710	
3/2/98	490	330	160	730	
3/9/98	500	370	130	770	
3/16/98	540	330	210	730	
3/23/98	600	390	210	790	
3/30/98	400	310	90	710	
4/7/98	380	370	10	770	
4/13/98	390	330	60	730	
4/20/98	410	410	0	810	
4/27/98	480	410	70	810	
5/4/98	525	400	125	800	
5/11/98	600	390	210	790	
5/18/98	600	355	245	755	
5/25/98	620	410	210	810	
6/2/98	500	300	200	700	
6/8/98	650	440	210	840	
6/17/98	725	410	315	810	
6/22/98	700	420	280	820	
6/30/98	750	415	335	815	
7/6/98	780	430	350	830	
7/13/98	790	420	370	820	
7/20/98	810	460	350	860	
7/27/98	800	460	340	860	
8/3/98	790	480	310	880	
8/10/98	810	445	365	845	
8/17/98	820	450	370	850	
8/24/98	750	440	310	840	
9/1/98	800	485	315	885	
9/7/98	800	450	350	850	
9/14/98	775	450	325	850	
9/28/98	725	430	295	830	
10/6/98	750	440	310	840	
10/13/98	725	395	330	795	
10/20/98	730	385	345	785	

Date	Effluent EC (umhos/cm)	Source EC (umhos/cm)	Effluent EC (+/-) Source (umhos/cm)	Source EC + 400 (umhos/cm)	Source 4 Quarter Average + 400 (umhos/cm)
10/26/98	650	330	320	730	
11/2/98	690	385	305	785	
11/9/98	500	415	85	815	
11/16/98	700	365	335	765	
11/23/98	420	385	35	785	
12/1/98	650	330	320	730	
12/8/98	600	355	245	755	
12/15/98	525	360	165	760	
12/24/98	575	355	220	755	
12/28/98	600	360	240	760	
12/31/98					789
1/5/99	600	300	300	700	
1/12/99	600	300	300	700	
1/19/99	600	300	300	700	
1/28/99	590	380	210	780	
2/3/99	595	325	270	725	
2/10/99	575	350	225	750	
2/16/99	625	340	285	740	
2/22/99	590	390	200	790	
3/2/99	620	440	180	840	
3/8/99	575	425	150	825	
3/16/99	550	300	250	700	
3/22/99	600	300	300	700	
3/29/99	620	420	200	820	
3/31/99					790
4/6/99	590	380	210	780	
4/14/99	620	350	270	750	
4/21/99	780	385	395	785	
4/26/99	600	350	250	750	
5/3/99	650	350	300	750	
5/10/99	620	350	270	750	
5/20/99	690	390	300	790	
5/24/99	700	350	350	750	
6/2/99	700	410	290	810	
6/7/99	700	400	300	800	
6/14/99	700	350	350	750	
6/21/99	700	300	400	700	
6/28/99	700	350	350	750	
6/30/99					783
7/5/99	750	400	350	800	
7/12/99	750	400	350	800	
7/19/99	775	450	325	850	
7/26/99	700	480	220	880	
8/2/99	700	400	300	800	
8/10/99	700	450	250	850	
8/16/99	800	400	400	800	

Date	Effluent EC (umhos/cm)	Source EC (umhos/cm)	Effluent EC (+/-) Source (umhos/cm)	Source EC + 400 (umhos/cm)	Source 4 Quarter Average + 400 (umhos/cm)
8/24/99	700	400	300	800	
8/30/99	800	400	400	800	
9/7/99	700	460	240	860	
9/14/99	700	425	275	825	
9/20/99	775	450	325	850	
9/27/99	775	400	375	800	
9/30/99					778
10/4/99	700	400	300	800	
10/12/99	650	400	250	800	
10/26/99	675	400	275	800	
11/1/99	600	300	300	700	
11/9/99	550	250	300	650	
11/15/99	600	325	275	725	
11/22/99	590	295	295	695	
11/29/99	550	300	250	700	
12/6/99	500	250	250	650	
12/13/99	550	350	200	750	
12/20/99	550	525	25	925	
12/27/99	500	350	150	750	
12/31/99					771
1/4/00	520	300	220	700	
1/10/00	550	250	300	650	
1/24/00	590	300	290	700	
2/1/00	575	230	345	630	
2/8/00	520	350	170	750	
2/15/00	525	225	300	625	
2/22/00	500	230	270	630	
2/28/00	575	300	275	700	
3/6/00	500	200	300	600	
3/15/00	600	300	300	700	
3/20/00		320		720	
3/27/00	610	380	230	780	
3/31/00					755
4/3/00	660	380	280	780	
4/11/00	650	410	240	810	
4/20/00	775	400	375	800	
4/25/00	675	465	210	865	
5/1/00	690	450	240	850	
5/8/00	640	440	200	840	
5/15/00	625	400	225	800	
5/25/00	750	425	325	825	
5/30/00	440	480	-40	880	
6/5/00	750	400	350	800	
6/12/00	740	330	410	730	
6/20/00	810	500	310	900	
6/26/00	825	450	375	850	

Date	Effluent EC (umhos/cm)	Source EC (umhos/cm)	Effluent EC (+/-) Source (umhos/cm)	Source EC + 400 (umhos/cm)	Source 4 Quarter Average + 400 (umhos/cm)
6/30/00					772
7/3/00	800	420	380	820	
7/11/00	780	440	340	840	
7/17/00	740	440	300	840	
7/25/00	775	425	350	825	
7/31/00	800	425	375	825	
8/8/00	830	490	340	890	
8/15/00	725	425	300	825	
8/21/00	800	425	375	825	
8/28/00	730	490	240	890	
9/5/00	750	395	355	795	
9/11/00	750	415	335	815	
9/18/00	710	490	220	890	
9/26/00	720	325	395	725	
9/30/00					773
10/6/00	650	300	350	700	
10/10/00	700	375	325	775	
10/16/00	685	280	405	680	
10/24/00	605	380	225	780	
10/30/00	600	320	280	720	
11/6/00	600	300	300	700	
11/14/00	525	300	225	700	
11/21/00	520	210	310	610	
11/30/00	610	320	290	720	
12/4/00	600	300	300	700	
12/13/00	540	280	260	680	
12/18/00	620	375	245	775	
12/26/00	600	380	220	780	
12/31/00					765
1/2/01	510	350	160	750	
1/8/01	600	225	375	625	
1/15/01	600	350	250	750	
1/22/01	525	410	115	810	
1/29/01	450	300	150	700	
2/6/01	530	430	100	830	
2/12/01	550	330	220	730	
2/19/01	600	375	225	775	
2/26/01	650	325	325	725	
3/5/01	675	350	325	750	
3/12/01	675	300	375	700	
3/19/01	280	260	20	660	
3/26/01		350		750	
3/31/01					777
4/2/01	725	400	325	800	
4/9/01	560	350	210	750	
4/16/01	610	355	255	755	

Date	Effluent EC (umhos/cm)	Source EC (umhos/cm)	Effluent EC (+/-) Source (umhos/cm)	Source EC + 400 (umhos/cm)	Source 4 Quarter Average + 400 (umhos/cm)
4/23/01	600	300	300	700	
4/30/01	710	410	300	810	
5/7/01	720	420	300	820	
5/14/01	710	450	260	850	
5/21/01	730	425	305	825	
5/28/01	700	420	280	820	
6/4/01	700	440	260	840	
6/11/01	730	450	280	850	
6/19/01	720	460	260	860	
6/27/01	800	490	310	890	
6/30/01					774
7/3/01	790	525	265	925	
7/9/01	830	480	350	880	
7/16/01	770	500	270	900	
7/25/01	725	400	325	800	
7/31/01	780	490	290	890	
8/7/01	720	485	235	885	
8/13/01	725	500	225	900	
8/22/01	700	450	250	850	
8/28/01	720	400	320	800	
9/3/01	820	430	390	830	
9/10/01	800	300	500	700	
9/17/01	750	425	325	825	
9/24/01	820	425	395	825	
9/30/01					778
10/1/01	700	400	300	800	
10/11/01	680	330	350	730	
10/15/01	710	350	360	750	
10/31/01	680	350	330	750	
11/7/01	575				
12/24/01	590				
12/31/01					795
1/3/02	500	300	200	700	
1/11/02	510	280	230	680	
2/14/02	520				
2/18/02	500				
3/7/02	500				
3/31/02					812
n	201	198	196	198	14
Min	280	200	-40	600	755
Max	830	525	500	925	812
Average	648	379	271	779	780
STDEV	108	66	86	66	14
CV	0.17	0.18	0.32	0.09	0.02

Date	Effluent EC (umhos/cm)	Source EC (umhos/cm)	Effluent EC (+/-) Source (umhos/cm)	Source EC + 400 (umhos/cm)	Source 4 Quarter Average + 400 (umhos/cm)
AVE +3.3 STDEV	755	445	358	845	793
Max x 1.6			800		

EC Time Series

