

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2006-0039
NPDES NO. CA0083682

WASTE DISCHARGE REQUIREMENTS
FOR
CANADA COVE LIMITED PARTNERSHIP
FRENCH CAMP RV PARK AND GOLF COURSE FACILITY
SAN JOAQUIN COUNTY

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

Discharger	Canada Cove Limited Partnership
Name of Facility	French Camp RV Park and Golf Course, Manteca
Facility Address	3919 E French Camp Road
	Manteca, CA 95336
	San Joaquin County

The Discharger is authorized to discharge from the following discharge points as set forth below:

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Treated Domestic Wastewater	37°, 52', 27" N	121°, 13', 30" W	Lone Tree Creek
002	Treated Domestic Wastewater	Reclamation Discharge		Groundwater

This Order was adopted by the Regional Water Board on:	5 May 2006
This Order shall become effective on:	5 May 2006
This Order shall expire on:	1 May 2011
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Board have classified this discharge as a minor discharge.	
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of the Order expiration date as application for issuance of new waste discharge requirements.	

IT IS HEREBY ORDERED, that Order No. 95-054 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) 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 the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 5 May 2006.

Pamela C. Creedon, Executive Officer

TABLE OF CONTENTS

I.	Facility Information	3
II.	Findings.....	3
III.	Discharge Prohibitions.....	8
IV.	Effluent Limitations and Discharge Specifications	8
	A. Effluent Limitations – Discharge Point 001	8
	B. Land Discharge Specifications – See Section VI. C. 5 -Construction, Operation and Maintenance Specifications.....	11
	C. Reclamation Specifications – Discharge Point 002	11
V.	Receiving Water Limitations	11
	A. Surface Water Limitations.....	11
	B. Groundwater Limitations	13
VI.	Provisions.....	15
	A. Standard Provisions.....	15
	B. Monitoring and Reporting Program Requirements	19
	C. Special Provisions	19
	1. Reopener Provisions	19
	2. Special Studies, Technical Reports and Additional Monitoring Requirements	20
	3. Best Management Practices and Pollution Prevention – Not Applicable.....	22
	4. Compliance Schedules.....	22
	5. Construction, Operation and Maintenance Specifications.....	22
	6. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable.....	25
	7. Other Special Provisions.....	25
VII.	Compliance Determination	27
	A. Average Monthly Effluent Limitation (AMEL).....	27
	B. Average Weekly Effluent Limitation (AWEL).....	27
	C. Maximum Daily Effluent Limitation (MDEL).	27
	D. Instantaneous Minimum Effluent Limitation.	27
	E. Instantaneous Maximum Effluent Limitation.	27
	F. BOD and TSS Effluent Limitations.	28
	G. Aluminum Effluent Limitations	28
	H. Mass Loading Limitations.....	28
	Attachment A – Definitions	A-1
	Attachment B – Topographic Map	B-1
	Attachment C – Flow Schematic	C-1
	Attachment D – Federal Standard Provisions.....	D-1
	Attachment E – Monitoring and Reporting Program (MRP).....	E-1
	Attachment F – Fact Sheet.....	F-1
	Attachment G – WQBEL Calculations.....	G-1

I. FACILITY INFORMATION

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

Discharger	Canada Cove Limited Partnership
Name of Facility	French Camp RV Park and Golf Course, Manteca
Facility Address	3919 E French Camp Road
	Manteca, CA 95336
	San Joaquin County
Facility Contact, Title, and Phone	Francis Collier, General Manager, (209) 234-3001
Mailing Address	P.O. Box 1500, French Camp, CA 95231
Type of Facility	Domestic Wastewater Treatment Plant
Facility Design Flow	0.040 million gallons per day (mgd)

II. FINDINGS

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

- A. **Background.** Canada Cove Limited Partnership (hereinafter Discharger) is currently discharging under Order No. 95-054 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0083682. The Discharger submitted a Report of Waste Discharge, dated 14 April 2000, and applied for a NPDES permit renewal to discharge up to 0.040 of treated wastewater from the French Camp RV Park and Golf Course, hereinafter Facility. Supplemental information to complete filing of the application included: 1) Production, Distribution, and Use of Disinfected Secondary-23 Recycled Water Report by ECOLOGIC Engineering (5 March 2004), and 2) correspondence from the Discharger to the Regional Board regarding justification for time schedules and rationale as to why reclamation all year round is not feasible (10 May and 2 June 2005). The application was deemed complete on 2 June 2005.
- B. **Facility Description.** The Discharger owns and operates a wastewater collection, treatment, and disposal system, and provides sewerage service to 196 recreational vehicle spaces, one residential caretaker’s home, a laundromat, and a restaurant/golf course clubhouse. The treatment system consists of extended aeration, clarification, multimedia filtration, and disinfection by ozonation or chlorination in case the ozone system fails. During extreme wet weather conditions and when the recycled water storage capacity is exceeded, wastewater is discharged from Discharge Point 001 (see table on cover page) to Lone Tree Creek, a water of the United States and a tributary to French Camp Slough, and the Sacramento-San Joaquin River Delta within the North Valley Floor Hydrologic Unit. Treated wastewater is also used to irrigate the onsite golf course (Discharge Point 002). [Attachment B](#) provides a topographic map of the area around the Facility. [Attachment C](#) provides a flow schematic of the Facility.

- C. **Legal Authorities.** This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4 of the CWC for discharges that are not subject to regulation under CWA section 402.
- D. **Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and through special studies. Attachments A through G, which contain background information and rationale for Order requirements, are hereby incorporated into this Order and, thus, constitute part of the Findings for this Order.
- E. **California Environmental Quality Act (CEQA).**
1. This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with Section 13389 of the CWC.
 2. The action to update waste discharge requirements for the existing land discharge (Discharge 002) is exempt from the provisions of CEQA, in accordance with Title 14, CCR, Section 15301 (existing facility).
- F. **Technology-based Effluent Limitations.** The Code of Federal Regulations (CFR) at 40 CFR 122.44(a) requires that permits include applicable technology-based limitations and standards. This Order includes, when discharging to surface water, technology-based effluent limitations based on tertiary treatment or equivalent treatment system that meet both the technology-based secondary treatment standards for POTWs and protect the beneficial uses of the receiving waters when little or no dilution is available for treated domestic wastewater discharges. The Regional Water Board has considered the factors listed in CWC section 13241 in establishing these requirements. For discharges to land (reclamation), this Order includes technology-based effluent limitations for the current treatment system based on best professional judgment (BPJ) necessary to meet Title 22 reclamation requirements for landscape irrigation and for use in a restricted recreational landscape impoundment, which are carried over from the previous Order No. 95-054. 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 122.44(d) of 40 CFR requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, 40 CFR 122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a), proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information, or an indicator parameter.

The Basin Plan includes a list of Water Quality Limited Segments (WQLSs), which are defined as "...those sections of lakes, streams, rivers or other fresh water bodies where water quality

does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 CFR 130, et seq.).” The Basin Plan also states, “Additional treatment beyond minimum federal standards will be imposed on dischargers to WQLSs. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment.” The listing for Lone Tree Creek includes ammonia, Biological Oxygen Demand (BOD), and Electrical Conductivity (EC). Therefore, the receiving water has no assimilative capacity for these constituents and applicable water quality standards must be applied as end-of-pipe effluent limitations.

H. **Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (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 Lone Tree Creek, but does identify present and potential uses for the Sacramento-San Joaquin River Delta, which includes the section of French Camp Slough to which Lone Tree Creek is tributary. These beneficial uses are municipal and domestic supply (MUN); irrigation and stock watering (AGR); industrial process supply (PRO); industrial service supply (IND); contact water recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); warm and cold water migration of aquatic organisms (MIGR); warm water spawning, reproduction, and/or early development (SPWN), wildlife habitat (WILD); and navigation (NAV). In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. The beneficial uses of the underlying groundwater are municipal and domestic, industrial service, industrial process and agricultural supply. Thus, as discussed in detail in the Fact Sheet, beneficial uses applicable to Lone Tree Creek and the underlying groundwater are as follows:

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Lone Tree Creek	<u>Existing:</u> MUN, AGR, PRO, IND, REC-1, REC-2, WARM, COLD, MIGR, SPWN, and WILD.
002	Reclamation Discharge, Groundwater	MUN, AGR, PRO, and IND.

Requirements of this Order specifically implement the applicable Water Quality Control Plans.

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

- J. **State Implementation Policy.** On 2 March 2000, State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on 28 April 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on 18 May 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the California Toxics Rule. The State Water Board adopted amendments to the SIP on 24 February 2005 that became effective on 13 July 2005.
- K. **Compliance Schedules and Interim Requirements.** 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 18 May 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation 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 does include compliance schedules and interim effluent limitations. A detailed discussion of the basis for the compliance schedule(s) and interim effluent limitation(s) is included in the Fact Sheet ([Attachment F](#)).
- L. **Alaska Rule.** On 30 March 2000, USEPA revised its regulation that specifies when new and revised State and Tribal water quality standards (WQS) become effective for CWA purposes (40 CFR 131.21, 65 FR 24641, 27 April 2000). Under USEPA's new regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after 30 May 2000, must be approved before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by 30 May 2000, may be used for CWA purposes, whether or not approved by USEPA.
- M. **Stringency of Requirements for Individual Pollutants.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. The technology-based effluent limitations consist of restrictions on flow, biochemical oxygen demand (BOD) and total suspended solids (TSS). Restrictions on BOD and TSS are specified in federal regulations as discussed in Finding II.F, and the permit's technology-based pollutant restrictions are no more stringent than required by the Clean Water Act. 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 California Toxics Rule, the California Toxics Rule is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on 18 May 2000. All beneficial uses and water quality objectives

contained in the Basin Plan which were used in the development of water quality-based effluent limitations were approved under state law and submitted to and approved by USEPA prior to 30 May 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to 30 May 2000, but not approved by USEPA before that date, are nonetheless “applicable water quality standards for purposes of the CWA” pursuant to 40 CFR 131.21(c)(1). Collectively, this Order’s restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

- N. **Anti-degradation Policy.** Section 131.12 of 40 CFR requires that State water quality standards include an anti-degradation policy consistent with the federal policy. The State Water Board established California’s anti-degradation policy in State Water Board Resolution 68-16, which incorporates the requirements of the federal anti-degradation policy. Resolution 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. As discussed in detail in the Fact Sheet ([Attachment F Section III C.5](#)) the permitted discharge is consistent with the anti-degradation provision of 40 CFR 131.12 and State Water Board Resolution 68-16.
- O. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.
- P. **Monitoring and Reporting.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.
- Q. **Standard and Special Provisions.** Standard Provisions, which in accordance with 40 CFR 122.41 and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet (Attachment F).
- R. **Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet (Attachment F) of this Order.
- S. **Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet (Attachment F) of this Order.

III. DISCHARGE PROHIBITIONS

- A. Discharge of treated wastewater at a location or in a manner different from that described in this Order is prohibited.
- B. The bypass or overflow of untreated wastewater or wastes to surface waters or surface water drainage courses is prohibited, except as allowed in Standard Provision I.G of Attachment D, Federal Standard Provisions, and Regional Water Board Standard Provisions VI.A.2.f.
- C. Neither the discharge nor its treatment shall create a nuisance or pollution as defined in CWC Section 13050.
- D. The Discharger shall not allow pollutant-free wastewater to be discharged into the collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.
- E. The discharge to the treatment plant of any trucked or hauled wastes is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations – Discharge Point 001 (EFF-001)

- a. The discharge of treated domestic wastewater when discharging to Lone Tree Creek shall maintain compliance with the following effluent limitations at Discharge Point 001 (EFF-001), as described in the attached Monitoring and Reporting Program (Attachment E):

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	MGD	0.04	--			
BOD 5-day 20°C	mg/L	10	15	20	--	--
	lbs/day ¹	3.3	5.1	6.7	--	--
Total Suspended Solids (TSS)	mg/L	10	15	20	--	--
	lbs/day ¹	3.3	5.1	6.7	--	--
Settleable Solids	ml/L	0.1	--	0.2	--	--
pH	standard units	--	--	--	6.5	8.5
Copper (total recoverable)	µg/L	2.9	--	5.9	--	--
	lbs/day ¹	0.00097	--	0.002	--	--
Lead (total recoverable)	µg/L	0.81	--	1.6	--	--
	lbs/day ¹	0.00027	--	0.00054	--	--
Silver (total recoverable)	µg/L	0.42	--	0.84	--	--
	lbs/day ¹	0.00014	--	0.00028	--	--
Zinc (total recoverable)	µg/L	27	--	55	--	--
	lbs/day ¹	0.0091	--	0.018	--	--
Indeno(1,2,3-cd) Pyrene	µg/L	0.0044	--	0.0088	--	--
	lbs/day ¹	0.0000015	--	0.0000029	--	--
Organochlorine Pesticides	µg/L	--	--	--	--	ND ²
	lbs/day ¹	--	--	--	--	0.0
Aluminum	µg/L	71	--	140	--	--
	lbs/day ¹	0.02	--	0.05	--	--
Ammonia (total recoverable)	µg/L	630	--	--	--	--
	lbs/day ¹	0.21	--	--	--	--
Boron (total recoverable)	µg/L	700	--	--	--	--
	lbs/day ¹	0.23	--	--	--	--
Iron (total recoverable)	µg/L	300	--	--	--	--
	lbs/day ¹	0.1	--	--	--	--
Manganese (total recoverable)	µg/L	50	--	--	--	--
	lbs/day ¹	0.02	--	--	--	--
Nitrate (as N) (total recoverable)	mg/L	10	--	--	--	--
	lbs/day ¹	3.3	--	--	--	--
Electrical Conductivity (EC at 25°C)	µmhos/cm	700	--	--	--	--

¹ Based upon a design treatment capacity of 0.04 mgd.

² Each organochlorine pesticide shall be ND (non-detectable). The Discharger shall use EPA standard analytical techniques that have the lowest practical level for the organochlorine pesticides with a minimum acceptable reporting level as indicated in appendix 4 of the SIP. Organochlorine pesticides include aldrin, chlordane, 4,4'DDT, dieldrin, endosulfan (alpha, beta, sulfate), endrin, endrin aldehyde, heptachlor, heptachlor epoxide, hexacyclohexane (alpha, beta, delta, and lindane), and toxaphene.

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

c. **Total Coliform:** The median concentration of total coliform bacteria measured in the disinfected effluent shall not exceed an MPN of 2.2 per 100 milliliters utilizing the

bacteriological results of the last seven days for which analyses have been completed (7-day median), and shall not exceed an MPN of 23 per 100 milliliters in more than one sample in any 30 day period. No sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters.

- d. **Chlorine Residual:** Effluent Total Chlorine Residual shall not exceed:
 - i. 0.011 mg/L as a 4-day average;
 - ii. 0.0033 lbs/day (based on a treatment capacity of 0.04 mgd) as a 4-day average; and
 - iii. 0.019 mg/L, as a 1-hour average.
- e. **Ammonia:** The maximum 1-hour average ammonia (total recoverable) in the discharge shall not exceed 2100 µg/L.
- f. **Turbidity:** The turbidity in the effluent shall not exceed an average of 2 Nephelometric Turbidity Units (NTUs) within a 24-hour period, shall not exceed 5 NTUs more than 5% of the time within a 24-hour period, and shall not exceed 10 NTUs at any time.
- g. **Acute Toxicity:** Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:
 - Minimum for any one bioassay - - - - - 70%
 - Median for any three or more consecutive bioassays - - - - 90%

2. Interim Effluent Limitations

- a. During the period beginning **Permit Effective Date** and ending on **18 May 2010**, the discharge of treated domestic wastewater to Lone Tree Creek shall maintain compliance with the following limitations at Discharge Point 001 (EFF-001), as described in the attached Monitoring and Reporting Program ([Attachment E](#)). 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.

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Min	Instantaneous Max
Copper (total recoverable)	µg/L	--	--	39	--	--
	lbs/day ¹	--	--	0.0013	--	--
Lead (total recoverable)	µg/L	--	--	8.9	--	--
	lbs/day ¹	--	--	0.0029	--	--
Silver (total recoverable)	µg/L	--	--	8.5	--	--
	lbs/day ¹	--	--	0.0028	--	--
Zinc (total recoverable)	µg/L	--	--	800	--	--
	lbs/day ¹	--	--	0.27	--	--
Indeno(1,2,3-cd) Pyrene	µg/L	--	--	1.2	--	--
	lbs/day ¹	--	--	0.00041	--	--

¹ Based upon a design treatment capacity of 0.04 mgd.

B. Land Discharge Specifications – See Section VI. C. 5 -Construction, Operation and Maintenance Specifications.

C. Reclamation Specifications – Discharge Point 002

1. Beginning **Permit Effective Date**, the discharge of treated domestic wastewater to land for reclamation purposes shall maintain compliance with the following limitations at Discharge Point 002, as described in the attached Monitoring and Reporting Program (Attachment E).

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Min	Instantaneous Max
Flow	mgd	0.040	--	--	--	--
BOD 5-day @ 20°C	mg/L	10	20	50	--	--
Total Suspended Solids	mg/L	10	20	50	--	--
Settleable Solids	ml/L	0.1	--	0.2	--	--
pH	standard units	--	--	--	6.5	8.5

2. **Percent Removal:** The average monthly percent removal of BOD 5-day at 20°C and total suspended solids shall not be less than 85 percent.
3. **Total Coliform:** The median concentration of total coliform bacteria measured in the disinfected effluent shall not exceed an MPN of 2.2 per 100 milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed (7-day median). The number of total coliform bacteria shall not exceed an MPN of 23 per 100 milliliters in more than one sample in any 30 day period. No sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters.
4. **Turbidity:** The turbidity in the effluent shall not exceed a daily average of 2 NTUs and shall not exceed 5 NTUs more than 5 percent of the time during any 24-hour period, and shall not exceed 10 NTUs at any time.

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 Lone Tree Creek:

1. **Fecal Coliform:** 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.
2. **Dissolved Oxygen:** Concentrations of dissolved oxygen to fall below 7 mg/L. 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 95th percentile concentration shall not fall below 75 percent of saturation.

3. **Oil and Grease:** Oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the water surface or on objects in the water, or otherwise adversely affect beneficial uses.
4. **Color:** Discoloration that causes nuisance or adversely affects beneficial uses.
5. **pH:** The ambient pH to be depressed below 6.5, nor raised above 8.5, nor changes in normal ambient pH levels to be exceeded by more than 0.5 units. A monthly averaging period may be used for determining compliance with the above 0.5 receiving water pH limitation.
6. **Temperature:** The natural receiving water temperature to increase more than 5°F. A monthly averaging period may be used for determining compliance with this receiving water temperature limitation.
7. **Settleable Matter:** Substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.
8. **Radioactivity:** 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.
9. 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 CCR.
10. **Toxicity:** Toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances.
11. **Biostimulatory Substances:** Biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.
12. **Floating Material:** Floating material in amounts that cause nuisance or adversely affect beneficial uses.
13. **Sediment:** Suspended sediment load and suspended sediment discharge rate altered in such a manner to cause nuisance or adversely affect beneficial uses.
14. **Suspended Sediment:** Suspended sediment concentrations that cause nuisance or adversely affect beneficial uses.
15. **Taste and Odor:** Taste- or odor-producing substances in concentrations that cause nuisance, adversely affect beneficial uses, or impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin or to domestic or municipal water supplies.

16. **Turbidity:** Changes in turbidity that cause nuisance or adversely affect beneficial uses. Turbidity attributable to controllable water quality factors to exceed the following:

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

17. **Pesticides:**

- a. Pesticides in individual or combined concentrations that adversely affect beneficial uses.
- b. Pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses.
- c. Total identifiable persistent chlorinated hydrocarbon pesticides in concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the Executive Officer.
- d. Concentrations exceeding those allowable by applicable anti-degradation policies (see State Water Resources Control Board Resolution No. 68-16 and 40 C.F.R. Section 131.12.)
- e. Concentrations exceeding the lowest levels technically and economically achievable.
- f. Concentrations exceeding the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.
- g. Concentrations of thiobencarb in excess of 1.0 µg/L.

18. Aquatic communities and populations, including vertebrate, invertebrate, and plant species, to be degraded.

19. Esthetically undesirable discoloration:

20. Fungi, slimes, or other objectionable growths.

B. Groundwater Limitations

Release of waste constituents from any storage, treatment, or disposal component associated with the Facility shall not, in combination with other sources of the waste constituents, cause underlying groundwater to contain waste constituents in concentrations statistically greater than background water quality or that listed below, whichever is greater:

- 1. Total Coliform organisms of 2.2 MPN/100 ml over any seven day period.
- 2. Chemical constituents in concentrations that adversely affect beneficial uses, including
 - a. Constituents concentrations greater than those listed below

<u>Constituent</u>	<u>Units</u>	<u>Limitation</u>
Boron	mg/L	0.7
Chloride	mg/L	106

<u>Constituent</u>	<u>Units</u>	<u>Limitation</u>
Iron	mg/L	0.3
Manganese	mg/L	0.05
Sodium	mg/L	69
Total Dissolved Solids ¹	mg/L	450
Total Nitrogen	mg/l	10
Aluminum	mg/L	0.2
Ammonia (as ammonia)	mg/L	1.5

¹ A cumulative impact limit that accounts for several dissolved constituents in addition to those listed here separately [e.g., alkalinity (carbonate and bicarbonate), calcium, hardness, phosphate, and potassium].

3. Exhibit a pH of less than 6.5 or greater than 8.5 pH units.
4. Impart taste, odor, toxicity, or color that creates nuisance or impairs any beneficial use.

VI. PROVISIONS

A. Standard Provisions

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

The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, Sections 13385, 13386, and 13387.

2. **Regional Water Board Standard Provisions.** The Discharger shall comply with the following Regional Water Board standard provisions:
 - a. If the Discharger's wastewater treatment plant is publicly owned or subject to regulation by the California Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to Title 23, CCR, Division 3, Chapter 14.
 - b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
 - (i) Violation of any term or condition contained in this Order;
 - (ii) Obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;
 - (iii) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and
 - (iv) A material change in the character, location, or volume of discharge.

The causes for modification include:

- (i) 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.
- (ii) 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.
- (iii) Change in sludge use or disposal practice. Under 40 CFR section 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. By-pass (the intentional diversion of waste streams from any portion of a treatment facility or collection system, except those portions designed to meet variable effluent limits) is prohibited except under the following condition:
 - (i) by-pass is required for essential maintenance to assure efficient operation;
and
 - (ii) neither effluent nor receiving water limitations are exceeded;
and
 - (iii) the Discharger notifies the Board ten days in advance.

The permittee shall submit notice of an unanticipated by-pass as required in Federal Standard Provisions [I.G.5](#). (Attachment D). Additional by-pass provisions are included in Federal Standard Provisions [I.G.](#) (Attachment D)

- g. 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.

- 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. Neither the treatment nor the discharge shall create a condition of nuisance or pollution as defined by the CWC, Section 13050.
- k. 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.
- l. The Discharger, upon written request of the Regional Water Board, shall file with the Regional Water Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events.

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.

- m. 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.
- n. The Discharger shall submit technical reports as directed by the Executive Officer.
- o. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the Discharger, analyses performed by a non-certified 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.
 - (i) Unless otherwise specified, all metals shall be reported as Total Metals.
 - (ii) Unless otherwise specified, all metals shall be reported as Total Metals.
 - 1) Acute bioassays shall be performed in accordance with guidelines approved by the Regional Water Board and the Department of Fish and Game or in accordance with methods described in USEPA's manual for measuring acute toxicity of effluents (EPA-821-R-02-012 and subsequent amendments).

- 2) Short-term chronic bioassays shall be performed in accordance with USEPA guidelines (EPA-821-R-02-013 and subsequent amendments).
- p. Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Regional Water Board and USEPA.
- q. 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.
- r. 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.
- s. 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.
- t. 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.
- u. The results of all monitoring required by this Order shall be reported to the 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.
- v. Upon written request of the Regional Water Board, the Discharger shall submit a summary monitoring report to the Regional Water Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).

B. Monitoring and Reporting Program Requirements

The discharger shall comply with the Monitoring and Reporting Program, and future revisions thereto, in [Attachment E](#) of this Order.

C. Special Provisions

1. Reopener Provisions

- a. **New more stringent Water Quality Standards.** Upon adoption of any more stringent applicable water quality standards for receiving waters by the Regional Water Board or the State Water Board pursuant to Section 303 of the CWA and regulations adopted thereunder, this permit may be reopened and modified in accordance with such more stringent standards.

- b. **Chronic Toxicity.** If chronic toxicity testing as specified below in Section VI.C.2.a (Special Studies, Technical Reports and Additional Monitoring Requirements) indicates that the discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the water quality objective for toxicity (other than salinity), this Order may be reopened and a chronic toxicity limitation included and/or a limitation for the specific toxicant identified in the TRE included. Additionally, if a chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened and a limitation based on that objective included.
- c. **Groundwater limitations.** If after review of groundwater monitoring results from the Groundwater monitoring study specified below in Section VI.C.2.b, it is determined that the discharge has reasonable potential to cause or contribute to an exceedance of a water quality objective in groundwater, this Order may be reopened and new or modified groundwater limitations added for the subject constituents.
- d. **Ammonia, BOD, and EC TMDL.** This Order shall be reopened, as necessary, and alternative final effluent limitations established for ammonia, BOD, and/or EC based upon a waste load allocation derived from TMDLs established for Lone Tree Creek, a site-specific water quality objective, or based upon new criteria.
- e. **Optional Dilution Study.** Lone Tree Creek may have assimilative capacity for certain pollutants for which effluent limitations have been established. If the Discharger elects to conduct a dilution study in accordance with the procedures outlined in Appendix 5 of the SIP, this Order may be reopened and if necessary modify effluent limitations for the subject constituents.
- f. **Bis (2-Ethylhexyl)Phthalate (DEHP), chlorpyrifos.** This Order may be reopened and establish new effluent limitations for DEHP, and chlorpyrifos if necessary upon review of monitoring data collected indicating these constituents have a reasonable potential to exceed a water quality objective.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

- a. **Chronic Whole Effluent Toxicity.** For protection of 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). If the testing indicates that the discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the water quality objective for toxicity, the Discharger shall initiate a Toxicity Reduction Evaluation (TRE), 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 of whole effluent toxicity, evaluate the effectiveness of the toxicity control options, and confirm the reduction in effluent toxicity.
- b. **Hydrogeologic Evaluation and Groundwater Monitoring Tasks.** Since the Discharger is currently discharging to land by impounding recycled water and is considering an additional land disposal alternative (ie: subsurface irrigation), the

Discharger shall complete a hydrogeologic investigation within the area affected and potentially affected by the Facility and its discharge(s) to land by **1 March 2008** in accordance with the following time schedule

<u>Task</u>	<u>Date Due</u>
Submit Groundwater Study Workplan	1 September 2006
Begin Study	1 January 2007
Progress Report	1 July 2007
Submit Final Report	1 March 2008

The technical report documenting the hydrogeologic investigation shall describe the underlying geology, existing wells (active and otherwise), local well construction practices and standards, well restrictions, hydrogeology and assess all impacts of the wastewater discharge on water quality. The groundwater quality shall be monitored in accordance with the attached Monitoring and Reporting Program. The technical report must present, for each monitoring event, determinations for the direction and gradient of groundwater flow.

The groundwater monitoring network, consisting of a minimum of four (4) monitoring wells, shall include one or more background monitoring wells and sufficient number of designated monitoring wells to evaluate performance of BPTC measures and determine if the discharge has degraded groundwater. These include monitoring wells immediately downgradient of every treatment, storage, and disposal unit that does or may release waste constituents to groundwater with the exception of wastewater reclamation areas to which the Discharger applies effluent. All wells shall comply with appropriate standards as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981), and any more stringent standards adopted by the Discharger or county pursuant to CWC section 13801. The existing well network will be evaluated, and the proposed network should include existing monitoring wells where they will serve to measure compliance or provide other relevant information (e.g., depth to groundwater). The Discharger shall install approved monitoring wells, properly destroy ineffective wells, and commence groundwater monitoring in accordance with this Order's Monitoring and Reporting Program. After one year of monitoring, the Discharger shall characterize natural background quality of monitored constituents in a technical report. If the monitoring shows that any constituent concentrations are increased above background water quality, the Discharger shall submit a technical report describing the evaluation's results and critiquing each evaluated component with respect to BPTC and minimizing the discharge's impact on groundwater quality. In no case shall the discharge be allowed to exceed a water quality objective. Where treatment system deficiencies are documented, the technical report shall provide recommendations for necessary modifications (e.g., new or revised salinity source control measures, Facility component upgrade and retrofit) to achieve BPTC and identify the source of funding and proposed schedule for modifications for achieving full compliance prior to expiration of this Order. This Order may be reopened and additional groundwater limitations added.

3. Best Management Practices and Pollution Prevention – Not Applicable

4. Compliance Schedules

- a. Corrective Action Plan/Implementation schedule for Copper, Lead, Silver, Zinc, and Indeno(1,2,3-cd) Pyrene:** The Discharger’s effluent contains copper, lead, silver, zinc, and indeno (1,2,3-cd) pyrene at concentrations that exceed water quality criteria contained in the CTR. Sampling indicates the existing effluent while discharging to Lone Tree Creek would not be capable of consistently meeting the effluent limitations for these constituents. The Discharger on 2 June 2005 submitted justification for a compliance schedule, which could include additional treatment, source control, and other land disposal alternatives as possible corrective measures for compliance with these limitations. The Discharger therefore shall achieve full compliance with final limitations for copper, lead, silver, zinc and indeno (1,2,3-cd) pyrene in accordance with the following time schedule by **18 May 2010**:

<u>Task</u>	<u>Date Due</u>
Submit Corrective Action Plan and implementation schedule	1 September 2006
Progress Reports ¹	1 July Annually
Full Compliance	18 May 2010

¹ The Progress reports shall detail what steps have been implemented towards achieving compliance with waste discharge requirements, evaluate the effectiveness of the implemented measures and assess whether additional measures are necessary to meet the time schedule.

5. Construction, Operation and Maintenance Specifications

- a. Wastewater Treatment Facility
- i. Wastewater shall be oxidized, disinfected, and in this situation filtered (to assure effectiveness of the ozone disinfection process) or equivalent pursuant to DHS criteria for the use of recycled water at a Golf Course with restricted access in Title 22, CCR, Division 4, Chapter 3 (Title 22).
 - ii. The treatment and disposal facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
 - iii. To ensure the ozone disinfection system is continuously effective, in addition to having an automatic on-line ozone monitoring system, the Discharger shall also use a bench-top ozone monitoring instrument that uses the Indigo colorimetric method for ozone analysis. The on-line ozone monitor should produce results that are within 5% of the results obtained using the indigo method.
 - iv. The chlorine disinfection process following filtration shall provide a CT (the product of total chlorine residual and modal contact time measured at the same point) value of not less than 450 milligram-minutes per liter at all times with a modal contact time of

at least 90 minutes, based on peak dry weather design flow. This requirement only applies when the Facility is using chlorine for disinfection.

b. Recycled Water Use Area Requirements

- (i) Use of reclaimed water shall be limited to the recycled water use area as defined in the Facility's ECOLOGIC engineering report (5 March 2004).
- (ii) No irrigation with, or impoundment of recycled water shall take place within 100 feet of any domestic water supply well.
- (iii) Any irrigation runoff shall be confined to the recycled water use area.
- (iv) Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities.
- (v) Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff.
- (vi) No spray irrigation of any recycled water, shall take place within 100 feet of a residence or a place where public exposure could be similar to that of a park, playground, or school yard. Public contact is being minimized as specified by DHS comments on the Discharger's Engineering Report (by sprinkler irrigation between the hours of 1 a.m and 4 a.m., when the public should not be present). Observations of the irrigation system performance during the night must be conducted at least weekly.
- (vii) All use areas where recycled water is used/stored that are accessible to the public shall be posted with signs that are visible to the public, in a size no less than 4 inches high by 8 inches wide, that include the following wording: "RECYCLED WATER - DO NOT DRINK". Each sign shall display an international symbol similar to that shown in figure 60310-A of Title 22, Division 4, Chapter 3.
- (viii) Except as allowed under Section 7604 of Title 17, California Code of Regulations, no physical connection shall be made or allowed to exist between any reclaimed water system and any separate system conveying potable water.
- (ix) The portions of the recycled water piping system that are in areas subject to access by the general public shall not include any hose bibbs. Only quick couplers that differ from those used on the potable water system shall be used on the portions of the recycled water piping system in areas subject to public access.
- (x) Areas irrigated with recycled water shall be managed to prevent breeding of mosquitoes.
- (xi) Application of reclaimed wastewater to the reclamation area shall be at reasonable rates considering the crop, climate, soil, and irrigation management system. The

nutrient loading of the reclamation area, including the nutritive value of organic and chemical fertilizers and of the reclaimed water, shall not exceed the crop or vegetation demand.

- (xii) The Discharger may not spray irrigate effluent during periods of precipitation and for at least 24 hours after cessation of precipitation, or when winds exceed 30 mph.
- (xiii) A minimum freeboard of two (2) feet shall be maintained at all times in any reservoir or pond containing recycled water, except with prior written authorization by the Regional Water Board's Executive Officer.
- c. Sludge/Biosolids Disposal Requirements:
- (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, California Code of Regulations, 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 requirements.
- (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. 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.
- (iv) The use and disposal of biosolids shall comply with existing Federal and State laws and regulations, including permitting requirements and technical standards included in 40 CFR 503. If the State Water Board and the Regional Water Board are given the authority to implement regulations contained in 40 CFR 503, this Order may be reopened to incorporate appropriate time schedules and technical standards. The Discharger must comply with the standards and time schedules contained in 40 CFR 503 whether or not they have been incorporated into this Order.
- (v) The Discharger shall comply with the Monitoring and Reporting Program for biosolids disposal contained in Attachment E.
- (vi) Any proposed change in sludge use or disposal practice from a previously approved practice shall be reported to the Executive Officer and EPA Regional Administrator at least **90 days** in advance of the change.

- (vii) 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.
 - (viii) Facilities for the storage of Class B biosolids shall be located, designed and maintained to restrict public access to biosolids.
 - (ix) 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.
 - (x) 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.
 - (xi) Biosolids storage facilities shall be designed, maintained and operated to minimize the generation of leachate.
- d. Golf course reservoirs shall be managed to prevent breeding of mosquitoes. In particular,
- (i) An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.
 - (ii) Weeds shall be minimized through control of water depth, harvesting, or herbicides.
 - (iii) Dead algae, vegetation, and debris shall not accumulate on the water surface.
- e. Freeboard in any pond containing wastewater or reclaimed wastewater shall never be less than two feet as measured from the water surface to the lowest point of overflow.

6. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable

7. Other Special Provisions

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

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

assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

- c. 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.

VII. COMPLIANCE DETERMINATION

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

A. Average Monthly Effluent Limitation (AMEL).

If the average of daily discharges over a calendar month exceeds the AMEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). The average of daily discharges over the calendar month that exceeds the AMEL for a parameter will be considered out of compliance for that month only. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the discharger will be considered out of compliance for that calendar month. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

B. Average Weekly Effluent Limitation (AWEL).

If the average of daily discharges over a calendar week exceeds the AWEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance. The average of daily discharges over the calendar week that exceeds the AWEL for a parameter will be considered out of compliance for that week only. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the discharger will be considered out of compliance for that calendar week. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week.

C. Maximum Daily Effluent Limitation (MDEL).

If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

D. Instantaneous Minimum Effluent Limitation.

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

E. Instantaneous Maximum Effluent Limitation.

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

F. BOD and TSS Effluent Limitations.

Compliance with the final effluent limitations for BOD and TSS required in sections IV.A.1 and IV.C.1 shall be ascertained by a 24-hour composite sample

G. Aluminum Effluent Limitations.

Compliance with the final effluent limitations for aluminum can be demonstrated by 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.

H. Mass Loading Limitations.

Compliance with effluent mass loading limitations shall be calculated as follows:

For monthly average limitations: (measured concentration {mg/L} x 8.345 {conversion factor} x monthly average flow rate). For daily maximum limitations: (measured concentration {mg/L} x 8.345 {conversion factor} x daily flow rate).

ATTACHMENT A – DEFINITIONS

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.

Biosolids: refers to sludge that has been treated and tested and shown to be capable of being beneficially and legally used pursuant to federal and state regulations as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities.

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.

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): the highest allowable daily discharge of a pollutant.

Maximum 1-Hour Average Effluent Limitation: If the average of analytical results of samples collected within 1-hour is higher than the maximum 1-hour average effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter.

Residual Sludge: in this document means sludge that will not be subject to further treatment at the Facility.

7-day Median Effluent Limitation: the highest allowable median of daily discharges over a 7-day period, calculated as the rolling median value of the previous 7-days.

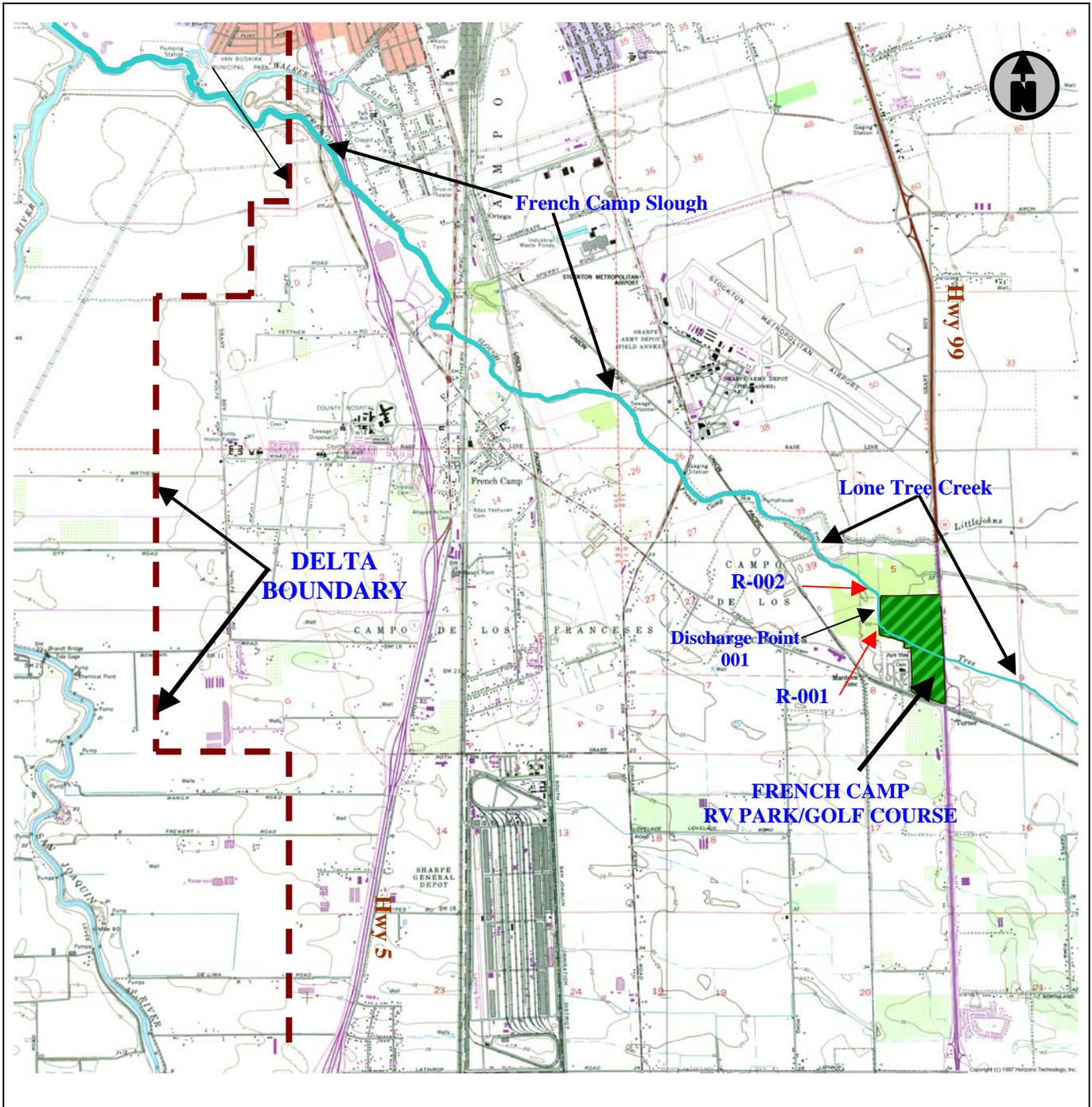
Six-month Median Effluent Limitation: NA

Sludge: in this document means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes.

Solid Waste: refers to grit and screening material generated during preliminary treatment

Toxicity Test: the procedure using living organisms to determine whether a chemical or an effluent is toxic. A toxicity test measures the degree of the effect of a specific chemical or effluent on exposed test organisms.

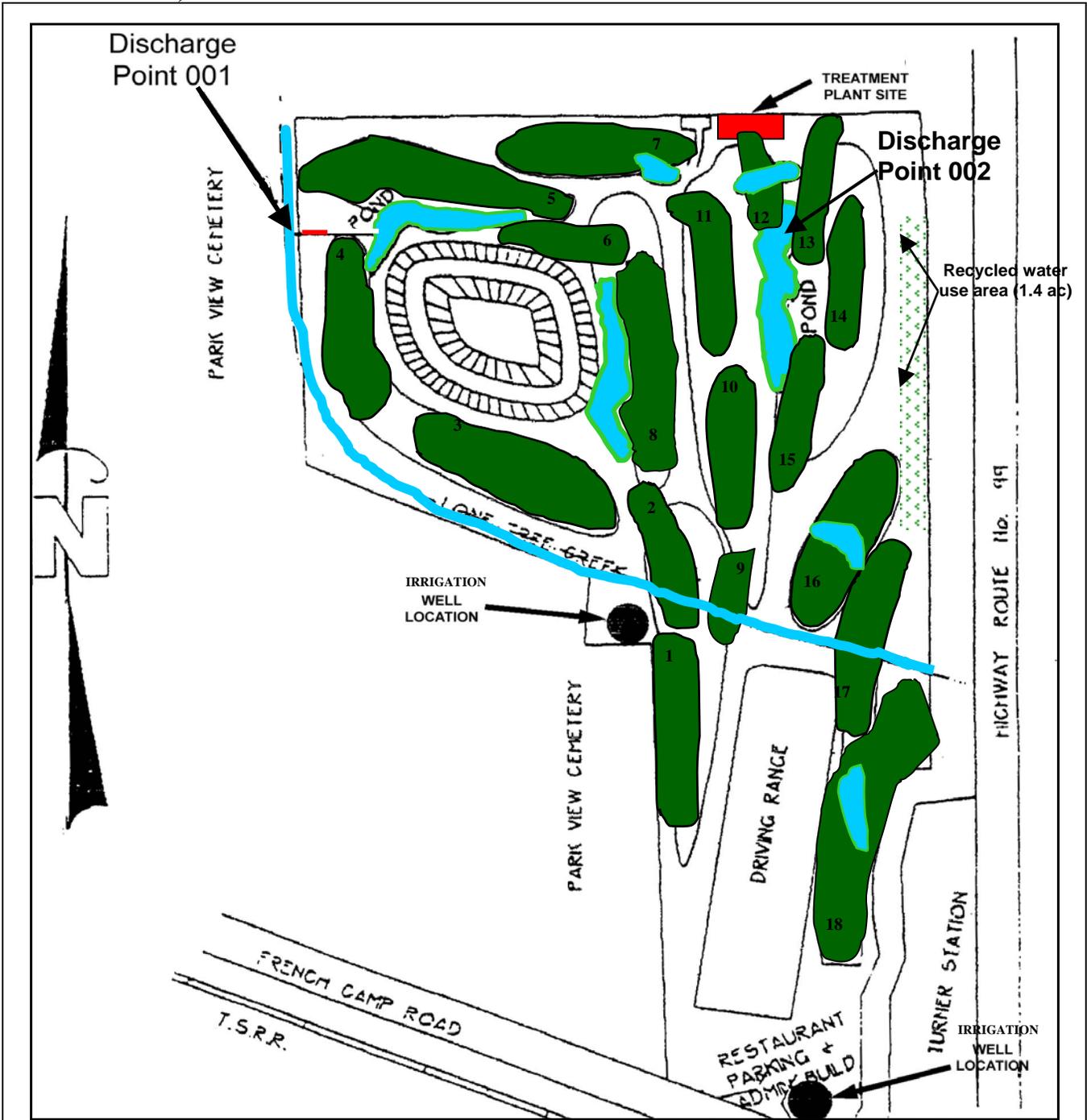
ATTACHMENT B – TOPOGRAPHIC MAP



LOCATION MAP

CANADA COVE LIMITED PARTNERSHIP
FRENCH CAMP RV PARK AND GOLF COURSE
Manteca – San Joaquin County
Facility Location – Latitude 37° 51' 43.42" N, Longitude 121° 13' 15.28" W
Section 8, T1N, R7E, MDB&M

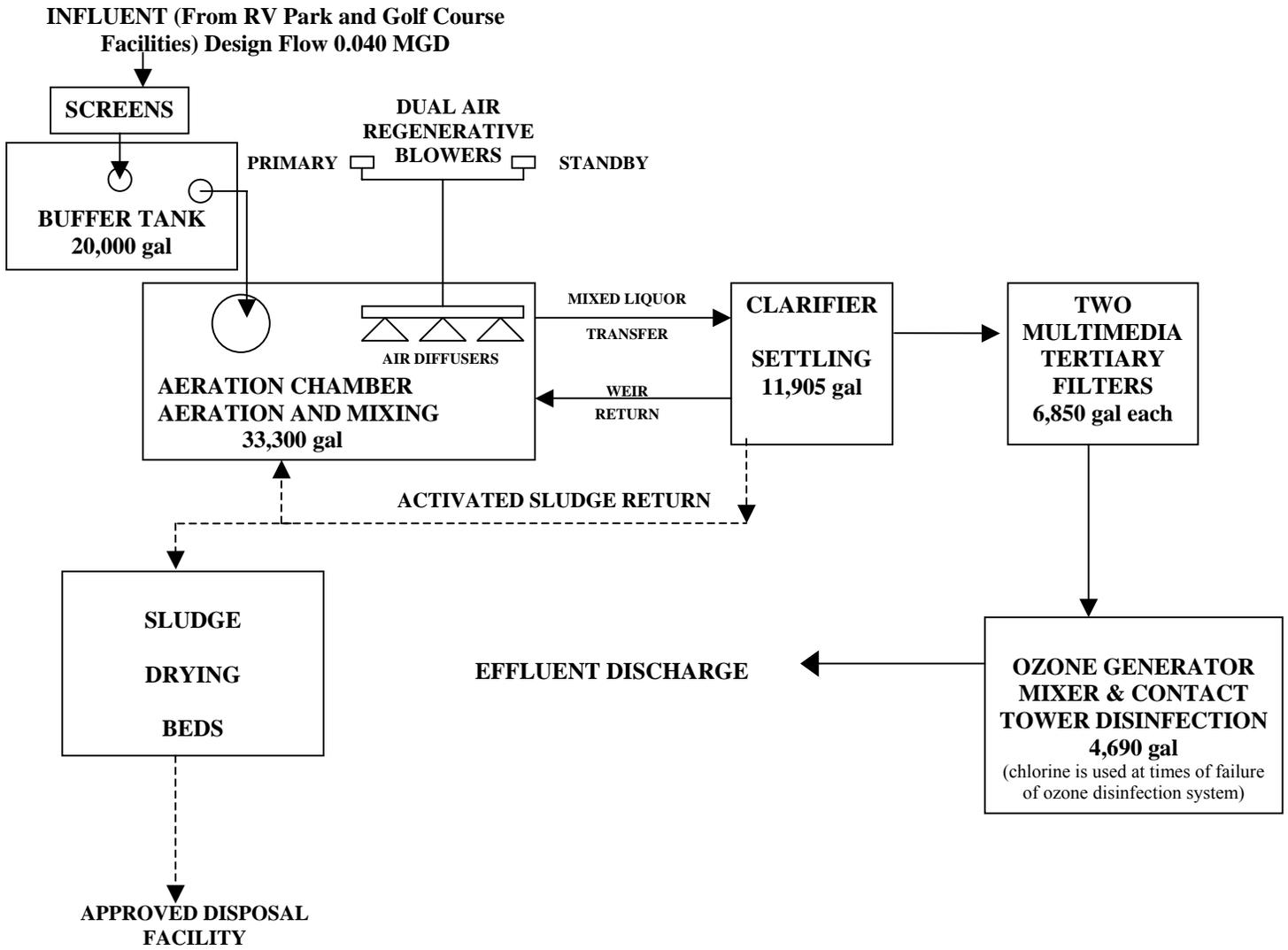
ATTACHMENT B, CONT



SITE MAP

CANADA COVE LIMITED PARTNERSHIP
FRENCH CAMP RV PARK AND GOLF COURSE
Manteca – San Joaquin County
Facility Location – Latitude 37° 51' 43.42" N, Longitude 121° 13' 15.28" W
Section 8, T1N, R7E, MDB&M

ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – FEDERAL STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

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

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges [40 CFR 122.41(g)].
2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations [40 CFR 122.5(c)].

F. Inspection and Entry

The Discharger shall allow the Regional Water Quality Control Board (RWQCB), State Water Resources Control Board (SWRCB), United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to [40 CFR 122.41(i)] [CWC 13383(c)]:

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order [40 CFR 122.41(i)(1)];
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order [40 CFR 122.41(i)(2)];
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order [40 CFR 122.41(i)(3)];
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location [40 CFR 122.41(i)(4)].

G. Bypass

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

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

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation [40 CFR 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 paragraph H.2 of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review [40 CFR 122.41(n)(2)].
2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that [40 CFR 122.41(n)(3)]:
 - a. An upset occurred and that the Discharger can identify the cause(s) of the upset [40 CFR 122.41(n)(3)(i)];
 - b. The permitted facility was, at the time, being properly operated [40 CFR 122.41(n)(3)(i)];

- c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b [40 CFR 122.41(n)(3)(iii)]; and
 - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above [40 CFR 122.41(n)(3)(iv)].
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof [40 CFR 122.41(n)(4)].

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

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

IV. STANDARD PROVISIONS – RECORDS

- A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at

least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time [40 CFR 122.41(j)(2)].

B. Records of monitoring information shall include:

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

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

1. The name and address of any permit applicant or Discharger [40 CFR 122.7(b)(1)]; and
2. Permit applications and attachments, permits and effluent data [40 CFR 122.7(b)(2)].

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order [40 CFR 122.41(h)] [CWC 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 paragraph (2.) and (3.) of this provision [40 CFR 122.41(k)].
2. All permit applications shall be signed as follows:
 - a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities,

- provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures [40 CFR 122.22(a)(1)];
- b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively [40 CFR 122.22(a)(2)]; or
 - c. For a municipality, State, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA) [40 CFR 122.22(a)(3)].
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in paragraph (b) of this provision, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- a. The authorization is made in writing by a person described in paragraph (2.) of this provision [40 CFR 122.22(b)(1)];
 - b. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company (a duly authorized representative may thus be either a named individual or any individual occupying a named position) [40 CFR 122.22(b)(2)]; and
 - c. The written authorization is submitted to the Regional Water Board, State Water Board, or USEPA [40 CFR 122.22(b)(3)].
4. If an authorization under paragraph (3.) of this provision is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (3.) of this provision must be submitted to the Regional Water Board, State Water Board, or USEPA prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 CFR 122.22(c)].
5. Any person signing a document under paragraph (2.) or (3.) of this provision shall make the following certification:

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

C. Monitoring Reports

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

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [40 CFR 122.41(l)(6)(i)].
2. The following shall be included as information that must be reported within 24 hours under this paragraph [40 CFR 122.41(l)(6)(ii)]:

- a. Any unanticipated bypass that exceeds any effluent limitation in this Order [*40 CFR 122.41(l)(6)(ii)(A)*].
 - b. Any upset that exceeds any effluent limitation in this Order [*40 CFR 122.41(l)(6)(ii)(B)*].
 - c. Violation of a maximum daily discharge limitation for any of the pollutants listed in this Order to be reported within 24 hours [*40 CFR 122.41(l)(6)(ii)(C)*].
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours [*40 CFR 122.41(l)(6)(iii)*].

F. Planned Changes

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

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b) [*40 CFR 122.41(l)(1)(i)*]; or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in this Order nor to notification requirements under 40 CFR Part 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [*40 CFR 122.41(l)(1)(ii)*].
3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan [*40 CFR 122.41(l)(1)(iii)*].

G. Anticipated Noncompliance

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

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting E.3, E.4, and E.5 at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E [*40 CFR 122.41(l)(7)*].

I. Other Information

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

VI. STANDARD PROVISIONS – ENFORCEMENT – NOT APPLICABLE

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Regional Water Board as soon as they know or have reason to believe [40 CFR 122.42(a)]:

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [40 CFR 122.42(a)(1)]:
 - a. 100 micrograms per liter ($\mu\text{g/L}$) [40 CFR 122.42(a)(1)(i)];
 - b. 200 $\mu\text{g/L}$ for acrolein and acrylonitrile; 500 $\mu\text{g/L}$ for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony [40 CFR 122.42(a)(1)(ii)];
 - c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [40 CFR 122.42(a)(1)(iii)]; or
 - d. The level established by the Regional Water Board in accordance with 40 CFR 122.44(f) [40 CFR 122.42(a)(1)(iv)].
2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [40 CFR 122.42(a)(2)]:
 - a. 500 micrograms per liter ($\mu\text{g/L}$) [40 CFR 122.42(a)(2)(i)];
 - b. 1 milligram per liter (mg/L) for antimony [40 CFR 122.42(a)(2)(ii)];
 - c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [40 CFR 122.42(a)(2)(iii)]; or
 - d. The level established by the Regional Water Board in accordance with 40 CFR 122.44(f) [40 CFR 122.42(a)(2)(iv)].

B. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following [*40 CFR 122.42(b)*]:

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

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

Attachment E – Monitoring and Reporting Program – Table of Contents

Attachment E – Monitoring and Reporting Program (MRP).....	E-2
I. General Monitoring Provisions.....	E-2
II. Monitoring Locations.....	E-3
III. Influent Monitoring Requirements	E-3
A. Monitoring Location INF-001	E-3
IV. Effluent Monitoring Requirements.....	E-4
A. Monitoring Location EFF-001	E-4
V. Whole Effluent Toxicity Testing Requirements.....	E-5
VI. Land Discharge Monitoring Requirements (Recycled WATER storage reservoir)	E-6
VII. Reclamation Monitoring Requirements.....	E-6
A. Monitoring Location REC-001	E-6
VIII. Receiving Water Monitoring Requirements – Surface Water and Groundwater	E-7
A. Lone Tree Creek Monitoring Locations R-001 and R-002	E-7
B. Groundwater Monitoring.....	E-7
IX. Other Monitoring Requirements	E-10
A. Priority Pollutants.....	E-10
B. Sludge/Biosolids Monitoring	E-11
C. Water Supply Monitoring.....	E-11
X. Reporting Requirements	E-11
A. General Monitoring and Reporting Requirements	E-11
B. Self Monitoring Reports (SMRs)	E-12
C. Discharge Monitoring Reports (DMRs).....	E-13
D. Other Reports	E-14

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

40 CFR 122.48 requires that all NPDES permits specify monitoring and reporting requirements. CWC sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements 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. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices. Devices selected shall be capable of measuring flows with a maximum deviation of less than ± 10 percent from true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration and operation of acceptable flow measurement devices can be obtained from the following references:
1. *A Guide to Methods and Standards for the Measurement of Water Flow*, U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 96 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD Catalog No. C13.10:421.)
 2. *Water Measurement Manual*, U.S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U.S. Government Printing Office, Washington D.C. 20402. Order by Catalog No. 172.19/2:W29/2, Stock No. S/N 24003-0027.)
 3. *Flow Measurement in Open Channels and Closed Conduits*, U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy or microfiche from National Technical Information Services (NTIS) Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST.)
 4. *NPDES Compliance Sampling Manual*, U.S. Environmental Protection Agency, Office of Water Enforcement, Publication MCD-51, 1977, 140 pp. (Available from the General Services Administration (8FFS), Centralized Mailing Lists Services, Building 41, Denver Federal Center, CO 80225.)
- C. Unless otherwise approved by the Regional Water Board's Executive Officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. All analyses shall be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants", promulgated by the USEPA.

- D. 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.
- E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program.
- F. The collection, preservation and holding times of all samples shall be in accordance with United States Environmental Protection Agency (USEPA) approved procedures.
- G. If the facility is not in operation, or there is no discharge to surface water during a required reporting period, the Discharger shall forward a letter to the Regional Water Board indicating that there has been no discharge during the required reporting period.

II. MONITORING LOCATIONS

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

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Treatment plant influent, prior to any treatment.
001	EFF-001	When Discharging to Lone Tree Creek: Discharge from the treatment plant entering Lone Tree Creek at 37°, 52', 27" N, Latitude; 121°, 13', 30" W, Longitude.
002	REC-001	When Discharging to Land: Discharge from the treatment plant prior to being discharged to the recycled water storage reservoir for reclamation use.
	PND-001	Recycle Water Storage Reservoir
--	R-001	Lone Tree Creek, 100 feet upstream from the point of discharge 001.
--	R-002	Lone Tree Creek, 100 feet downstream from the point of discharge 001.
	WS-001	Water Supply
	BIO-001	Biosolids

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

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

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Metered	Continuous	[1]
BOD 5-day @ 20°C	mg/L	24-hour Composite	1/Month	[1]
Total Suspended Solids	mg/L	24-hour Composite	1/Month	[1]

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

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor effluent from the treatment plant, when discharging to Lone Tree Creek at EFF-001 as follows. Effluent samples should be representative of the volume and quality of the discharge:

Parameter	Units	Sample Type	Minimum Sampling Frequency ¹	Required Analytical Test Method
Flow	mgd	Metered	Continuous	[2]
Turbidity	NTU	Metered	Continuous	[2]
Chlorine, Total Residual ³	mg/L	Grab	1/Day/continuous ⁴	[2]
pH	standard units	Grab	1/Day/continuous ⁴	[2]
Temperature	°F	Grab	1/Day	[2]
Total Coliform Organisms	MPN/100 ml	Grab	2/Week	[2]
BOD 5-day @ 20°C	mg/L	24-hour Composite	1/Week	[2]
Total Suspended Solids	mg/L	24-hour Composite	1/Week	[2]
Settleable Solids	ml/L	Grab	1/Week	[2]
Electrical Conductivity @ 25°C	µmhos/ cm	Grab	1/Month	[2]
Copper (total recoverable)	µg/L	Grab	1/Month	[2]
Lead (total recoverable)	µg/L	Grab	1/Month	[2]
Silver (total recoverable)	µg/L	Grab	1/Month	[2]
Zinc (total recoverable)	µg/L	Grab	1/Month	[2]
Indeno(1,2,3-cd) Pyrene	µg/L	Grab	1/Month	[2]
Aluminum	µg/L	Grab	1/Month	[2][5]
Ammonia ⁶ (total recoverable)	µg/L	Grab	1/Month	[2]
Boron (total recoverable)	µg/L	Grab	1/Month	[2]
Iron (total recoverable)	µg/L	Grab	1/Month	[2]
Manganese (total recoverable)	µg/L	Grab	1/Month	[2]
Nitrate (total recoverable)	mg/L	Grab	1/Month	[2]
Acute Toxicity ⁷	% Survival	Grab	1/Semi-annual period	[2]
Sulfate (total recoverable)	mg/L	Grab	1/Semi-annual period	[2]
Arsenic (total recoverable)	µg/L	Grab	1/Semi-annual period	[2]
Bis(2-Ethylhexyl) Phthalate	µg/L	Grab	1/Semi-annual period	[2]
Organochlorine Pesticides ⁸	µg/L	Grab	1/Semi-annual period	[2]
1,2,3,6,7,8-HxCDF	µg/L	Grab	1/Semi-annual period	[2]
Chlorpyrifos	µg/L	Grab	1/Semi-annual period	[2]
Total Dissolved Solids	mg/L	Grab	1/Semi-annual period	[2]
Standard Minerals ⁹	mg/L	Grab	1/Semi-annual period	[2]

¹ If a discharge is intermittent rather than continuous, the Discharger shall monitor and record data for all of the constituents listed above on the first day of each intermittent discharge and thereafter the frequencies in the schedule shall apply. In no event shall the Discharger be required to monitor and record data more often than twice the frequencies listed in the schedule.

² Pollutants shall be analyzed using the analytical methods described in 40 CFR 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in 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 Analyze for chlorine residual if chlorine was used in the disinfection process at any time within the week of sampling.
- 4 Continuous pH and chlorine residual monitoring is required after 1 January 2008.
- 5 Compliance 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 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.
- 6 Report as both total and un-ionized ammonia with corresponding pH and temperature measurements.
- 7 All acute toxicity bioassays shall be performed according to EPA-821-R-02-012 *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition*, October 2002 (or latest edition) using *Pimephales promelas* with no pH adjustment, with exceptions granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP). Temperature and pH shall be recorded at the time of bioassay sample collection.
- 8 Organochlorine pesticides include aldrin, chlordane, 4,4' DDT, dieldrin, endosulfan (alpha, beta, sulfate), endrin, endrin aldehyde, heptachlor, heptachlor epoxide, hexachyclohexane (alpha, beta, delta, and lindane), and toxaphene.
- 9 Standard minerals shall include all major cations and anions and include verification that the analysis is complete (i.e., cation/anion balance).

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

Chronic toxicity monitoring shall be conducted to determine whether the effluent is contributing toxicity to the receiving water. The testing shall be conducted as specified in EPA-821-R-02-013, *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fifth Edition. Composite samples of the effluent shall be collected prior to discharge to the Lone Tree Creek (at Monitoring Location EFF-001). Twenty four hour composite samples shall be representative of the volume and quality of the discharge. Time of collection samples shall be recorded. Dilution waters shall be collected upstream of the discharge to Lone Tree Creek. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay and reported with the test results. Both the reference toxicant and effluent test must meet all test acceptability criteria as specified in the chronic manual. If the test acceptability criteria are not achieved, then the Discharger must re-sample and re-test within 14 days. Chronic toxicity monitoring shall include the following:

Species: *Pimephales promelas*, *Ceriodaphnia dubia*, and *Selenastrum capricornutum*
 Frequency: Once during the term of this Order, immediately upon discharge to Lone Tree Creek.

	<u>Dilutions (%)</u>					<u>Controls</u>	
	<u>100</u>	<u>50</u>	<u>25</u>	<u>12.5</u>	<u>6.25</u>	<u>Lone Tree Creek</u>	<u>Lab Water</u>
% Effluent	100	50	25	12.5	6.25	0	0
% Dilution Water ¹	0	50	75	87.5	93.75	100	0
% Lab Water ²	0	0	0	0	0	0	100

1 Dilution water shall be receiving water taken upstream from the discharge point. The dilution series may be altered upon approval of Regional Water Board staff.

2 Lab water shall meet EPA protocol requirements

VI. LAND DISCHARGE MONITORING REQUIREMENTS (RECYCLED WATER STORAGE RESERVOIR)

The Recycled water storage reservoir shall be monitored when water is present in the reservoir, and all samples shall be grab samples. The Discharger shall monitor the reservoir at PND-001, at a minimum as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency ¹
Freeboard	Feet ¹	----	1/Week
pH	standard units	Grab	1/Week
Dissolved Oxygen	mg/L	Grab	1/Month
Electrical Conductivity	µmohs/cm	Grab	1/Month

¹ Freeboard shall be monitored to the nearest tenth of a foot.

VII. RECLAMATION MONITORING REQUIREMENTS

A. Monitoring Location REC-001

1. The Discharger shall monitor effluent discharged to land for irrigation (discharge point 002) at REC-001 as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Metered	Continuous	[1]
Turbidity	NTU	Metered	Continuous	[1]
Total Coliform Organisms	MPN/100 ml	Grab	2/Week	[1]
BOD 5-day @ 20°C	mg/L	24-hour Composite	1/Week	[1]
Total Suspended Solids	mg/L	24-hour Composite	1/Week	[1]
Settleable Solids	ml/L	Grab	1/Week	[1]
pH	standard units	Grab	1/Week	[1]
Electrical Conductivity @ 25°C	µmhos/ cm	Grab	1/Month	[1]
Total Dissolved Solids	mg/L	Grab	1/Semi-annual period	[1]
Standard Minerals ²	mg/L	Grab	1/Semi-annual period	[1]

¹ Pollutants shall be analyzed using the analytical methods described in 40 CFR 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in 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 Standard minerals shall include all major cations and anions and include verification that the analysis is complete (i.e., cation/anion balance).

VIII. RECEIVING WATER MONITORING REQUIREMENTS – Surface Water and Groundwater

A. Lone Tree Creek Monitoring Locations R-001 and R-002

1. All receiving water samples shall be grab samples. Samples shall be collected when there is discharge to Lone Tree Creek. If discharge does not occur during the monitoring period, samples are not required to be collected. The Discharger shall monitor Lone Tree Creek at Monitoring Locations R-001 and R-002 as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency ¹	Required Analytical Test Method
Dissolved Oxygen	mg/L	Grab	1/Month	[2]
pH	standard units	Grab	1/Month	[2]
Turbidity	NTU	Grab	1/Month	[2]
Temperature	°F (°C)	Grab	1/Month	[2]
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Month	[2]
Ammonia ³	mg/L	Grab	1/Month	[2]
Fecal Coliform Organisms	MPN/100 ml	Grab	1/Month	[2]

¹ If a discharge is intermittent rather than continuous, the Discharger shall monitor and record data for all of the constituents listed above on the first day of each intermittent discharge and thereafter the frequencies in the schedule shall apply. In no event shall the Discharger be required to monitor and record data more often than twice the frequencies listed in the schedule.

² Pollutants shall be analyzed using the analytical methods described in 40 CFR 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in 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 Report as both total and un-ionized ammonia with corresponding pH and temperature measurements.

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

- | | |
|------------------------------|---|
| Floating or suspended matter | Visible films, sheens or coatings |
| Discoloration | Fungi, slimes, or objectionable growths |
| Bottom deposits | Potential nuisance conditions |
| Aquatic life | |

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

B. Groundwater Monitoring

1. In accordance with Provision VI.C.2b of this Order, upon Regional Water Board approval and installation of an adequate groundwater monitoring network, all new wells shall be added to the MRP, and shall be sampled and analyzed according to the schedule below.
2. Prior to collecting samples and after measuring the water level, each monitoring well shall be adequately purged to remove water that has been standing within the well screen and

casing that may not be chemically representative of formation water. Depending on the hydraulic conductivity of the geologic setting, the volume removed during purging typically does not exceed 3 to 5 volumes of the standing water within the well casing and screen, or additionally the filter pack pore volume. At least quarterly and concurrently with groundwater quality sampling, the Discharger shall measure the water level in each well as groundwater depth (in feet and hundredths) and as groundwater surface elevation (in feet and hundredths above mean sea level). Samples shall be collected from approved monitoring wells and analyzed for the following constituents:

Parameter	Units	Type of Sample	Minimum Sampling frequency
Depth to groundwater	To 0.01 foot (hundredths)	Measured	1/quarter ^{1,2}
Groundwater elevation	Above mean sea level, to 0.01 foot	Calculated	1/quarter ^{1,2}
pH	pH Units	Grab	1/quarter ^{1,2}
Total Coliform	MPN/100ml	Grab	1/quarter ^{1,2}
Boron (total recoverable)	µg/L	Grab	1/quarter ^{1,2}
Chloride (total recoverable)	µg/L	Grab	1/quarter ^{1,2}
Iron (total recoverable)	µg/L	Grab	1/quarter ^{1,2}
Manganese (total recoverable)	µg/L	Grab	1/quarter ^{1,2}
Sodium (total recoverable)	mg/L	Grab	1/quarter ^{1,2}
Total Dissolved Solids (TDS)	mg/L	Grab	1/quarter ^{1,2}
Total Nitrogen	mg/L	Grab	1/quarter ^{1,2}
Aluminum	µg/L	Grab	1/quarter ^{1,2}
Ammonia (total recoverable)	mg/L	Grab	1/quarter ^{1,2}
Electrical Conductivity @ 5°C)	µmhos/cm	Grab	1/quarter ^{1,2}
Standard Minerals ³	mg/L	Grab	1/quarter ^{1,2,3}

¹ January, April, July and October

² Designated background monitoring wells shall be sampled at least 2/quarter for at least one year upon initiation of Provision VI.C.2.b. Following one year of monitoring at 2/quarter frequency, the frequency of background monitoring well sampling may be reduced to 1/quarter.

³ Standard Minerals shall include calcium, magnesium, hardness, sodium, potassium, alkalinity, sulfate, chloride, boron, and nitrate, and include verification that the analysis is complete (i.e., cation/anion balance). Reduce the monitoring frequency to 1/year after 1 year of 1/quarter monitoring.

3. Additionally, the Discharger shall include a technical description of proposed Data Analysis Methods for evaluating groundwater monitoring data (e.g., equivalent or similar to that described in Title 27 Section 20415(e)(7-10)), consisting, at a minimum, methods to:
 - (a) characterize natural background water quality of monitored constituents;
 - (b) determine statistically significant differences between background and compliance wells for constituents that do not have water quality objectives or have background concentrations that exceed water quality objectives; and
 - (c) select the minimum sample size required for the proposed data analysis approach and, if greater than that required by this program (i.e.,

2/quarter), identification of when and how the additional samples will be collected during the one-year groundwater characterization period.

4. After one full year of groundwater monitoring, the Discharger shall analyze monitoring data from background well(s) to (a) compute values characterizing natural background water quality for each monitored chemical constituent/parameter and (b) perform an initial assessment of whether there is evidence of an impact from the discharge. Reports thereafter shall be submitted **quarterly**, as described in section X.B of this MRP, and shall include the same analysis. The Discharger shall characterize groundwater quality using the proposed Data Analysis Method on the following:

Groundwater Constituents to Evaluate Using Data Analysis Method

Iron (total recoverable)	Manganese (total recoverable)
Ammonia (total recoverable)	Nitrate Nitrogen
Boron (total recoverable)	Chloride (total recoverable)
Electrical Conductivity/TDS	Total Coliform
Aluminum (total recoverable)	Sodium (total recoverable)

5. **Quarterly** groundwater monitoring reports shall be submitted under separate cover to the Regional Water Board. The Quarterly Report shall include the following:
 - a. Tabular summary of groundwater monitoring results.
 - b. A scaled map showing relevant structures and features of the Facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum.
 - c. An assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends, if any.
 - d. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal trends, with reference to summary data tables, graphs, and appended analytical reports (as applicable).
 - e. A comparison of the monitoring data during the reporting period to numerical groundwater limitations in the WDRs and an explanation of any exceedances of limitations.
 - f. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring (reference to previous submitted report(s) describing standard sampling procedures is acceptable).

- g. Field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged.
- h. Summary data tables of historical and current water table elevations and analytical results.
- i. Copies of laboratory analytical report(s) for groundwater monitoring.

IX. OTHER MONITORING REQUIREMENTS

A. Priority Pollutants

The State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (known as the State Implementation Policy or SIP). The SIP states that the Regional Water Boards will require periodic monitoring for pollutants for which criteria or objectives apply and for which no effluent limitations have been established. Accordingly, the Regional Water Board is requiring, as part of this MRP, that the Discharger conduct effluent monitoring (Monitoring Location EFF-001) of priority pollutants **one time no more than 365 days and no less than 180 days prior to expiration of this Order if discharging to Lone Tree Creek**. Priority pollutants are defined as USEPA Priority Pollutants and consist of the constituents listed in the most recent National Toxics Rule and California Toxics Rule. The Discharger must analyze pH and hardness at the same time as priority pollutants.

All analyses shall be performed at a laboratory certified by the California Department of Health Services. The laboratory is required to submit the Minimum Level (ML) and the Method Detection Limit (MDL) with the reported results for each constituent. The MDL should be as close as practicable to the USEPA MDL determined by the procedure found in 40 CFR Part 136. The results of analytical determinations for the presence of chemical constituents in a sample shall use the following reporting protocols:

- a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory.
- b. Sample results less than the reported ML, 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.
- c. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration." Numerical estimates of data quality may be by percent accuracy (+ or - a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.
- d. Sample results that are less than the laboratory's MDL shall be reported as "Not Detected" or ND.

B. Sludge/Biosolids Monitoring

A composite sample of sludge shall be collected 1/Year in accordance with EPA’s *POTW Sludge Sampling and Analysis Guidance Document, August 1989*, and tested for the following metals:

Arsenic	Chromium	Lead	Molybdenum	Selenium
Cadmium	Copper	Mercury	Nickel	Zinc

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.

C. Water Supply Monitoring

A sampling station shall be established and designated as WS-001 where a representative sample of the municipal water supply can be obtained. Water supply monitoring shall include at least the following:

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

¹ If the source water is from more than one well, analyses shall be conducted on a sample weighted in proportion to the annual volumes of water produced.

² Pollutants shall be analyzed using the analytical methods described in 40 CFR 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in 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.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. The Discharger shall report to the Regional Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986
3. If a discharge is intermittent rather than continuous, the Discharger shall monitor and record data for all of the constituents listed above on the first day of each intermittent discharge and thereafter the frequencies in the schedule shall apply. In no event shall the Discharger be

required to monitor and record data more often than twice the frequencies listed in the schedule.

4. 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.

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. Until such notification is given, the Discharger shall submit self-monitoring reports in accordance with the requirements described below.
2. The Discharger shall submit monthly, quarterly, semiannual, and annual Self Monitoring Reports including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. Monthly reports shall be due on the 1st day of the second month following the end of each calendar month; quarterly reports shall be due on May 1, August 1, November 1, and February 1 following each calendar quarter; semi-annual reports shall be due on August 1 and February 1 following each semi-annual period; annual reports shall be due on February 1 following each calendar year.
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 (interim and/or final effluent limitations). 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. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	First day of second calendar month following month of sampling
1 / Day	Permit effective date	Calendar day (Midnight through 11:59 PM)	First day of second month following month of sampling
2 / Week 1 / Week	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	First day of second calendar month following month of sampling
1 / Month	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1 st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
1 / Quarter	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
1 / Semi-annual period	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	August 1 February 1
1 / Year	January 1 following (or on) permit effective date	January 1 through December 31	February 1

7. The Discharger shall report with each sample result the applicable Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136.
8. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.
9. 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:

Central Valley Regional
 Water Quality Control Board
 11020 Sun Center Drive #200
 Rancho Cordova, CA 95670-6114

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 self-monitoring reports. Until such notification is given, the Discharger shall submit discharge monitoring reports (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:

State Water Resources Control Board
 Discharge Monitoring Report Processing Center
 Post Office Box 671
 Sacramento, CA 95812

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 or modified cannot be accepted.

D. Other Reports

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

Special Provision	Reporting Requirements
Compliance Schedule for Final Effluent Limitations for copper, lead, silver, zinc, and indeno (1,2,3-cd) pyrene, (Special Provisions VI.C.4.a)	1 July , annually, until final compliance

2. **Sludge/Biosolids Reporting Requirements.**

Within 90 days of the effective date of this Order, the Discharger shall submit

- a. Quantitative results of chemical analyses for the priority pollutants listed in 40 CFR section 122 Appendix D, Tables II and III (excluding total phenols);

And annually by 1 February of each year, the Discharger shall submit:

- a. Certification of compliance with 40 CFR part 503.
- b. Annual sludge production in dry tons and percent solids.
- c. Quantitative results of chemical analyses for the metals listed in the Sludge Monitoring (MRP Section IX.B).
- d. A schematic diagram showing sludge handling facilities and a solids flow diagram.
- e. Depth of application and drying time for sludge drying beds, and
- f. A description of disposal method(s) used. If more than one method is used, include the percentage of annual sludge production disposed by each method.

3. Annual Report (1/Year):

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 for emergency and routine situations.
 - c. A statement certifying when the flow meters 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 reviewed.
4. Upon notice, the Discharger may also be requested to submit an annual report (1/Year) to the Regional Water Board with both tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.

Attachment F – Fact Sheet – Table of Contents

Attachment F – Fact Sheet.....	F-3
I. Permit Information.....	F-3
II. Facility Description.....	F-4
A. Description of Wastewater and Biosolids Treatment or Controls.....	F-5
B. Discharge Points and Receiving Waters	F-5
C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data	F-6
D. Compliance Summary	F-7
E. Planned Changes	F-7
III. Applicable Plans, Policies, and Regulations.....	F-7
A. Legal Authorities.....	F-7
B. California Environmental Quality Act (CEQA).....	F-8
C. State and Federal Regulations, Policies, and Plans	F-8
D. Impaired Water Bodies on CWA 303(d) List	F-12
E. Other Plans, Policies and Regulations.....	F-12
IV. Rationale For Effluent Limitations and Discharge Specifications	F-12
A. Discharge Prohibitions	F-14
B. Technology-Based Effluent Limitations	F-15
1. Scope and Authority	F-15
2. Applicable Technology-Based Effluent Limitations	F-15
C. Water Quality-Based Effluent Limitations (WQBELs).....	F-18
1. Scope and Authority	F-18
2. Applicable Beneficial Uses and Water Quality Criteria and Objectives	F-18
3. Determining the Need for WQBELs.....	F-19
4. WQBEL Calculations	F-32
5. Whole Effluent Toxicity (WET).....	F-36
D. Final Effluent Limitations	F-36
E. Interim Effluent Limitations.....	F-39
F. Land Discharge Specifications – Not Applicable	F-40
G. Reclamation Specifications	F-40
V. Rationale for Receiving Water Limitations.....	F-42
A. Surface Water	F-42
B. Groundwater.....	F-43
VI. rationale for Monitoring and Reporting Requirements.....	F-46
A. Influent Monitoring	F-46
B. Effluent Monitoring.....	F-46
C. Whole Effluent Toxicity Testing Requirements	F-47
D. Receiving Water Monitoring.....	F-48
1. Surface Water.....	F-48
2. Groundwater	F-48
E. Other Monitoring Requirements	F-48
VII. Rationale for Provisions.....	F-49
A. Standard Provisions.....	F-49
1. Federal Standard Provisions	F-49
2. Regional Water Board Standard Provisions	F-49
B. Special Provisions	F-49
1. Reopener Provisions	F-49
Attachment F – Fact Sheet (Version 2005-1)	F-1

2. Special Studies and Additional Monitoring Requirements.....	F-50
3. Best Management Practices and Pollution Prevention – Not Applicable.....	F-50
4. Compliance Schedules.....	F-50
5. Construction, Operation, and Maintenance Specifications.....	F-51
6. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable.....	F-52
7. Other Special Provisions.....	F-52
VIII. Public Participation.....	F-52
A. Notification of Interested Parties.....	F-52
B. Written Comments	F-52
C. Public Hearing.....	F-52
D. Waste Discharge Requirements Petitions.....	F-53
E. Information and Copying	F-53
F. Register of Interested Persons	F-53
G. Additional Information.....	F-53

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.

SCOPE OF PERMIT

This renewed Order regulates the discharge of up to 0.04 million gallons per day (mgd), design average dry weather flow (ADWF), of treated effluent from the French Camp RV Park and Golf Course Facility (hereinafter Facility) into Lone Tree Creek and to a recycled water storage reservoir for use in a restricted section of the golf course only. This Order includes effluent, groundwater, water supply, sludge, and surface water limitations, monitoring and reporting requirements, additional study requirements, and reopener provisions for effluent and groundwater constituents. Since adoption of the NPDES permit (Order No. 95-054) in March of 1995, the Facility has not reported any surface water discharges of its treated effluent. However, because of the use of ozonation as the method of disinfection, and because DHS does not recognize this method as meeting disinfection requirements for tertiary 2.2 recycled water, the recycled water can only be used in a restricted manner, and thus it cannot be applied on the entire golf course. Taking into account the restrictions on the recycled water and the water balances submitted by the Discharger, the facility would need to discharge only under extreme wet weather conditions (100 year storm event) and when the 5 MG storage capacity of the recycled water storage reservoir is exceeded due to lack of disposal area.

Under Order No. 95-054, the recycled water storage reservoir was connected with the rest of the golf course ponds and would commingle the treated effluent with the stored creek water, groundwater, and stormwater in the ponds before discharging into Lone Tree Creek. Since September 2003, the recycled water storage reservoir has been completely isolated from the rest of the golf course pond system and any discharges to Lone Tree Creek under this permit would be directly from the treatment facility.

The proposed permit includes more stringent limitations and time schedules to come into compliance by providing the maximum allowable time in the life of the permit to look at alternative methods of compliance, including additional advanced treatment, the total elimination of the discharge, and other land disposal alternatives such as subsurface irrigation.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

WDID	5B391077001
Discharger	Canada Cove Limited Partnership
Name of Facility	French Camp RV Park and Golf Course, Manteca
Facility Address	3919 E French Camp Road
	Manteca, CA 95336
	San Joaquin County
Facility Contact, Title and Phone	Francis Collier, General Manager, (209) 234-3001
Authorized Person to Sign and Submit Reports	Jo Lynn Farthing, Administrative Assistant, (209) 234-8390
Mailing Address	P.O. Box 1500, French Camp, CA 95231
Billing Address	P.O. Box 1500, French Camp, CA 95231
Type of Facility	Domestic Wastewater Treatment Plant
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	B
Pretreatment Program	N
Reclamation Requirements	Producer and User
Facility Permitted Flow	0.040 million gallons per day (mgd)
Facility Design Flow	0.040 mgd
Watershed	North Valley Floor Hydrologic Unit (531.00)
Receiving Water	Lone Tree Creek
Receiving Water Type	Creek

- A. Canada Cove Limited Partnership (hereinafter Discharger) is the owner and operator of the French Camp RV Park and Golf Course Facility, a domestic wastewater treatment facility.
- B. The Facility is permitted to discharge treated wastewater to Lone Tree Creek, a water of the United States and is currently regulated by Order No. 95-054 which was adopted on 24 March 1995 and expired on 1 March 2000. The terms of the existing Order automatically continued in effect after the permit expiration date.
- C. The Discharger filed a report of waste discharge and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on 14 April 2000. A site visit was conducted on 10 February 2004, to observe operations and collect additional data to develop permit limitations and conditions. Supplemental information to complete filing of the application included: 1) Production, Distribution, and Use of Disinfected Secondary-23 Recycled Water Report by ECOLOGIC Engineering (5 March 2004), and 2) correspondence from the Discharger to the Regional Board regarding justification for time schedules and rationale as to why reclamation all year round is not feasible (10 May and 2 June 2005). The application was deemed complete on 2 June 2005.

II. FACILITY DESCRIPTION

The Facility is a private recreational vehicle (RV) park with a golf course, laundromat, restaurant/club house, and a wastewater treatment system. The golf course is only accessible to RV park residents and paying customers.

A. Description of Wastewater and Biosolids Treatment or Controls

1. The Discharger owns and operates a wastewater collection, treatment, and disposal system, and provides sewerage service to 196 recreational vehicle spaces, one residential caretaker's home, a laundromat, and a restaurant/golf course club house. Monthly average daily wastewater flows ranged from 920 gpd to 23,000 gpd with a long term average flow of approximately 9,400 gpd for the period of January 1999 thru October 2003. Raw wastewater is pumped from the RV park and other generation areas via two lift stations. The Wastewater Treatment system design average dry weather capacity is 40,000 gpd (0.04 mgd).
2. The wastewater treatment system is a package plant referred to as a sequencing batch reactor. The wastewater treatment system includes a 20,000-gallon flow equalization tank; 33,300-gallon aeration tank fed by dual air regenerative blowers; 11,905-gallon clarifier, two multimedia filters composed of anthracite, sand, garnet, and gravel; and a 4,690-gallon ozone contact tower, with the option for chlorination in case the ozone system fails.
3. The Facility is designed to produce effluent that meets California Department of Health Services (DHS), California Code of Regulations (CCR), Title 22 disinfected tertiary standards for filtration and disinfection.
4. Solids are wasted to sludge drying beds approximately once every five weeks. Dried sludge is hauled to the City of Manteca Wastewater Treatment Plant.

B. Discharge Points and Receiving Waters

1. The Facility is located within Section 8, T1N, R7E, MDB&M, as shown on Attachment B, a part of this Order.
2. Facility effluent is discharged from the wastewater treatment plant to the recycled water storage reservoir, a landscape impoundment (Discharge Point 002). Although the facility is capable of producing Title 22 disinfected tertiary water, it does not meet the Department of Health Services (DHS) disinfection requirements for tertiary 2.2 recycled water, because Title 22 does not recognize ozone disinfection for disinfected tertiary. Therefore, the recycled water produced has to be applied in a restricted manner, and is only to be used for the irrigation of 1.4 acres of mostly golf course rough located on the northeast portion of the golf course. It is anticipated that the 1.4 acre recycled water use area will be insufficient to dispose of the Facility's effluent during winter months (October-March).
3. The 18-hole golf course includes a total of seven (7) ponds known as ponds #5, #7, #8, #12, #15, #16, and #18 corresponding to the greens in which they are located as shown on Attachment B. The recycled water storage reservoir is pond #15 and has been isolated from the other golf course ponds. The Discharger has a water right License (No. 00598) from the State Water Board to divert 0.36 mgd from Lone Tree Creek between the months of February and September of each year for purposes of irrigation. The six other golf course ponds are used as water traps, and for storage of irrigation water diverted from Lone Tree Creek and pumped from an irrigation well during the summer months, and in the winter for storage of stormwater.

4. During the winter months of October thru March and under extreme wet weather conditions when recycled water storage capacity is exceeded, the effluent from the treatment plant may be released to Lone Tree Creek at a point 37° ,52' ,27" N, Latitude and 121° ,13' ,30" W, Longitude, within the North Valley Floor Hydrologic Unit (Discharge Point 001), located on the Northwest side of the golf course near pond #5, either by hauling it or pumping it directly. However, there have been no direct discharges of treated effluent during the life or Order No. 95-054. The only discharge reported occurred during the wet season of 1997-98, when floodwaters from Lone Tree Creek inundated the golf course and were pumped back to Lone Tree Creek.
5. Lone Tree Creek is a tributary of French Camp Slough and the Sacramento-San Joaquin River Delta (Delta). French Camp Slough from its confluence with Lone Tree Creek runs for about 4 miles before crossing the Delta boundaries and becoming part of the Delta (as shown on Attachment B).
6. In order to protect downstream properties from flooding impacts from the pond discharge, the discharger may be subject to discharge requirements from San Joaquin County that may be more restrictive than the conditions prescribed in this Order.

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

1. Effluent limitations contained in Order No. 95-054 were for discharges from the wastewater treatment plant to the onsite irrigation/stormwater ponds via the recycled water storage reservoir, and representative monitoring data from the term of Order No. 95-054 and through October 2003 are as follows:

Parameter (units)	Effluent Limitation			Monitoring Data ^a (January 1999 – October 2003)		
	Monthly Average	Weekly Median	Maximum Daily	Highest Monthly Average Discharge	Highest Weekly Median Discharge	Highest Daily Discharge
BOD (mg/L)	10	20	50	44	126	126
Total Suspended Solids (mg/L)	10	20	50	38	69	69
Settleable Solids (ml/L)	0.1	---	0.2	<0.5	---	<0.5
Chlorine Residual (mg/L)	---	---	0.1	---	---	ND
Total Coliform Organisms (MPN/100ml)	---	2.2	23	---	2400	2400
Turbidity (NTUs)	2	---	5	35	---	82
pH (standard unit)	---	---	6.5-8.5 ^b	---	---	6.1-8.3 ^b

- a. Medians and averages based on detected values.
- b. Minimum-maximum range.

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

Design Flow (dry <u>or</u> wet weather):	0.040	million gallons per day (mgd)
Annual Average Daily Flow Rate:	0.013	mgd
Maximum Daily Flow Rate:	0.023	mgd
Average Temperature, Summer:	74.2	°F
Average Temperature, Winter:	49.2	°F
BOD ¹ :	10	mg/l
Total Suspended Solids:	10	mg/l

¹ 5-day, 20°C biochemical oxygen demand

D. Compliance Summary

The Regional Water Board Executive Officer issued the Discharger a Notice of Violation on 9 September 2003 for the following violations of Order No. 95-054: 28 violations of total coliform effluent limitations; violations of reclamation specifications for overspray and inadequate signage; failure to submit a contingency plan as required by Order No. 95-054; failure to provide flow monitoring data for discharges from the golf course ponds to Lone Tree Creek; failure to provide receiving water monitoring data for Lone Tree Creek; and operation without an engineering report for the production and use of recycled wastewater (the engineering report is required by Title 22, section 60323(a) of the California Code of Regulations).

E. Planned Changes

The Discharger is currently storing recycled water in a storage pond for restricted irrigation of a section of the golf course, and only under extreme wet weather conditions and when storage capacity is exceeded, has the option to discharge to Lone Tree Creek. The Discharger, however, is proposing to dispose of all the Facility’s wastewater via other land disposal alternatives including subsurface irrigation to eliminate the need to discharge to Lone Tree Creek. During the term of this Order the Discharger will be evaluating the feasibility of land disposal options and the need for future discharges to Lone Tree Creek during extremely high precipitation years. This Order requires the Discharger to initiate a groundwater monitoring program to evaluate groundwater impacts of the land disposal operations.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in the proposed Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4 of the CWC for discharges that are not subject to regulation under CWA section 402.

B. California Environmental Quality Act (CEQA)

1. This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with Section 13389 of the CWC.
2. The action to update waste discharge requirements for the existing land discharge (Discharge 002) is exempt from the provisions of CEQA, in accordance with Title 14, CCR, Section 15301 (existing facility).
3. An Initial Study which included the land disposal/reclamation of the treated wastewater was prepared for the project on June 10, 1993, and no significant environmental impacts were identified. On November 16, 1993 San Joaquin County approved a Negative Declaration in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, et seq), and the State CEQA Guidelines.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (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 Lone Tree Creek, but does identify present and potential uses for the Sacramento-San Joaquin River Delta, to which Lone Tree Creek, via French Camp Slough, is tributary. These beneficial uses are municipal and domestic supply (MUN); irrigation and stock watering (AGR); industrial process supply (PRO); industrial service supply (IND); contact water recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); warm and cold water migration of aquatic organisms (MIGR); warm water spawning, reproduction, and/or early development (SPWN), wildlife habitat (WILD); and navigation (NAV). In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63, incorporated into the Basin Plan pursuant to Regional Water Board Resolution No. 89-056, requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. Thus, as discussed in detail in this Fact Sheet, beneficial uses applicable to Lone Tree Creek are as follows:

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Lone Tree Creek	<u>Existing:</u> MUN, AGR, PRO, IND, REC-1, REC-2, WARM, COLD, MIGR, SPWN, and WILD.
002	Reclamation Discharge, Groundwater	MUN, AGR, PRO, and IND.

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

The federal Clean Water Act, 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 Clean Water Act, create a rebuttable presumption that all waters be designated as fishable and swimmable. Federal Regulations, 40 CFR Sections 131.2 and 131.10, require that all waters of the State be regulated to protect the beneficial uses of public water supply, protection and propagation of fish, shell fish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. 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.

In reviewing whether the existing and/or potential uses of the Delta apply to Lone Tree Creek, the Regional Water Board has considered the following facts:

a. Domestic Supply and Agricultural Supply

The Regional Water Board is required to apply the beneficial uses of municipal and domestic supply to Lone Tree 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. In addition, the State Water Resources Control Board (State Water Board) has issued water rights to existing water users along Lone Tree Creek and French Camp Slough downstream of the discharge for irrigation uses.

b. Water Contact and Noncontact Recreation and Esthetic Enjoyment

The Regional Water Board finds that the discharge flows through farmland and residential areas, there is ready public access to Lone Tree Creek and French Camp Slough, exclusion of the public is unrealistic and contact recreational activities may currently exist along Lone Tree Creek and downstream waters and these uses are likely to increase as the population in the area grows.

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

Lone Tree Creek flows to the Delta. The Basin Plan (Table II-1) designates the Delta as being both a cold and warm freshwater habitat; wildlife habitat; warm and cold migration of aquatic organisms; and warm spawning, reproduction, and/or early development of freshwater organisms. It is unknown whether Lone Tree Creek supports significant aquatic life, however, the Delta does, and therefore these beneficial uses apply to its tributaries. Therefore, pursuant to the Basin Plan (Table II-1, Footnote (2)), the cold

designation applies to Lone Tree Creek. The cold-water habitat designation necessitates that the in-stream dissolved oxygen concentration be maintained at, or above, 7.0 mg/L.

Upon review of the flow conditions, habitat values, and beneficial uses of Lone Tree Creek, and the facts described above, the Regional Water Board finds that the beneficial uses identified in the Basin Plan for the Delta, except navigation, are applicable to Lone Tree Creek in the vicinity of the discharge.

2. **Thermal Plan.** The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan) on 18 May 1972, and amended this plan on 18 September 1975. This plan contains temperature objectives for inland surface waters. Lone Tree Creek is outside the Delta, thus, these temperature objectives are not applicable to this discharge.
3. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on 22 December 1992, which was amended on 4 May 1995 and 9 November 1999, and the CTR on 18 May 2000, which was amended on 13 February 2001. These rules include water quality criteria for priority pollutants and are applicable to this discharge.
4. **State Implementation Policy.** On 2 March 2000, State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on 28 April 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Boards in their basin plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by USEPA Regional Administrator. The alternate test procedures provision was effective on 22 May 2000. The SIP became effective on 18 May 2000. The State Water Board adopted amendments to the SIP on 24 February 2005 that became effective on 13 July 2005. The SIP includes procedures for determining the need for and calculating water quality-based effluent limitations (WQBELs), and requires Dischargers to submit data sufficient to do so.
5. **Alaska Rule.** On 30 March 2000, USEPA revised its regulation that specifies when new and revised State and Tribal water quality standards (WQS) become effective for CWA purposes (40 CFR 131.21, 65 FR 24641, 27 April 2000). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after 30 May 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by 30 May 2000, may be used for CWA purposes, whether or not approved by USEPA.
6. **Stringency of Requirements for Individual Pollutants.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. The technology-based effluent limitations consist of restrictions on flow, biochemical oxygen demand (BOD) and total suspended solids (TSS). Restrictions on BOD and TSS are specified in federal regulations as discussed in Finding II.F, and the permit's technology-based pollutant restrictions are no more stringent than required by the Clean Water Act. 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 California Toxics Rule, the California Toxics Rule is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on 18 May 2000. All beneficial uses and water quality objectives contained in the Basin Plan which were used in the development of water quality-based effluent limitations were approved under state law and submitted to and approved by USEPA prior to 30 May 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to 30 May 2000, but not approved by USEPA before that date, are nonetheless “applicable water quality standards for purposes of the CWA” pursuant to 40 CFR 131.21(c)(1). Collectively, this Order’s restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

7. **Anti-degradation Policy.** Section 131.12 of 40 CFR requires that State water quality standards include an anti-degradation policy consistent with the federal policy. The State Water Board established California’s anti-degradation policy in State Water Board Resolution 68-16, which incorporates the requirements of the federal anti-degradation policy. Resolution 68-16 requires that existing water quality is maintained unless degradation is justified based on specific findings. As discussed in detail in this Fact Sheet, the permitted discharge is consistent with the anti-degradation provision of 40 CFR 131.12 and State Water Board Resolution 68-16.
8. **Anti-Backsliding Requirements.** Sections 402(o) (2) and 303(d) (4) of the CWA and 40 CFR 122.44(l) prohibits backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. All effluent limitations in the Order are at least as stringent as the effluent limitations in the previous Order.
9. **Monitoring and Reporting Requirements.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWA authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in Attachment E.
10. **Stormwater Requirements.** USEPA promulgated Federal Regulations for storm water on 16 November 1990 in 40 CFR Parts 122, 123, and 124. The NPDES Industrial Storm Water Program regulates storm water discharges from municipal sanitary sewer systems. Wastewater Treatment Plants are applicable industries under the stormwater program and are obligated to comply with the Federal Regulations. However, storm water discharges from this Facility are not required to be regulated under the General Permit for Discharges of Storm Water Associated with Industrial Activities (State Water Resources Control Board, Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001) because the design flow rate is less than 1 mgd.

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

1. The Basin Plan includes a list of Water Quality Limited Segments (WQLSs), which are defined as “...those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 CFR 130, et seq.)” The Basin Plan also states, “Additional treatment beyond minimum federal standards will be imposed on dischargers to WQLSs. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment.” Lone Tree Creek is listed in the 303(d) list as a WQLS for ammonia, biochemical oxygen demand, and electrical conductivity. Therefore, the receiving water for the discharge has no assimilative capacity for these constituents and applicable water quality standards must be applied as end-of-pipe effluent limitations.
2. This Order contains effluent limits necessary to protect the beneficial uses of the receiving waters until such time as TMDLs are completed for all constituents of concern on the 303(d) list and loads can be allocated. A provision of this Order contains a reopener to modify and/or include effluent limits as necessary when load allocations for any 303(d) listed constituents are implemented.

E. Other Plans, Policies and Regulations

1. The State Water Board adopted the *Sources of Drinking Water Policy* and the *Policy with Respect to Water Reclamation in California*. The requirements within this Order are consistent with these Policies.
2. 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 Clean Water Act (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., section 1311(b) (1) (C); 40 CFR 122.44(d) (1)). NPDES permits must incorporate discharge limits necessary to ensure that water quality standards are met. This requirement applies to narrative criteria as well as to criteria specifying maximum amounts of particular pollutants. Pursuant to Federal Regulations, 40 CFR 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that “*are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality.*” Federal Regulations, 40 CFR 122.44(d) (1) (vi), further provides that “[w]here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits.”

The CWA requires point source discharges to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations; and other requirements in NPDES permits. There are two principal bases for effluent limitations: 40 CFR §122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR §122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water where numeric water quality objectives have not been established. The Regional Water Board’s Basin Plan, page IV-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. When a reasonable potential exists for exceeding a narrative objective, Federal Regulations mandate numerical effluent limitations and the Basin Plan narrative criteria clearly establish a procedure for translating the narrative objectives into numerical effluent limitations

Previous Order No. 95-054 established an average dry weather (April-October) wastewater treatment plant effluent discharge limitation of 0.040 mgd at Discharge Point 002. The flow limitation is based on the design flow of the treatment plant. The wastewater treatment plant flow limitation is continued in this Order as a monthly average reclamation specification.

The previous Order did not establish a flow limitation for discharge from the golf course ponds to Lone Tree Creek (Discharge Point 001) because the domestic wastewater would have comprised only a small, unquantifiable portion of discharge to the creek. However, any discharges to Lone Tree Creek under this permit will be directly from the treatment facility. Therefore, this Order does include a maximum discharge flow limitation for discharge to Lone Tree Creek based upon the design treatment capacity of 0.040 mgd.

Mass-based effluent limitations and discharge specifications in this Order are based upon the design treatment capacity of 0.040 mgd, consistent with the requirements established for municipal and domestic wastewater treatment plants in 40 CFR 122.45(b)(1). While the Facility is not a POTW, it is similar in nature and operation.

A. Discharge Prohibitions

As stated in the Federal Standard Provisions (Attachment D), 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 Resources Control 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. In the case of *United States v. City of Toledo, Ohio* (63 F. Supp 2d 834, N.D. Ohio 1999) the Federal Court ruled that “*any bypass which occurs because of inadequate plant capacity is unauthorized...to the extent that there are ‘feasible alternatives’, including the construction or installation of additional treatment capacity*”.

The Federal Clean Water Act, Section 301, requires that not later than 1 July 1977, publicly owned wastewater treatment works meet effluent limitations based on secondary treatment or any more stringent limitation necessary to meet water quality standards. Federal Regulations, 40 CFR, Part 133, establish the minimum level of effluent quality attainable by secondary treatment for BOD, TSS, and pH. Tertiary treatment requirements for BOD and TSS are based on the technical capability of the process. Biochemical oxygen demand (BOD) is a measure of the amount of oxygen used in the biochemical oxidation of organic matter. The solids content—suspended (TSS) and settleable (SS)—is also an important characteristic of wastewater. The secondary and tertiary treatment standards for BOD and TSS are indicators of the effectiveness of the treatment processes.

The principal infectious agents (pathogens) that may be present in raw sewage may be classified into three broad groups: bacteria, parasites, and viruses. Secondary treatment has been shown to be effective for pathogen removal. For additional pathogen reduction, 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.

A wet weather influent wastestream may contain significantly diluted levels of BOD and TSS. A bypassed diluted wastestream may have BOD and TSS levels that meet the secondary or tertiary objectives, either alone or when blended with treated wastewater. However, the bypassed wastestream would not have been treated to reduce pathogens or other individual pollutants. The indicator parameters of BOD and TSS cannot be diluted to a level that may indicate the adequate treatment has occurred as an alternative to providing appropriate treatment.

Previous Order No. 95-054 prohibits the discharge of any trucked or hauled wastes to the treatment plant. This Order continues the previous Order's prohibition of trucked or hauled waste discharge to the treatment plant.

B. Technology-Based Effluent Limitations

1. Scope and Authority

The California Department of Health Services (DHS) has established statewide reclamation criteria in Title 22, CCR, for use of reclaimed water and has developed guidelines for discharges to surface waters. The Regional Water Board consults with the DHS on reclamation discharges in accordance with the terms specified in a Memorandum of Agreement between DHS and the State Water Board.

2. Applicable Technology-Based Effluent Limitations

- a. **BOD, TSS, and Settleable Solids.** Previous Order No. 95-054 established effluent limitations when discharging to land (recycling) for BOD, total suspended solids (TSS), and settleable solids, which are technology-based effluent limitations (TBELs) for the current treatment system based on best professional judgment (BPJ) necessary to meet title 22 requirements for landscape irrigation such as cemeteries, golf courses, and freeway landscaping and for use in a restricted recreational and landscape impoundment. This Order includes more stringent technology based effluent limitations when discharging to Lone Tree Creek for BOD and TSS found to be achievable by facilities with tertiary treatment or equivalent treatment system that meets both the technology-based secondary treatment standards for POTWs and protect the beneficial uses of the receiving waters when little or no dilution is available for treated domestic wastewater discharges. This Order therefore carries over the TBELs established by the previous Order when discharging to land and the more stringent TBELs when discharging to surface water. The Regional Water Board has considered the factors listed in CWC section 13241 in establishing these requirements.
- b. **Total Coliform Organisms.** Previous Order No. 95-054 established effluent limitations for total coliform organisms, which are TBELs for tertiary treatment systems based on BPJ. This Order continues the requirement for tertiary treated wastewater; however, the following updates are included to maintain consistency with DHS Title 22 standards for disinfected tertiary recycled wastewater: The previous Order included a weekly median effluent limitation of 2.2 MPN/100 ml and a daily maximum effluent limitation of 23

- MPN/100 ml for total coliform organisms. This Order continues the previous Order's weekly median effluent coliform limitation as a 7-day median. The previous Order's 23 MPN/100 ml daily maximum coliform limitation is included in this Order as a maximum for any one sample within a 30-day period. In addition, this Order establishes an instantaneous maximum effluent limitation for total coliform of 240 MPN/100 ml. These updated TBELs for total coliform organisms are based on BPJ considering the expected performance of tertiary treatment systems and are consistent with the requirements found in 40 CFR 122.44 concerning the establishment of limitations, standards, and other permit conditions. These TBELs apply to both discharges to land (recycled water) and to surface water (Lone Tree Creek discharge). Review of monitoring data for total coliform results (January 1999 thru August 2005) show that the Discharger is not able to consistently meet the limitations and therefore a time schedule to come into compliance is included in an accompanying Cease and Desist Order.
- c. **Turbidity.** Previous Order No. 95-054 established effluent limitations for turbidity, which are TBELs for tertiary treatment systems based on BPJ. This Order continues the requirement for tertiary treated wastewater; however, the following updates are included to maintain consistency with DHS Title 22 standards for disinfected tertiary recycled wastewater: The previous Order included a monthly average effluent turbidity limitation of 2 NTU and a daily maximum effluent turbidity limitation of 5 NTU. This Order includes the following TBEL for turbidity: "The turbidity in the effluent shall not exceed a daily average of 2 turbidity units and shall not exceed 5 turbidity units more than 5 percent of the time during any 24-hour period, and shall not exceed 10 turbidity units at any time." These updated TBELs for turbidity are based on BPJ considering the expected performance of tertiary treatment systems and are consistent with the requirements found in 40 CFR 122.44 concerning the establishment of limitations, standards, and other permit conditions. These TBELs apply to both discharges, to land (recycled water) and to surface water (Lone Tree Creek discharge). Review of monitoring data for total coliform results (January 1999 thru August 2005) show that the Discharger is not able to consistently meet the limitations and therefore a time schedule to come into compliance is included in an accompanying Cease and Desist Order.
- d. TBELs are summarized below in Table F-1.

**Table F-1.
 Summary of Technology-based Effluent Limitations
 Discharge Point 001 (Lone Tree Creek)**

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
BOD 5-day @ 20°C	mg/L	10	15	20	--	--
	lbs/day	3.3	6.7	17	--	--
TSS	mg/L	10	15	20	--	--
	lbs/day	3.3	6.7	17	--	--
Settleable Solids	ml/L	0.1	--	0.2	--	--
The average monthly percent removal of BOD 5-day at 20°C and total suspended solids shall not be less than 85 percent.						
The median concentration of total coliform (TC) bacteria measured in the disinfected effluent shall not exceed an MPN of 2.2 per 100 milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed (7-day median). The number of TC bacteria shall not exceed an MPN of 23 per 100 milliliters in more than one sample in any 30 day period. No sample shall exceed an MPN of 240 TC bacteria per 100 milliliters.						
The turbidity in the effluent shall not exceed a daily average of 2 turbidity units and shall not exceed 5 turbidity units more than 5 percent of the time during any 24-hour period, and shall not exceed 10 turbidity units at any time.						

**Summary of Technology-based Effluent Limitations
 Discharge Point 002 (Reclamation Reservoir)**

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
BOD 5-day @ 20°C	mg/L	10	20	50	--	--
TSS	mg/L	10	20	50	--	--
Settleable Solids	ml/L	0.1	--	0.2	--	--
The average monthly percent removal of BOD 5-day at 20°C and total suspended solids shall not be less than 85 percent.						
The median concentration of TC bacteria measured in the disinfected effluent shall not exceed an MPN of 2.2 per 100 milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed (7-day median). The number of TC bacteria shall not exceed an MPN of 23 per 100 milliliters in more than one sample in any 30 day period. No sample shall exceed an MPN of 240 TC bacteria per 100 milliliters.						
The turbidity in the effluent shall not exceed a daily average of 2 turbidity units and shall not exceed 5 turbidity units more than 5 percent of the time during any 24-hour period, and shall not exceed 10 turbidity units at any time.						

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

a. Dilution

There may be assimilative capacity within the receiving water (Lone Tree Creek) for certain pollutants in the Facility's discharge, however, section 1.4.2.2 of the SIP requires that the Discharger's permit application include the information needed by the Regional Water Board to make a determination on allowing a mixing zone, including the calculations for deriving the appropriate receiving water and effluent flows, and/or the results of a mixing zone study. The Discharger has not submitted the required mixing zone study. In addition, Lone Tree Creek is on the 303(d) list of impaired water bodies for ammonia, BOD, and electrical conductivity impairment. Therefore, the receiving water has no assimilative capacity for these constituents. Due to the lack of information regarding available assimilative capacity, and the 303(d) listing for ammonia, BOD, and electrical conductivity, the Regional Water Board has evaluated the need for WQBELs for pollutants without benefit of dilution in this Order. These water quality-based effluent limitations are based on the application of water quality criteria or objectives at the point of discharge to Lone Tree Creek. The Discharger may elect, as a means of compliance, to conduct a dilution study to evaluate any available assimilative capacity. If requested, the Regional Water Board will review such studies and if warranted, may reopen this permit to make appropriate changes.

b. Receiving Water Hardness, pH, and Temperature

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

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

The State Water Resources Control Board, in footnote 19 to Water Quality Order No. 2004-0013, stated: *“We note that...the Regional Water Board...applied a variable*

hardness value whereby effluent limitations will vary depending on the actual, current hardness values in the receiving water. We recommend that the Regional Water Board establish either fixed or seasonal effluent limitations for metals, as provided in the SIP, rather than 'floating' effluent limitations."

Effluent Limitations for the discharge must be set to protect the beneficial uses of the receiving water for all discharge conditions. In the absence of the option of including condition-dependent, "floating" effluent limitations that are reflective of actual conditions at the time of discharge, Effluent Limitations must be set using the worst-case condition (e.g., lowest ambient hardness) in order to protect beneficial uses for all discharge conditions.

The minimum receiving water hardness, maximum receiving water pH limitation, and maximum average effluent temperature were used to develop hardness, pH, and/or temperature dependent WQBELs. These worst-case values have been chosen to protect the beneficial uses of the receiving water and are summarized below:

Hardness:	40 mg/L
pH:	8.5 standard units
Temperature:	74 °F

3. Determining the Need for WQBELs

- a. Reasonable potential (RP) was determined by calculating the projected maximum effluent concentration (MEC) for each constituent and comparing it to applicable water quality criteria; if a criterion was exceeded, the discharge was determined to have reasonable potential to exceed a water quality objective for that constituent. The projected MEC is determined by multiplying the observed MEC by a factor that accounts for statistical variation. The multiplying factor is determined (for 99% confidence level and 99% probability basis) using the number of results available and the coefficient of variation (standard deviation divided by the mean) of the sample results. In accordance with the SIP, non-detect results were counted as one-half the detection level when calculating the mean. For all constituents contained in the CTR or NTR, the multiplying factor is 1. Reasonable potential evaluation was based on the methods used in the SIP and the USEPA Technical Support Document for Water Quality-Based Toxics Control [EPA/505/2-90-001].
- 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 does have a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard for copper, lead, silver, zinc, indeno(1,2,3-cd)pyrene, chlordane, 4,4'-DDT, beta-endosulfan, endrin, aluminum, ammonia, boron, chloride, iron, manganese, nitrate, electrical conductivity, sulfate, and total dissolved solids. Effluent limitations for these constituents are included in this Order.

- c. The reasonable potential analysis for detected constituents in the effluent and receiving water is summarized below in Table F-2.

Table F-2.
RPA Summary for Detected Constituents
Discharge 001

Parameter (units)	n ¹	cv ¹	RPA multiplier ¹	MEC ¹	Projected MEC ¹	B ¹	WQO/WQC ¹	Source	RP ¹
Arsenic (µg/L)	4	0.6	--	8.4	--	3.6	10	USEPA Primary MCL	N
Cadmium (µg/L)	4	0.6	--	ND ²	--	0.3	1.2/1.6	CTR CCC/CMC	N
Chromium III (µg/L)	4	0.6	4.7	2.3	11	12	50	USEPA Primary MCL	N
Copper (µg/L)	4	0.6	--	8.3	--	59	4.3/5.9	CTR CCC/CMC	Y
Lead (µg/L)	4	0.6	--	1.9	--	6.5	0.99/25	CTR CCC/CMC	Y
Mercury (µg/L)	4	0.6	--	0.0025	--	0.02	0.05	CTR HH	N
Nickel (µg/L)	4	0.6	--	5.1	--	13.5	24/220	CTR CCC/CMC	N
Silver (µg/L)	4	0.6	--	1.8	--	0.6	0.84	CTR CMC	Y
Zinc (µg/L)	4	0.6	--	170	--	310	55/55	CTR CCC/CMC	Y
Chloroform (µg/L)	4	0.6	4.7	0.09	0.42	ND	1.1	CalEPA Cancer Potency Factor	N
1,2-Dichloroethane (µg/L)	4	0.6	--	ND	--	0.13	0.38	NTR HH	N
Ethylbenzene (µg/L)	4	0.6	--	0.13	--	ND	300	California Primary MCL	N
Methylene Chloride (µg/L)	4	0.6	--	0.7	--	0.5	4.7	CTR HH	N
Toluene (µg/L)	4	0.6	--	ND	--	0.13	150	California Primary MCL	N
Bis(2-Ethylhexyl) Phthalate (µg/L)	4	0.6	--	6.15	--	4.8	1.8	NTR HH	I
1,4-Dichlorobenzene (µg/L)	4	0.6	--	0.12	--	ND	5	California Primary MCL	N
1,2,4-Trichlorobenzene (µg/L)	4	0.6	--	ND	--	0.08	5	California Primary MCL	N
Indeno(1,2,3-cd) Pyrene (µg/L)	4	0.6	--	0.26	--	ND	0.0044	CTR HH	Y
Chlordane (µg/L)	4	0.6	4.7	0.02	0.094	--	ND	Basin Plan	Y
4,4'-DDT (µg/L)	4	0.6	4.7	0.0055	0.026	ND	ND	Basin Plan	Y
beta-Endosulfan (µg/L)	4	0.6	4.7	0.016	0.075	ND	ND	Basin Plan	Y
Endrin (µg/L)	4	0.6	4.7	0.06	0.28	ND	ND	Basin Plan	Y
OCDD (µg/L)	2	0.6	7.4	ND	--	2.78x10 ⁻⁹	NA	NA	I ³
1,2,3,6,7,8-HxCDF (µg/L)	2	0.6	7.4	8.7x10 ⁻⁷	0.0000064	ND	NA	NA	I
Methyl-tert-butyl-ether (MTBE) (µg/L)	4	0.6	4.7	0.26	1.2	ND	5	California Secondary MCL	N
Xylenes (µg/L)	4	0.6	4.7	0.29	1.4	ND	17	Taste and Odor	N
Glyphosate (µg/L)	4	0.6	4.7	ND	--	15	700	California Primary MCL	N
Simazine (µg/L)	4	0.6	4.7	ND	--	1.4	4	California Primary MCL	N
Diazinon (µg/L)	4	0.6	4.7	ND	--	0.54	6	California DHS Action Level, Drinking Water	N
Chlorpyrifos (µg/L)	4	0.6	4.7	0.06	0.28	ND	0.014/0.02	California Department of Fish & Game CCC/CMC	I
Molinate (µg/L)	4	0.6	4.7	ND	--	3	13	California Department of Fish & Game Maximum	N
Thiobencarb (µg/L)	4	0.6	4.7	ND	--	1.8	1	California Secondary MCL	N
Aluminum (µg/L)	4	0.6	4.7	460	2162	8700	87/750	USEPA Recommended Water Quality Criteria	Y
Ammonia (µg/L)	8	0.6	3.3	4900	16,170	ND	630/2140	USEPA Recommended	Y

Parameter (units)	n ¹	cv ¹	RPA multiplier ¹	MEC ¹	Projected MEC ¹	B ¹	WQO/WQC ¹	Source	RP ¹
								Water Quality Criteria	
Barium (µg/L)	4	0.6	4.7	ND	--	200	1000	California Primary MCL	N
Boron (µg/L)	3	0.6	5.6	900	5040	NA	700	Ag Goal	Y
Chloride (mg/L)	8	0.6	3.3	118	389	49	106	Ag Goal	Y
Iron (µg/L)	8	0.6	3.3	400	1320	8290	300	California Secondary MCL	Y
Manganese (µg/L)	8	0.6	3.3	70	231	280	50	California Secondary MCL	Y
Nitrate as N (mg/L)	8	0.6	3.3	50	165	3.9	10	California Primary MCL	Y
Nitrite as N (mg/L)	5	0.6	4.2	0.22	0.92	0.22	1	California Primary MCL	N
EC (µmhos/cm)	146	0.23	1.1	1160	1276	580	700	Ag Goal	Y
Sulfate (mg/L)	8	0.6	3.3	78	257	16	250	California Secondary MCL	Y
TDS (mg/L)	109	0.23	1.1	744	818	177	450	Ag Goal	Y

¹ n: number of data points available; cv: statistically determined coefficient of variation; RPA multiplier: 99th percentile multiplier; MEC: maximum effluent concentration; Projected MEC: determined using the RPA multiplier; B: background receiving water concentration; WQO/WQC: applicable water quality objective/water quality criteria; RP: reasonable potential.
² ND: not detected; NA: no data points available.
³ Indeterminate. Not enough information to establish effluent limitations. See discussion below.

d. **Aluminum.** Aluminum in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the level necessary to protect aquatic life, and, therefore to violate the Basin Plan’s narrative toxicity objective. USEPA developed National Recommended Ambient Water Quality Criteria for the 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. USEPA recommends that the ambient criteria are protective of the aquatic beneficial uses of receiving waters in lieu of site-specific criteria. The receiving stream has been measured to have a low hardness of 40 mg/L as CaCO₃. This condition is supportive of the applicability of the ambient water quality criteria for aluminum, according to USEPA’s development document. Applying 40 CFR §122.44(d)(1)(vi)(B), Effluent Limitations for aluminum are included in this Order and are based on USEPA’s Ambient Water Quality Criteria for the protection of the beneficial use of freshwater aquatic habitat.

Aluminum was detected in an effluent sample collected 12 February 2002, at a maximum observed concentration of 460 µg/L. The projected maximum effluent aluminum concentration is 2162 µg/L. The measured and projected maximum effluent concentrations are greater than the water quality criteria; therefore, effluent limitations for aluminum are required.

The USEPA *Technical Support Document for Water Quality-Based Toxics Control* [EPA/505/2-90-001] contains statistical methods for converting chronic (four-day) and acute (one-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. Equations summarizing the conversion are shown below:

$$AMEL = 1.55[\min(0.321CMC, 0.527CCC)] = 71 \mu\text{g/L}$$

$$MDEL = 3.11[\min(0.321CMC, 0.527CCC)] = 140 \mu\text{g/L}$$

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

This Order includes average monthly and maximum daily effluent limitations for aluminum. Considering the observed and projected MEC, it is anticipated that the Discharger will not be able to immediately comply with the new effluent limitations for aluminum. As the Basin Plan toxicity objective is not a new water quality objective, a schedule of compliance for aluminum is not included in this Order. A separate Cease and Desist Order shall be proposed for compliance with the new aluminum effluent limitations.

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

USEPA's *Ambient Water Quality Criteria for the Protection of Freshwater Aquatic Life*, for total ammonia, recommends acute (1-hour average; criteria maximum concentration) standards based on pH and chronic (30-day average, criteria continuous concentration) standards based on pH and temperature. It also recommends a maximum four-day average concentration of 2.5 times the criteria continuous concentration. USEPA found that as pH increased, both the acute and chronic toxicity of ammonia increased. 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. At lower temperatures, the chronic criterion is also dependent on the presence or absence of early life stages of fish (ELS). The beneficial uses of Lone Tree Creek include warm freshwater aquatic habitat (WARM), cold freshwater aquatic habitat (COLD), migration of aquatic organisms (MIGR) in warm and cold habitat, warm habitat spawning, and reproduction, and/or early development (SPWN). The early life stages of fish are likely present during the permitted period of discharge. Therefore, USEPA's recommended criteria for waters where salmonids and early life stages are present were used as shown below:

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

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

where T is in degrees Celsius

Using the maximum permitted effluent and receiving water limit for pH of 8.5 pH units and the maximum average effluent temperature of 26° C, the USEPA Recommended Ambient Water Quality Criterion for Fresh Water Aquatic Life, 30 day average chronic criteria, or criterion continuous concentration for ammonia is 630 µg as N (Nitrogen)/L. Additionally, the highest 4 day average concentration within the 30 day period should not exceed 2.5 times this criterion (2.5 x 630 = 1,575 µg as N/L). Considering the maximum permitted pH of 8.5, and the assumed presence of salmonids, the USEPA Recommended Ambient Water Quality Criterion for Fresh Water Aquatic Life, maximum 1-hour acute criteria, or criteria maximum concentration for ammonia is 2,140 µg as N/L.

Ammonia was detected in six of eight samples of the Discharger's effluent, with a maximum detected effluent concentration of 4900 µg/L. Using the TSD reasonable potential analysis procedure, the projected MEC for ammonia is 16,170 µg/L; therefore, based on the observed and the projected MECs, there is a reasonable potential that the discharge may exceed the USEPA chronic and acute criteria for ammonia and cause or contribute to an excursion above the narrative toxicity objective. This Order contains an average monthly effluent limitation, and a 1-hour maximum effluent limitation considering USEPA's chronic and acute ammonia criteria. The resulting effluent limitations are 0.630 mg/L (as N) for the average monthly effluent limitation and 2.14 mg/L (as N) for the average one-hour effluent limitation. Effluent Limitations for ammonia are included in this Order to assure the treatment process adequately nitrifies the waste stream to protect the aquatic habitat beneficial uses.

A 30-day period is a reasonable representation of a calendar month; so, to conform to 40 CFR §122.45, the 30-day average criteria are set equal to average monthly limitations in this Order

Considering the observed MEC, it is anticipated that the Discharger will not be able to immediately comply with these new effluent limitations for ammonia. As the Basin Plan narrative toxicity objective is not new, a schedule of compliance for ammonia is not included in this Order. A separate Cease and Desist Order shall be proposed for compliance with the ammonia effluent limitations.

- f. **Bis(2-Ethylhexyl)Phthalate (DEHP)**. DEHP is used in the production of polyvinyl chloride (PVC). The USEPA has classified DEHP as a Group B2, probable human carcinogen. USEPA has found phthalate to potentially cause mild gastrointestinal disturbances, nausea, and vertigo when people are exposed to it at levels above the MCL for relatively short periods of time. DEHP has the potential to cause damage to liver and testes; reproductive effects; and cancer from a lifetime exposure (long-term

exposure) at levels above the MCL. DEHP has a strong tendency to adsorb to soil and sediments. In water, microbes in a matter of weeks will degrade DEHP. DEHP does have a tendency to accumulate in aquatic organisms. DEHP was detected but not quantified (DNQ) in the receiving water at an estimated concentration of 4.8 µg/L, and in the effluent at estimated concentrations of 6.15 and 1.1 µg/L. The estimated effluent and receiving water DNQ values for DEHP exceed the applicable, most restrictive CTR human health criteria of 1.8 µg/L. Because the DEHP concentrations are DNQ (essentially, the concentrations have been estimated), and DEHP is a common contaminant of sample containers, sampling apparatus, and analytical equipment, and sources of the detected DEHP may be from plastics used for sampling or analytical equipment, the Regional Water Board is not establishing effluent limitations for DEHP at this time. Instead of limitations, additional monitoring has been established for DEHP with a reopener provision should monitoring results indicate that the discharge has the reasonable potential to cause or contribute an exceedance of water quality objectives.

- g. **Boron.** Results of monitoring conducted by the discharger indicate that the maximum detected effluent concentration for boron is 900 µg/L. The recommended agricultural water quality goal for boron that would implement the Basin Plan's narrative "Chemical Constituent" objective, is 700 µg/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 observed MEC for boron exceeds the Basin Plan's "Chemical Constituent" objective. Therefore, this Order includes an average monthly effluent limitation for boron of 700 µg/L considering protection of the Basin Plan chemical constituent objective. Considering the observed MEC, it is anticipated that the Discharger will not be able to immediately comply with this new effluent limitation for boron. As the Basin Plan chemical constituents objectives are not new objectives, a schedule of compliance for boron is not included in this Order. A separate Cease and Desist Order shall be proposed for compliance with the boron effluent limitation.
- h. **Chlorine, Total Residual.** The Discharger uses ozone for disinfection of the effluent waste stream. Chlorine will be used for disinfection only for emergencies, in the event of an ozone system failure. Chlorine can cause toxicity to aquatic organisms when discharged to surface waters. USEPA recommends, in its Ambient Water Quality Criteria for the Protection of Fresh Water Aquatic Life, maximum 1-hour average and 4-day average chlorine concentrations of 0.019 mg/L and 0.011 mg/L, respectively. The use of chlorine as a disinfectant presents a reasonable potential that it could be discharged in toxic concentrations. Effluent limitations for total chlorine residual have been included in this Order to protect the receiving stream aquatic life beneficial uses. Effluent limitations have been established based on the USEPA-recommended ambient water quality criteria for chlorine.

Because chlorine is an acutely toxic constituent that can be 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.

- i. **Chlorpyrifos.** Insufficient information is available to determine whether chlorpyrifos levels in the discharge have reasonable potential to cause or contribute to an in-stream excursion above applicable water quality criteria or objectives. There is only one effluent data point available, and the data point has been estimated as present, but not quantifiable or DNQ. Instead of limitations, additional monitoring has been established for chlorpyrifos with a reopener provision should monitoring results indicate that the discharge has the reasonable potential to cause or contribute to an exceedance of water quality objectives.
- j. **Copper.** Copper in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria for 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 recoverable concentrations. The conversion factors for copper in freshwater are 0.960 for both the acute and the chronic criteria.

The observed copper MEC was detected in a sample collected on 27 May 2002 at a concentration of 8.3 µg/L. Using the worst-case (lowest upstream receiving water) measured hardness of 40 mg/L, the corresponding concentrations are 5.9 µg/L and 4.3 µg/L for the acute and chronic criteria, respectively. The maximum observed upstream receiving water copper concentration was 59 µg/L. Both the effluent and receiving water concentrations have exceeded the chronic criterion; therefore, there is no assimilative capacity for copper and the CTR criteria must be met at the point of discharge. The effluent limitations for copper included in this Order are presented in total recoverable concentrations, and are based on CTR criteria for the protection of freshwater aquatic life.

The SIP requires converting CTR chronic (four-day) and acute (one-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. Equations summarizing the conversion are shown below:

$$CCC = e^{[0.8545 \ln(\text{hardness}) - 1.702]} = 4.3 \text{ } \mu\text{g/L}$$

$$CMC = e^{[0.9422 \ln(\text{hardness}) - 1.700]} = 5.9 \text{ } \mu\text{g/L}$$

$$AMEL = 1.55[\min(0.321CMC, 0.527CCC)] = 2.9 \text{ } \mu\text{g/L}$$

$$MDEL = 3.11[\min(0.321CMC, 0.527CCC)] = 5.9 \text{ } \mu\text{g/L}$$

This Order includes average monthly and maximum daily effluent copper limitations

A review of effluent monitoring data indicates that the Discharger will not be able to immediately comply with these new effluent limitations for copper. Where the Regional Water Board determines that it is infeasible to achieve immediate compliance with an adopted CTR water quality objective, the Board may establish in NPDES permits a schedule of compliance. This Order includes interim limitations and a compliance time schedule for copper.

- k. **Indeno(1,2,3-cd) Pyrene.** The discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria for indeno(1,2,3-cd) pyrene. The CTR includes criteria for the protection of human health based on a one-in-a-million cancer risk for indeno(1,2,3-cd) pyrene. Municipal and domestic supply is a beneficial use of the receiving stream. The criterion for waters from which both water and organisms are consumed is 0.0044 µg/L. The maximum observed effluent indeno(1,2,3-cd) pyrene concentration was 0.26 µg/L. No indeno(1,2,3-cd) pyrene has been detected in the upstream receiving water. The effluent indeno(1,2,3-cd) pyrene concentration exceeded the CTR human health criterion; therefore, effluent limitations for indeno(1,2,3-cd) pyrene are required. Effluent limitations for indeno(1,2,3-cd) pyrene are included in this Order and are based on the CTR criterion for the protection of human health.

The AMEL was set equal to the standard of 0.0044 µg/L and the MDEL was calculated as follows:

$$MDEL = \left(\frac{3.11}{1.55} \right) AMEL = 0.0088 \mu g / l$$

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

This Order includes average monthly and maximum daily effluent limitations for indeno(1,2,3-cd) pyrene.

A review of effluent monitoring data indicates that the Discharger will not be able to immediately comply with these new effluent limitations for indeno(1,2,3-cd) pyrene. Where the Regional Water Board determines that it is infeasible to achieve immediate compliance with an adopted CTR water quality criteria or objective, the Board may establish in NPDES permits a schedule of compliance. This Order includes interim limitations and a compliance schedule for indeno(1,2,3-cd) pyrene.

- l. **Iron.** The discharge has a reasonable potential to cause or contribute to an in-stream excursion above the Secondary MCL-Consumer Acceptance Limit of 300 µg/L. The Basin Plan also includes a water quality objective that water "...shall be free of discoloration that causes nuisance or adversely affects beneficial uses." The Basin Plan identifies non-contact water recreation, which includes aesthetic enjoyment, as a beneficial use of the Receiving Water. Iron concentrations in excess of the Secondary MCL-Consumer Acceptance Limit cause aesthetically undesirable discoloration.

The maximum observed effluent iron concentration was 400 µg/L. The projected maximum effluent iron concentration is 1320 µg/L. The observed and projected MECs are greater than the water quality criteria; therefore, an Effluent Limitation for iron is required. An average monthly effluent limitation of 300 µg/L for total recoverable iron is included in this Order and is based on the Basin Plan water quality objectives for chemical constituents and color and the DHS Secondary MCL. Considering the

observed MEC, it is anticipated that the Discharger will not be able to immediately comply with this new effluent limitation for iron. As the Basin Plan chemical constituents objectives are not new objectives, a schedule of compliance for iron is not included in this Order. A separate Cease and Desist Order shall be proposed for compliance with the iron effluent limitation.

- m. **Lead.** Lead in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria for lead. The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for lead. The criteria for lead are presented in dissolved concentrations. USEPA recommends conversion factors to translate dissolved concentrations to total recoverable concentrations. The conversion factors for lead in freshwater are 0.926 for both the acute and the chronic criteria. Using the worst-case (lowest of receiving water and effluent) measured hardness of 40 mg/L, the corresponding concentrations are 25 µg/L and 0.99 µg/L for the acute and chronic criteria, respectively. The maximum observed effluent lead concentration was 1.9 µg/L. The maximum observed upstream receiving water lead concentration was 6.5 µg/L. Both the effluent and receiving water concentrations have exceeded the chronic criterion; therefore, there is no assimilative capacity for lead and the CTR criteria must be met at the point of discharge. The effluent limitations for lead included in this Order are presented in total recoverable concentrations, and are based on the CTR standards for the protection of freshwater aquatic life.

The SIP requires converting CTR chronic (four-day) and acute (one-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. Equations summarizing the conversion are shown below (using lowest hardness of 40 mg/L):

$$CCC = e^{[1.273 \ln(\text{hardness}) - 4.705]} = 0.99 \text{ } \mu\text{g/L}$$

$$CMC = e^{[1.273 \ln(\text{hardness}) - 1.460]} = 25 \text{ } \mu\text{g/L}$$

$$AMEL = 1.55[\min(0.321CMC, 0.527CCC)] = 0.81 \text{ } \mu\text{g/L}$$

$$MDEL = 3.11[\min(0.321CMC, 0.527CCC)] = 1.6 \text{ } \mu\text{g/L}$$

This Order includes average monthly and maximum daily effluent lead limitations

A review of effluent monitoring data indicates that the Discharger will not be able to immediately comply with these new effluent limitations for lead. Where the Regional Water Board determines that it is infeasible to achieve immediate compliance with an adopted CTR water quality objective, the Board may establish in NPDES permits a schedule of compliance. This Order includes interim limitations and a compliance schedule for lead.

- n. **Manganese.** The discharge has a reasonable potential to cause or contribute to an in-stream excursion above the Secondary MCL-Consumer Acceptance Limit of 50 µg/L for manganese. The maximum observed effluent manganese concentration was 70 µg/L on a sample collected on 2 September 2002. The projected manganese MEC is 231 µg/L. The observed and projected MECs are greater than the water quality criteria;

- therefore, an Effluent Limitation for manganese is required. The maximum observed upstream receiving water manganese concentration was 280 µg/L, from a sample collected on 12 February 2002; and therefore, there is no assimilative capacity for manganese in the receiving stream at the point of discharge. An average monthly effluent limitation of 50 µg/L for total recoverable manganese is included in this Order and is based on the Basin Plan water quality objectives for chemical constituents and the DHS Secondary MCL. Considering the observed MEC, it is anticipated that the Discharger will not be able to immediately comply with this new effluent limitation for manganese. As the Basin Plan chemical constituents objectives are not new objectives, a schedule of compliance for manganese is not included in this Order. A separate Cease and Desist Order shall be proposed for compliance with the manganese effluent limitation.
- o. **Nitrate (as N).** 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 Discharger does not currently use denitrification to remove nitrate from the waste stream. The California DHS has adopted a Primary MCL for the protection of human health for nitrate of 10 mg/L (measured as nitrogen). The maximum detected effluent concentration for nitrate (as N) is 50 mg/L from a sample taken on 8 December 2002. The projected nitrate MEC is 165 mg/L. The observed and projected MECs are greater than the water quality criteria; therefore, the discharge from the Facility has a reasonable potential to cause or contribute to an in-stream excursion above water quality standards for nitrate, and an Effluent Limitation for nitrate is required. An average monthly effluent limitation of 10 mg/L for total recoverable nitrate (as N) is included in this Order and is based on the California DHS Primary MCL. Considering the observed MEC, it is anticipated that the Discharger will not be able to immediately comply with this new effluent limitation for nitrate. As the Basin Plan chemical constituents objectives are not new objectives, a schedule of compliance for nitrate is not included in this Order. A separate Cease and Desist Order shall be proposed for compliance with the nitrate effluent limitation.
- p. **OCDD and 1,2,3,6,7,8-HxCDF.** These 2,3,7,8-TCDD congeners have been detected in the effluent and receiving water. OCDD was detected in the receiving water at a concentration of 2.8×10^{-9} µg/L and 1,2,3,6,7,8-HxCDF was detected in the effluent at a concentration of 8.7×10^{-7} µg/L. Section 3 of the SIP contains the following guidance regarding 2,3,7,8-TCDD congeners' monitoring: "Based on monitoring results, the Regional Water Board may, at its discretion, increase the monitoring requirement (e.g. increase the sampling frequency) to further investigate frequent or significant detections of any congener..." Since the OCDD detection was much less than the CTR human health criteria for 2,3,7,8-TCDD (1.3×10^{-8}), this Order does not require any further analysis of this congener. 1,2,3,6,7,8-HxCDF was detected in the Facility's effluent at a higher concentration than the CTR criteria for 2,3,7,8-TCDD, therefore additional effluent monitoring for 1,2,3,6,7,8-HxCDF is included in this Order.

- q. **Organochlorine Pesticides.** Group A-organochlorine pesticides include: aldrin, chlordane, dieldrin, endosulfan (alpha, beta, sulfate), endrin, endrin aldehyde, 4,4'-DDT, heptachlor, heptachlor epoxide, hexachlorocyclohexane (alpha, beta, delta and lindane), and toxaphene. Some of these persistent organochlorine pesticides have been detected in the Facility's effluent. Chlordane, beta-endosulfan, and endrin have been detected at concentrations of 0.02 µg/L, 0.016 µg/L, and 0.06 µg/L, respectively. 4,4'-DDT was detected but not quantified (DNQ) at an estimated concentration of 0.0055 µg/L. The Basin Plan includes the following objective for organochlorine pesticides:

"...total chlorinated hydrocarbon pesticide concentrations shall not be present in the water column at detectable concentrations..."

The Basin Plan's requirement that chlorinated hydrocarbon pesticides shall not be present in the water column in detectable concentrations is the most stringent criterion for the regulation of the Group A-organochlorine pesticides. This Order applies a limitation of non-detect to each of the organochlorine pesticides. Considering that some organochlorine pesticides have already been detected in the Facility's effluent, it is anticipated that the Discharger will not be able to immediately comply with the new effluent limitation of nondetectable for organochlorine pesticides. As the Basin Plan objectives for pesticides are not new water quality objectives, a schedule of compliance for organochlorine pesticides is not included in this Order. A separate Cease and Desist Order shall be proposed for compliance with the new organochlorine pesticide limitations.

- r. **pH.** The Basin Plan includes numeric water quality objectives that the pH "...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 receiving water is designated as having both COLD and WARM beneficial uses. An effluent limitation for pH is included in this Order, and is based on the Basin Plan objectives for pH.
- s. **Salinity.** The discharge contains total dissolved solids (TDS), chloride, sulfate and electrical conductivity (EC). These are water quality parameters that are indicative of the salinity of the water. Their presence in water can be growth limiting to certain agricultural crops and can affect the taste of water for human consumption. There are no USEPA water quality criteria for the protection of aquatic organisms for these constituents. The Basin Plan contains a "Chemical Constituent" objective that incorporates state MCLs, contains a narrative objective, and contains numeric water quality objectives for EC, TDS, Sulfate, and Chloride (See Table F-3).

Table F-3
Salinity Water Quality Objectives

Parameter	Agricultural WQ Goal	Secondary MCL	Effluent		
			Avg	Min	Max
EC (µmhos/cm)	700	1000	736	180	1160
TDS (mg/L)	450	500	518	210	744
Sulfate (mg/L)	N/A	250	58	32	78
Chloride (mg/L)	106	250	73	48	118

The recommended agricultural water quality goals for TDS, chloride, and EC that would implement the narrative “Chemical Constituent” objective, are 450 mg/L, 106 mg/L, and 700 µmhos/cm, respectively, as long-term averages based on the *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).

A review of the Discharger’s monitoring reports from January 1999 through October 2003 indicates an average TDS effluent concentration of 518 mg/L, a minimum effluent concentration of 210 mg/L, and a maximum effluent concentration of 744 mg/L (based on 109 data points). Background concentrations in Lone Tree Creek range from 102-177 mg/L based on results from four samples collected from May 2002 through March 2003. The maximum and average effluent TDS concentrations exceed the water quality objective of 450 mg/L based on the narrative objective.

Chloride concentrations in the effluent ranged from 48-118 mg/L with an average of 73 mg/L based on results from eight samples collected from February 2002 through July 2003. Background concentrations in Lone Tree Creek range from 3.2-49 mg/L based on results from four samples collected from February 2002 through December 2002. The maximum effluent chloride concentration exceeds the water quality objective of 106 mg/L based on the narrative objective.

Sulfate concentrations in the effluent ranged from 32-78 mg/L with an average of 58 mg/L based on results from eight samples collected from February 2002 through July 2003. Background concentrations in Lone Tree Creek range from 4-16 mg/L based on results from four samples collected from February 2002 through December 2002. The maximum observed effluent sulfate concentration was 78 mg/L. Applying the reasonable potential analysis procedure described above, the projected maximum effluent sulfate concentration is calculated to be 257 mg/L in the discharge and has a reasonable potential to cause or contribute to an in-stream excursion above the Secondary MCL-Consumer Acceptance Limit of 250 mg/L.

A review of the Discharger’s monitoring reports from January 1999 through October 2003 indicates an average effluent EC of 736 µmhos/cm, a minimum effluent concentration of 180 µmhos/cm, and a maximum effluent concentration of 1160 µmhos/cm, based on the results of 146 samples. EC data collected at receiving water sample location R-1 from February 2002 through December 2002 show that the EC levels in the receiving water ranged from 115 µmhos/cm to 580 µmhos/cm (based on

the results of four samples). The secondary California MCL for EC is 900. Effluent EC shows reasonable potential to cause an exceedance of both the recommended agricultural water quality goal and the secondary MCL. An average monthly effluent limitation of 700 $\mu\text{mhos/cm}$ for electrical conductivity is included in this Order and is based on the Basin Plan narrative water quality objectives for chemical constituents.

The TDS, chloride, sulfate, and EC objectives and recommended levels are all measures of the salt content of the water. Compliance with the effluent limitations for EC will be protective of the chloride, sulfate, and TDS recommended levels; therefore, no limitations are included for chloride, sulfate, and TDS. Considering the observed MEC for EC, it is anticipated that the Discharger will not be able to immediately comply with this new effluent limitation for EC. As the Basin Plan chemical constituents objectives are not new objectives, a schedule of compliance for EC is not included in this Order. A separate Cease and Desist Order shall be proposed for compliance with the EC effluent limitation.

- t. **Silver.** Silver in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria for silver. The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for silver. The criteria for silver are presented in dissolved concentrations. USEPA recommends conversion factors to translate dissolved concentrations to total recoverable concentrations. The conversion factor for silver in freshwater is 0.85 for the acute criterion. Using the worst-case (lowest of receiving water and effluent) measured hardness of 40 mg/L, the corresponding acute criterion for silver is 0.84 $\mu\text{g/L}$. The observed MEC for silver was 1.8 $\mu\text{g/L}$ (DNQ). The maximum upstream receiving water silver concentration was 0.6 $\mu\text{g/L}$. The observed MEC is greater than the acute criterion; therefore, an effluent limitation is required. The effluent limitations for silver included in this Order are presented in total recoverable concentrations, and are based on the CTR criterion for the protection of freshwater aquatic life.

The SIP requires converting CTR chronic (four-day) and acute (one-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. Equations summarizing the conversion are shown below:

$$CCC = \text{none}$$

$$CMC = e^{[1.72 \ln(\text{hardness}) - 6.52]} = 0.84 \mu\text{g/L}$$

$$AMEL = 1.55[\min(0.321CMC, 0.527CCC)] = 0.42 \mu\text{g/L}$$

$$MDEL = 3.11[\min(0.321CMC, 0.527CCC)] = 0.84 \mu\text{g/L}$$

This Order includes average monthly and maximum daily effluent silver limitations

A review of effluent monitoring data indicates that the Discharger will not be able to immediately comply with these new effluent limitations for silver. Where the Regional Water Board determines that it is infeasible to achieve immediate compliance with an adopted CTR water quality objective, the Board may establish in NPDES permits a

schedule of compliance. This Order includes interim limitations and a compliance schedule for silver.

- u. **Zinc.** Zinc in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria for zinc. The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for zinc. Freshwater aquatic habitat is a beneficial use of the receiving water. The criteria for zinc are presented in dissolved concentrations. USEPA recommends conversion factors to translate dissolved concentrations to total recoverable concentrations. The conversion factors for zinc in freshwater are 0.978 and 0.986 for acute and the chronic criteria, respectively. Using the worst-case (lowest of receiving water and effluent) measured hardness of 40 mg/L, the corresponding concentrations are 55 µg/L for both the acute and chronic criteria. The maximum observed effluent zinc concentration was 170 µg/L. The maximum observed upstream receiving water zinc concentration was 310 µg/L. The effluent and receiving water concentrations have exceeded the acute and chronic criteria; therefore, there is no assimilative capacity for zinc and the CTR criteria must be met at the point of discharge. The effluent limitations for zinc included in this Order are presented in total recoverable concentrations, and are based on CTR criteria for the protection of freshwater aquatic life.

The SIP requires converting CTR chronic (four-day) and acute (one-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. Equations summarizing the conversion are shown below:

$$CCC = e^{[0.8473 \ln(\text{hardness}) + 0.884]} = 55 \text{ } \mu\text{g/L}$$

$$CMC = e^{[0.8473 \ln(\text{hardness}) + 0.884]} = 55 \text{ } \mu\text{g/L}$$

$$AMEL = 1.55[\min(0.321CMC, 0.527CCC)] = 27 \text{ } \mu\text{g/L}$$

$$MDEL = 3.11[\min(0.321CMC, 0.527CCC)] = 55 \text{ } \mu\text{g/L}$$

This Order includes average monthly and maximum daily effluent zinc limitations

A review of effluent monitoring data indicates that the Discharger will not be able to immediately comply with these new effluent limitations for zinc. Where the Regional Water Board determines that it is infeasible to achieve immediate compliance with an adopted CTR water quality objective, the Board may establish in NPDES permits a schedule of compliance. This Order includes interim limitations and a compliance schedule for zinc.

4. WQBEL Calculations

- a. The Discharger conducted monitoring for priority and non-priority pollutants. The analytical results of four comprehensive sampling events were submitted to the Regional Water Board. The results of these sampling events were used in developing this Order. Effluent limitations are included in the Order to protect the beneficial uses of the receiving water and to ensure that the discharge complies with the Basin Plan

objective that toxic substances not be discharged in toxic amounts. Unless otherwise noted, all mass limitations in this Order were calculated by multiplying the concentration limitation by the design flow and the appropriate unit conversion factors.

- b. Effluent limitations for water quality-based limitations were calculated in accordance with Section 1.4 of the SIP and Chapter 5 of the TSD. Detailed numeric calculations for constituents with WQBELs are shown in Attachment G. WQBELs are summarized below in Table F-4. The following paragraphs describe the general methodology used for calculating effluent limitations.
- c. **Calculations for WQBELs.** In calculating maximum effluent limitations, the effluent concentration allowances were set equal to the criteria/standards/objectives.

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

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

Acute and chronic toxicity ECAs were then converted to equivalent long-term averages (LTA) using statistical multipliers (obtained from SIP Table 1) and then the lowest LTA is used. Additional statistical multipliers (obtained from SIP Table 2) were then used to calculate the maximum daily effluent limitation (MDEL) and the average monthly effluent limitation (AMEL). The statistical multipliers were calculated using data shown in Table 1.

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

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

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

$$AMEL_{HH} = ECA_{HH}$$

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

where: $mult_{AMEL}$ = statistical multiplier converting minimum LTA to AMEL
 $mult_{MDEL}$ = statistical multiplier converting minimum LTA to MDEL

M_A = statistical multiplier converting CMC to LTA

M_C = statistical multiplier converting CCC to LTA

- d. Flow- The Facility was designed to provide tertiary level of treatment for up to its design flow of 0.040 mgd.
- e. Mass based Effluent Limitations- Mass based effluent limitations were based upon a design treatment capacity of 0.040 mgd.
- f. USEPA recommends a maximum daily limitation rather than an average weekly limitation for water quality based permitting.

**Table F-4
 Summary of Water Quality-based Effluent Limitations
 Discharge Point 001**

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	standard units	--	--	--	6.5	8.5
Copper (total recoverable)	µg/L	2.9	--	5.9	--	--
	lbs/day	0.00097	--	0.002	--	--
Lead (total recoverable)	µg/L	0.81	--	1.6	--	--
	lbs/day	0.00027	--	0.00054	--	--
Silver (total recoverable)	µg/L	0.42	--	0.84	--	--
	lbs/day	0.00014	--	0.00028	--	--
Zinc (total recoverable)	µg/L	27	--	55	--	--
	lbs/day	0.0091	--	0.018	--	--
Indeno(1,2,3-cd) Pyrene	µg/L	0.0044	--	0.0088	--	--
	lbs/day	0.0000015	--	0.0000029	--	--
Organochlorine Pesticides	µg/L	--	--	--	--	ND ¹
	lbs/day	--	--	--	--	--
Aluminum	µg/L	71	--	140	--	--
	lbs/day	0.02	--	0.05	--	--
Ammonia (total recoverable)	µg/L	630	--	--	--	--
	lbs/day	0.21	--	--	--	--
Boron (total recoverable)	µg/L	700	--	--	--	--
	lbs/day	0.23	--	--	--	--
Iron (total recoverable)	µg/L	300	--	--	--	--
	lbs/day	0.1	--	--	--	--
Manganese (total recoverable)	µg/L	50	--	--	--	--
	lbs/day	0.02	--	--	--	--
Nitrate Nitrogen (total recoverable)	mg/L	10	--	--	--	--
	lbs/day	3.3	--	--	--	--
Specific Conductance (EC at 25°C)	µmhos/cm	700	--	--	--	--

The maximum 1-hour average ammonia (total recoverable) in the discharge shall not exceed 2100 µg/L.

The maximum 1-hour average total chlorine concentration in the discharge shall not exceed 0.02 µg/L, and the maximum 4-day average total chlorine in the discharge shall not exceed 0.01 mg/l and 0.0033 lbs/day.

- Each organochlorine pesticide shall be ND (non-detectable). The Discharger shall use EPA standard analytical techniques that have the lowest practical level for the organochlorine pesticides with a minimum acceptable reporting level as indicated in appendix 4 of the SIP. Organochlorine pesticides include aldrin, chlordane, 4,4'DDT, dieldrin, endosulfan (alpha, beta, sulfate), endrin, endrin aldehyde, heptachlor, heptachlor epoxide, hexacyclohexane (alpha, beta, delta, and lindane), and toxaphene.

5. Whole Effluent Toxicity (WET)

- a. **Acute Toxicity.** In order to comply with Basin Plan narrative toxicity requirements, this Order includes the following acute toxicity limitation: the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test having less than 70% survival.
- b. **Chronic Toxicity.** The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental response on aquatic organisms. Detrimental response includes but is not limited to decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota.

D. Final Effluent Limitations

Table F-5 summarizes the final technology-based and water quality-based effluent limits established in this Order for discharges to Lone Tree Creek.

Table F-5
Summary of Final Effluent Limitations
Discharge Point 001

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
BOD 5-day @ 20°C	mg/L	10	15	20	--	--	Order No. 95-054, Anti-backsliding
	lbs/day	3.3	5.0	6.7	--	--	
Total Suspended Solids	mg/L	10	15	20	--	--	Order No. 95-054, Anti-backsliding
	lbs/day	3.3	5.0	6.7	--	--	
Settleable Solids	ml/L	0.1	--	0.2	--	--	Order No. 95-054, Anti-backsliding
pH	standard units	--	--	--	6.5	8.5	Basin Plan
Copper (total recoverable)	µg/L	2.9	--	5.9	--	--	CTR
	lbs/day	0.00097	--	0.002	--	--	
Lead (total recoverable)	µg/L	0.81	--	1.6	--	--	CTR
	lbs/day	0.00027	--	0.00054	--	--	
Silver (total recoverable)	µg/L	0.42	--	0.84	--	--	CTR
	lbs/day	0.00014	--	0.00028	--	--	
Zinc (total recoverable)	µg/L	27	--	55	--	--	CTR
	lbs/day	0.0091	--	0.018	--	--	
Indeno(1,2,3-cd) Pyrene	µg/L	0.0044	--	0.0088	--	--	CTR
	lbs/day	0.0000015	--	0.0000029	--	--	
Organochlorine Pesticides	µg/L	--	--	--	--	ND ¹	Basin Plan
	lbs/day	--	--	--	--	--	
Aluminum	µg/L	71	--	140	--	--	Basin Plan, USEPA
	lbs/day	0.02	--	0.05	--	--	
Ammonia (total recoverable)	µg/L	630	--	--	--	--	Basin Plan, USEPA
	lbs/day	0.21	--	--	--	--	
Boron (total recoverable)	µg/L	700	--	--	--	--	Water Quality for Agriculture
	lbs/day	0.23	--	--	--	--	
Iron (total recoverable)	µg/L	300	--	--	--	--	California Secondary MCL
	lbs/day	0.1	--	--	--	--	
Manganese (total recoverable)	µg/L	50	--	--	--	--	California Secondary MCL
	lbs/day	0.02	--	--	--	--	
Nitrate (total recoverable)	mg/L	10	--	--	--	--	California Primary MCL
	lbs/day	3.3	--	--	--	--	
Specific Conductance (EC at 25°C)	µmhos/cm	700	--	--	--	--	Water Quality for Agriculture
The average monthly percent removal of BOD 5-day at 20°C and total suspended solids shall not be less than 85 percent.							Order No. 95-054, Anti-backsliding
The median concentration of total coliform bacteria measured in the disinfected effluent shall not exceed an MPN of 2.2 per 100 milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed (7-day median). The number of total coliform bacteria shall not exceed an MPN of 23 per 100 milliliters in more than one sample in any 30 day period. No sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters.							Order No. 95-054, BPJ, Tertiary Treatment Systems

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
The turbidity in the effluent shall not exceed a daily average of 2 turbidity units and shall not exceed 5 turbidity units more than 5 percent of the time during any 24-hour period, and shall not exceed 10 turbidity units at any time.							Order No. 95-054, BPJ, Tertiary Treatment Systems
The maximum 1-hour average ammonia (total recoverable) in the discharge shall not exceed 2100 µg/L.							Basin Plan, USEPA Ambient WQ
The maximum 1-hour average total chlorine in the discharge shall not exceed 0.02 µg/L, and the 4-day average of total chlorine in the discharge shall not exceed 0.01 mg/l and 0.0033 lbs/day.							Basin Plan, USEPA Ambient WQ
The average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test having less than 70% survival.							Basin Plan

- Each organochlorine pesticide shall be ND (non-detectable). The Discharger shall use EPA standard analytical techniques that have the lowest practical level for the organochlorine pesticides with a minimum acceptable reporting level as indicated in appendix 4 of the SIP. Organochlorine pesticides include aldrin, chlordane, 4,4' DDT, dieldrin, endosulfan (alpha, beta, sulfate), endrin, endrin aldehyde, heptachlor, heptachlor epoxide, hexachlorohexane (alpha, beta, delta, and lindane), and toxaphene.

E. Interim Effluent Limitations

- As stated in the above Findings, the USEPA adopted the NTR and the CTR, which contain promulgated water quality criteria applicable to this discharge and the State Water Board adopted the SIP, which contains guidance on implementation of the NTR and CTR. CTR and NTR criteria along with beneficial use designations contained in the Basin Plan and anti-degradation policies constitute water quality standards pursuant to the Clean Water Act. The SIP, Section 2.2.1, requires that if a compliance schedule is granted for a CTR or NTR constituent, the Regional Water Board shall establish interim requirements and dates for their achievement in the NPDES permit. The interim limitations must: be based on current treatment plant performance or existing permit limitations, whichever is more stringent; include interim compliance dates separated by no more than one year, and; be included in the provisions. The interim limitations in this Order are based on the current treatment plant performance. In developing the interim limitations, where there are ten or more sampling data points available, sampling and laboratory variability are 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). Therefore, the interim limitations in this Order are established as the mean plus 3.3 standard deviations of the available data if have more than 10 data points. Where actual sampling shows an exceedance of the proposed 3.3 standard deviations interim limit, the maximum detected concentration has been established as the interim limitation. When there are less than ten sampling data points available, the 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. Therefore, when there are less than ten sampling results for a constituent, the interim limitation is based on the corresponding multiplier from Table 3.1 of the TSD multiplied by the maximum observed sampling point. Interim limitations are established when compliance with NTR- and CTR-based effluent limitations cannot be achieved by the existing discharge. Discharge of constituents in concentrations in excess of the final effluent limitations, but in compliance with the interim effluent limitations, can significantly degrade water quality and adversely affect the beneficial uses of the receiving stream on a long-term basis. The interim limitations, however, establish an enforceable ceiling concentration until compliance with the Effluent Limitation can be achieved.
- The following interim limitations for copper, lead, silver, zinc, and indeno(1,2,3-cd) pyrene establish an enforceable maximum effluent concentration until compliance with the final effluent limitations can be achieved:

Parameter	Units	Maximum Daily
Copper (total recoverable)	µg/L	39
	lbs/day	0.013
Lead (total recoverable)	µg/L	8.9
	lbs/day	0.0029
Silver (total recoverable)	µg/L	8.5
	lbs/day	0.0028
Zinc (total recoverable)	µg/L	800

Parameter	Units	Maximum Daily
	lbs/day	0.27
Indeno(1,2,3-cd) Pyrene	µg/L	1.2
	lbs/day	0.00041

F. Land Discharge Specifications – Not Applicable

G. Reclamation Specifications

1. The California DHS requires that the American Water Works Association (AWWA) *Guidelines for Distribution of Non-Potable Water* and *Guidelines for the On-site Retrofit of Facilities Using Disinfected Tertiary Recycled Water* be implemented in design and construction of recycling equipment. The guidelines require installation of purple pipe, adequate signs, etc. Adequate separation between the recycled water lines and domestic water lines and sewer lines is also required. The Discharger submitted an engineering report in March 2004 attesting to the full compliance with these requirements in accordance with the DHS guidelines.
2. DHS has established statewide water recycling criteria in Title 22, CCR, Section 60301 et. seq. (hereafter Title 22). DHS revised the water recycling criteria contained in Title 22 on 2 December 2000. The Facility produces effluent that meets Title 22 disinfected tertiary (tertiary) standards for filtration and disinfection; however, the current disinfection method utilized by the Facility, ozonation, is not recognized by Title 22 for the production of disinfected tertiary recycled water. The Reclamation Specifications in this Order require that effluent meet Title 22 requirements for disinfected tertiary recycled water, but recycled water use area requirements established in this Order are for disinfected secondary-23 effluent, as defined in Title 22 of the CCR, suitable for use on a restricted access golf course and as a source for landscape impoundments.
2. Section 60303 of Title 22 states that water recycling requirements shall not apply to the use of recycled water onsite at a water recycling plant, or wastewater treatment plant, provided access by the public to the area of onsite recycled water use is restricted.
3. Section 60323(a) of Title 22 states that no person shall produce or supply reclaimed water for direct reuse from a proposed water reclamation plant unless an engineering report is submitted for review and approval by DHS and the Regional Water Board. An Engineering Report was prepared by ECOLOGIC Engineering dated March 2004 and submitted on 5 March 2004. Irrigation of golf courses and other landscaping is considered a beneficial reuse, which DHS has granted approval for.
4. The Basin Plan encourages water recycling.
5. **BOD, TSS, Settleable Solids, Total Coliform Organisms, and Turbidity.** The TBELs for BOD, TSS, Settleable Solids, Total Coliform Organisms, and Turbidity when discharging to land (recycled water use) are the same as the TBELs established in the previous Order and must be met at the discharge point to the recycled water storage pond (Discharge Point 002).

6. **pH.** Previous Order No. 95-054 established the following pH effluent limitations for discharges from the treatment plant to the golf course irrigation ponds (Discharge Point 002): “The discharge shall not have a pH less that 6.5 nor greater than 8.5.” This Order continues the pH limitations established in Previous Order No. 95-054.
7. Reclamation specifications are summarized below in Table F-6.

**Table F-6.
 Summary of Reclamation Specifications
 Discharge Point 002**

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	mgd	0.040	--	--	--	--
pH	standard units	--	--	--	6.5	8.5
BOD 5-day @ 20°C	mg/L	10	20	50	--	--
Total Suspended Solids	mg/L	10	20	50	--	--
Settleable Solids	ml/L	0.1	--	0.2	--	--
The average monthly percent removal of BOD 5-day at 20°C and total suspended solids shall not be less than 85 percent.						
The median concentration of total coliform bacteria measured in the disinfected effluent shall not exceed an MPN of 2.2 per 100 milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed (7-day median). The number of total coliform bacteria shall not exceed an MPN of 23 per 100 milliliters in more than one sample in any 30 day period. No sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters.						
The turbidity in the effluent shall not exceed a daily average of 2 turbidity units and shall not exceed 5 turbidity units more than 5 percent of the time during any 24-hour period, and shall not exceed 10 turbidity units at any time.						

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

1. The Clean Water Act, Section 303(a-c), required states to adopt numeric criteria where they are necessary to protect designated uses. The Regional Water Board adopted numeric criteria in the Basin Plan. The Basin Plan is a regulatory reference for meeting the state and federal requirements for water quality control (40 CFR 131.20). State Water Board Resolution No. 68-16, the Anti-degradation Policy, does not allow changes in water quality less than that prescribed in the Basin Plans. The Basin Plan states that; “The numerical and narrative water quality objectives define the least stringent standards that the Regional Water Board will apply to regional waters in order to protect the beneficial uses.” This Order contains Receiving Water Limitations based on the Basin Plan numerical and narrative water quality objectives for Biostimulatory Substances, Chemical Constituents, Color, Dissolved Oxygen, Floating Material, Oil and Grease, pH, Pesticides, Radioactivity, Sediment, Settleable Material, Suspended Material, Tastes and Odors, Temperature, Toxicity and Turbidity.
2. **Fecal Coliform.** Lone Tree Creek has been designated as having the beneficial use of contact recreation (REC-1). For water bodies designated as having REC-1 as a beneficial use, the Basin Plan includes a water quality objective limiting the “...*fecal coliform concentration based on a minimum of not less than five samples for any 30-day period...*” to a maximum geometric mean of 200 MPN/100 ml. The objective also states that “...[no] *more than ten percent of the total number of samples taken during any 30-day period [shall] exceed 400/100 ml.*” This objective is included in the Order as a receiving water limitation.
3. **Dissolved Oxygen.** Lone Tree 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 Lone Tree Creek, a receiving water limitation of 7.0 mg/L for dissolved oxygen was included in the Order.

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

4. **pH.** For all surface water bodies in the Sacramento River and San Joaquin River basins, the Basin Plan includes water quality objectives stating that “[t]he pH shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters with designated COLD or WARM beneficial uses.” The 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 the Order.

5. **Temperature.** Lone Tree 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 5°F above natural receiving water temperature.” The Order includes a receiving water limitation based on this objective.
6. **Turbidity.** The Basin Plan includes the following objective: “Increases in turbidity attributable to controllable water quality factors shall not exceed the following limits:
 - a. Where natural turbidity is between 0 and 5 Nephelometric Turbidity Units (NTUs), increases shall not exceed 1 NTU.
 - b. Where natural turbidity is between 5 and 10 NTUs, increases shall not exceed 20 percent.
 - c. Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTU.
 - d. Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent.”
7. **Ammonia and Chlorine.** USEPA has developed Ambient Water Quality Criteria for the Protection of Freshwater Aquatic Life for ammonia and for chlorine. The Order contains effluent limitations for chlorine and ammonia equal to the Ambient Water Quality Criteria. Compliance with the effluent limitations for ammonia and for chlorine means that the discharge cannot cause an exceedance of the criteria in the receiving stream; in other words, the limitations are fully protective of water quality. Therefore, no receiving water ammonia or chlorine limitations are included in the Order.
8. **Salinity.** This order contains effluent limitations for salinity, more specifically Electrical conductivity (EC) based on the Basin Plan narrative water quality objective for chemical constituents protective of the AGR beneficial use. Compliance with this effluent limitation for EC means that the discharge cannot cause an exceedance of the objective in the receiving water. Therefore, no receiving water salinity limitation is included in this Order.

B. Groundwater

1. The beneficial uses of the underlying ground water, as identified in the Basin Plan, are MUN, AGR, PRO, and IND.
2. Basin Plan water quality objectives to protect the beneficial uses of groundwater include numeric objectives and narrative objectives, including objectives for chemical constituents, toxicity of groundwater, and taste and odor. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, or animals. The chemical

constituent objective states groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use or that exceed the maximum contaminant levels (MCLs) in Title 22, CCR. The Basin Plan requires the application of the most stringent objective as necessary to ensure that groundwaters 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.

3. State Water Board Resolution No. 68-16 (hereafter Resolution 68-16) requires the Regional Water Board in regulating discharge of waste to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the Regional Water Board's policies (e.g., quality that exceeds water quality objectives). Resolution 68-16 requires that the discharge be regulated to meet best practicable treatment or control to assure that pollution or nuisance will not occur and the highest water quality consistent with the maximum benefit to the people of the State be maintained.
4. Domestic wastewater contains constituents such as total dissolved solids (TDS), specific conductivity, pathogens, nitrates, organics, metals and oxygen demanding substances (BOD). The discharge to land, via irrigation of the golf course or any other land disposal method, may result in an increase in the concentration of these constituents in groundwater. The increase in the concentration of these constituents in groundwater must be consistent with Resolution 68-16. Any increase in pollutant concentrations in groundwater must be shown to be necessary to allow wastewater utility service necessary to accommodate housing and economic expansion in the area and must be consistent with maximum benefit to the people of the state of California. Some degradation of groundwater by the Discharger is consistent with Resolution 68-16 provided that:
 - a. the degradation is limited in extent;
 - b. the degradation after effective source control, treatment, and control is limited to waste constituents typically encountered in municipal wastewater as specified in the groundwater limitations in this Order;
 - c. the Discharger minimizes the degradation by fully implementing, regularly maintaining, and optimally operating best practicable treatment and control (BPTC) measures; and
 - d. the degradation does not result in water quality less than that prescribed in the Basin Plan.
5. Some degradation of groundwater by some of the typical waste constituents released with discharge from a municipal/domestic wastewater treatment facility after effective source control, treatment, and control is consistent with maximum benefit to the people of California. The technology, energy, water recycling, and waste management advantages of municipal treatment facility far exceed any benefits derived from a community otherwise reliant on numerous concentrated individual wastewater systems, and the impact on water

quality will be substantially less. Degradation of groundwater by constituents (e.g., toxic chemicals) other than those specified in the groundwater limitations in this Order (section V.B of this Order), and by constituents that can be effectively removed by conventional treatment (e.g., total coliform bacteria) is prohibited. When allowed, the degree of degradation permitted depends upon many factors (i.e., background water quality, the waste constituent, the beneficial uses and most stringent water quality objective, source control measures, waste constituent treatability).

6. Since the Discharger is currently impounding recycled wastewater, applying it to land, and is proposing to implement additional land disposal alternatives including subsurface irrigation, as described in section II.E of this Fact Sheet, and also because of a lack of groundwater information, monitoring of the groundwater must be conducted to determine if the discharge has caused or threatens to cause an increase in constituent concentrations, when compared to background. The monitoring must, at a minimum, require a complete assessment of groundwater impacts including the vertical and lateral extent of degradation, an assessment of all wastewater-related constituents which may have migrated to groundwater, and an analysis of whether additional or different methods of treatment or control of the discharge are necessary to provide best practicable treatment or control to comply with Resolution No. 68-16. Economic analysis is only one of many factors considered in determining best practicable treatment. If groundwater quality has been or may be degraded by the discharge, this Order may be reopened and specific numeric limitations established consistent with Resolution 68-16 and the Basin Plan.

Section 13267 of the California Water Code states in part, “(a) A regional board, in establishing.....waste discharge requirements.....may investigate the quality of any waters of state within its region” and “(b) (1) In conducting an investigation....., the regional board may require that any person who... discharges.... waste....that could effect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires.” California Water Code Section 13383 also authorizes monitoring and reporting requirements. The attached monitoring and reporting program to monitor groundwater required by this Order and the attached Monitoring and Reporting Program are necessary to assure compliance with these waste discharge requirements.

7. Economic prosperity of local communities and associated industry is of maximum benefit to the people of California, and therefore sufficient reason exists to accommodate growth and groundwater degradation around the wastewater treatment plant, provided that the terms of the Basin Plan are met.
8. The Discharger will provide treatment and control of the discharge that incorporates:
 - a. Tertiary treatment;
 - b. Disinfection of treated effluent;
 - c. Recycling of wastewater using agronomic application rates; and
 - d. Appropriate sludge storage and disposal practices.

9. 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.
10. This Order establishes groundwater limitations that will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan. This Order contains tasks for assuring that BPTC and the highest water quality consistent with the maximum benefit to the people of the State will be achieved. Accordingly, the discharge is consistent with the anti-degradation provisions of Resolution 68-16. Based on the results of the hydrogeologic evaluation required by provisions in this Order, the Regional Water Board may reopen this Order to reconsider groundwater limitations and other requirements to comply with Resolution 68-16.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 of 40 CFR requires all NPDES permits to specify recording and reporting of monitoring results. Sections 13267 and 13383 of the California Water Code authorize the Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program, Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the Monitoring and Reporting Program for this Facility.

A. Influent Monitoring

The influent monitoring in the Monitoring and Reporting Program is required to determine compliance with TBELs for BOD and TSS. The influent monitoring required by this Order is identical to the influent monitoring required by previous Order No. 95-054.

B. Effluent Monitoring

1. This Order continues the effluent monitoring established by previous Order No. 95-054's Monitoring and Reporting Program and includes additional effluent monitoring for all constituents with effluent limitations, consistent with the requirements of 40 CFR 122.44(i)(2). Effluent monitoring is also included for constituents on the 303(d) list and constituents for which insufficient information is available to determine the need for effluent limitations. Tables F-7 and F-8 summarize the additional monitoring required for Discharge Points 001 and 002, respectively, and the rationale for assigning the monitoring.

**Table F-7.
 Summary of Additional Effluent Monitoring
 Discharge Point 001**

Parameter(s)	Monitoring Frequency	Rationale
Temperature, pH	1/week	Determine whether the discharge is causing an exceedance of receiving water objectives.
Copper, Lead, Silver, Zinc, Indeno(1,2,3-cd) Pyrene	1/month	Determine compliance with AMELs and MDELs.
Aluminum	1/month	Determine compliance with AMEL and MDEL.
Ammonia and Chlorine	1/month	Determine compliance with AMEL, 4-day average and 1-hr average.
Boron, Iron, Manganese, Nitrate	1/month	Determine compliance with AMELs.
Organochlorine Pesticides	1/semi-annual period	Determine compliance with instantaneous maximum effluent limitation of ND.
Bis(2-Ethylhexyl)Phthalate, 4,4'-DDT, Chlorpyrifos,	1/semi-annual period	Inconclusive preliminary monitoring suggests that effluent limitations may be required for these parameters. Monitoring is assigned to gather additional information.
1,2,3,6,7,8-HxCDF	1/year	This 2,3,7,8-TCDD congener was detected in the Facility's effluent. This monitoring has been assigned in accordance with the guidance established in section 3 of the SIP for 2,3,7,8-TCDD congener monitoring.

**Table F-8.
 Summary of Additional Effluent Monitoring
 Discharge Points 001 and 002**

Parameter	Monitoring Frequency	Rationale
Turbidity	continuous	Determine compliance with TBELs for turbidity.
Total Coliform Organisms	2/week	The Facility has had ozone disinfection system failures in the past. Previous Order No. 95-054 required monthly monitoring for total coliform organisms. This Order requires more frequent monitoring to determine compliance with coliform limitations (7-day median), and also to provide earlier warning in the event of disinfection system failure.

C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity:** Chapter III of the Basin Plan, establishes narrative toxicity water quality objectives and requires that at a minimum compliance with this objective shall be evaluated with a 96-hour bioassay. Previous Order No. 95-054 required acute toxicity monitoring 1/Semi-annual period. This Order also requires acute toxicity testing 1/semi-annual period, consistent with the requirements of the Basin Plan.

2. **Chronic Toxicity:** Section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters. Therefore, in accordance with the SIP, the Discharger will be required to conduct chronic toxicity testing in order to determine reasonable potential and establish WQBELs as necessary. This Order requires one chronic toxicity monitoring event to take place during the term of this Order.

D. Receiving Water Monitoring

1. Surface Water

The Lone Tree Creek receiving water monitoring required by this Order is identical to the receiving water monitoring required by previous Order No. 95-054 except the discontinuance of receiving water total residual chlorine monitoring.

2. Groundwater

Because of a lack of groundwater information, and since the discharger is currently impounding treated wastewater and plans to pursue additional land disposal alternatives as discussed in section II.E of this Fact Sheet, this Order requires the Discharger to conduct groundwater monitoring. The groundwater monitoring reports are necessary to evaluate impacts to waters of the state to assure protection of beneficial uses and compliance with Regional Water Board plans and policies, including Resolution 68-16. Evidence in the record includes effluent monitoring data that indicates the presence of constituents that may degrade groundwater and surface water.

E. Other Monitoring Requirements

1. **Priority Pollutant Monitoring.** Section 1.3 of the SIP requires the Regional Water Board to require periodic monitoring for pollutants, at least once prior to the reissuance of a permit, for which criteria or objectives apply and for which no effluent limitations have been established. To comply with the SIP, this Order requires the Discharger to sample effluent and upstream receiving water for priority pollutants at least once during this permit term and the samples shall be collected no more than 365 days and no less than 180 days prior to expiration of this Order.
2. **Sludge Monitoring.** Annual sludge monitoring for metals is required by this Order. The required sludge monitoring under this Order is identical to the monitoring required by previous Order No. 95-054.
3. **Water Supply Monitoring.** The required water supply monitoring under this Order is identical to the monitoring required by previous Order No. 95-054, except for the removal of Standard Minerals.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

1. Federal Standard Provisions

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

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

2. Regional Water Board Standard Provisions

The Discharger is required to comply with applicable Regional Water Board Standard Provisions, section VI.A.2 of the Order.

B. Special Provisions

1. Reopener Provisions

- a. **Provision VI.C.1.a, Reopener Provision.** This provision allows the Regional Water Board to reopen this Order to include any newly adopted receiving water standards.
- b. **Provision VI.C.1.b, Chronic Toxicity Reopener Provision.** If the chronic toxicity testing specified in Section VI.C.2.a indicates that the discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the water quality objective for toxicity, this Order shall be reopened and a chronic toxicity limitation included and/or a limitation for the specific toxicant identified in the TRE included. Additionally, if a chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened and a limitation based on that objective included.
- c. **Provision VI.C.1.c, Studies/Monitoring Reopener Provision.** This provision allows the Regional Water Board to reopen this Order if review of the study results specified in Section VI.C.2.b of this Order or any effluent monitoring show that the discharge has reasonable potential to cause or contribute to an exceedance of a water quality objective, or the discharge is causing groundwater degradation.

- d. **Provision VI.C.1.d, Ammonia, BOD, and EC TMDL Reopener Provision.** Upon adoption of an ammonia, BOD, or EC TMDL for Lone Tree Creek, this Order may be reopened to consider alternate effluent limitations needed to allow the Discharger to meet its required load allocation that may be specified in the TMDL.
- e. **Provision VI.C.1.e, Optional Dilution Study Reopener Provision.** Lone Tree Creek may have assimilative capacity for certain pollutants. If the Discharger elects to conduct a dilution study, the Regional Water Board would consider the information in reevaluating applicable effluent limitations and other requirements established in this Order; and if necessary this Order may be reopened to revise existing requirements.
- f. **Provision VI.C.1.f, Additional monitoring for Bis (2-Ethylhexyl)Phthalate (DEHP) and chloropyrifos.** Upon review of monitoring data and if necessary, this Order may be reopened to establish new effluent limitations for DEHP and chloropyrifos.

2. Special Studies and Additional Monitoring Requirements

- a. **Provision VI.C.2.a, Toxicity Studies.** This provision is based on Section 4 of the SIP. It requires the discharger to conduct additional studies and workplans to evaluate toxicity in the discharge and eventually reduce that toxicity (Toxicity Identification Evaluation (TIE) and Toxicity Reduction Evaluation (TRE)) if chronic toxicity monitoring indicates that the discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the water quality objective for toxicity.
- b. **Provision VI.C.2.b, Groundwater Monitoring.** Because the existing storage and discharge of treated wastewater to land may impact groundwater quality, and in the event that the Discharger initiates land disposal operations as discussed in section II.E of this Fact Sheet, this Provision requires the Discharger to install monitoring wells and implement a groundwater monitoring program to begin characterizing background groundwater quality to determine whether the Facility's discharge is causing groundwater degradation.

3. Best Management Practices and Pollution Prevention – Not Applicable

4. Compliance Schedules

Provision VI.C.4, Compliance Schedule and Infeasibility Study. The SIP, Section 2.1, provides that: "Based on an existing discharger's request and demonstration that it is infeasible for the discharger to achieve immediate compliance with a CTR criterion, or with an effluent limitation based on a CTR criterion, the Regional Water Board may establish a compliance schedule in an NPDES permit." Section 2.1 further states that compliance schedules may be included in NPDES permits provided that the following justification has been submitted: "... (a) documentation that diligent efforts have been made to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream; (b) documentation of source control and/or pollution minimization efforts currently underway or completed; (c) a proposal for additional or future source control measures, pollutant minimization actions, or waste treatment (i.e., facility upgrades); and (d) a demonstration that the proposed schedule is as short as practicable." This Order requires

the Discharger to provide this information. The new water quality-based effluent limitations for copper, lead, silver, zinc, and indeno(1,2,3-cd) pyrene become effective on **May 18, 2010** since a compliance schedule justification was completed and submitted by the Discharger on 2 June 2005 the Discharger to the Regional Water Board.

5. Construction, Operation, and Maintenance Specifications

a. Provision VI.C.5.a

- i. **Flood and Overflow Protection.** In order to protect public health and receiving waters from overflow of treated or partially treated wastewater, this Provision requires that all wastewater disposal and storage facilities be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency
 - ii. **Ozone Disinfection.** To ensure the ozone disinfection system is continuously effective, in addition to having an automatic on-line ozone monitoring system, the Discharger shall also use a bench-top ozone monitoring instrument that uses the Indigo colorimetric method for ozone analysis. The on-line ozone monitor should produce results that are within 5% of the results obtained using the indigo method.
 - iii. **Chlorine Disinfection.** DHS statewide reclamation criteria contained in Title 22, section 60301.230, of the California Code of Regulations requires that the chlorine disinfection process following filtration provide a CT (the product of total chlorine residual and modal contact time measured at the same point) value of not less than 450 milligram-minutes per liter at all times with a modal contact time of at least 90 minutes, based on peak dry weather design flow. This Provision establishes minimum CT and modal contact time operation specifications based on DHS reclamation criteria. This requirement only applies when the Facility is using chlorine for disinfection.
- b. **Provision VI.C.5.b, Recycled Water Use Area Requirements.** This Provision establishes recycled water use area requirements that are consistent with the requirements in Title 22 of the CCR, developed by the California DHS for the purveyance and use of disinfected secondary-23 recycled water.
- c. **Provision VI.C.5.c, Sludge Disposal Requirements.** Previous Order No. 95-054 established sludge disposal requirements consistent with those required for a POTW. This Order continues the previous Order's sludge disposal requirements.
- d. **Provision VI.C.5.d, Mosquito Prevention Requirements.** This Provision requires the Discharger to maintain golf course reservoirs to prevent the breeding of mosquitoes. This Provision is established in order to prevent a nuisance condition pursuant to the requirements of CWC section 13050 and protect human health.
- e. **Provision VI.C.5.e, Freeboard Requirement.** This Provision requires that 2 feet of freeboard be maintained in any pond containing wastewater or reclaimed wastewater

and is established to prevent unauthorized discharges to waters of the United States or waters of the State.

6. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable

7. Other Special Provisions

Other special provisions in this Order include specific requirements for change of discharge point, change of ownership, and requirements for professional reports.

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 French Camp RV Park and Golf Course. As a step in the WDRs 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 direct mailing to agencies and known interested parties, posting of the NOPH at the Discharger's offices and the local post office and publication in the local newspaper.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should 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 10 April 2006.

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: **4/5 May 2006**
Time: 8:30 am
Location: Regional Water Quality Control Board
11020 Sun Center Dr #200
Rancho Cordova, CA

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

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

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 Jon Ericson at (916) 464-4660.

ATTACHMENT G – WQBEL CALCULATIONS

The water quality-based effluent limits developed for this Order are summarized below and were calculated as described in the methodology summarized in Attachment F, Fact Sheet Section IV.C.4 of this Order.

Parameter	Human Health Calculations			Aquatic Life Calculations											Selected Limits	
	Human Health			Freshwater												
	AMEL = ECA = C hh	MDEL / AMEL multiplier	MDEL hh	ECA acute = C acute	ECA acute multiplier	LTA acute	ECA chronic = C chronic	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier 95	AMEL aquatic life	MDEL multiplier 99	MDEL aquatic life	AMEL	MDEL
	µg/L		µg/L	µg/L		µg/L	µg/L		µg/L	µg/L					µg/L	µg/L
Copper	10	2.01	20.10	5.9	0.321	1.8939	4.3	0.527	2.2661	1.89	1.55	2.935545	3.11	5.890029	2.9	5.9
Lead	2	2.01	4.02	25	0.321	8.025	0.99	0.527	0.52173	0.52	1.55	0.8086815	3.11	1.6225803	0.81	1.6
Silver	10	2.01	20.10	0.84	0.321	0.26964	--	--	--	0.27	1.55	0.417942	3.11	0.8385804	0.42	0.84
Zinc	100	2.01	201.00	55	0.321	17.655	55	0.527	28.985	17.66	1.55	27.36525	3.11	54.90705	27	55
Indeno(1,2,3-cd) Pyrene	0.0044	2.01	8.8x10 ⁻³	--	--	--	--	--	--	--	--	--	--	--	4.4x10 ⁻³	8.8x10 ⁻³
Aluminum	200	2.01	402	750	0.321	240.75	87	0.527	45.849	45.849	1.55	71.06595	3.11	142.59039	71	140

Notes:

Number of data points were less than 10, multipliers based on default CV = 0.6.

C = Water Quality Criteria

hh = human health

AMEL = Average monthly effluent limitation

MDEL = Maximum daily effluent limitation

ECA = Effluent concentration allowance

LTA = Long-term average concentration