CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

CENTRAL VALLEY REGION

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ORDER NO. R5-2008-0111-01
NPDES NO. CA0083241

WASTE DISCHARGE REQUIREMENTS FOR THE NEVADA COUNTY SANITATION DISTRICT NO. 1 CASCADE SHORES WASTEWATER TREATMENT PLANT NEVADA COUNTY

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

Table 1. Discharger Information

Discharger	Nevada County Sanitation District No. 1
Name of Facility	Cascade Shores Wastewater Treatment Plant
Facility Address	14326 Gas Canyon Road
	Nevada City, CA 95959-8600
	Nevada 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 Nevada County Sanitation District No. 1 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	Treated domestic wastewater	39º, 15', 40" N	120º, 54', 20" W	Gas Canyon

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**31 July 2008**
This Order shall become effective on:	**31 July 2008**
This Order shall expire on:	**01 July 2013**
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	**180 days prior to the Order expiration date**

IT IS HEREBY ORDERED, that Order No. 5-01-177 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code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 31 July 2008 and amended on 2 February 2012.

Original signed by

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	Nevada County Sanitation District No. 1
Name of Facility	Cascade Shores Wastewater Treatment Plant
Facility Address	14326 Gas Canyon Road
	Nevada City, CA 95959
	Nevada County
Facility Contact, Title, and Phone	Phil Guerra, Wastewater Plant Operations Supervisor, 530-265-7121
Mailing Address	950 Maidu Avenue, Nevada City, CA 95959
Type of Facility	Publicly Owned Treatment Works
Facility Design Flow	0.026 million gallons per day (mgd) ADWF

II. FINDINGS

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

A. Background. The Nevada County Sanitation District No. 1 (hereinafter Discharger) is currently discharging pursuant to Order No. 5-01-177 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0083241. The Discharger submitted a Report of Waste Discharge, dated 1 December 2005**,** and applied for a NPDES permit renewal to discharge up to 0.026 mgd of treated wastewater from the Cascade Shores Wastewater Treatment Plant**,** hereinafter Facility.

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

B. Facility Description. The Discharger owns and operates a Publicly Owned Treatment Works (POTW). The treatment system consists of influent comminution, a flow equalization tank, an aerated activated sludge tank and clarifier, a sludge holding/aerobic digester tank, dual-media filtration, pH adjustment and chlorination/dechlorination. Wastewater is discharged from Discharge Point 001 (see table on cover page) to the Gas Canyon Creek, a water of the United States and a tributary to Bear River via Greenhorn Creek and Rollins Reservoir, within the Sacramento River Watershed. 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 (commencing with section 13370). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

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

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

F. Technology-based Effluent Limitations*.* Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations (CFR)[1] require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at Part 133. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).

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

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

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

interpreting the State's narrative criterion, supplemented with other relevant information, as provided in 40 CFR section 122.44(d)(1)(vi).

H. Water Quality Control Plans. The Regional Water Board adopted a *Water Quality Control Plan, Fourth Edition (Revised August 2006), for the Sacramento and San Joaquin River Basins* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan at page II-2.00 states that the "…*beneficial uses of any specifically identified water body generally apply to its tributary streams*." The Basin Plan does not specifically identify beneficial uses for Gas Canyon Creek, but does identify present and potential uses for Bear River, to which Gas Canyon Creek, via Greenhorn Creek and Rollins Reservoir, is tributary. These beneficial uses are as follows: municipal and domestic supply; agricultural supply, including stock watering; hydropower generation; water contact recreation, including canoeing and rafting; non-contact water recreation, including aesthetic enjoyment; warm freshwater habitat; cold freshwater habitat; warm migration of aquatic organisms; cold migration of aquatic organisms; warm spawning, reproduction, and/or early development; cold spawning, reproduction, and /or early development; and wildlife habitat.

In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Thus, as discussed in detail in the Fact Sheet, beneficial uses applicable to Gas Canyon Creek are as follows:

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Gas Canyon Creek to Bear River via Greenhorn Creek and Rollins Reservoir	<u>Existing:</u> Municipal and domestic supply (MUN); Agricultural supply, including stock watering (AGR); Hydropower generation (POW); Water contact recreation, including canoeing and rafting (REC-1); Non-contact water recreation, including aesthetic enjoyment (REC-2); Warm freshwater habitat (WARM); Cold freshwater habitat (COLD); Wildlife habitat (WILD). <u>Potential:</u> Warm migration of aquatic organisms (MGR); Cold migration of aquatic organisms (MGR); Warm spawning, reproduction, and/or early development (SPWN); and Cold spawning, reproduction, and /or early development (SPWN) <u>Groundwater:</u> Municipal and domestic water supply (MUN), industrial service supply (IND), industrial process supply (PRO), and agricultural supply (AGR).

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 Water Code section 13300 or a Cease and Desist Order pursuant to Water Code section 13301 where it finds that the discharger is violating or threatening to violate the permit. The Regional Water Board will consider the merits of each case in determining whether it is appropriate to include a compliance schedule in a permit, and, consistent with the Basin Plan, should consider feasibility of achieving compliance, and must

impose a schedule that is as short as practicable to achieve compliance with the objectives, criteria, or effluent limit based on the objective or criteria.

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

L. Alaska Rule. On 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 C.F.R. § 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 BOD_5, TSS and pH. The water quality-based effluent limitations consist of restrictions on pathogens. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order includes effluent limitations for BOD, TSS, and pathogens to meet numeric objectives or protect beneficial uses. The rationale for including these limitations is explained in the Fact Sheet. In addition, the Regional Water Board has considered the factors in Water Code section 13241 in establishing these requirements.

Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on May 1, 2001. All beneficial uses and water quality

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

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

O. Anti-Backsliding Requirements. Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Some effluent limitations in this Order are less stringent that those in the previous Order. As discussed in detail in the Fact Sheet this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

P. Monitoring and Reporting. Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program 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 section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. 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, V.B, and VI.C. of this Order are

included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

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 to surface waters is prohibited, except as allowed by Federal Standard Provisions I.G. and I.H. (Attachment D).

C. Neither the discharge nor its treatment shall create a nuisance as defined in Section 13050 of the California Water Code.

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

E. The Discharger shall not bypass the Ultraviolet (UV) disinfection system once operational prior to discharge to the receiving water except as allowed by Federal Standard Provisions I.G. (Attachment D). "Bypass" for preventative or operational maintenance is not allowed unless it meets the conditions of Section I.G.3 (Attachment D.)

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations – Discharge Point 001

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the attached MRP (Attachment E):

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

Table 6. Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Conventional Pollutants						
Biochemical Oxygen Demand, 5-day @ 20°C[1]	mg/L	10	15	25	--	--
	lbs/day[2]	2.2	3.3	5.4	--	--
Total Suspended Solids[1]	mg/L	10	15	25	--	--
	lbs/day[2]	2.2	3.3	5.4	--	--
pH	standard units	--	--	--	6.5	8.0
Priority Pollutants						
Copper, Total Recoverable[1]	µg/L	1.6	--	3.2	--	--
Dichlorobromomethane[1,3]	µg/L	0.56	--	1.1	--	--
Non-Conventional Pollutants						
Aluminum, Total Recoverable[4]	µg/L	71	--	143	--	--
Ammonia, Nitrogen, Total (as N)	mg/L	1.8	--	5.6	--	--
Nitrate Nitrogen, Total (as N)	mg/L	10	--	--	--	--

[1] Full compliance required by 18 May 2010.
[2] Based upon dry weather flow of 0.026 mgd.
[3] These effluent limitations are in effect until the Discharger submits written certification that a chlorine-based disinfection system is no longer in use and chlorine containing chemicals are not added to the treatment process for wastewater discharge to surface waters.
[4] Full compliance required by 1 June 2013.

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

- 70%, minimum for any one bioassay; and
- 90%, median for any three consecutive bioassays.

d. **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;

The total residual chlorine effluent limitations are effective until the Discharger submits written certification that a chlorine-based disinfection system is no longer in use and chlorine-containing chemicals are not added to the treatment process for wastewater discharged to the receiving water.

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

i. 2.2 most probable number (MPN) per 100 mL, as a 7-day median; and

ii. 23 MPN/100 mL, more than once in any 30-day period, and

iii. 240 MPN/100 ml, at any time.

f. **Mass Limitation for Mercury**. The total recoverable mercury loading in the effluent shall not exceed 0.00033 lbs per month.

g. **Average Dry Weather Flow.** The Average Dry Weather Flow shall not exceed 0.026 mgd.

2. Interim Effluent Limitations

a. During the period beginning with the **Adoption Date** of this Order and ending on **18 May 2010**, the Discharger shall maintain compliance with the following limitations in Table 7, with compliance measured at Monitoring Location EFF-001 as described in the attached MRP. These interim effluent limitations shall apply in lieu of the corresponding final effluent limitations specified for the same parameters during the time period indicated in this provision.

Table 7. Interim Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Copper	µg/L	--	--	31	--	--
Dichlorobromomethane	µg/L	--	--	7.2	--	--
BOD	mg/L	15	20	35		
TSS	mg/L	15	20	35		

b. **Aluminum**. During the period beginning with the **Adoption Date** of this Order and ending on **1 June 2013,** the aluminum concentration shall not exceed 694 µg/L as a daily maximum.

c. **Electrical Conductivity.** The effluent shall not exceed an interim annual average of 1058 µmhos/cm.

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 Gas Canyon Creek:

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

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

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

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

5. **Dissolved Oxygen**:

   a. The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass;
   b. The 95 percentile dissolved oxygen concentration to fall below 75 percent of saturation; nor
   c. The dissolved oxygen concentration to be reduced below 7.0 mg/L at any time.

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

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

8. **pH**. The pH to be depressed below 6.5, raised above 8.5.

9. **Pesticides**:

   a. Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses;
   b. Pesticides to be present in bottom sediments or aquatic life in concentrations that adversely affect beneficial uses;
   c. Total identifiable persistent chlorinated hydrocarbon pesticides to be present in the water column at concentrations detectable within the accuracy of analytical methods approved by USEPA or the Executive Officer/prescribed in *Standard*

Methods for the Examination of Water and Wastewater, 18th Edition, or other equivalent methods approved by the Executive Officer.

d. Pesticide concentrations to exceed those allowable by applicable antidegradation policies (see State Water Board Resolution No. 68-16 and 40 CFR §131.12.).
e. Pesticide concentrations to exceed the lowest levels technically and economically achievable.
f. Pesticides to be present in concentration in excess of the maximum contaminant levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15/specified in Table 64444-A (Organic Chemicals) of Section 64444 of Title 22 of the California Code of Regulations.
g. Thiobencarb to be present in excess of 1.0 µg/L.

10. **Radioactivity**:

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

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

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

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

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

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

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

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

    a. More than 1 Nephelometric Turbidity Unit (NTU) where natural turbidity is between 0 and 5 NTUs. (When wastewater is treated to a tertiary level, including coagulation, a one-month averaging period may be used when determining compliance with Receiving Water Limitation 17.a. for turbidity.
    b. More than 20 percent where natural turbidity is between 5 and 50 NTUs.
    c. More than 10 NTU where natural turbidity is between 50 and 100 NTUs.
    d. More than 10 percent where natural turbidity is greater than 100 NTUs.

B. Groundwater Limitations

1. The release of waste constituents from any storage, treatment, or disposal component shall not cause the groundwater to exceed water quality objectives, unreasonably affect beneficial uses, or cause a condition of pollution or nuisance.

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

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

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

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

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

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

   ii. controls any pollutant limited in the Order.

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

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

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

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

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

i. A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.

j. Safeguard to electric power failure:

   i. The Discharger shall provide safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharge shall comply with the terms and conditions of this Order.

   ii. Upon written request by the Regional Water Board the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past five years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Regional Water Board.

   iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Regional Water Board not approve the existing safeguards, the Discharger shall, within ninety days of having been advised in writing by the Regional Water Board that the existing safeguards are inadequate, provide to the Regional Water Board and USEPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. The schedule of compliance shall, upon approval of the Regional Water Board, become a condition of this Order.

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

   The technical report shall:

   i. Identify the possible sources of spills, leaks, untreated waste by-pass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.

ii. Evaluate the effectiveness of present facilities and procedures and state when they became operational.

iii. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

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

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 section 122.41(l)(6)(i)].

B. Monitoring and Reporting Program (MRP) Requirements

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

C. Special Provisions

1. Reopener Provisions

a. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special

conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.

b. Conditions that necessitate a major modification of a permit are described in 40 CFR section 122.62, including:

   i. If new or amended applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA, or amendments thereto, this permit may be reopened and modified in accordance with the new or amended standards.

   ii. When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.

c. **Mercury.** If mercury is found to be causing toxicity based on acute or chronic toxicity test results, or if a TMDL program is adopted, this Order shall be reopened and the interim mass effluent limitation modified (higher or lower) or an effluent concentration limitation imposed.

d. **Disinfection.** Upon installation of the ultraviolet disinfection system, the discharge may request the elimination of chlorine and chlorine by-product related effluent limitation contingent on certification that chlorine is not used in the treatment process. If the Regional Water Board determines that the discharge does not have reasonable potential to cause or contribute to exceedance of criteria for chlorine and/or chlorine byproducts, then this Order may be reopened to consider removal of corresponding limitations and waste discharge requirements.

e. **Pollution Prevention.** This Order requires the Discharger to prepare pollution prevention plans following CWC section 13263.3(d)(3) for copper and aluminum. Based on a review of the pollution prevention plans, this Order may be reopened for addition and/or modification of effluent limitations and requirements for these constituents.

f. **Whole Effluent Toxicity.** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if the State Water Board revises the SIP's toxicity control provisions that would require the establishment of numeric chronic toxicity effluent limitations, this Order may be reopened to include a numeric chronic toxicity effluent limitation based on the new provisions.

g. **Salinity Evaluation and Minimization Plan.** This Order requires that the Discharger to prepare and implement a salinity evaluation and minimization plan to address sources of salinity from the municipal wastewater treatment system. The plan shall be completed and submitted to the Regional Water Board within

nine (9) months of the effective date of this Order for approval by the Executive Officer. Based on a review of the results of implementation of the salinity evaluation and minimization plan this Order may be reopened for addition and/or modification of effluent limitations and requirements for salinity.

h. **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.

i. **Salinity/EC Site-Specific Studies.** This Order requires the Discharger complete and submit a report on the results of Salinity/EC Site-Specific studies to determine appropriate Salinity/EC levels necessary to protect downstream beneficial uses. The studies shall be completed and submitted to the Regional Water Board within 39 months of the adoption date of this Order. Based on a review of the results of the report on the Salinity/EC Site-Specific studies this Order may be reopened for addition of effluent limitations and requirements for salinity and/or EC.

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. Within 90 days of the effective date of this Order,** the Discharger shall submit to the Regional Water Board an Initial Investigative TRE Work Plan for approval by the Executive Officer. This should be a one to two page document including, at minimum:

a) A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of effluent toxicity, effluent variability, and treatment system efficiency;

b) A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility; and

c) A discussion of who will conduct the Toxicity Identification Evaluation, if necessary (i.e. an in-house expert or outside contractor).

i. **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.

ii. **Numeric Monitoring Trigger.** The numeric toxicity monitoring trigger is > **1 TUc** (where TUc = 100/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.

iii. **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 and the source(s) of the toxicity are not easily identified as described in (b) above, 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 guidance[1].

b. **Reuse of Municipal Wastewater Feasibility Study:** The Discharger shall evaluate the feasibility of utilizing reclaimed municipal wastewater from the new treatment facility for beneficial reuse to reduce area dependence on existing surface and groundwater water supply sources. A report containing the study conclusions of feasible wastewater reuse alternatives shall be completed and submitted **within 12 months of the adoption date of this Order** for approval by the Executive Officer.

c. **Salinity Site-Specific Study:** The Discharger shall complete and submit a report on the results of a site-specific investigation of appropriate salinity levels in the receiving water to protect agricultural beneficial use in areas irrigated with water from Gas Canyon Creek and downstream water bodies. The study shall, at minimum, determine the sodium adsorption ratio of soils in the affected area, the effects of rainfall and flood-induced leaching, and background water quality. The study shall evaluate how climate, soil chemistry, background water quality, rainfall, and flooding affect salinity requirements. Based on these factors, the study shall recommend site-specific numeric values for Electrical Conductivity and/or other appropriate salinity constituents to fully protect beneficial uses.

The Discharger shall comply with the following time schedule to complete the study:

[1] See 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.

Task	Compliance Date
-Submit Workplan and Time Schedule	Within 12 months of adoption date of this Order
-Complete Study	Within three years of the adoption date of this Order
-Submit Study Report	Within 39 months of the adoption date of this Order

d. **Best Practicable Treatment or Control (BPTC) Evaluation Tasks**. The Discharger has proposed a work plan and schedule for construction of a new facility designed to provide BPTC as required by Resolution 68-16. Following completion of the new facility the Discharger shall conduct a compliance evaluation study to determine if the level of treatment achieves compliance for all constituent effluent limitations. Following completion of the compliance evaluation, the Discharger shall submit a technical report describing the evaluation's results and critiquing each evaluated component with respect to BPTC. If compliance is achieved and no deficiencies are documented, no further action is required. If deficiencies are documented, a technical report shall be prepared to recommendations for necessary modifications (*e.g*, WWTP component upgrade and retrofit) to achieve BPTC and identify the source of funding and proposed schedule for modifications. The schedule shall be as short as practicable but in no case shall completion of the necessary modifications exceed three years past the Executive Officer's determination of the adequacy of the compliance evaluation, unless the schedule is reviewed and specifically approved by the Regional Water Board. The technical report shall include specific methods the Discharger proposes as a means to measure processes and assure continuous optimal performance of BPTC measures. The Discharger shall comply with the following compliance schedule in implementing the work required by this Provision:

Task	**Compliance Date**
1 -Submit compliance evaluation for new WWTP	**1 year** following completion of WWTP construction
2 -Where deficiencies are documented submit workplan and time schedule for achieving compliance	**6 months** following completion of Task 1.

3. Best Management Practices and Pollution Prevention

a. **Pollution Prevention Plan for copper and aluminum.** The Discharger shall prepare and implement a pollution prevention plan for copper and aluminum in accordance with CWC section 13263.3(d)(3). The minimum requirements for the pollution prevention plan are outlined in the Fact Sheet, Attachment F. A work plan and time schedule for preparation of the pollution prevention plan shall be completed and submitted **within 6 months of the adoption date of this Order** for approval by the Executive Officer. The Pollution Prevention Plan shall be completed and submitted to the Regional Water Board **within two (2) years following work plan approval by the Executive Officer**, and progress reports shall be submitted in accordance with the Monitoring and Reporting Program (Attachment E, Section X.D.1.).

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

4. Construction, Operation and Maintenance Specifications

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

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

c. Freeboard in the emergency storage ponds shall not be less than two feet (measured vertically to the lowest point of overflow), except if lesser freeboard does not threaten the integrity of the pond, no overflow of the pond occurs, and lesser freeboard is due to direct precipitation or storm water runoff occurring as a result of annual precipitation with greater than a 100-year recurrence interval, or a storm event with an intensity greater than a 25-year, 24-hour storm event.

d. Objectionable odors originating at this Facility shall not be perceivable beyond the limits of the wastewater treatment facility.

5. Ultraviolet Disinfection (UV) System Operating Specifications

Once in operation the Discharger shall operate the UV disinfection system to provide a minimum UV dose per bank of 100 millijoules per square centimeter (mJ/cm^2) at peak daily flow, unless otherwise approved by the California Department of Public Health, and shall maintain an adequate dose for disinfection while discharging to

Gas Canyon Creek, unless otherwise approved by the California Department of Public Health.

a. The Discharger shall provide continuous, reliable monitoring of flow, UV transmittance, UV power, and turbidity.

b. The Discharger shall operate the treatment system to insure that turbidity prior to disinfection shall not exceed 2 NTU as a daily average, and 5 NTU more than 5% of the time within a 24-hour period, and 10 NTU, at any time.

c. The UV transmittance (at 254 nanometers) in the wastewater exiting the UV disinfection system shall not fall below 55 percent of maximum at any time.

d. The quartz sleeves and cleaning system components must be visually inspected per the manufacturer's operations manual for physical wear (scoring, solarization, seal leaks, cleaning fluid levels, etc.) and to check the efficacy of the cleaning system.

e. The lamp sleeves must be cleaned periodically as necessary to meet the requirements.

f. Lamps must be replaced per the manufacturer's operations manual, or sooner, if there are indications the lamps are failing to provide adequate disinfection. Lamp age and lamp replacement records must be maintained.

g. The facility must be operated in accordance with an operations and maintenance program that assures adequate disinfection.

6. Special Provisions for Municipal Facilities (POTWs Only)

a. Sludge/Biosolids Discharge Specifications

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

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

iii. The treatment of sludge generated at the Facility shall be confined to the Facility property and conducted in a manner that precludes infiltration of

waste constituents into soils in a mass or concentration that will violate Groundwater Limitations V.B. In addition, the storage of residual sludge, solid waste, and biosolids on Facility property shall be temporary and controlled, and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate Groundwater Limitations V.B.

iv. The use and disposal of biosolids shall comply with existing Federal and State laws and regulations, including permitting requirements and technical standards included in 40 CFR 503. If the State Water Board and the Regional Water Board are given the authority to implement regulations contained in 40 CFR 503, this Order may be reopened to incorporate appropriate time schedules and technical standards. The Discharger must comply with the standards and time schedules contained in 40 CFR 503 whether or not they have been incorporated into this Order.

b. **Biosolids Disposal Requirements**

i. The Discharger shall comply with the Monitoring and Reporting Program for biosolids disposal contained in Attachment E.

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

iii. The Discharger is encouraged to comply with the “Manual of Good Practice for Agricultural Land Application of Biosolids” developed by the California Water Environment Association.

c. **Biosolids Storage Requirements**

i. Facilities for the storage of Class B biosolids shall be located, designed and maintained to restrict public access to biosolids.

ii. Biosolids storage facilities shall be designed and maintained to prevent washout or inundation from a storm or flood with a return frequency of 100 years.

iii. Biosolids storage facilities, which contain biosolids, shall be designed and maintained to contain all storm water falling on the biosolids storage area during a rainfall year with a return frequency of 100 years.

iv. Biosolids storage facilities shall be designed, maintained and operated to minimize the generation of leachate.

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

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

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

7. Other Special Provisions

a. Wastewater shall be oxidized, coagulated, filtered, and adequately disinfected pursuant to the DHS reclamation criteria, California Code of Regulations, Title 22, Division 4, Chapter 3, (Title 22), or equivalent. The filters shall be used to the maximum extent possible.

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

   To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory and certification requirements in the Federal Standard Provisions (Attachment D, Section V.B.) and state that the new owner or operator assumes full responsibility for compliance with this Order.

Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

8. Compliance Schedules

a. **Compliance Schedules for Final Effluent Limitations for copper and aluminum.**

i. **By 18 May 2010,** the Discharger shall comply with the final effluent limitations for copper. **By 1 June 2013**, the Discharger shall comply with the final effluent limitations for aluminum. In an Infeasibility Report dated 11 April 2008, the Discharger submitted a compliance schedule justification for copper and aluminum. 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 semi-annual progress reports in accordance with the Monitoring and Reporting Program (Attachment E, Section X.D.1.).

ii. **Corrective Action Plan/Implementation Schedule.** The Discharger shall submit to the Regional Water Board a corrective action plan and implementation schedule to assure compliance with the final effluent limitations for copper and aluminum **within 6 months of the adoption date of this Order**.

iii. **Pollution Prevention Plan.** The Discharger shall prepare and implement a pollution prevention plan for copper and aluminum, in accordance with CWC section 13263.3(d)(3). The minimum requirements for the pollution prevention plan are outlined in the Fact Sheet, Attachment F. A work plan and time schedule for preparation of the pollution prevention plan shall be completed and submitted to the Regional Water Board **within 6 months of the adoption date of this Order**. The Pollution Prevention Plan shall be completed and submitted to the Regional Water Board **within six months following work plan approval by the Executive Officer**, and progress reports shall be submitted in accordance with the Monitoring and Reporting Program (Attachment E, Section X.D.1.).

iv. **Treatment Feasibility Study.** The Discharger is required to perform an engineering treatment feasibility study examining the feasibility, costs and benefits of different treatment options that may be required to remove copper, and aluminum from the discharge if continued reasonable potential exists after the new treatment plant comes on line and the discharger-specific WER adjustments are completed. If reasonable potential still exists for either of these constituents, a work plan and time schedule for preparation of the treatment feasibility study shall be completed and submitted to the Regional Water Board **within 6 months** after the compliance evaluation study for the new facility and the discharge-specific WER study is completed. The treatment feasibility study shall be completed and submitted to the Regional

Water Board **within six months following work plan approval by the Executive Officer**, and progress reports shall be submitted in accordance with the Monitoring and Reporting Program (Attachment E, Section X.D.1.).

b. **Compliance Schedule for Construction and Operation of the New Wastewater Treatment Plant**

i. The Discharger shall complete construction of the new wastewater treatment plant, and wastewater shall be oxidized, coagulated, filtered, and adequately disinfected, or equivalent to produce and effluent quality that complies with final effluent limitations specified in this Order, which assures that it is of a quality that is similar to that required by the Department of Public Health Services (DPH) reclamation criteria, California Code of Regulations, Title 22, Division 4, Chapter 3 (Title 22). In an Infeasibility Report dated 11 April 2008, the Discharger submitted a compliance schedule justification and time schedule for completion and operation of a new wastewater treatment plant. The new treatment facility is scheduled for completion by July 2009 with the compliance evaluation completed by June 2010. This Order requires that the Discharger shall comply with the final effluent limitations for dichlorobromomethane, BOD, and TSS, **by 18 May 2010.** Since the new treatment facility is designed to achieve compliance with the proposed final effluent limits for BOB an TSS, and elimination of the chlorine disinfection process should eliminate the formation of dichlorobromomethane, the Regional Water Board has determined that another corrective action plan, pollution prevention plan and treatment feasibility study is not required for these constituents.

ii. Any changes to the design specifications for the new wastewater treatment plant already approved by the DPH shall be submitted by the Discharger to the Regional Water Board prior to implementation of the change. These changes include the proposed use of “equivalent” equipment by a bidder.

iii. The Discharger shall provide the following periodic progress reports for the compliance schedule included in this Provision:

Task	Compliance Date
1 - Submit letter notifying the Regional Water Board of the Status of Funding (Grants and Loans) Commitments for Construction of the New Wastewater Treatment Plant	**Within 30 days** following Order adoption
2 - Submit letter notifying the Regional Water Board of the Selected Bidder and Construction Schedule for Construction of the New Wastewater Treatment Plant	**Within 60 days** following Order adoption
3 - Construction Progress Reports (including discussion of compliance with construction schedule)	**Quarterly** following construction startup

Task	Compliance Date
4 - Plan for New Wastewater Treatment Plant Testing, Optimization and Implementation of the New Wastewater Treatment System	**1 March 2009**
5 - Notification of Completion of Construction and Initiation of Operation	**1 July 2009**

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 shall be ascertained by 24-hour composite samples. Compliance with effluent limitations for percent removal shall be calculated using the arithmetic mean of 20°C BOD (5-day) and total suspended solids in effluent samples collected over a monthly period as a percentage of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.

B. **Aluminum Effluent Limitations**. Compliance with the final effluent limitations for aluminum can be demonstrated using either total or acid-soluble (inductively coupled plasma/atomic emission spectrometry or inductively coupled plasma/mass spectrometry) analysis methods, as supported by US EPA's Ambient Water Quality Criteria for Aluminum document (EPA 440/5-86-008), or other standard methods that exclude aluminum silicate particles as approved by the Executive Officer.

C. **Total Mercury Mass Loading Effluent Limitations.** The procedures for calculating mass loadings are as follows:

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

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

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

E. **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 2.2 per 100 milliliters, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period.

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

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

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

ATTACHMENT A – DEFINITIONS

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

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

Average Monthly Effluent Limitation (AMEL): the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Pollutant Minimization Program (PMP) means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through

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

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

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

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

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

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

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

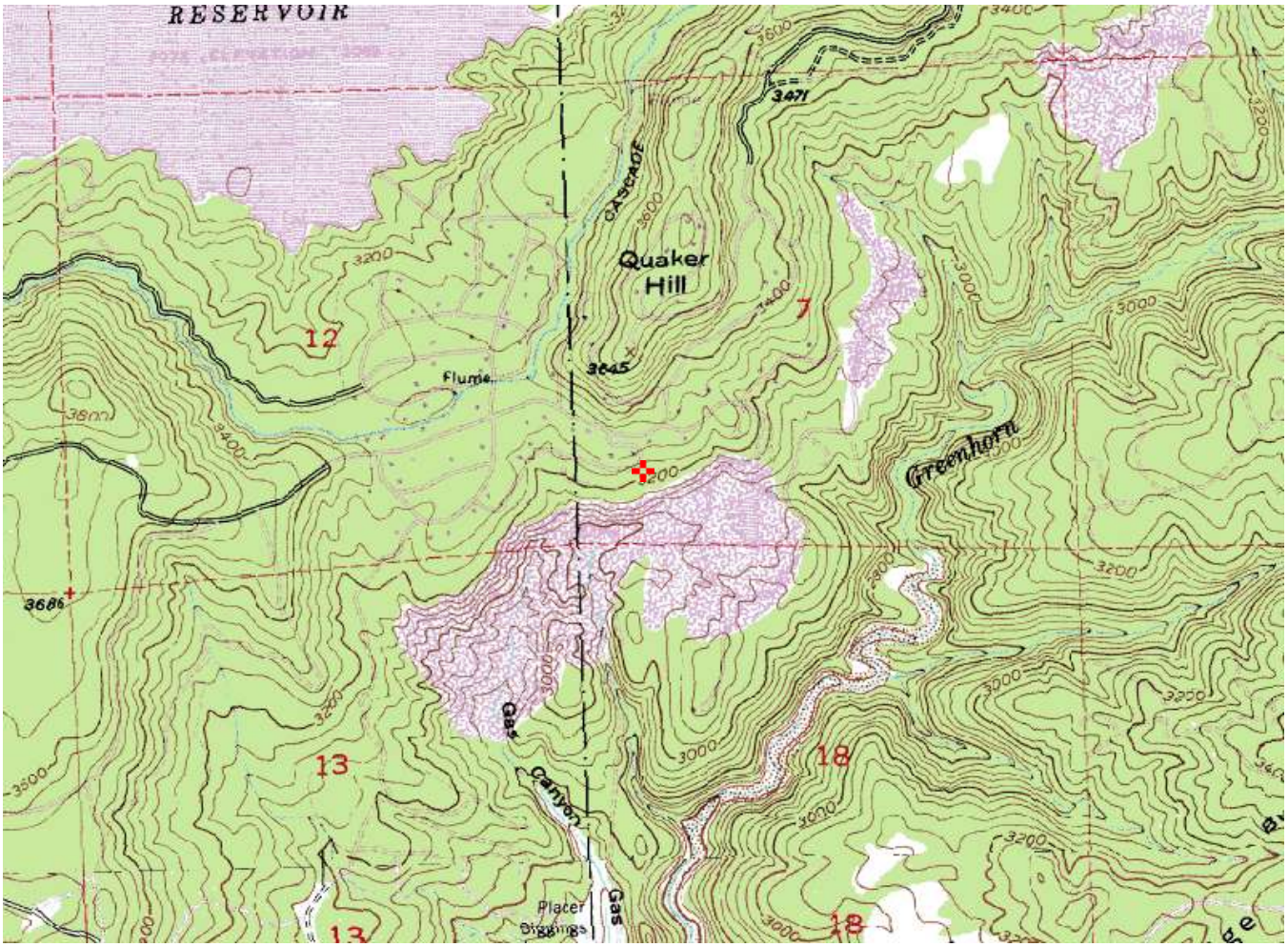
where:

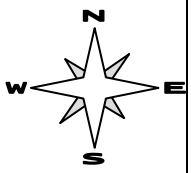
x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

Toxicity Reduction Evaluation (TRE) 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

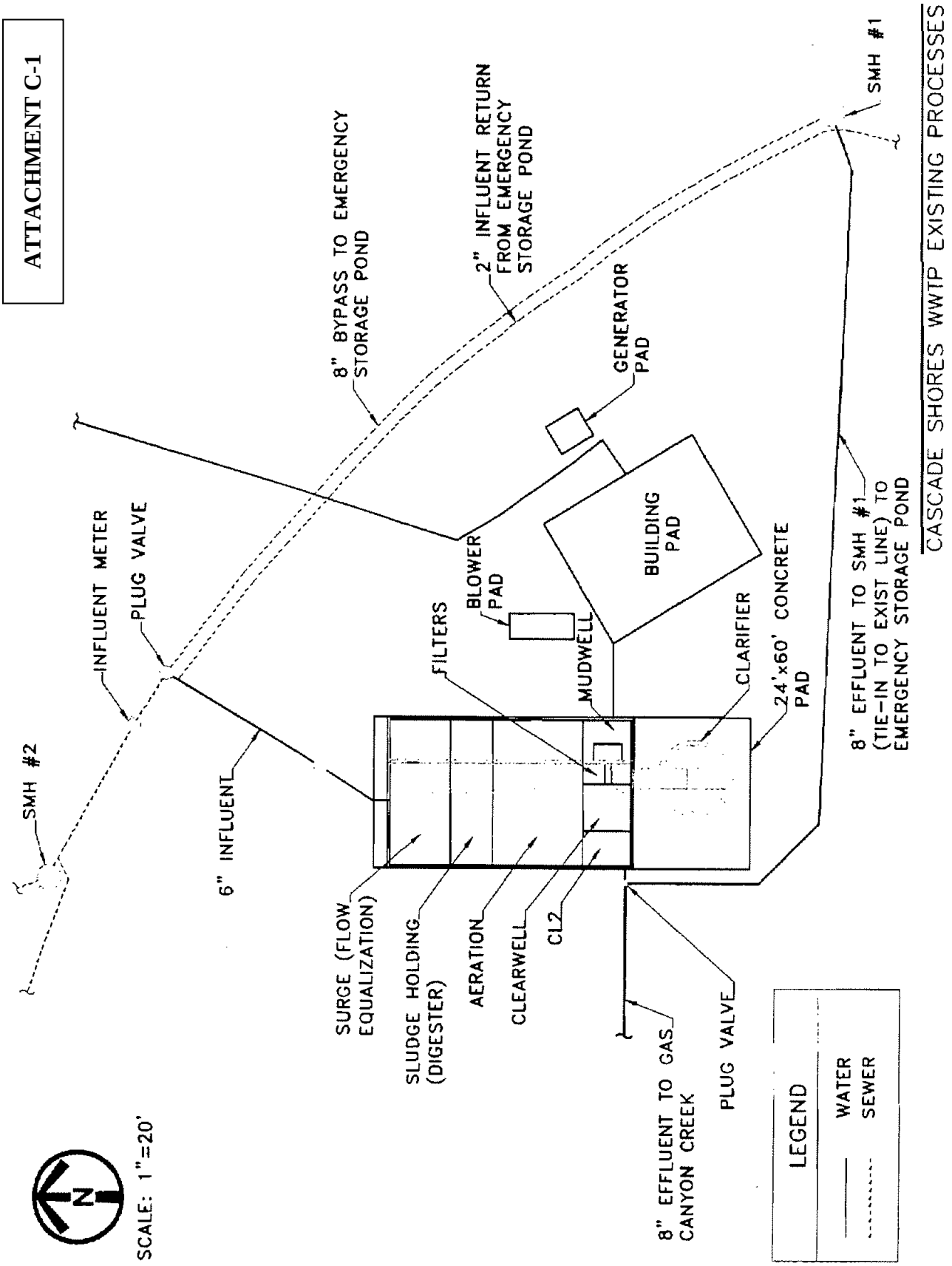
additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

ATTACHMENT B – SITE MAP

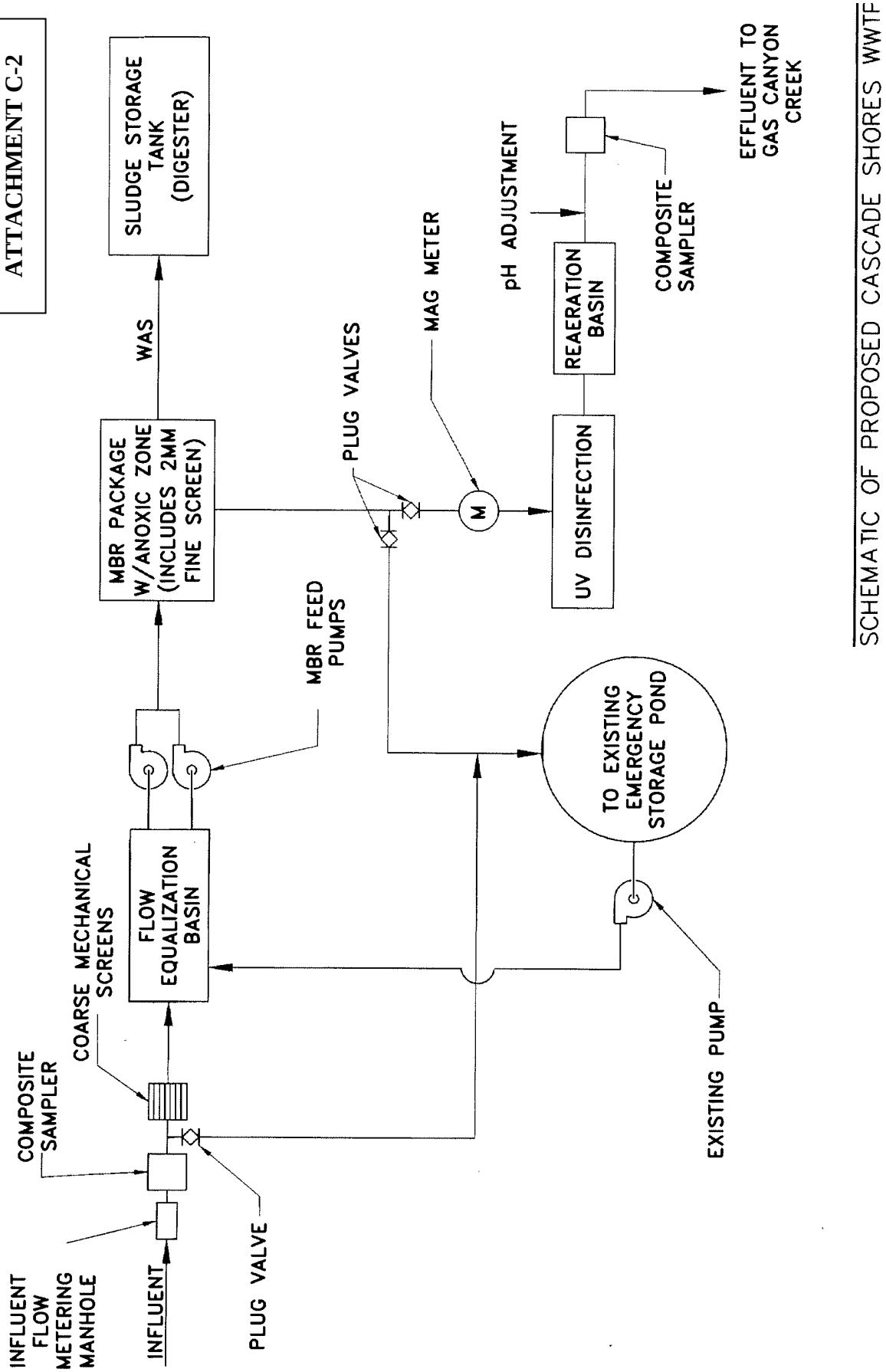


NORTH BLOOMFIELD U.S.G.S TOPOGRAPHIC MAP 7.5 MINUTE QUADRANGLE Datum: WGS84/NAD83 Map Center: 39° 15' 40" N, 120° 54' 20" W UTM Projection: Zone 10, 680701E, 4347844N *Photorevised 1976* *Not to scale*	**SITE LOCATION MAP** NEVADA COUNTY SANITATION DISTRICT NO. 1 CASCADE SHORES WASTEWATER TREATMENT PLANT NEVADA COUNTY	

ATTACHMENT C-1

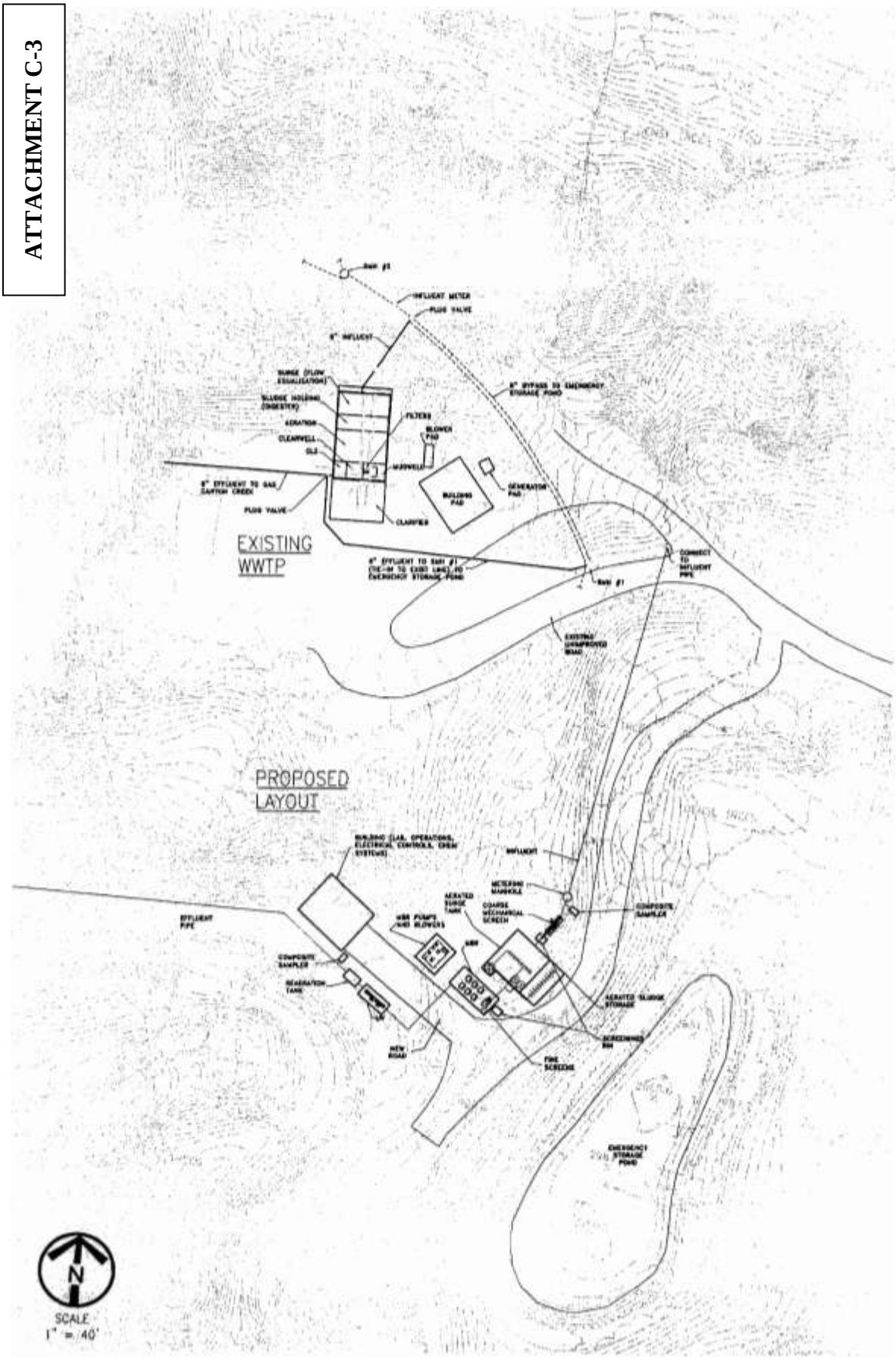


ATTACHMENT C-2



SCHEMATIC OF PROPOSED CASCADE SHORES WWTF

ATTACHMENT C-3



ATTACHMENT D –STANDARD PROVISIONS
A

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); Water 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); Water 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 California 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 Health Services. Laboratories that perform sample analyses shall be identified in all monitoring reports.

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

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

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude when available)
	INF-001	Treatment plant headworks
001	**EFF-001**	Downstream from the last connection through which wastewater treated in the treatment system can be admitted to the outfall (39º, 15', 40" N, 120º, 54', 20" W)
	PND-001	Emergency Storage Pond
	RSW-001D	Upstream of the discharge at a location to be determined.
	RSW-002D	Downstream in Gas Canyon Creek at a location to be determined within 500 feet downstream of the discharge.
	UVS-001	UV Disinfection System
--	**BIO-001**	Biosolids
--	**SPL-001**	Water Supply Source Water

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
Biochemical Oxygen Demand (BOD) 5-day 20°C	mg/L	24-hr Composite[1]	2/month	[2]
Total Suspended Solids (TSS)	mg/L	24-hr Composite[1]	2/month	[2]
Flow	mgd	Meter	Continuous	

[1] 24-hour flow proportional composite

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

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor effluent from the treatment plant downstream from the last connection through which wastes can be admitted into the outfall at EFF-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Meter	Continuous	[1]
Total Residual Chlorine[2]	mg/L	Grab	Continuous	[1]
pH	standard units	Meter	Continuous	[1]
Total Coliform	MPN/100 mL	Grab	2/Week	[1]
Temperature[3]	^{o}F	Grab	2/Week	[1]
Ammonia Nitrogen, (Total as N)[4]	mg/L	Grab	2/Week	[1]
Biochemical Oxygen Demand, 5-day @ 20°C	mg/L	24-hour composite[5]	1/Week	[1]
	lbs/day	Calculate	1/Week	[1]
Total Suspended Solids (TSS)	mg/L	24-hour composite[5]	1/Week	[1]
	lbs/day	Calculate	1/Week	[1]
Nitrate (as N)	mg/L	Grab	1/Month	[1]
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Month	[1]
Total Dissolved Solids	mg/L	Grab	1/Month	[1]
Hardness, Total (as CaCO3)[6]	mg/L	Grab	1/Month	[1]
Aluminum[7]	µg/L	Grab	1/Quarter	[1]
Copper, Total Recoverable	µg/L	Grab	1/Month	[1]
Dichlorobromomethane[2]	µg/L	Grab	1/Month	[1]
Bis (2-ethylhexyl) Phthalate	µg/L	Grab	1/Month[8]	[1]
Mercury, Total Recoverable	µg/L	Grab	Annually	[1]
	lbs/day	Calculated[9]	Annually	[1]
Methyl Mercury	µg/L		Not Required	[1]
Standard Minerals[10]	mg/L	Grab	1/Year	[1]
Other Priority Pollutants[11,12]	µg/L	[13]	[14]	[1]

Footnotes for Table E3

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

[2] Total chlorine residual must be monitored with a method sensitive to and accurate at the permitted level of 0.01 mg/L. (see also Section VII.D., Compliance Determination). Monitoring for chlorine and dichlorobromomethane is in effect until the Discharger submits written certification that a chlorine-based disinfection system is no longer in use, chlorine byproducts are no longer present, and chlorine containing chemicals are not added to the treatment process for wastewater discharge to surface waters.

[3] Effluent Temperature monitoring shall be at the Outfall location.

[4] Monitoring for ammonia shall be concurrent with acute whole effluent toxicity monitoring. See Section V.A.1.

[5] 24-hour flow proportioned composite.

[6] Hardness samples shall be collected concurrently with metals samples.

[7] Report as total recoverable or acid soluble (inductively coupled plasma/atomic emission spectrometry or inductively coupled plasma/mass spectrometry) analysis methods, as supported by USEPA's Ambient Water Quality Criteria for Aluminum document (EPA 440/5-86-008), or other standard methods that exclude aluminum silicate particles as approved by the Executive Officer.

[8] If Bis(2-ethylhexyl) Phthalate effluent concentrations are below 1.8µg/L for the initial six monthly samples collected and analyzed using clean sampling and analysis techniques, then no further monitoring for this constituent shall be required following the Discharger' s request to discontinue montoring, and Regional Water Board staff concurrence that the data are adequate.

[9] The monthly average loading for mercury shall be calculated using the average monthly effluent flow volume and the monthly average mercury concentration.

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

[11] 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.

[12] Concurrent with receiving surface water sampling.

[13] Volatile samples and bis(2-ethylhexyl)phthalate shall be grab samples, the remainder shall be 24-hour composite samples.

[14] Priority pollutants shall be sampled quarterly only during the third year following the date of permit adoption and shall be conducted concurrently with up stream receiving water monitoring for hardness (as $CACO^3$) and pH. The Discharger is not required to conduct effluent monitoring for priority pollutants that have already been sampled in a given quarter, as required in Table E-3.

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-001.

3. *Test Species* – Test species shall be rainbow trout.

4. *Methods* – The acute toxicity testing samples shall be analyzed using EPA-821-R-02-012, Fifth Edition, and its subsequent amendments or revisions. 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 semi-annual three species chronic toxicity testing.

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

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, and its subsequent amendments or revisions.

6. *Reference Toxicant* – As required by the SIP, all chronic toxicity tests shall be conducted with concurrent testing with a reference toxicant and shall be reported with the chronic toxicity test results.

7. *Dilutions* – The chronic toxicity testing shall be performed using the dilution series identified in Table E-4, below. The receiving water control shall be used as the diluent. If the receiving water is toxic or Gas Canyon Creek is dry above the discharge, laboratory control water may be used as the diluent.

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[1]	0	25	50	75	87.5	100	0
% Laboratory Water	0	0	0	0	0	0	100

[1] If receiving water is toxic or if Gas Canyon Creek is dry upstream of the discharge, laboratory water will be used for the dilution series as described in EPA method 821-R-02-013 Section 7.12.

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 on the schedule for quarterly sampling described in Table E-9 and shall contain, at minimum:

   a. The results expressed in TUc, measured as 100/NOEC, and also measured as $100/LC_{50}$, $100/EC_{25}$, $100/IC_{25}$, and $100/IC_{50}$, as appropriate.

   b. The statistical methods used to calculate endpoints;

   c. The statistical output page, which includes the calculation of the percent minimum significant difference (PMSD);

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

   e. The results compared to the numeric toxicity monitoring trigger.

   Additionally, the monthly discharger self-monitoring reports shall contain an updated chronology of chronic toxicity test results expressed in TUc, and organized by test

species, type of test (survival, growth or reproduction), and monitoring frequency, i.e., either quarterly, monthly, accelerated, or TRE.

2. **Acute WET Reporting.** Acute toxicity test results shall be submitted with the monthly discharger self-monitoring reports and reported as percent survival.

3. **TRE Reporting.** Reports for Toxicity Reduction Evaluations shall be submitted in accordance with the schedule contained in the Discharger's approved TRE Work Plan.

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

VI. DISCHARGE TO EMERGENCY STORAGE POND

A. Monitoring Location PND-001

1. The Discharger shall monitor plant effluent discharged to the Emergency Storage Pond as follows:

Table E-5. Discharge to Emergency Storage Pond Requirements (PND-001)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Meter	Daily[1]	
Freeboard	Feet	Visual	Daily	
Odors		Observation	Daily	

[1] Report total flow for each day.

VII. RECLAMATION MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Monitoring Location

Accessible monitoring locations upstream and downstream of the discharge are difficult and may require installation of walkways and steps for safe access. The Discharger will identify access locations above and below the new discharge point from the new treatment facility and implement receiving water monitoring of Gas Canyon Creek when the new treatment facility becomes operational. Visual inspection from the bank above Gas Canyon Creek of general stream conditions shall be conducted when conditions are determined to be unsafe for access to Gas Canyon Creek for monitoring. The Discharger shall report whether there is flow above and below the discharge point. Receiving water conditions at the point of discharge shall be summarized in the monitoring report. Receiving water monitoring is not required when Gas Canyon Creek goes subsurface below the discharge point.

The Discharger shall monitor Gas Canyon Creek at RSW-001D and RSW-002D when there is stream flow in Gas Canyon Creek as follows:

Table E-6. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Analytical Test Method
Dissolved Oxygen	mg/L	Grab	1/Month	[1]
	% Saturation	Grab	1/Month	[1]
pH	Standard Units	Grab	1/Month	[1]
Temperature	°F(°C)	Grab	1/Month	[1]
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Month	[1]
Turbidity	NTU	Grab	1/Month	[1]
Fecal coliform	MPN/100 ml	Grab	Not Required	
Flow	Narrative	Visual	1/Month	
Floating or suspended matter	Narrative	Visual	1/Month	
Discoloration	Narrative	Visual	1/Month	
Bottom Deposits	Narrative	Visual	1/Month	
Aquatic Life	Narrative	Visual	1/Month	
Visible films, sheens	Narrative	Visual	1/Month	
Fungi, slimes, or objectionable growths	Narrative	Visual	1/Month	
Potential nuisance conditions	Narrative	Visual	1/Month	
Foam	Narrative	Visual	1/Month	

[1] A hand-held field meter may be used, provided the meter utilizes a USEPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the wastewater treatment plant.

IX. OTHER MONITORING REQUIREMENTS

A. Biosolids

1. Monitoring Location BIO-001

1. A composite sample of sludge shall be collected annually at Monitoring Location BIO-001 in accordance with EPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989, and tested for metals listed in Title 22.

2. Sampling records shall be retained for a minimum of **five years**. A log shall be kept of sludge quantities generated and of handling and disposal activities. The frequency of entries is discretionary; however, the log should be complete enough to serve as a basis for part of the annual report.

B. Ultraviolet Disinfection System

1. Monitoring Location UVS-001

Table E-7. Ultraviolet Disinfection System Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow rate	mgd	Meter	Continuous
Turbidity[1]	NTU	Meter	Continuous
Number of UV banks in operation	Number	Meter	Continuous
UV Transmittance	Percent (%)	Meter	Continuous
UV Power Setting	Percent (%)	Meter	Continuous
UV Dose[2]	MW-sec/cm^2	Calculated	Continuous

[1] Report daily average turbidity and maximum. If the influent exceeds 10 NTU and is not diverted from discharging to Gas Canyon Creek, report the duration of the turbidity exceedance.

[2] Report daily minimum UV dose, daily average UV dose, and weekly average UV dose. For the daily minimum UV dose, also report associated number of banks, gallons per minute per lamp, power settings, and UV transmittance used in the calculation. If effluent discharge has received less than the minimum UV dose and is not diverted from discharging to Gas Canyon Creek, report the duration and dose calculation variables associated with each incident.

C. 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-8. Municipal Water Supply Monitoring Requirements

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

[1] 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.

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

[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 recordkeeping.

1. 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).

2. **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.

3. 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.

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

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

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

b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

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

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

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

5. **Multiple Sample Data.** 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
   NPDES Compliance and Enforcement Unit
   11020 Sun Center Dr., Suite #200
   Rancho Cordova, CA 95670-6114

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

Table E-9. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	**Permit effective date**	**All**	**First day of second calendar month following month of sampling**
Daily	**1st day of calendar month following permit effective date**	**Any 24-hour period that reasonably represents a calendar day for purposes of sampling.**	**First day of second calendar month following month of sampling**
Weekly	**Sunday following permit effective date or on permit effective date if on a Sunday**	**Sunday through Saturday**	**First day of second calendar month following month of sampling**
Monthly	**First day of calendar month following permit effective date or on permit effective date if that date is first day of the month**	**First day of calendar month through last day of calendar month**	**45 days from the end of the monitoring period**
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**	**45 days from the end of the monitoring period**
Semiannually	**Closest of 1 January or 1 July following permit effective date**	**1 January through 31 December**	**45 days from the end of the monitoring period**
Annually	**January 1 following (or on) permit effective date**	**1 January through 31 December**	**45 days from the end of the monitoring period**

C. Discharge Monitoring Reports (DMRs)

1. As described in Section X.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharger shall submit the original DMR and one copy of the DMR to the address listed below:

Standard Mail	FedEx/UPS/ Other Private Carriers
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15th Floor Sacramento, CA 95814

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated cannot be accepted unless they follow the exact same format as EPA form 3320-1.

D. Other Reports

1. **Progress Reports.** As specified 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-10. Reporting Requirements for Special Provisions Progress Reports

Special Provision	Reporting Requirements
Compliance Schedule for Construction of New Wastewater Treatment	**1 September 2008**, quarterly thereafter until construction complete
BPTC Compliance Evaluation for New WWTP	**1 September 2008**, quarterly thereafter until evaluation complete
Compliance Schedules for Final Effluent Limitations for copper and aluminum. Pollution Prevention and Treatment Feasibility Study	**1 June**, annually, after approval of work plan until final compliance

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

3. The Discharger's sanitary sewer system collects wastewater using sewers, pipes, pumps, and/or other conveyance systems and directs the raw sewage to the wastewater treatment plant. A "sanitary sewer overflow" is defined as a discharge to ground or surface water from the sanitary sewer system at any point upstream of the wastewater treatment plant. Sanitary sewer overflows are prohibited by this Order. All violations must be reported as required in Standard Provisions. Facilities (such as wet wells, regulated impoundments, tanks, highlines, *etc*.) may be part of a sanitary sewer system and discharges to these facilities are not considered sanitary sewer overflows, provided that the waste is fully contained within these temporary storage facilities.

4. **Annual Operations Report**. By **1 February** of each year, the Discharger shall submit a written report to the Executive Officer containing the following:

a. The names, certificate grades, and general responsibilities of all persons employed at the Facility.

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

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

d. A statement certifying whether the current operation and maintenance manual, and contingency plan, reflect the wastewater treatment plant as currently constructed and operated, and the dates when these documents were last revised and last reviewed for adequacy.

e. The Discharger may also be requested to submit an annual report to the Regional Water Board with both tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	5A290107002
Discharger	Nevada County Sanitation District No. 1
Name of Facility	Cascade Shores Wastewater Treatment Plant
Facility Address	14326 Gas Canyon Road
	Nevada City, CA 95959
	Nevada
Facility Contact, Title and Phone	Phil Guerra, Wastewater Wastewater Plant Operations Supervisor, 530-265-7121
Authorized Person to Sign and Submit Reports	Mark Miller, Director of Sanitation, 530-265-1351
Mailing Address	950 Maidu Avenue, Nevada City, CA95959
Billing Address	Same
Type of Facility	Publicly Owned Treatment Works
Major or Minor Facility	Minor
Threat to Water Quality	3
Complexity	C
Pretreatment Program	N
Reclamation Requirements	NA
Facility Permitted Flow	0.026 million gallons per day (mgd) Average Dry Weather Flow (ADWF)
Facility Design Flow	0.026 mgd ADWF
Receiving Water	Gas Canyon Creek
Receiving Water Type	Inland surface water-Ephemeral Stream

A. Nevada County Sanitation District No. 1 (hereinafter Discharger) is the owner and operator of the Cascade Shores Wastewater Treatment Plant (hereinafter Facility), a Publicly Owned Treatment Works (POTW).

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

B. The Facility discharges wastewater to Gas Canyon Creek, a water of the United States, and is currently regulated by Order 5-01-177 which was adopted on 14 June 2001 and expired on 1 June 2006. The terms and conditions of the current Order have been administratively extended 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 and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on 1 December 2005. A site visit was conducted on 22 March 2006, to observe operations and collect additional data to develop permit limitations and conditions.

II. FACILITY DESCRIPTION

The Discharger provides sewerage service for the community of Cascade Shores and serves a population of approximately 200. The WWTP average dry weather flow design capacity is 0.026 mgd.

A. Description of Existing Wastewater and Biosolids Treatment or Controls

The existing Cascade Shores WWTP, which began operation in 1996, is a tertiary-level activated sludge package plant. The treatment system consists of communition, a flow equalization tank, a sludge holding/aerobic digester tank, an aerated activated sludge tank, a clarifier, dry-weather dual-media filtration, pH adjustment with soda ash, and chlorination/dechlorination with chlorine and sulfur dioxide gas, respectively. The current wastewater treatment system is shown in Attachment C-1.

The WWTP is equipped with a surge tank, which provides flow equalization and pretreatment for the influent. Wastewater enters the tank by gravity and is lifted into the aeration tank by one of two influent pumps. The pump also serves to grind large materials prior to secondary treatment. The level of water in the tank is controlled by a splitter box, which allows a constant flow through a V-notch weir to the aeration tank. The excess flow is allowed to return to the surge tank over a broad weir. Aeration is provided in the surge tank to minimize odors. Rocks and heavier items remain at the bottom of the surge tank and are periodically removed. pH adjustment with soda ash occurs in the surge tank prior to nitrification in the aerated basin.

The wastewater is pumped from the surge tank into an aerated basin where it is mixed with return activated sludge. Coarse-bubble diffusers aerate the activated sludge, returned sludge, and wastewater to keep the mixture in suspension. A dissolved oxygen concentration of at least 2 mg/L is maintained in the basin. The wastewater then flows to the clarifier for final settling. Scum is scraped off the clarifier surface and settled sludge is returned to the aerated basin. A portion of the sludge is wasted to the aerobic sludge digester. The amount of sludge wasted is determined by measuring the amount of suspended solids in the aeration tank.

After clarification, the wastewater is conveyed through a dual-media filter, which removes additional suspended solids and reduces turbidity. The existing filters can treat flow as high as 26,000 gal/d. A portion of the filtered water is collected in a backwash tank. At the beginning of every backwash cycle, the flow is reversed for about 5 minutes to "clean" the filter. The backwash water is discharged into the backwash holding tank and then returns to the beginning of the treatment process for retreatment. The filter media (anthracite and sand) is backwashed once every 24-hours or when the filter is clogged.

After filtration, the wastewater enters the chlorine contact chamber for disinfection. Chlorine gas is dosed such that there is a chlorine residual remaining when the water flows out of the contact chamber. Sulfur dioxide gas is added in the dechlorination zone to remove the chlorine residual before discharge of the effluent to Gas Canyon.

Excess sludge from the activated sludge system is wasted to the aerobic digester where sludge is aerated and further stabilized. The sludge is then removed from the digester and transported to the Lake Wildwood WWTP where it is eventually dewatered. The dewatered sludge is then taken off site and landfilled.

B. Discharge Points and Receiving Waters

1. The Facility is located in Section 7, T16N, R10E, MDB&M, as shown in Attachment B (Figure B-1), a part of this Order.

2. Treated municipal wastewater is discharged at Discharge Point 001 to Gas Canyon Creek, a water of the United States *and a tributary to Bear River via Greenhorn Creek and Rollins Reservoir* at a point Latitude 39°, 15', 40" N and longitude 120°, 54', 20" W.

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

Effluent limitations contained in the existing Order for discharges from D-001 (Monitoring Location EFF-001), through 14 June 2006, are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data

Effluent limitations contained in the existing Order for discharges of wastewater through Discharge Point 001 (Monitoring Location EFF-001) after 14 June 2006 are as follows:

Parameter (units)	Effluent Limitation (after 14 June 2006)				
	Average Monthly	Average Weekly	Monthly Median	Instantaneous Minimum	Maximum Daily
BOD_5 (20°C) (mg/L)	15	20	--	--	35
BOD_5 (20°C) (lb/day)	3.3	4.3	--	--	7.6
Total Suspended Solids (mg/L)	15	20	--	--	35
Total Suspended Solids (lb/day)	3.3	4.3	--	--	7.6

Parameter (units)	Effluent Limitation (after 14 June 2006)				
	Average Monthly	Average Weekly	Monthly Median	Instantaneous Minimum	Maximum Daily
Settleable Solids (mL/L)	0.1	--	--	--	0.2
Chlorine, Residual (mg/L)	--	0.01	--	--	0.02
Coliform, Total (MPN/100 mL)	--	--	2.2	--	23
Turbidity (NTU)	2	--	--	--	5
Ammonia (mg/L)	Temp/pH Dependent Floating Ammonia Limit			--	pH Dependent Floating Ammonia Limit
Nitrate (as N) (mg/L)	10	--	--	--	--
BOD Removal (% removed)	--	--	--	85%	--
TSS Removal (% removed)	--	--	--	85%	--
pH (Standard Units)	--	--	--	6.5	8.5
Dissolved Oxygen (mg/L)	--	--	--	7.0	--
Flow (mgd)	--	--	--	--	0.0260
96-hour aquatic bioassay (% survival)	--	--	90%	70%	--

Maximum effluent concentrations reported in Discharge Monitoring Reports (DMR).

Parameter (Units)	Maximum Effluent Concentration
BOD_5 (20°C) (mg/L)	40
Total Suspended Solids (mg/L)	37
Coliform, Total (MPN/100 mL)	>1600
Turbidity (NTU)	43
Ammonia (mg/L)	23
Nitrate (as N)(mg/L)	92
pH (Standard Units)	8.4

D. Compliance Summary

1. Numerous violations of the effluent limitations contained in WDR Order No. 5-01-177. These included violations of Total Suspended Solids (daily maximum, 7-day and monthly average limitations), BOD (daily maximum, 7-day and monthly average limitations), chlorine residual, coliform (daily maximum, monthly median), settleable solids (daily maximum), pH, and dissolved oxygen. In addition, deficiencies were documented for failure to submit monitoring reports for ammonia, nitrates, acute and chronic toxicity. The Discharger received a Notice of Violation from the Regional Water Board—in a letter dated 12 September 2002 for the violations occurring in 2001-2002.

2. The Discharger received a Notice of Violation from the Regional Water Board—in a letter dated 10 March 2003—based on the Discharger's failure to submit water quality data for priority pollutants, organophosphorous pesticides, drinking water constituents, pH, hardness, flow and other constituents (except for dioxins and furans) by the 1 March 2003 deadline.
3. On 10 May 2005, a landslide took place on the cliff overhanging the Cascade Shores WWTP, resulting in the displacement of the main influent pipeline to the plant and the discharge of raw sewage to Gas Canyon Creek. The discharge of untreated domestic wastewater went unabated until 18 May 2005. The Discharger received a Notice of Violation from the Regional Water Board in a letter dated 9 June 2005 for the discharge. The Discharger also received an order from the Regional Water Board dated 27 June 2005 requesting the submittal of a technical report in response to the landslide and sewage spill.
4. The Discharger received Administrative Civil Liability Complaint (ACLC) No. R5-2005-0518 on 10 August 2005 for violating Waste Discharge Requirements Order Nos. 94-160 and 5-01-077. The permit violations included Total Suspended Solids (daily maximum, 7-day and monthly average limitations), BOD (daily maximum, 7-day and monthly average limitations), chlorine residual, coliform (daily maximum, monthly median), settleable solids (daily maximum), pH, and dissolved oxygen. The ACLC also included liability for the discharge of raw sewage into Gas Canyon Creek as a result of the 10 May 2005 landslide.
5. The Discharger received Cleanup and Abatement Order (CAO) No. R5-2005-0714 on 23 August 2005. The purpose of the CAO is to abate the site conditions, which threat cause violation(s) WDR No. 5-01-177 and threaten water quality and the beneficial uses of Gas Canyon Creek. The CAO was issued in response to the 10 May 2005 landslide, which took out a section of the collection system pipe that leads to the facility and raw sewage as discharged into Gas Canyon Creek.
6. On 15 September 2005 the State Water Board placed Cascade Shores Community on its list of Small Communities with a Financial Hardship. In order to allow the opportunity for a compliance project to be performed in lieu of assessing a penalty, ACLC No. R5-2005-0518 was rescinded with a new ACLC No. R5-2006-0500 was issued on 7 March 2006. ACLC No. R5-2006-0500 for $541,000 covered effluent violations from 1 January 2000 through 30 April 2005, and the May 2005 raw sewage spill to Gas Canyon Creek. The ACLC non-discretionary amount of $498,000 for the effluent violations may be used to complete a compliance project.
7. On 15 September 2005, the Discharger requested that the compliance date established in WDR Order No. 5-01-177 of 14 June 2006 for full compliance be extended to 31 August 2007. On 4 May 2006 the Regional Water Board adopted Cease and Desist Order (C&D) No. R5-2006-0035. Monitoring data indicated the Discharger could not meet the effluent limits for turbidity, ammonia, and nitrates effective 14 June 2006. The C&D Order established a time schedule for completion of treatment facilities and full compliance with effluent limitations by 30 September 2007.

8. On 5 May 2008 ACLC No. R5-2008-0521 was issued rescinding ACLC No. R5-2006-0500, which was not settled. ACLC No. R5-2008-0521 for $411,000 included the mandatory minimum penalties from ACLC No. R5-2006-050 but did not address the additional penalty for the raw sewage spill. The Regional Water Board may elect to require the amount of $411,000 for the effluent violations to be used to complete a compliance project to correct the violations.

E. Planned Changes

Discharger is proposing to construct a new treatment facility at location away from the existing facility and landslide threat. (See Attachment C-3, Layouts of Existing and Proposed Plants). The proposed treatment would be a pre-packaged membrane bioreactor system (MBR) with an anoxic zone (combined denitrification, nitrification, and membrane process) and UV disinfection (See Attachment C-2). The proposed facility would be designed to treat and average flow of 0.026 mgd. It is expected that the treatment processes and increased removal of suspended solids will reduce concentrations of constituents in the wastewater effluent. The expected effluent quality from the MBR system should result in compliance with the final effluent limitations in this permit for total coliform organisms, ammonia, nitrate, BOD, and TSS. The UV disinfection will eliminate chlorine use and the byproduct dichlorobromomethane should no longer be present. Chlorine related effluent limitations would no longer be necessary if all chlorine use is discontinued. The anoxic zone treatment is expected to reduce nitrates to levels below the proposed 10 mg/L effluent limit. The effectiveness of the MBR system to reduce copper and other metals is unknown.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authority

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

B. California Environmental Quality Act (CEQA)

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

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans**. The Regional Water Board adopted a *Water Quality Control Plan, Fourth Edition (Revised August 2006), for the Sacramento and San Joaquin River Basins* (Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, State Water

Board Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. The beneficial uses of Gas Canyon Creek downstream of the discharge are municipal and domestic supply, agricultural, hydropower generation, water contact recreation, other non-contact water recreation, warm freshwater aquatic habitat, cold freshwater aquatic habitat, warm fish migration habitat, cold fish migration habitat, warm spawning habitat, cold spawning habitat, and wildlife habitat.

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

The federal CWA section 101(a)(2), states: "*it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983.*" Federal Regulations, developed to implement the requirements of the CWA, create a rebuttable presumption that all waters be designated as fishable and swimmable. Federal Regulations, 40 CFR sections 131.2 and 131.10, require that all waters of the State regulated to protect the beneficial uses of public water supply, protection and propagation of fish, shell fish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. Section 131.3(e), 40 CFR, defines existing beneficial uses as those uses actually attained after November 28, 1975, whether or not they are included in the water quality standards. Federal Regulation, 40 CFR section 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.

The beneficial uses of Gas Canyon Creek are not specifically listed in the Basin Plan. Gas Canyon Creek is tributary to Greenhorn Creek, which is tributary to Rollins Reservoir and Bear River. Bear River is the first body of water downstream for which beneficial uses are listed

a. Municipal and Domestic Supply; Agricultural Supply

   Gas Canyon Creek is not currently directly used for drinking water supply or agricultural supply; however there are some homes above the creek. There is no record of any established water rights along Gas Canyon Creek but property owners may be exercising riparian rights. Gas Canyon Creek is an ephemeral stream and goes subsurface below the discharge during the summer months. Therefore, it likely provides groundwater recharge. In a letter dated 10 April 2007 DHS stated that the current degree of treatment is adequate to protect public health for drinking water supply and agricultural irrigation in Gas Canyon Creek.

The Regional Board is required to apply the beneficial uses of municipal and domestic supply to Gas Canyon Creek based on State Water Board Resolution No. 88-63 which was incorporated in the Basin Plan pursuant to Regional Water Board Resolution No. 89-056.

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

Gas Canyon Creek between the discharge and the 1.5 miles to Greenhorn Creek is relatively inaccessible to the public and is dry during most of the year. Therefore limited recreational opportunities exist. In a letter dated 10 April 2007 DHS stated that the current degree of treatment is adequate to protect public health for recreation.

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

The Basin Plan designates the Bear River as being both a cold and warm water freshwater habitat. The findings in the previous Order No. 5-01-177 stated that Gas Canyon Creek has fish species that are consistent with both cold and warm water species. At that time the DFG stated that Gas Canyon Creek has a self-sustaining wild trout fishery. In a letter dated 2 May 2007 DFG determined that it is highly unlikely that Gas Canyon Creek supports cold-water species, except at its mouth, where it has direct influence from Greenhorn Creek. The only potential habitat is within 200 feet above the confluence with Greenhorn Creek. The DFG stated it would have no objection to removing the cold-water fishery designation from Gas Canyon Creek. However, such use could only be removed in a basin planning action. The cold-water designation necessitates that the in-stream dissolved oxygen concentration be maintained at, or above, 7.0 mg/L. The effluent limitation for dissolved oxygen in the previous Order has been removed and compliance with the dissolved oxygen receiving water objective is ascertained with receiving water monitoring is ascertained with receiving water monitoring.

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

3. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the

previous permit, with some exceptions in which limitations may be relaxed. 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) (EPCRKA) indicate as discharged into the POTW, for which the State Water Board or the Regional Water Board has established numeric water quality objectives, and has determined that the discharge is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective*".

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

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

5. ***Stormwater Requirements*.** 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 with design flows greater than 1 mgd. The discharge from this facility is less than 1 mgd therefore these regulations do not apply. In addition, no storm water is directly discharged from the Facility.

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.*" Gas Canyon Creek is not listed as a WQLS in the 303(d) list of impaired water bodies.

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 are applicable to the discharge.

The Federal CWA mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state or federal law [33 U.S.C., § 1311(b)(1)(C); 40 CFR, § 122.44(d)(1)]. NPDES permits must incorporate discharge limits necessary to ensure that water quality standards are met. This requirement applies to narrative criteria as well as to criteria specifying maximum

amounts of particular pollutants. Pursuant to Federal Regulations, 40 CFR Section 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that "*are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality*." Federal Regulations, 40 CFR, §122.44(d)(1)(vi), further provide that "[w]*here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits.*"

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

A. Discharge Prohibitions

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

B. Technology-Based Effluent Limitations

1. Scope and Authority

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

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

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

2. Applicable Technology-Based Effluent Limitations

a. **BOD_5 and TSS.** Federal Regulations, 40 CFR, Part 133, establish the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for BOD_5 and TSS. Tertiary treatment is necessary to protect the beneficial uses of the receiving stream and the final effluent limitations for BOD_5 and TSS are based on the technical capability of the tertiary process. BOD_5 is a measure of the amount of oxygen used in the biochemical oxidation of organic matter. The secondary and tertiary treatment standards for BOD_5 and TSS are indicators of the effectiveness of the treatment processes. The principal design parameter for wastewater treatment plants is the daily BOD_5 and TSS loading rates and the corresponding removal rate of the system. In applying 40 CFR Part 133 for weekly and monthly average BOD_5 and TSS limitations, the application of tertiary treatment processes results in the ability to achieve lower

levels for BOD_5 and TSS than the secondary standards currently prescribed; the 30-day average BOD_5 and TSS limitations have been revised to 10 mg/L, which is technically based on the capability of a tertiary system. In addition to the 30-day average, a weekly average of 15 mg/L and a daily maximum of 25 have been included in the Order for BOD_5 and TSS is to ensure that the treatment works are not organically overloaded and operate in accordance with design capabilities. See Table F-3 for final technology-based effluent limitations required by this Order. In addition, 40 CFR 133.102, in describing the minimum level of effluent quality attainable by secondary treatment, states that the 30-day average percent removal shall not be less than 85 percent. If 85 percent removal of BOD_5 and TSS must be achieved by a secondary treatment plant, it must also be achieved by a tertiary (i.e., treatment beyond secondary level) treatment plant. This Order contains a limitation requiring an average of 85 percent removal of BOD_5 and TSS over each calendar month.

Based on monitoring data, it appears that the Discharger may be in immediate non-compliance with the monthly average limitation for BOD and TSS upon issuance of the permit. New or modified control measures may be necessary in order to comply with the effluent limitations, and the new or modified control measures cannot be designed, installed and put into operation within 30 calendar days. The Basin Plan for the Sacramento and San Joaquin River Basins includes a provision that authorizes the use of compliance schedules in NPDES permits for water quality objectives adopted after September 25, 1995 (See Basin Plan at page IV-16). The water quality-based effluent limitations for BOD and TSS are more stringent than limitations in WDR Order No. 5-01-177 and are based on a new interpretation of applicable water quality objectives or criteria. Therefore, based on the technical justification and implementation schedule included in the Discharger's Infeasibility Study Report dated 11 April 2008, a schedule of compliance with the BOD and TSS effluent limitations is established in the Order.

Interim effluent limitations for BOD and TSS have been established in this Order. Interim limitations must be based on current treatment plant performance or existing permit limitations, whichever is more stringent. Therefore, the interim limitations in this Order are the existing permit limitations of 15, 20, and 35 mg/L contained in Order No. 5-01-177 and are in effect through 18 May 2010. Compliance with the new effluent limitations should be achieved upon completion of the new wastewater treatment facility. The Discharger has submitted a corrective action plan and implementation schedule for completion of the new facility to assure compliance with the final BOD and TSS effluent limitations.

b. pH Federal Regulations, 40 CFR Part 133, also establish technology-based effluent limitations for pH. The secondary treatment standards require the pH of the effluent to be no lower that 6.0 and no greater than 9.0 standard units. This Order contains an effluent pH limitation of 6.5 to 8.0 to assure compliance with receiving water objectives.

c. **Flow.** The current Facility was designed to provide a tertiary level of treatment for up to a design flow of 0.026 mgd. The proposed new Facility will have the same design flow. Therefore, this Order contains an effluent flow limitation of 0.026 mgd as the Average Daily Dry Weather Flow (ADWF).

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

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

Parameter	Units	Effluent Limitations			
		Monthly Average	Weekly Average	Daily Maximum	Daily Average
Average Dry Weather Flow	mgd	--	--		0.026
Biochemical Oxygen Demand, 5-day @ 20°C	mg/L	10	15	25	--
	lbs/day[1]	2.2	3.3	5.4	--
Total Suspended Solids	mg/L	10	15	25	--
	lbs/day[1]	2.2	3.3	5.4	--

[1] Based upon an average dry weather flow of 0.026 mgd.

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

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

a. **Receiving Water.** The receiving stream is Gas Canyon Creek, tributary *to Bear River via Greenhorn Creek and Rollins Reservoir*. The beneficial uses, as described above in III.C.1 are as follows:

Table F-4. Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Gas Canyon Creek to Bear River via Greenhorn Creek and Rollins Reservoir	Existing: Municipal and domestic supply (MUN); agricultural supply, including stock watering (AGR); hydropower generation (POW); water contact recreation, including canoeing and rafting (REC-1); non-contact water recreation, including aesthetic enjoyment (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); wildlife habitat (WILD). Potential: Warm migration of aquatic organisms (MGR); cold migration of aquatic organisms (MGR); warm spawning, reproduction, and/or early development (SPWN); and cold spawning, reproduction, and /or early development (SPWN) Groundwater: Municipal and domestic water supply (MUN), industrial service supply (IND), industrial process supply (PRO), and agricultural supply (AGR).

b. **Hardness.** While no effluent limitation for hardness is necessary in this Order, hardness is critical to the assessment of the need for, and the development of, effluent limitations for certain metals. The *California Toxics Rule and the National Toxics Rule*, contain water quality criteria for seven metals that vary as a function of hardness, the lower the hardness the lower the water quality criteria. The hardness-dependent metals include cadmium, copper, chromium III, lead, nickel, silver, and zinc. The equation describing the total recoverable regulatory criterion is as follows

$$\text{CTR Criterion (expressed as dissolved)} = \text{WER} \times \text{CF} \times e^{m[\ln(H)]+b} \quad \text{(Equation 1)}$$

Where:

WER = water-effect ratio (default of 1.0 used in this Order)

CF = total to dissolved conversion factor

m = criterion-specific constant

H = Hardness

b = criterion-specific constant

The constants “m” and “b” are specific to both the metal under consideration, and the type of total recoverable criterion (i.e. acute or chronic)

Effluent limitations for the discharge must be set to protect the beneficial uses of the receiving water for all discharge conditions. In the absence of the option of including condition-dependent, “floating” effluent limitations that are reflective of actual conditions at the time of discharge, effluent limitations must be set using a

reasonable worst-case condition in order to protect beneficial uses for all discharge conditions. Recent studies indicate that using the receiving water lowest hardness for establishing water quality criteria is not the most protective for the receiving water. The Regional Water Board has evaluated these studies and concurs that for some parameters the beneficial uses of the receiving water are best protected using the lowest hardness value of the effluent, while for some parameters, the use of both the lowest hardness value of the receiving water and the lowest hardness value of the effluent is the most protective, provided sufficient hardness data for the effluent and receiving water are available.

Because of the non-linearity of the Total Recoverable Criterion equation, the relationship can be either concave downward or concave upward depending on the criterion-specific constants. For those contaminants whereby the regulatory criteria exhibit a concave downward relationship as a function of hardness (e.g. acute and chronic copper, chromium III, nickel, and zinc, and chronic cadmium), use of the lowest recorded effluent hardness for establishment of water quality objectives is fully protective of all beneficial uses regardless of whether the effluent or receiving water hardness is higher. For the purposes of establishing water quality-based effluent limitations, the minimum reported effluent hardness value of 21 mg/L as $CaCO_3$ was used

c. **Assimilative Capacity/Mixing Zone.** The Regional Water Board finds that based on the available information and on the Discharger's application, that Gas Canyon Creek, absent the discharge, is an ephemeral stream. The ephemeral nature of Gas Canyon Creek means that the designated beneficial uses must be protected, but that no credit for receiving water dilution is available. Although the discharge, at times, maintains the aquatic habitat, constituents may not be discharged that may cause harm to aquatic life. At other times, natural flows within Gas Canyon Creek help support the aquatic life. Both conditions may exist within a short time span, where Gas Canyon Creek would be dry without the discharge and periods when sufficient background flows provide hydraulic continuity with Greenhorn Creek. Dry conditions occur primarily in the summer months, but dry conditions may also occur throughout the year, particularly in low rainfall years. The lack of dilution results in more stringent effluent limitations to protect contact recreational uses, drinking water standards, agricultural water quality goals and aquatic life. Significant dilution may occur during and immediately following high rainfall events. The impact of assuming zero assimilative capacity within the receiving water is that discharge limitations are end-of-pipe limits with no allowance for dilution within the receiving water.

3. Determining the Need for WQBELs

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

standards, including the CTR and NTR. The Basin Plan includes numeric site-specific water quality objectives and narrative objectives for toxicity, chemical constituents, and tastes and odors. The narrative toxicity objective states: "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*" (Basin Plan at III-8.00.) With regards to the narrative chemical constituents objective, the Basin Plan states that waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. At minimum, "…*water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs)*" in Title 22 of CCR. The narrative tastes and odors objective states: "*Water shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.*"

b. Federal regulations require effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause, or contribute to an in-stream excursion above a narrative or numerical water quality standard. Based on information submitted as part of the application, in studies, and as directed by monitoring and reporting programs, the Regional Water Board finds that the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard for copper, dichlorobromomethane, aluminum, ammonia, and nitrate. Water quality-based effluent limitations (WQBELs) for these constituents are included in this Order. A detailed discussion of the RPA for each constituent is provided below.

c. The Regional Water Board conducted the RPA in accordance with Section 1.3 of the SIP. Although the SIP applies directly to the control of CTR priority pollutants, the State Water Board has held that the Regional Water Board may use the SIP as guidance for water quality-based toxics control.[2] The SIP states in 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. **Aluminum.** USEPA developed National Recommended Ambient Water Quality Criteria for protection of freshwater aquatic life for aluminum. The recommended four-day average (chronic) and one-hour average (acute) criteria for aluminum are 87 µg/L and 750 µg/L, respectively, for waters with a pH of 6.5 to 9.0.

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

USEPA recommends that the ambient criteria are protective of the aquatic beneficial uses of receiving waters in lieu of site-specific criteria.

The USEPA criteria are based on studies with waters in a pH range of 6.5-6.8 and low hardness (<10 mg/L as $CaCO_3$). Based on the minimum hardness measured in the effluent of 21 mg/L and the minimum pH measured in the effluent (<6.5), and no receiving water dilution, it is appropriate to establish the aluminum effluent limitation using the chronic criterion. This Order contains final Average Monthly Effluent Limitations (AMEL) and Maximum Daily Effluent Limitations (MDEL) for aluminum of 71 µg/L and 143 µg/L, respectively, based on USEPA's National Ambient Water Quality Criteria for the protection of freshwater aquatic life. (See Section IV.C.4, Table F-6, of the Fact Sheet for calculations of the AMEL and MDEL for aluminum.)

The MEC for aluminum was 223 µg/L based on 3 samples collected. Therefore, aluminum in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a level necessary to protect aquatic life resulting in a violation of the Basin Plan's narrative toxicity objective. Based on the sample results in the effluent, it appears that the Discharger may be in immediate non-compliance upon issuance of the permit. New or modified control measures may be necessary in order to comply with the effluent limitations, and the new or modified control measures cannot be designed, installed and put into operation within 30 calendar days. The Basin Plan for the Sacramento and San Joaquin River Basins includes a provision that authorizes the use of compliance schedules in NPDES permits for water quality objectives adopted after September 25, 1995 (See Basin Plan at page IV-16). The water quality-based effluent limitations for aluminum are based on a new interpretation of the narrative standard for protection of receiving water beneficial uses. Therefore, based on the technical justification and implementation schedule included in the Discharger's Infeasibility Study Report dated 11 April 2008, a schedule for compliance with the aluminum effluent limitations is established in the Order.

An interim performance-based maximum daily effluent limitation of 694 µg/L has been established in this Order. The interim limitation was determined as described in Attachment F, Section IV.E.3., and is in effect through 1 July 2013. As part of the compliance schedule, this Order requires the Discharger to submit a corrective action plan and implementation schedule to assure compliance with the final aluminum effluent limitations. In addition, the Discharger shall submit an engineering treatment feasibility study and prepare and implement a pollution prevention plan that is in compliance with CWC section 13263.3(d)(3).

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

Order allows the use of the alternate aluminum testing protocol described above to meet monitoring requirements.

f. **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 currently uses nitrification to remove ammonia from the waste stream. Inadequate or incomplete nitrification may result in the discharge of ammonia to the receiving stream. Ammonia is known to cause toxicity to aquatic organisms in surface waters. Discharges of ammonia would violate the Basin Plan narrative toxicity objective. Applying 40 CFR section 122.44(d)(1)(vi)(B), it is appropriate to use USEPA's Ambient National Water Quality Criteria for the Protection of Freshwater Aquatic Life for ammonia, which was developed to be protective of aquatic organisms.

USEPA's *Ambient Water Quality Criteria for the Protection of Freshwater Aquatic Life*, for total ammonia, recommends acute (1-hour average; criteria maximum concentration or CMC) standards based on pH and chronic (30-day average, criteria continuous concentration or CCC) standards based on pH and temperature. USEPA also recommends that no 4-day average concentration should exceed 2.5 times the 30-day CCC. USEPA found that as pH increased, both the acute and chronic toxicity of ammonia increased. Salmonids were more sensitive to acute toxicity effects than other species. However, while the acute toxicity of ammonia was not influenced by temperature, it was found that invertebrates and young fish experienced increasing chronic toxicity effects with increasing temperature.

The previous Order contained "floating" effluent limitations for ammonia. Effluent limitations for ammonia in this Order are fixed year-round limitations that are based on reasonable worst-case conditions. The maximum permitted effluent pH is 8.0 as requested by the Discharger. This effluent pH limitation is more restrictive than the Basin Plan objective for pH in the receiving stream. In order to protect against the worst-case short-term exposure of an organism, a pH value of 8.0 was used to derive the acute criterion. The resulting acute criterion is 5.62 mg/L.

Because Gas Canyon Creek is an ephemeral stream and is sometimes dominated by the effluent, effluent temperature and pH data from the Discharger's monthly monitoring reports between July 2002 and June 2005 were used to develop the chronic criteria. The CCC for ammonia varies with pH and temperature. The 30-day average CCC is calculated using the temperature and pH of the effluent. Using effluent data from July 2002 through June 2005, the CCC was calculated for each day when temperature and pH were measured. The lowest 99.9% 30-day average CCC was 2.33 mg/L during this period. The 4-day average concentration is derived in accordance with the USEPA criterion

as 2.5 times the 30-day CCC. Based on the 30-day CCC of 2.33mg/L (as N), the 4-day average concentration that should no be exceeded is 5.83 mg/L (as N).

The Regional Water Board calculates WQBELs in accordance with SIP procedures for non-CTR constituents, and ammonia is a non-CTR constituent. The SIP procedure assumes a 4-day averaging period for calculating the long-term average discharge condition (LTA). However, USEPA recommends modifying the procedure for calculating permit limits for ammonia using a 30-day averaging period for the calculation of the LTA corresponding to the 30-day chronic criteria. Therefore, while the LTAs corresponding to the acute and 4-day chronic criteria were calculated according to SIP procedures, the LTA corresponding to the 30-day chronic criteria was calculated assuming a 30-day averaging period. The lowest LTA representing the acute 4-day average, and 30-day chronic criteria is then selected for deriving the average monthly effluent limitation (AMEL) and the maximum daily effluent limitation (MDEL). The remainder of the WQBEL calculation for ammonia was performed according to the SIP procedures. The ammonia effluent limitations are 1.8mg/L (as N) as the AMEL and 5.6 mg/L as the MDEL (See Section IV.C.4, Table F-7, of the Fact Sheet for calculations of the AMEL and MDEL for ammonia.)

The MEC for ammonia was 23.2 mg/L based on 301 samples collected between July 2002 and July 2005. Therefore, ammonia in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a level necessary to protect aquatic life resulting in a violation of the Basin Plan's narrative toxicity objective.

It appears that the Discharger may be in immediate non-compliance upon issuance of the permit. New or modified control measures may be necessary in order to comply with the effluent limitations, and the new or modified control measures cannot be designed, installed and put into operation within 30 calendar days. As described in Section II.E above, the Discharger is planning on constructing a new wastewater treatment plant that includes biological nutrient removal. The previous NPDES permit contains effluent limitations for ammonia based on pH and temperature that became effective 14June 2006. C&D R5-2006-0035 required compliance by 30 September 2007. The Discharger has indicated in an Infeasibility Report that compliance should be achieved by May 2010 upon completion of the new treatment facility. Therefore, a time schedule and interim limitations are established in CDO No. R5-2008-0112 in accordance with CWC section 13301, that also requires preparation and implementation of a pollution prevention plan in compliance with CWC section 13263.3.

g. **Bis (2-ethylhexyl) phthalate.** Bis (2-ethyl-hexyl) phthalate is used primarily as one of several plasticizers in polyvinyl chloride (PVC) resins for fabricating flexible vinyl products. According to the Consumer Product Safety Commission, USEPA, and the Food and Drug Administration, these PVC resins are used to manufacture many products, including soft squeeze toys, balls, raincoats, adhesives, polymeric coatings, components of paper and paperboard, defoaming

agents, animal glue, surface lubricants, and other products that must stay flexible and noninjurious for the lifetime of their use. The State MCL for bis(2 ethylhexyl)phthalate is 4 µg/l and the USEPA MCL is 6 µg/l. The NTR criterion for Human health protection for consumption of water and aquatic organisms is 1.8 µg/l and for consumption of aquatic organisms only is 5.9 µg/l.

Bis (2-ethylhexyl) phthalate has been detected in the effluent in one sample at a concentration of 2.0 µg/L. Bis (2-ethylhexyl) phthalate is a common contaminant of sample containers, sampling apparatus, and analytical equipment. The influent to the Facility is from residential sources only. Therefore, the sources of the detected bis (2-ethylhexyl) phthalate may be from plastics used for sampling or analytical equipment. The Regional Water Board is not establishing effluent limitations for bis (2-ethylhexyl) phthalate at this time. Instead of limitations, additional monitoring has been established for bis (2-ethylhexyl) phthalate with a reopener provision should monitoring results indicate that the discharge has the reasonable potential to cause or contribute to an exceedance of a water quality standard.

In order to verify if bis-(2-ethylhexyl) phthalate is truly present in the effluent discharge, the Discharger shall take steps to assure that sample containers, sampling apparatus, and analytical equipment are not sources of the detected contaminant. Sample collection and analytical techniques may involve the use of flexible plastics. Composite sampling uses plastic tubing that may contaminate the samples and result in erroneous data. Using grab sample collection methods may avoid the bis-(2-ethylhexyl) phthalate contamination and provide more accurate data. If changes in sampling and/or analytical procedures and equipment indicate that bis-(2-ethylhexyl) phthalate is not present in the effluent in concentrations that cause reasonable potential as defined by the SIP for six consecutive sampling events, then the monitoring requirement will cease to apply, at the Discharger's request and documented by a staff response. However, if bis-(2-ethylhexyl) phthalate continues to be detected in the effluent and/or receiving water, then this Order may be reopened and modified by adding an appropriate effluent limitation for bis-(2-ethylhexyl)phthalate.

h. **Chlorine Residual.** The Discharger uses chlorine for disinfection, which is extremely toxic to aquatic organisms. The Discharger uses a sulfur dioxide process to dechlorinate the effluent prior to discharge to Gas Canyon Creek. Due to the existing chlorine use and the potential for chlorine to be discharged, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan’s narrative toxicity objective.

The USEPA Technical Support Document for Water Quality-Based Toxics Control [EPA/505/2-90-001] contains statistical methods for converting chronic (four-day) and acute (one-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. However, because chlorine is an acutely toxic constituent that can and will be monitored continuously, an average

one-hour limitation is considered more appropriate than an average daily limitation. Average one-hour and four-day limitations for chlorine, based on these criteria, are included in this Order.

The chlorine effluent limitations in this Order are the same as the limitations in the existing NPDES permit. Therefore, the Discharger can immediately comply with these new effluent limitations for chlorine residual.

The chlorine residual limitations required in this Order are protective of aquatic organisms dependent on the undiluted discharge. If compliance is maintained, the Regional Water Board does not anticipate residual chlorine impacts to benthic organisms. Since the Discharger is proposing to replace chlorine disinfection with UV disinfection the effluent limitations for chlorine will not be applicable when chlorine is no longer used.

i. **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 (21mg/L as $CaCO_3$) and the USEPA recommended dissolved-to-total translator, the applicable chronic criterion (maximum four-day average concentration) is 2.46 µg/L and the applicable acute criterion (maximum one-hour average concentration) is 3.22 µg/L, as total recoverable.

The MEC for total copper was 10.1 µg/L, based on five samples collected. 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 1.6 µg/L and 3.2 µg/L, respectively, are included in this Order based on CTR criteria for the protection of freshwater aquatic. (See Section IV.C.4, Table F-8, of the Fact Sheet for calculations of the AMEL and MDEL for copper.)

The sample results for the effluent indicate that the Discharger will be in immediate non-compliance upon issuance of the permit. Section 2.1 of the SIP allows for compliance schedules within the permit for existing discharges where it is demonstrated that it is infeasible for a Discharger to achieve immediate compliance with a CTR criterion. An interim performance-based maximum daily effluent limitation of 31 µg/L has been established in this Order. The interim limitation was calculated as described in Attachment F, Section IV.E.3. The new water quality-based effluent limitations for copper become effective on **18 May 2010**.

The SIP, Section 2.1, provides that: "*Based on an existing discharger's request and demonstration that it is infeasible for the discharger to achieve immediate compliance with a CTR criterion, or with an effluent limitation based on a CTR criterion, the RWQCB may establish a compliance schedule in an NPDES*

permit." Section 2.1 further states that compliance schedules may be included in NPDES permits provided that the following justification has been submitted*:…"(a) documentation that diligent efforts have been made to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream; (b) documentation of source control and/or pollution minimization efforts currently underway or completed; (c) a proposal for additional or future source control measures, pollutant minimization actions, or waste treatment (i.e., facility upgrades); and (d) a demonstration that the proposed schedule is as short as practicable.*"

The Discharger submitted an Infeasibility Report dated 11 April 2008 including technical justification and an implementation schedule to assure compliance with the final copper effluent limitations. This Order requires the Discharger to submit an engineering treatment feasibility study and prepare and implement a pollution prevention plan that is in compliance with CWC section 13263.3(d)(3). The Discharger has indicated in the Infeasibility Report that additional time may be required beyond 18 May 2010 to comply with the final effluent limits for copper. Based on the Discharger's performance in implementing their corrective action plan to comply by 18 May 2010, the Regional Water Board may consider at a future date issuance of a Time Schedule Order to provide additional time to comply with final effluent limits for copper.

j. **Dichlorobromomethane***.* The CTR includes a dichlorobromomethane criterion of 0.56 µg/L for the protection of human health and is based on a one-in-a-million cancer risk for waters from which both water and organisms are consumed. The MEC for dichlorobromomethane was 2.3 µg/L, based on three samples collected. Therefore, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criterion for dichlorobromomethane.

No dilution is allowed due to periods of no flow in the receiving water. An AMEL and MDEL for dichlorobromomethane of 0.56 µg/L and 1.1µg/L, respectively, are included in this Order based on based on the CTR criterion for the protection of human health. (See Section IV.C.4, Table F-9, of the Fact Sheet for calculations of the AMEL and MDEL for dichlorobromomethane.)

Based on the sample results in the effluent, it appears that the Discharger may be in immediate non-compliance upon issuance of the permit. Section 2.1 of the SIP allows for compliance schedules within the permit for existing discharges where it is demonstrated that it is infeasible for a Discharger to achieve immediate compliance with a CTR criterion. An interim performance-based maximum daily effluent limitation of 7.2 µg/L has been established in this Order. The interim limitation was determined as described in Attachment F, Section IV.E.3. The new water quality-based effluent limitations for dichlorobromomethane become effective on **18 May 2010**.

The SIP, Section 2.1, provides that: "*Based on an existing discharger's request and demonstration that it is infeasible for the discharger to achieve immediate*

compliance with a CTR criterion, or with an effluent limitation based on a CTR criterion, the RWQCB may establish a compliance schedule in an NPDES permit." Section 2.1 further states that compliance schedules may be included in NPDES permits provided that the following justification has been submitted*:…"(a) documentation that diligent efforts have been made to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream; (b) documentation of source control and/or pollution minimization efforts currently underway or completed; (c) a proposal for additional or future source control measures, pollutant minimization actions, or waste treatment (i.e., facility upgrades); and (d) a demonstration that the proposed schedule is as short as practicable.*"

The Discharger submitted an Infeasibility Study Report dated 11 April 2008 including technical justification and an implementation schedule to assure compliance with the final dichlorobromomethane effluent limitations. The proposed new treatment facility includes ultraviolet light (UV) disinfection, which will replace chlorine disinfection. Since dichlorobromomethane is a byproduct of chlorine disinfection, compliance with the effluent limitation for dichlorobromomethane is expected as a result of eliminating the current chlorine disinfection process. Since the source of dichlorobromomethane will be eliminated this Order does not require the Discharger to submit an engineering treatment feasibility study and or prepare and implement a pollution prevention plan that is in compliance with CWC section 13263.3(d)(3).

k. **Electrical Conductivity. (See Subsection o. Salinity)**

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

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

Inadequate or incomplete denitrification may result in the discharge of nitrate to the receiving stream. The conversion of ammonia to nitrites and the conversion of nitrites to nitrates present a reasonable potential for the discharge to cause or contribute to an in-stream excursion above the Primary MCL for nitrate.

An AMEL for nitrate of 10 mg/L is included in this Order based on the MCLs. This effluent limitation is included in this Order to assure the treatment process adequately nitrifies and denitrifies the waste stream to protect the beneficial use of municipal and domestic supply. It appears that the Discharger may be in immediate non-compliance upon issuance of the permit. New or modified control measures may be necessary in order to comply with the effluent limitations, and the new or modified control measures cannot be designed, installed and put into operation within 30 calendar days. As described in Section II.E above, the Discharger is planning on constructing a new wastewater treatment plant that includes biological nutrient removal. The previous NPDES permit contained an effluent limitation for nitrate of 10mg/L that became effective 14 June 2006. C&D R5-2006-0035 required compliance by 30 September 2007. The Discharger has indicated in an Infeasibility Report that compliance should be achieved by May 2010 upon completion of the new treatment facility. Therefore, a time schedule and interim limitations are established in CDO No. R5-2008-0112 in accordance with CWC section 13301, that also requires preparation and implementation of a pollution prevention plan in compliance with CWC section 13263.3.

m. **Pathogens**. The beneficial uses of Gas Canyon Creek include municipal and domestic supply, water contact recreation, and agricultural irrigation supply. There is little, if any, dilution provided from upstream flow during the dry season, and at other times there is less than 20:1 dilution, except during storm flows. To protect these beneficial uses, the Regional Water Board finds that the wastewater must be disinfected and adequately treated to prevent disease. The principal infectious agents (pathogens) that may be present in raw sewage may be classified into three broad groups: bacteria, parasites, and viruses. Tertiary treatment, consisting of chemical coagulation, sedimentation, and filtration, has been found to remove approximately 99.5% of viruses. Filtration is an effective means of reducing viruses and parasites from the waste stream. The wastewater must be treated to tertiary standards (filtered), or equivalent, to protect contact recreational and food crop irrigation uses.

The California Department of Public Health (DPH) has developed reclamation criteria, CCR, Division 4, Chapter 3 (Title 22), for the reuse of wastewater. Title 22 requires that for spray irrigation of food crops, parks, playgrounds, schoolyards, and other areas of similar public access, wastewater be adequately disinfected, oxidized, coagulated, clarified, and filtered, and that the effluent total coliform levels not exceed 2.2 MPN/100 m/ as a 7-day median. As coliform organisms are living and mobile, it is impracticable to quantify an exact number of coliform organisms and to establish weekly average limitations. Instead, coliform organisms are measured as a most probable number and regulated based on a 7-day median limitation.

Title 22 also requires that recycled water used as a source of water supply for non-restricted recreational impoundments be disinfected tertiary recycled water that has been subjected to conventional treatment. A non-restricted recreational

impoundment is defined as "*…an impoundment of recycled water, in which no limitations are imposed on body-contact water recreational activities.*" Title 22 is not directly applicable to surface waters; however, the Regional Water Board finds that it is appropriate to apply an equivalent level of treatment to that required by DPH for unrestricted reuse of reclaimed water because the receiving water is used for irrigation of agricultural land and for contact recreation purposes. The stringent limitations for total coliform organisms are appropriate since the undiluted effluent may be used for the irrigation of food crops and/or for body-contact water recreation. Coliform organisms are intended as an indicator of the effectiveness of the entire treatment train and the effectiveness of removing other pathogens. The method of treatment is not prescribed by this Order; however, wastewater must be treated to a level that consistently achieves the total coliform organism effluent limitations included in this Order.

The Regional Water Board has considered the factors specified in CWC section 13263, including considering the provisions in CWC section 13241, in adopting the coliform requirements. The Regional Water Board finds, on balance, that these requirements are necessary to protect the beneficial uses, including water contact recreation and irrigation uses, of Gas Canyon Creek, and the downstream water bodies in which it is tributary to, including: Bear River via Greenhorn Creek and Rollins Reservoir. Effluent limitations for Total Coliform Organisms equivalent to Title 22 Total Coliform Organism requirements are included in this Order. The effluent limitations are 2.2 MPN/100mL as a 7-Day Median, exceedance of 23 MPN/100mL is permitted only once in 30 days, and 240 MPN/100mL as an Instantaneous Maximum. The previous Order required compliance with a 2.2 MPN/100mL as a 7-Day Median and 23 MPN/100mL as a Daily Maximum, by 14 June 2006. Cease and Desist Order R5-2006-0035 required compliance by 30 September 2007. The Discharger has indicated in an Infeasibility Report that compliance should be achieved by May 2010 upon completion of the new treatment facility. Therefore, a time schedule and interim limitations are established in CDO No. R5-2008-0112 in accordance with CWC section 13301, that also requires preparation and implementation of a pollution prevention plan in compliance with CWC section 13263.3.

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

disinfection. The operational specification requires that turbidity prior to disinfection shall not exceed 2 NTU as a daily average; 5 NTU, more than 5% of the time within a 24-hour period, and an instantaneous maximum of 10 NTU.

n. **pH.** The Basin Plan includes a water quality objective for surface waters (except for Goose Lake) that the "…*pH shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters with designated COLD or WARM beneficial uses.*" The Discharger requested the maximum pH in the effluent be restricted to 8.0. Since there is no receiving water dilution, effluent limitations for pH are included in this Order based on the Discharger's request, which is more restrictive than Basin Plan pH objectives of 6.5 to 8.5.

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

Table F-5. Salinity Water Quality Criteria/Objectives

Parameter	Agricultural WQ Goal[1]	Secondary MCL[3]	Effluent	
			Avg	Max
EC (µmhos/cm)	Varies[2]	900, 1600, 2200	831	1294
TDS (mg/L)	Varies	500, 1000, 1500	--	--
Sulfate (mg/L)	Varies	250, 500, 600	--	--
Chloride (mg/L)	Varies	250, 500, 600	53	111

[1] Agricultural water quality goals based on *Water Quality for Agriculture*, Food and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers and D.W. Westcot, Rome, 1985)

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

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

i. **Chloride**. The secondary MCL for chloride is 250 mg/L, as recommended level, 500 mg/L as an upper level, and 600 mg/L as a short-term maximum. The recommended agricultural water quality goal for chloride, that would apply the narrative chemical constituent objective, is 106 mg/L as a long-term average based on Water Quality for Agriculture, Food and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers and D.W. Westcot, Rome, 1985). The 106 mg/L water quality goal is intended to protect against adverse effects on sensitive crops when irrigated via sprinklers.

Chloride concentrations in the effluent ranged from 14.9 mg/L to 111 mg/L, with an average of 53 mg/L, for three samples collected by the Discharger. Therefore, no effluent limitations are included in this Order for chloride.

ii. **Electrical Conductivity (EC)**. The secondary MCL for EC is 900 µmhos/cm as a recommended level, 1600 µmhos/cm as an upper level, and 2200 µmhos/cm as a short-term maximum. The agricultural water quality goal, that would apply the narrative chemical constituents objective, is 700 µmhos/cm as a long-term average based on Water Quality for Agriculture, Food and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers and D.W. Westcot, Rome, 1985). The 700 µmhos/cm agricultural water quality goal is intended to prevent reduction in crop yield, i.e. a restriction on use of water, for salt-sensitive crops, such as beans, carrots, turnips, and strawberries. These crops are either currently grown in the area or may be grown in the future. Most other crops can tolerate higher EC concentrations without harm, however, as the salinity of the irrigation water increases, more crops are potentially harmed by the EC, or extra measures must be taken by the farmer to minimize or eliminate any harmful impacts.

A review of the Discharger's monitoring reports shows an average effluent EC of 855 µmhos/cm, with a range from 401 µmhos/cm to 1294 µmhos/cm for 37 samples. The overall average of the 12-month running averages for this period is 876 µmhos/cm with a standard deviation of 55 µmhos/cm. These levels exceed the 700 µmhos/cm agricultural water quality screening value and at times the effluent exceeds the recommended MCL of 900 µmhos/cm.

Salinity Effluent Limitations. Gas Canyon Creek is an effluent dominated stream and no dilution is allowed due to periods of low or no flow. This Order includes an interim performance-based effluent limitation of 1058 µmhos/cm for EC to protect the receiving water from further salinity degradation, but no final effluent limitation because sufficient information does not exist for the water supply for the Discharger. Final effluent limitations for salinity based on BPTC will be established subsequent to the collection and analysis by the Discharger of EC in the Discharger's water supply. This Order requires quarterly monitoring of EC and TDS of the Discharger's water supply (see Attachment E, Section IX.A).

The Regional Water Board, with cooperation of the State Water Board, has begun the process to develop a new policy for the regulation of salinity in the Central Valley. In a statement issued at the 16 March 2006, Regional Water Board meeting, Board Member Dr. Karl Longley recommended that the Regional Water Board continue to exercise its authority to regulate discharges of salt to minimize salinity increases within the Central Valley. Dr. Longley stated, "*The process of developing new salinity control policies does not, therefore, mean that we should stop regulating salt discharges until*

a salinity Policy is developed. In the meantime, the Board should consider all possible interim approaches to continue controlling and regulating salts in a reasonable manner, and encourage all stakeholder groups that may be affected by the Regional Board's policy to actively participate in policy development."

The Antidegradation Policy (Resolution No. 68-16) requires that the Discharger implement best practicable treatment or control (BPTC) of its discharge. For salinity, the Regional Water Board is considering limiting effluent salinity of municipal wastewater treatment plants to an increment of 500 µmhos/cm over the salinity of the municipal water supply as representing BPTC. The Order requires an interim performance-based effluent limitation of 1058 µmhos/cm for EC to protect the receiving water from further salinity degradation, but no final effluent limitation because sufficient water supply information does not exist. Final effluent limitation for salinity based on BPTC will be established subsequent to the collection and submittal of EC water supply data. This Order requires quarterly monitoring of EC and TDS of the Dischargers water supply.

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

p. **Settleable Solids.** For inland surface waters, the Basin Plan states that *"[w]ater shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses."* The previous Order contained effluent limitations of 0.1 mL/L as a monthly average and 0.2 mL/L as a daily maximum. Tertiary treatment processes result in solids removal reflective of the design capabilities of the treatment system. The TSS limitations of 10 mg/L (monthly average), 15 mg/L (weekly average) and 25 mg/L (daily maximum) includes suspended and settleable matter in the analysis and an analysis for settleable matter is no longer necessary. With the TSS limitations in place, the settleable solids limits can be removed as an effluent limitation.

q. **Toxicity.** See Section IV.C.5. of the Fact Sheet regarding whole effluent toxicity.

4. WQBEL Calculations

a. Effluent limitations based on primary MCLs were applied as AMELs for nitrate. Effluent limitations for, chlorine residual, pathogens, and pH were based on Basin Plan objectives and applied directly as effluent limitations. Effluent limitations for copper, dichlorobromomethane, aluminum, 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 ECA is calculated as follows:

$$ECA_{acute} = CMC + D(CMC-B)$$
$$ECA_{chronic} = CCC + D(CCC-B)$$
$$ECA_{HH} = HH + D(HH - B)$$

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

Since no dilution credit is being granted the effluent concentration allowances were set equal to the criteria/standards/objectives.

$ECA_{acute} = CMC$ $\quad$ $ECA_{chronic} = CCC$ $\quad$ $ECA_{HH} = HH$

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).

AMELs based on human health criteria are set equal to the human health ECAs and a statistical multiplier is used to calculate the MDEL.

$$AMEL = mult_{AMEL} \min\left(M_A ECA_{acute}, M_C ECA_{chronic}\right)$$

$$MDEL = mult_{MDEL} \min\left(M_A ECA_{acute}, M_C ECA_{chronic}\right)$$

LTA_{acute}

$LTA_{chronic}$

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

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

Water quality-based effluent limitations were calculated for aluminum, ammonia, copper, and dichlorobromomethane as follows in Tables F-6 through F-9, below.

Table F-6. WQBEL Calculations for Aluminum

	Acute	Chronic
Criteria (µg/L) (1)	750	87
Dilution Credit	No Dilution	No Dilution
ECA	750	87
ECA Multiplier	0.32	0.53
LTA	241	46
AMEL Multiplier (95th%)	(2)	1.55
AMEL (µg/L)	(2)	**71**
MDEL Multiplier (99th%)	(2)	3.11
MDEL (µg/L)	(2)	**143**

(1)-USEPA Ambient Water Quality Criteria
(2)-Limitations based on chronic LTA (Chronic LTA < Acute LTA)

Table F-7. WQBEL Calculations for Ammonia

	Acute	Chronic (4-day)	Chronic (30-day)
Criteria (mg/L) (1)	5.62	5.83	2.33
Dilution Credit	No Dilution	No Dilution	No Dilution
ECA	5.62	5.83	2.33
ECA Multiplier	0.101	0.166	0.395
LTA	0.568	0.966	0.921
AMEL Multiplier (95th%)	3.10	(2)	(3)
AMEL (mg/L)	**1.8**	(2)	**(3)**
MDEL Multiplier (99th%)	9.89	(2)	(3)
MDEL (mg/L)	**5.6**	(2)	**(3)**

(1)-USEPA Ambient Water Quality Criteria
(2)-Limitations based on chronic acute LTA ({Chronic Acute LTA < Acute Chronic (4-day) LTA)]
(3)-Limitations based on acute LTA [Acute LTA < Chronic (30-day) LTA]

Table F-8. WQBEL Calculations for Copper

	Acute	Chronic
Criteria (µg/L)	3.22	2.46
Dilution Credit	No Dilution	No Dilution
ECA	3.22	2.46
ECA Multiplier	0.32	0.53
LTA	1.03	1.30
AMEL Multiplier (95th%)	1.55	(1)
AMEL (µg/L)	**1.6**	(1)
MDEL Multiplier (99th%)	3.11	(1)
MDEL (µg/L)	**3.2**	(1)

Table F-9. WQBEL Calculations for Dichlorobromomethane

	Acute	Chronic	Human Health
Criteria (µg/L)	--	--	0.56
Dilution Credit	--	--	No Dilution
ECA	--	--	0.56
ECA Multiplier	--	--	--
LTA	--	--	--
AMEL Multiplier (95th%)	--	--	--
AMEL (µg/L)	--	--	**0.56**
MDEL Multiplier (99th%)	--	--	2.01
MDEL (µg/L)	--	--	**1.1**

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

Table F-10. Summary of Water Quality-based Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	standard units	--	--	--	6.5	8.0
Priority Pollutants						
Copper	µg/L	1.6	--	3.2	--	--
Dichlorobromomethane	µg/L	0.56	--	1.1	--	--
Non-Conventional Pollutants						
Aluminum	µg/L	71	--	143	--	--
Ammonia	mg/L	1.8	--	5.6	--	--
Nitrate (as N)	mg/L	10	--	--	--	--

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

- 0.01 mg/L, as a 4-day average;
- 0.02 mg/L, as a 1-hour average;

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

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

Mass Limitation for Mercury. The monthly average total recoverable mercury loading in the effluent shall not exceed 0.00033 lbs per month.

5. Whole Effluent Toxicity (WET)

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

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

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

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

b. **Chronic Aquatic Toxicity.** Based on quarterly whole effluent chronic toxicity testing performed by the Discharger, the discharge has reasonable potential to cause or contribute to an to an in-stream excursion above of the Basin Plan's narrative toxicity objective.

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

Numeric chronic WET effluent limitations have not been included in this order. The SIP contains implementation gaps regarding the appropriate form and implementation of chronic toxicity limits. This has resulted in the petitioning of a NPDES permit in the Los Angeles Region[3] that contained numeric chronic toxicity effluent limitations. To address the petition, the State Water Board adopted WQO 2003-012 directing its staff to revise the toxicity control provisions in the SIP. The State Water Board states the following in WQO 2003-012*, "In reviewing this petition and receiving comments from numerous interested persons on the propriety of including numeric effluent limitations for chronic toxicity in NPDES permits for publicly-owned treatment works that discharge to inland waters, we have determined that this issue should be considered in a regulatory setting, in order to allow for full public discussion and deliberation. We intend to modify the SIP to specifically address the issue. We anticipate that review will occur within the next year. We therefore decline to make a determination here regarding the propriety of the final numeric effluent limitations for chronic toxicity contained in these permits."* The process to revise the SIP is currently underway. Proposed changes include clarifying the appropriate form of effluent toxicity limits in NPDES permits and general expansion and standardization of toxicity control implementation related to the NPDES permitting process. Since the toxicity control provisions in the SIP are under revision it is infeasible to develop numeric effluent limitations for chronic toxicity. Therefore, this Order requires that the Discharger meet best management practices for compliance with the Basin Plan's narrative toxicity objective, as allowed under 40 CFR 122.44(k).

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

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

D. Final Effluent Limitations

1. Mass-based Effluent Limitations.

Title 40 CFR 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 CFR 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass limitations provided in 40 CFR 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g. CTR criteria and MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.
Mass-based effluent limitations were calculated based upon the permitted average daily discharge flow allowed in Section IV.A.1 of the Limitations and Discharge Requirements.

2. Averaging Periods for Effluent Limitations.

Title 40 CFR 122.45 (d) requires average weekly and average monthly discharge limitations for publicly owned treatment works (POTWs) unless impracticable. However, for toxic pollutants and pollutant parameters in water quality permitting, the US EPA recommends the use of a maximum daily effluent limitation in lieu of average weekly effluent limitations for two reasons. "*First, the basis for the 7-day average for POTWs derives from the secondary treatment requirements. This basis is not related to the need for assuring achievement of water quality standards. Second, a 7-day average, which could comprise up to seven or more daily samples, could average out peak toxic concentrations and therefore the discharge's potential for causing acute toxic effects would be missed.*" (TSD, pg. 96) This Order utilizes maximum daily effluent limitations in lieu of average weekly effluent limitations for aluminum, ammonia, copper, and dichlorobromomethane as recommended by the TSD for the achievement of water quality standards and for the protection of the beneficial uses of the receiving stream. Furthermore, for BOD, TSS, pH, and

coliform, weekly average effluent limitations have been replaced or supplemented with effluent limitations utilizing shorter averaging periods. The rationale for using shorter averaging periods for these constituents is discussed in Attachment F, Section IV.C.3., above.

3. Satisfaction of Anti-Backsliding Requirements.

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

The previous permit contained effluent limitations for turbidity. The prior limitations for turbidity were solely an operational check to ensure the treatment system was functioning properly and could meet the limits for solids and coliform. The prior effluent limitations were not intended to regulate turbidity in the receiving water. Rather, turbidity is an operational parameter to determine proper system functioning and not a water quality based limitation.

The revised Order contains performance based operational turbidity specifications to be met prior to disinfection in lieu of effluent limitations. The revised Order does not include effluent limitations for turbidity. However, the performance-based specification in this Order is an equivalent limit that is not less stringent, and therefore does not constitute backsliding.

The proposed revised operational specifications for turbidity are the same as the effluent limitations in the previous permit, with the inclusion of a more stringent requirement for an instantaneous maximum limit at any time. (See Special Provisions C.5. Ultraviolet Disinfection (UV) System Operating Specifications for turbidity specifications.) The proposed revised permit moves the point of compliance from the final effluent after disinfection to an internal compliance point prior to disinfection. These revisions are consistent with state regulations implementing recycled water requirements.

The previous Order contained settleable solids effluent limitations of 0.1 ml/L as a monthly average and 0.2 ml/L as a daily maximum. Tertiary treatment processes result in solids removal reflective of the design capabilities of the treatment system. The TSS limitations in this Order are more stringent than the limitations in the previous Order and compliance with TSS limitations will result in settleable solids less than the 0.1 ml/L limitation in the previous Order. The Standard Methods analysis for settleable matter cannot reliably measure below 0.1 ml/L. The TSS limitations of 10 mg/L (monthly average), 15 mg/L (weekly average) and 25 mg/L (daily maximum) includes suspended and settleable matter in the analysis and an analysis for settleable matter is no longer necessary. These TSS limitations effectively limit settleable solids concentrations to less than the previous settleable

solids limitations. With the stringent TSS limitations in place the settleable solids limits can be removed as an effluent limitation.

The revision in the turbidity limitation and the removal of settleable solids is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Resources Control Board Resolution 68-16 because this Order imposes equivalent or more stringent requirements than the prior permit and therefore does not allow degradation.

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. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. The impact on existing water quality will be insignificant.

Summary of Final Effluent Limitations
Discharge Point D-001

Table F-11. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Average Dry Weather Flow	mgd	--	--	0.026	--	--
Biochemical Oxygen Demand, 5-day @ 20°C	mg/L	10	15	25	--	--
	lbs/day[1]	2.2	3.3	5.4	--	--
Total Suspended Solids	mg/L	10	15	25	--	--
	lbs/day[1]	2.2	3.3	5.4	--	--
pH	standard units	--	--	--	6.5	8.0
Copper	µg/L	1.6	--	3.2	--	--
Dichlorobromomethane	µg/L	0.56	--	1.1	--	--
Aluminum	µg/L	71	--	143	--	--
Ammonia	mg/L	1.8	--	5.6	--	--
Nitrate (as N)	mg/L	10	--	--	--	--

[1] Based upon an average dry weather flow of 0.026 mgd.

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

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

- 70%, minimum for any one bioassay; and
- 90%, median for any three consecutive bioassays.

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

- 0.01 mg/L, as a 4-day average;
- 0.02 mg/L, as a 1-hour average;

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

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

Mass Limitation for Mercury. The monthly average total recoverable mercury loading in the effluent shall not exceed 0.00033 lbs per month.

Average Dry Weather Flow. The Average Dry Weather Flow shall not exceed 0.026 mgd.

E. Interim Effluent Limitations

1. **Copper, Dichlorobromomethane, and Aluminum.** 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 interim limitations for BOD and TSS in this Order are based on existing permit limitations.

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

   When there are less than ten sampling data points available, the *Technical Support Document for Water Quality- Based Toxics Control* ((EPA/505/2-90-001), TSD) recommends a coefficient of variation of 0.6 be utilized as representative of wastewater effluent sampling. The TSD recognizes that a minimum of ten data

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

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

Table 12 summarizes the calculations of the interim effluent limitations for copper, dichlorobromomethane, and aluminum:

Table F-12. Interim Effluent Limitation Calculation Summary

Parameter	MEC	Mean	Std. Dev.	# of Samples	Interim Limitation (µg/L)
Copper	10.1	--	--	3	31.4
Dichlorobromomethane	2.3	--	--	3	7.2
Aluminum	223	--	--	3	694

2. **Electrical Conductivity.** The interim effluent limitation for electrical conductivity in this Order is based on the current treatment plant performance. An annual effluent limitation was determined in order to reflect the long-term nature of the screening criteria. To evaluate compliance with an annual limit, 12-month running averages of effluent electrical conductivity values were calculated for the period July 2002-June 2005. The overall average of 12-month running average for this period was determined to be 876 µmhos/cm with a standard deviation of 55 µmhos/cm. Given that 37 individual effluent EC values were used to develop the 12-month running averages, the interim annual electrical conductivity effluent limitation was calculated as the overall average of 12-month running averages (876 µmhos/cm) plus 3.3 times the standard deviation (55 µmhos/cm). The interim electrical conductivity effluent limitation shall be 1,058 µmhos/cm as an annual average.

F. Land Discharge Specifications – Not Applicable

G. Reclamation Specifications – Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

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

A. Surface Water

1. CWA section 303(a-c), requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The Regional Water Board adopted water quality criteria as water quality objectives in the Basin Plan. The Basin Plan states that "*[t]he numerical and narrative water quality objectives define the least stringent standards that the Regional Board will apply to regional waters in order to protect the beneficial uses*." The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This Order contains Receiving Surface Water Limitations based on the Basin Plan numerical and narrative water quality objectives for biostimulatory substances, chemical constituents, color, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, salinity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, turbidity, and electrical conductivity.

   Numeric Basin Plan objectives for bacteria, dissolved oxygen, pH, temperature, and turbidity are applicable to this discharge and have been incorporated as Receiving Surface Water Limitations. Rational for these numeric receiving surface water limitations are as follows:

   a. ***Bacteria.** The Basin Plan includes a water quality objective that "*[I]n water designated for contact recreation (REC-1), the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400/100 ml*." Numeric Receiving Water Limitations for bacteria are included in this Order and are based on the Basin Plan objective.

b. **Biostimulatory Substances**. The Basin Plan includes a water quality objective that "*[W]ater shall not contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses."* Receiving Water Limitations for biostimulatory substances are included in this Order and are based on the Basin Plan objective.

c. **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.

d. **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.

e. **Dissolved Oxygen.** Gas Canyon Creek has been designated as having the beneficial use of cold freshwater aquatic habitat (COLD). For water bodies designated as having COLD as a beneficial use, the Basin Plan includes a water quality objective of maintaining a minimum of 7.0 mg/L of dissolved oxygen. Since the beneficial use of COLD does apply to Gas Canyon Creek, a receiving water limitation of 7.0 mg/L for dissolved oxygen was included in this Order at the confluence with Greenhorn Creek.

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

f. **Floating Material**. The Basin Plan includes a water quality objective that *"[W]ater shall not contain floating material in amounts that cause nuisance or adversely affect beneficial uses."* Receiving Water Limitations for floating material are included in this Order and are based on the Basin Plan objective.

g. **Oil and Grease**. The Basin Plan includes a water quality objective that *"[W]aters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses."* Receiving Water Limitations for oil and grease are included in this Order and are based on the Basin Plan objective.

h. **pH.** The Basin Plan includes water quality objective that *"[T]he pH shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters with designated COLD or WARM beneficial uses.*" This Order includes receiving water limitations for both pH range and pH change.

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

i. **Pesticides**. The Basin Plan includes a water quality objective for pesticides beginning on page III-6.00. Receiving Water Limitations for pesticides are included in this Order and are based on the Basin Plan objective.

j. **Radioactivity**. The Basin Plan includes a water quality objective that *"[R]adionuclides shall not be present in concentrations that are harmful to human, plant, animal or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life."* The Basin Plan states further that *"[A]t a minimum, waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of radionuclides in excess of the maximum contaminant levels (MCLs) specified in Table 4 (MCL Radioactivity) of Section 64443 of Title 22 of the California Code of Regulations…"* Receiving Water Limitations for radioactivity are included in this Order and are based on the Basin Plan objective.

k. **Sediment.** The Basin Plan includes a water quality objective that *"[T]he suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses"* Receiving Water Limitations for suspended sediments are included in this Order and are based on the Basin Plan objective.

l. **Settleable Material.** The Basin Plan includes a water quality objective that *"[W]aters shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses."* Receiving Water Limitations for settleable material are included in this Order and are based on the Basin Plan objective.

m. **Suspended Material.** The Basin Plan includes a water quality objective that *"[W]aters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses."* Receiving Water Limitations for suspended material are included in this Order and are based on the Basin Plan objective.

n. **Taste and Odors**. The Basin Plan includes a water quality objective that *"[W]ater shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses."* Receiving Water Limitations for taste-

or odor-producing substances are included in this Order and are based on the Basin Plan objective.

o. **Temperature.** Gas Canyon Creek has the beneficial uses of both COLD and WARM. The Basin Plan includes the objective that "[a]*t no time or place shall the temperature of COLD or WARM intrastate waters be increased more than 5ºF above natural receiving water temperature*." This Order includes a receiving water limitation based on this objective.

p. **Toxicity**. The Basin Plan includes a water quality objective that *"[A]ll waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life."* Receiving Water Limitations for toxicity are included in this Order and are based on the Basin Plan objective.

q. **Turbidity.** The Basin Plan includes a water quality objective that "*[I]ncreases in turbidity attributable to controllable water quality factors shall not exceed the following limits:*

- *Where natural turbidity is between 0 and 5 Nephelometric Turbidity Units (NTUs), increases shall not exceed 1 NTU.*
- *Where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20 percent.*
- *Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs.*
- *Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent*."

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

B. Groundwater

The beneficial uses of the underlying ground water are municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply.
Basin Plan water quality objectives include narrative objectives for chemical constituents, tastes and odors, and toxicity of groundwater. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective states groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use. The tastes and odors objective prohibits taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan also establishes numerical water quality objectives for chemical constituents and radioactivity in

groundwaters designated as municipal supply. These include, at a minimum, compliance with MCLs in Title 22 of the CCR. The bacteria objective prohibits coliform organisms at or above 2.2 MPN/100 ml. The Basin Plan requires the application of the most stringent objective necessary to ensure that waters do not contain chemical constituents, toxic substances, radionuclides, taste- or odor-producing substances, or bacteria in concentrations that adversely affect municipal or domestic supply, agricultural supply, industrial supply or some other beneficial use.
Groundwater limitations are required to protect the beneficial uses of the underlying groundwater.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

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

A. Influent Monitoring

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

C. Effluent Monitoring

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

2. The SIP states that if "…all reported detection limits of the pollutant in the effluent are greater than or equal to the C [water quality criterion or objective] value, the RWQCB [Regional Water Board] shall establish interim requirements…that require additional monitoring for the pollutant…" This Order contains effluent limitations for all constituents that were included in the previous Order, ammonia, BOD, TSS, nitrate, chlorine residual, pH, flow, toxicity, and total coliform. In addition, reasonable potential to cause or contribute to exceedances of water quality objectives was found for dichlorobromomethane, copper, and aluminum. Interim limitations were required for dichlorobromomethane, copper, and aluminum. Monitoring for these constituents has been included in the Order in accordance with the SIP.

C. Whole Effluent Toxicity Testing Requirements

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

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

D. Receiving Water Monitoring

1. **Surface Water**

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

E. Other Monitoring Requirements

1. **Biosolids Monitoring**

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

2. **Ultraviolet Disinfection System Monitoring**

   UV System specifications and monitoring and reporting is required to ensure that adequate UV dosage is applied to the wastewater to inactivate pathogens e.g. viruses in the wastewater. UV Disinfection system monitoring are imposed pursuant to requirements established by the California Department of Public Health, (DPH) and the National Water Research Institute (NWRI) and American Water Works Association Research Foundation NWRI/AWWARF's *"Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse.*

3. **Water Supply Monitoring**

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

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in

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

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

B. Special Provisions

1. Reopener Provisions

a. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.

b. Conditions that necessitate a major modification of a permit are described in 40 CFR section 122.62, including:

   i. If new or amended applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA, or amendments thereto, this permit may be reopened and modified in accordance with the new or amended standards.

   ii. When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.

c. **Mercury.** If mercury is found to be causing toxicity based on acute or chronic toxicity test results, or if a TMDL program is adopted, this Order shall be reopened and the interim mass effluent limitation modified (higher or lower) or an effluent concentration limitation imposed. If the Regional Water Board determines that a mercury offset program is feasible for Dischargers subject to a NPDES permit, then this Order may be reopened to reevaluate the interim mercury mass loading limitation(s) and the need for a mercury offset program for the Discharger.

d. **Pollution Prevention.** This Order requires the Discharger to prepare pollution prevention plans following CWC section 13263.3(d)(3) for copper and aluminum. Based on a review of the pollution prevention plans, this Order may be reopened for addition and/or modification of effluent limitations and requirements for these constituents.

e. **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.

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

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

h. **Salinity/EC Site-Specific Studies.** This Order requires the Discharger complete and submit a report on the results of Salinity/EC Site-Specific studies to determine appropriate Salinity/EC levels necessary to protect downstream beneficial uses. The studies shall be completed and submitted to the Regional Water Board within 39 months of the adoption date of this Order. Based on a review of the results of the report on the Salinity/EC Site-Specific studies this Order may be reopened for addition of effluent limitations and requirements for salinity and/or EC.

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.) The discharge has

reasonable potential to cause or contribute to an in-stream excursion above of the Basin Plan's narrative toxicity objective.

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

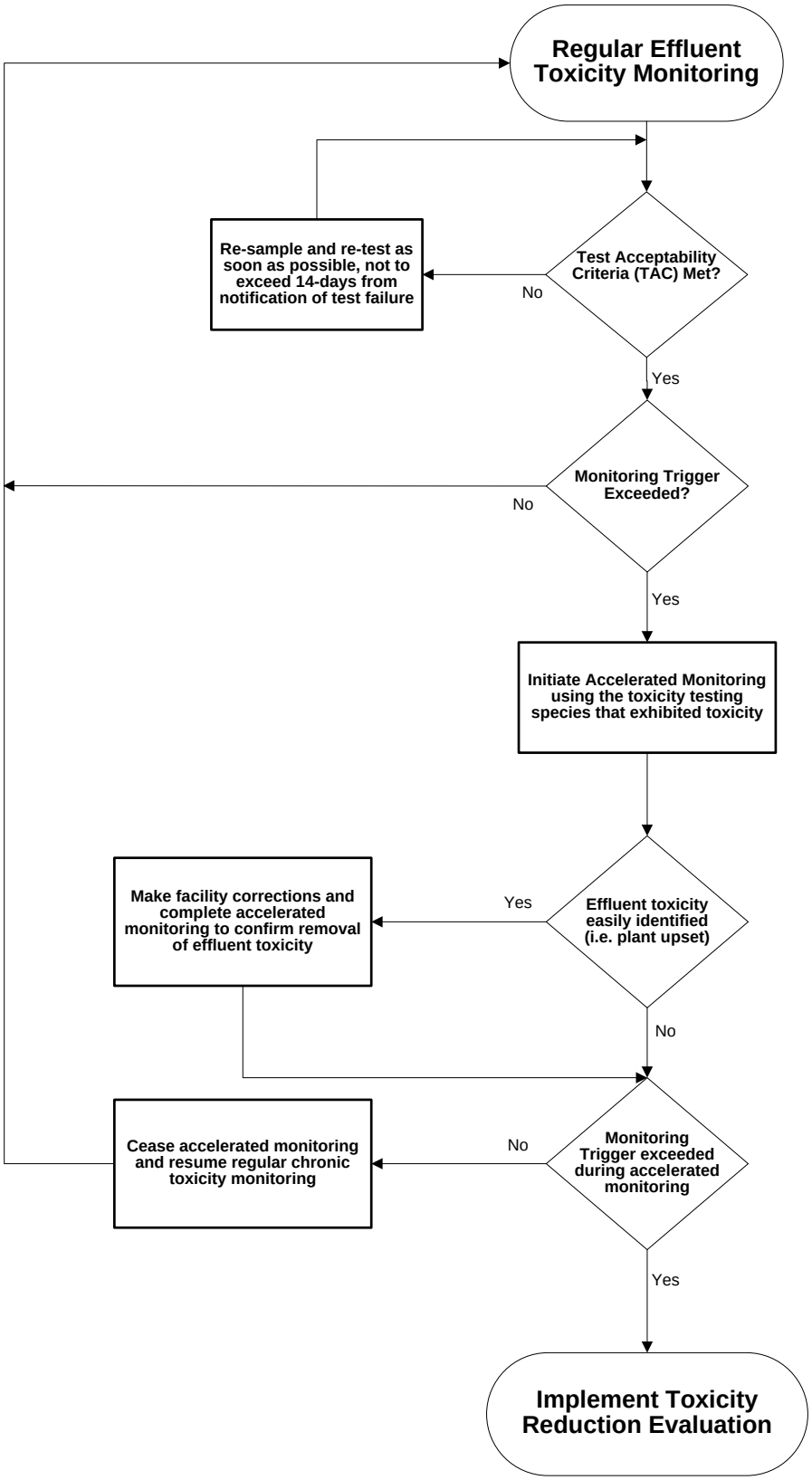
Monitoring Trigger. A numeric toxicity monitoring trigger of > 1 TUc (where Tuc = 100/NOEC) is applied in the provision, because this Order does not allow any dilution for the chronic condition. Therefore, a TRE is triggered when the effluent exhibits a pattern of toxicity at 100% effluent.

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-3), below, for further clarification of the accelerated monitoring requirements and for the decision points for determining the need for TRE initiation.

Figure F-3
WET Accelerated Monitoring Flow Chart



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*

b. **Reuse of Municipal Wastewater Feasibility Study:** The Discharger shall evaluate the feasibility of utilizing reclaimed municipal wastewater from the new treatment facility for beneficial reuse to reduce area dependence on existing surface and groundwater water supply sources. A report containing the study conclusions of feasible wastewater reuse alternatives shall be completed and submitted **within 12 months of the adoption date of this Order** for approval by the Executive Officer.

c. **Salinity Site-Specific Study:** The Discharger shall complete and submit a report on the results of a site-specific investigation of appropriate salinity levels in the receiving water to protect agricultural beneficial use in areas irrigated with water from Gas Canyon Creek and downstream water bodies. The study shall, at minimum, determine the sodium adsorption ratio of soils in the affected area, the effects of rainfall and flood-induced leaching, and background water quality. The study shall evaluate how climate, soil chemistry, background water quality, rainfall, and flooding affect salinity requirements. Based on these factors, the study shall recommend site-specific numeric values for Electrical Conductivity and/or other appropriate salinity constituents to fully protect beneficial uses.

The Discharger shall comply with the following time schedule to complete the study:

Task	Compliance Date
-Submit Workplan and Time Schedule	Within 12 months of adoption date of this Order
-Complete Study	Within three years of the adoption date of this Order
-Submit Study Report	Within 39 months of the adoption date of this Order

d. **Best Practicable Treatment or Control (BPTC) Evaluation Tasks**: The Discharger has proposed a work plan and schedule for construction of a new facility designed to provide BPTC as required by Resolution 68-16. The new facility is designed to achieve compliance with the proposed permit effluent limitations for total coliform, ammonia, nitrate, BOD, TSS, and Dichlorobromomethane. Additional treatment may be necessary to meet effluent limitations for aluminum and copper. Following completion of the new facility the Discharger shall conduct a compliance evaluation study to determine if the level of treatment achieves compliance for all constituent effluent limitations. Following completion of the compliance evaluation, if reasonable potential still exists for any constituent, the Discharger will be required to submit a technical report describing the evaluation's results and critiquing each evaluated component with respect to BPTC. Where deficiencies are documented, the technical report shall provide recommendations for necessary modifications or additional treatment to achieve BPTC and identify the source of funding and proposed schedule for modifications. The schedule shall be as short as practicable but in no case shall completion of the necessary modifications exceed three years past the Executive Officer's determination of the adequacy of the compliance evaluation and discharger-specific WER studies for metals, unless the schedule is reviewed and specifically approved by the Regional Water Board. The technical report shall include specific methods the Discharger proposes as a means to measure processes and assure continuous optimal

performance of BPTC measures. The Discharger shall comply with the following compliance schedule in implementing the work required by this Provision:

Task	Compliance Date
1 - Submit compliance evaluation for new WWTP	**1 year** following completion of WWTP construction
2 - Where deficiencies are documented submit technical report, workplan and time schedule for achieving compliance	**60 days** following completion of Task 1.

3. Best Management Practices and Pollution Prevention

a. **Pollution Prevention Plan (PPP) for copper and aluminum.** A PPP is required in this Order per CWC section 13263.3(d)(1)(D) as part of the interim effluent limitation for copper and aluminum. The PPP shall be developed in conformance with CWC section 13263.3(d)(3) as outlined in subsection b., below.

b. **CWC section 13263.3(d)(3) Pollution Prevention Plans.** The pollution prevention plans required for copper and aluminum, shall, at minimum, meet the requirements outlined in CWC section 13263.3(d)(3). The minimum requirements for the pollution prevention plans include the following:

i. An estimate of all of the sources of a pollutant contributing, or potentially contributing, to the loadings of a pollutant in the treatment plant influent.

ii. An analysis of the methods that could be used to prevent the discharge of the pollutants into the Facility, including application of local limits to industrial or commercial dischargers regarding pollution prevention techniques, public education and outreach, or other innovative and alternative approaches to reduce discharges of the pollutant to the Facility. The analysis also shall identify sources, or potential sources, not within the ability or authority of the Discharger to control, such as pollutants in the potable water supply, airborne pollutants, pharmaceuticals, or pesticides, and estimate the magnitude of those sources, to the extent feasible.

iii. An estimate of load reductions that may be attained through the methods identified in subparagraph ii.

iv. A plan for monitoring the results of the pollution prevention program.

v. A description of the tasks, cost, and time required to investigate and implement various elements in the pollution prevention plan.

vi. A statement of the Discharger's pollution prevention goals and strategies, including priorities for short-term and long-term action, and a description of

the Discharger's intended pollution prevention activities for the immediate future.

vii. A description of the Discharger's existing pollution prevention programs.

viii. An analysis, to the extent feasible, of any adverse environmental impacts, including cross-media impacts or substitute chemicals that may result from the implementation of the pollution prevention program.

ix. An analysis, to the extent feasible, of the costs and benefits that may be incurred to implement the pollution prevention program.

4. Construction, Operation, and Maintenance Specifications

a. **Construction Progress Updates:** The Discharger shall provide quarterly updates regarding the ongoing construction process, including but not limited to construction started, milestones achieved, construction completed. The quarterly updates shall be submitted in accordance with the Monitoring and Reporting Program.

5. Ultraviolet Disinfection (UV) System Operating Specifications

UV System specifications and monitoring and reporting is required to ensure that adequate UV dosage is applied to the wastewater to inactivate pathogens e.g. viruses in the wastewater. UV dosage is dependent on several factors such as UV transmittance, UV power setting, wastewater turbidity, and wastewater flow through the UV System. Monitoring and reporting of these parameters is necessary to determine compliance with minimum dosage requirements established by the California Department of Public Health, (DPH) and the National Water Research Institute (NWRI) and American Water Works Association Research Foundation NWRI/AWWARF's *"Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse"* first published in December 2000 revised as a Second Edition dated May 2003. In addition, a Memorandum dated 1 November 2004 issued by DPH to Regional Board executive officers recommended that provisions be included in permits to water recycling treatment plants employing UV disinfection requiring Dischargers to establish fixed cleaning frequency of quartz sleeves as well as include provisions that specify minimum delivered UV dose that must be maintained (as recommended by the NWRI/AWWARF UV Disinfection Guidelines).

Turbidity is included as an operational specification as an indicator of the effectiveness of the treatment process and to assure compliance effluent coliform limitations. The tertiary treatment MBR process, proposed for this facility, is capable of reliably meeting a turbidity limitation of 2 nephelometric turbidity units (NTU) as a daily average. Failure of the treatment system such that virus removal is impaired would normally result in increased particles in the effluent, which result in higher effluent turbidity and could impact UV dosage. Turbidity

has a major advantage for monitoring filter performance, allowing immediate detection of filter failure and rapid corrective action. The operational specification requires that turbidity prior to disinfection shall not exceed 2 NTU as a daily average; 5 NTU, more than 5% of the time within a 24-hour period, and an instantaneous maximum of 10 NTU.

Minimum UV dosage and turbidity specifications are included as operating criteria in Special Provisions, Section V1.C.5 and Monitoring and Reporting requirements, Attachment E, Section IX.B., to ensure that adequate disinfection of wastewater is achieve.

6. Special Provisions for Municipal Facilities (POTWs Only)

a. **Pretreatment Requirements – Not Applicable**

b. **Sanitary Sewer Overflow Requirements**

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

ii. Sanitary sewer overflows often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen demanding organic compounds, oil and grease, and other pollutants. Sanitary sewer overflows can cause exceedance of applicable water quality objectives, pose a threat to public health, adversely affect aquatic life, and impair the public recreational use and aesthetic enjoyment of surface waters in the area.

iii. The Discharger is responsible for all necessary steps to adequately maintain and operate its sanitary sewer collection system. The provisions in this Order are included to ensure compliance with the requirements in the 2 May 2006; the State Water Board adopted State Water Board Order 2006-0003, a Statewide General WDR for Sanitary Sewer Systems.

7. Other Special Provisions

b. Wastewater shall be oxidized, coagulated, filtered, and adequately disinfected pursuant to the DHS reclamation criteria, California Code of Regulations, Title 22, Division 4, Chapter 3, (Title 22), or equivalent.

c. The Discharger shall evaluate the feasibility of utilizing reclaimed water from the new treatment facility to reduce area dependence on existing surface and groundwater sources.

8. Compliance Schedules

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

a. The Discharger submitted a request, and justification (dated 11 April 2008), for a compliance schedule for copper and aluminum. The compliance schedule justification included all items specified in Paragraph 3, items (a) through (d), of Section 2.1 of the SIP. This Order establishes a compliance schedule for the final, WQBELs for these constituents. Full compliance with the copper and dichlorobromomethane WQBELs is required by **18 May 2010**, while full compliance with the WQBEL for aluminum is required by **1 June 2013**. Allowance of an additional compliance schedule beyond the dates specified above may be granted in a subsequent enforcement order, as the Regional Water Board deems necessary.

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Central Valley Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the Nevada County Sanitation District No. 1 Cascade Shores Wastewater Treatment Plant. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through local newspaper announcement and Internet posting.

B. Written Comments

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

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on 8 July 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: 31 July/1 August 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 address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling 916-464-3291.

F. Register of Interested Persons

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

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Dennis Wilson at (530) 224-4860 or DCwilson@waterboards.ca.gov.