

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table 1. Facility Information

WDID	4B190107015
Discharger	Joint Outfall System
Name of Facility	Los Coyotes Water Reclamation Plant, Cerritos
Facility Address	16515 Piuma Avenue
	Cerritos, CA, 90703
	Los Angeles County
Facility Contact, Title and Phone	Ann Heil, Supervising Engineer, (562) 699-7411
Authorized Person to Sign and Submit Reports	Ann Heil, Supervising Engineer, (562) 699-7411
Mailing Address	1955 Workman Mill Road, Whittier, CA 90601
Billing Address	SAME
Type of Facility	POTW
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Y
Reclamation Requirements	Producer
Facility Permitted Flow	37.5 million gallons per day
Facility Design Flow	37.5 million gallons per day
Watershed	San Gabriel River
Receiving Water	San Gabriel River Reach 1
Receiving Water Type	Inland surface water

- A.** The Joint Outfall System (ownership and operation of the Joint Outfall System is proportionally shared among the signatory parties to the amended Joint Outfall Agreement effective July 1, 1995. These parties include County Sanitation Districts of Los Angeles County Nos. 1, 2, 3, 5, 8, 15, 16, 17, 18, 19, 21, 22, 23, 28, 29, and 34, and South Bay Cities Sanitation District of Los Angeles County), formerly referred to as the County Sanitation Districts of Los Angeles County and hereinafter Discharger or Districts, is the owner and operator of Los Coyotes Water Reclamation Plant (hereinafter Facility), a Publicly-Owned Treatment Works.

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

- B.** The Facility discharges wastewater to Reach 1 (Firestone Blvd. To Estuary) of San Gabriel River, a water of the United States, and is currently regulated by Order R4-2002-0121 which was adopted on July 11, 2002, and expires on June 10, 2007. The terms and conditions of the current Order have been automatically continued and remain in effect until new Waste Discharge Requirements and NPDES permit are adopted pursuant to this Order.
- C.** The Discharger filed a report of waste discharge and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on December 12, 2006. A site visit was conducted on April 27, 2007, to observe operations and collect additional data to develop permit limitations and conditions.

II. FACILITY DESCRIPTION

The Discharger owns and operates the Los Coyotes WRP, a tertiary wastewater treatment plant located at 16515 Piuma Avenue, Cerritos, California. Attachment B shows the location of the plant. The Los Coyotes WRP currently receives wastewater from Alhambra, Arcadia, Artesia, Bellflower, Cerritos, City of Industry, Downey, Duarte, El Monte, Glendale, Irwindale, La Cañada, Flintridge, La Habra Heights, La Mirada, Monrovia, Montebello, Monterey Park, Norwalk, Pasadena, Pico Rivera, Rosemead, San Gabriel, San Marino, Santa Fe Springs, South El Monte, South Pasadena, Temple City, and Whittier. The wastewater is a mixture of domestic and industrial wastewater that is pre-treated pursuant to 40 CFR Part 403. Los Coyotes WRP has a design capacity of 37.5 mgd and serves an estimated population of 290,000 people.

The Los Coyotes WRP is part of integrated network of facilities, known as the Joint Outfall System (JOS). The JOS incorporates the Los Coyotes WRP and six other wastewater treatment plants, which are connected by more than 1,200 miles of interceptors and truck sewers. The upstream treatment plants (Whittier Narrows, Pomona, La Cañada, Long Beach, Los Coyotes, and San Jose Creek) are connected to the Joint Water Pollution Control Plant (JWPCP) located in Carson. This system allows for the diversion of influent flows into or around each upstream plant if so desired.

A. Description of Wastewater and Biosolids Treatment or Controls

1. Treatment at the Los Coyotes WRP consists of primary sedimentation, activated sludge biological treatment with nitrification and denitrification, secondary sedimentation, inert media filtration, chlorination, and dechlorination. Treated wastewater discharged to San Gabriel River is dechlorinated but the effluent delivered for reuse is not dechlorinated.
2. Gaseous chlorine is used as a disinfectant in the Los Coyotes WRP. The disinfecting agent is added to the treated effluent prior to the filters to destroy bacteria, pathogens and viruses, and to minimize algal growth in the filters. Additional disinfectant may be dosed prior to the serpentine chlorine contact chamber. Prior to discharge, sodium dioxide is added to the treated effluent to remove residual chlorine.
3. No facilities are provided for solids processing at the plant. Sewage solids separated from the wastewater are returned to the trunk sewer for conveyance to JWPCP for treatment and disposal occur, under Order No. R4-2006-0042 (NPDES No. CA0053813). Attachment C is a schematic of the Los Coyotes WRP wastewater flow.
4. JOS has constructed a biological nutrient removal system with nitrogen denitrification process (NDN) in order to achieve compliance with the ammonia Basin Plan objectives. The system in the Los Coyotes WRP was completed in June 2003.

B. Discharge Points and Receiving Waters

The Los Coyotes WRP discharges tertiary treated wastewater to Reach 1 of the San Gabriel River, a water of the United States, through Discharge Point 001 (Latitude 33° 52' 48" and Longitude 118° 06' 30"). Reach 1 is part of the San Gabriel River Watershed. Discharge point 001 is located about 1,230 feet upstream of the Artesia Freeway, above the estuary. During dry weather (May 1 – October 31), the primary sources of water flow in San Gabriel River, downstream of the discharge point, are the Los Coyotes WRP effluent and other NPDES-permitted discharges, including urban runoff conveyed through the municipal separate storm sewer system. Storm water and urban runoff, which are regulated under an NPDES permit, Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges within the County of Los Angeles (LA Municipal Permit), NPDES Permit No. CAS004001.

The Los Angeles County Flood Control District channelized portions of the San Gabriel River to convey and control floodwater and to prevent damage to homes located adjacent to the river. Although this is not the main purpose, the San Gabriel River conveys treated wastewater along with floodwater, and urban runoff. Notwithstanding that the San Gabriel River is concrete-lined from the point of discharge to the estuary, the watershed supports a diversity of wildlife, particularly an abundance of avian species such as the *Least Bell's Vireo*, *Tricolored Blackbird*, and *California Gnatcatcher*. Aquatic life, such as fish, invertebrates, and algae, also exist in the San Gabriel River.

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

Effluent limitations contained in the existing Order for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data (October 2003 to June 2006) from the term of the previous Order are as follows:

Table 2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation			Monitoring Data ¹ (From 10/01/2003 To 06/30/2006)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge ²	Highest Daily Discharge
BOD ₅ 20°C	mg/L	20	30	45	<3	4	4
Suspended Solids	mg/L	15	40	45	<2	<2	4
Oil and Grease	mg/L	10	--	15	8.4	--	8.4
Settleable Solids	ml/L	0.1	--	0.3	<0.1	<0.1	<0.1
Residual Chlorine	mg/L	--	--	0.1	<0.05	<0.05	>0.44
Nitrate + Nitrite as N	mg/L	8	--	--	7.75	--	7.75
Total Ammonia	mg/L	--	--	--	2.5	--	2.5
Mercury	µg/L	0.051	--	0.14	0.03(Est.)	--	0.03(Est.)
Nickel	µg/L	70	--	194	26.5	--	26.5
Cyanide ³	µg/L	4.2	--	8.5	3.6(Est.)	--	3.6(Est.)
Bis(2-Ethylhexyl) Phthalate	µg/L	5.9	--	12	3.2	--	3.2
Antimony	µg/L	--	--	--	2	--	2
Arsenic	µg/L	--	--	--	2.1	--	2.1
Beryllium	µg/L	--	--	--	0.1(Est.)	--	0.1(Est.)
Cadmium	µg/L	--	--	--	1	--	1
Chromium III	µg/L	--	--	--	1.05	--	1.05
Chromium VI	µg/L	--	--	--	7.7(Est.)	--	7.7(Est.)
Copper	µg/L	--	--	--	10	--	10
Lead	µg/L	--	--	--	4	--	4
Mercury	µg/L	--	--	--	0.03(Est.)	--	0.03(Est.)
Nickel	µg/L	--	--	--	26.5	--	26.5
Selenium	µg/L	--	--	--	1.1	--	1.1
Silver	µg/L	--	--	--	0.059(Est.)	--	0.059(Est.)
Thallium	µg/L	--	--	--	0.06(Est.)	--	0.06(Est.)
Zinc	µg/L	--	--	--	109	--	109
Cyanide ²	µg/L	--	--	--	3.6(Est.)	--	3.6(Est.)
Asbestos	µg/L	--	--	--	--	--	--

¹ "Est." means the estimated concentration. These monitoring data are less than the reporting level, but greater than or equal to the respective laboratory's MDLs.

² The highest average weekly discharge concentration is reported for constituents that are monitored at weekly or more frequent intervals.

³ Samples collected prior to April 2006 should be considered invalid because the preservation method used generated false positives. Samples collected beginning April 2006 are used to assess compliance.

Parameter	Units	Effluent Limitation			Monitoring Data ¹ (From 10/01/2003 To 06/30/2006)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge ²	Highest Daily Discharge
2,3,7,8-TCDD (Dioxin)	µg/L	--	--	--	--	--	--
Acrolein	µg/L	--	--	--	0.49(Est.)	--	0.49(Est.)
Acrylonitrile	µg/L	--	--	--	<5	--	<5
Benzene	µg/L	--	--	--	<0.5	--	<0.5
Bromoform	µg/L	--	--	--	1	--	1
Carbon Tetrachloride	µg/L	--	--	--	0.2(Est.)	--	0.2(Est.)
Chlorobenzene	µg/L	--	--	--	<0.5	--	<0.5
Dibromochloromethane	µg/L	--	--	--	4	--	4
Chloroethane	µg/L	--	--	--	<1	--	<1
2-chloroethyl vinyl ether	µg/L	--	--	--	<1	--	<1
Chloroform	µg/L	--	--	--	28	--	28
Dichlorobromomethane	µg/L	--	--	--	12	--	12
1,1-dichloroethane	µg/L	--	--	--	<0.5	--	<0.5
1,2-dichloroethane	µg/L	--	--	--	<0.5	--	<0.5
1,1-dichloroethylene	µg/L	--	--	--	<0.5	--	<0.5
1,2-dichloropropane	µg/L	--	--	--	<0.5	--	<0.5
1,3-dichloropropylene	µg/L	--	--	--	<0.5	--	<0.5
Ethylbenzene	µg/L	--	--	--	<0.5	--	<0.5
Methyl bromide	µg/L	--	--	--	<1	--	<1
Methyl chloride	µg/L	--	--	--	0.1(Est.)	--	0.1(Est.)
Methylene chloride	µg/L	--	--	--	2.4	--	2.4
1,1,2,2-tetrachloroethane	µg/L	--	--	--	<0.5	--	<0.5
Tetrachloroethylene	µg/L	--	--	--	<0.5	--	<0.5
Toluene	µg/L	--	--	--	0.2(Est.)	--	0.2(Est.)
Trans 1,2-Dichloroethylene	µg/L	--	--	--	<0.5	--	<0.5
1,1,1-Trichloroethane	µg/L	--	--	--	<0.5	--	<0.5
1,1,2-Trichloroethane	µg/L	--	--	--	<0.5	--	<0.5
Trichloroethylene	µg/L	--	--	--	<0.5	--	<0.5
Vinyl Chloride	µg/L	--	--	--	<0.5	--	<0.5
2-chlorophenol	µg/L	--	--	--	<5	--	<5
2,4-dichlorophenol	µg/L	--	--	--	<5	--	<5

Parameter	Units	Effluent Limitation			Monitoring Data ¹ (From 10/01/2003 To 06/30/2006)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge ²	Highest Daily Discharge
2,4-dimethylphenol	µg/L	--	--	--	<2	--	<2
4,6-dinitro-o-resol (aka 2-methyl-4,6-Dinitrophenol)	µg/L	--	--	--	<5	--	<5
2,4-dinitrophenol	µg/L	--	--	--	<5	--	<5
2-nitrophenol	µg/L	--	--	--	<10	--	<10
4-nitrophenol	µg/L	--	--	--	<10	--	<10
3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	µg/L	--	--	--	<1	--	<1
Pentachlorophenol	µg/L	--	--	--	<5	--	<5
Phenol	µg/L	--	--	--	<1	--	<1
2,4,6-trichlorophenol	µg/L	--	--	--	1.4	--	1.4
Acenaphthene	µg/L	--	--	--	<1	--	<1
Acenaphthylene	µg/L	--	--	--	<10	--	<10
Anthracene	µg/L	--	--	--	<10	--	<10
Benzidine	µg/L	--	--	--	<5	--	<5
Benzo(a)Anthracene	µg/L	--	--	--	<5	--	<5
Benzo(a)Pyrene	µg/L	--	--	--	0.008(Est.)	--	0.008(Est.)
Benzo(b)Fluoranthene	µg/L	--	--	--	<10	--	<10
Benzo(ghi)Perylene	µg/L	--	--	--	<5	--	<5
Benzo(k)Fluoranthene	µg/L	--	--	--	0.008(Est.)	--	0.008(Est.)
Bis(2-Chloroethoxy)methane	µg/L	--	--	--	<5	--	<5
Bis(2-Chloroethyl) Ether	µg/L	--	--	--	<1	--	<1
Bis(2-Chloroisopropyl) Ether	µg/L	--	--	--	<2	--	<2
Bis(2-Ethylhexyl) Phthalate	µg/L	--	--	--	3.2	--	3.2
4-Bromophenyl Phenyl Ether	µg/L	--	--	--	<5	--	<5
Butylbenzyl Phthalate	µg/L	--	--	--	<10	--	<10
2-Chloronaphthalene	µg/L	--	--	--	<10	--	<10
4-Chlorophenyl Phenyl Ether	µg/L	--	--	--	<5	--	<5

Parameter	Units	Effluent Limitation			Monitoring Data ¹ (From 10/01/2003 To 06/30/2006)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge ²	Highest Daily Discharge
Chrysene	µg/L	--	--	--	<10	--	<10
Dibenzo(a,h) Anthracene	µg/L	--	--	--	<10	--	<10
1,2-Dichlorobenzene	µg/L	--	--	--	<2	--	<2
1,3-Dichlorobenzene	µg/L	--	--	--	<1	--	<1
1,4-Dichlorobenzene	µg/L	--	--	--	0.46(Est.)	--	0.46(Est.)
3-3'-Dichlorobenzidine	µg/L	--	--	--	<5	--	<5
Diethyl Phthalate	µg/L	--	--	--	<2	--	<2
Dimethyl Phthalate	µg/L	--	--	--	<2	--	<2
Di-n-Butyl Phthalate	µg/L	--	--	--	<10	--	<10
2-4-Dinitrotoluene	µg/L	--	--	--	<5	--	<5
2-6-Dinitrotoluene	µg/L	--	--	--	<5	--	<5
Di-n-Octyl Phthalate	µg/L	--	--	--	<10	--	<10
1,2-Diphenylhydrazine	µg/L	--	--	--	<1	--	<1
Fluoranthene	µg/L	--	--	--	<1	--	<1
Fluorene	µg/L	--	--	--	<10	--	<10
Hexachlorobenzene	µg/L	--	--	--	<1	--	<1
Hexachlorobutadiene	µg/L	--	--	--	<1	--	<1
Hexachlorocyclopentadiene	µg/L	--	--	--	<5	--	<5
Hexachloroethane	µg/L	--	--	--	<1	--	<1
Indeno(1,2,3-cd)Pyrene	µg/L	--	--	--	<10	--	<10
Isophorone	µg/L	--	--	--	<1	--	<1
Naphthalene	µg/L	--	--	--	<1	--	<1
Nitrobenzene	µg/L	--	--	--	<1	--	<1
N-Nitrosodimethylamine	µg/L	--	--	--	<5	--	<5
N-Nitrosodi-n-Propylamine	µg/L	--	--	--	<5	--	<5
N-Nitrosodiphenylamine	µg/L	--	--	--	<1	--	<1
Phenanthrene	µg/L	--	--	--	<5	--	<5
Pyrene	µg/L	--	--	--	<10	--	<10

Parameter	Units	Effluent Limitation			Monitoring Data ¹ (From 10/01/2003 To 06/30/2006)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge ²	Highest Daily Discharge
1,2,4-Trichlorobenzene	µg/L	--	--	--	<5	--	<5
Aldrin	µg/L	--	--	--	<0.01	--	<0.01
Alpha-BHC	µg/L	--	--	--	<0.01	--	<0.01
Beta-BHC	µg/L	--	--	--	<0.01	--	<0.01
Gamma-BHC (aka Lindane)	µg/L	--	--	--	0.06	--	0.06
delta-BHC	µg/L	--	--	--	<0.01	--	<0.01
Chlordane	µg/L	--	--	--	<0.05	--	<0.05
4,4'-DDT	µg/L	--	--	--	<0.01	--	<0.01
4,4'-DDE	µg/L	--	--	--	<0.01	--	<0.01
4,4'-DDD	µg/L	--	--	--	<0.01	--	<0.01
Dieldrin	µg/L	--	--	--	<0.01	--	<0.01
Alpha-Endosulfan	µg/L	--	--	--	<0.01	--	<0.01
Beta-Endosulfan	µg/L	--	--	--	<0.01	--	<0.01
Endosulfan Sulfate	µg/L	--	--	--	<0.1	--	<0.1
Endrin	µg/L	--	--	--	<0.01	--	<0.01
Endrin Aldehyde	µg/L	--	--	--	<0.04	--	<0.04
Heptachlor	µg/L	--	--	--	<0.01	--	<0.01
Heptachlor Epoxide	µg/L	--	--	--	<0.01	--	<0.01
PCB 1016	µg/L	--	--	--	<0.1	--	<0.1
PCB 1221	µg/L	--	--	--	<0.5	--	<0.5
PCB 1232	µg/L	--	--	--	<0.3	--	<0.3
PCB 1242	µg/L	--	--	--	<0.1	--	<0.1
PCB 1248	µg/L	--	--	--	<0.1	--	<0.1
PCB 1254	µg/L	--	--	--	<0.05	--	<0.05
PCB 1260	µg/L	--	--	--	<0.1	--	<0.1
Toxaphene	µg/L	--	--	--	<0.5	--	<0.5

D. Compliance Summary

Monitoring data from 2002 to 2006 was reviewed to determine compliance by the Discharger with the effluent limitations specified in Order No. R4-2002-0121. This Order became effective August 31, 2002. From August 31, 2002 until October 2, 2002, the Discharger was unable to meet a new effluent total residual chlorine residual limitation of 0.1 mg/L. Prior to adoption of Order No. R4-2002-0121, a total residual chlorine residual limitation of 0.1 mg/L had been applied in the downstream receiving water, not in the effluent. When the Order was adopted, the Discharger did not have equipment in place to meet the limitation as an effluent limitation. By October 3, 2002, the Discharger had the necessary equipment in place to meet the effluent limitation. The Discharger has had six subsequent exceedances of the total residual chlorine

residual limitation, primarily caused by equipment malfunctions (two in November 2002 and one each in January 2003, August 2003, March 2006, and April 2006).

The Discharger has reported two other instances of noncompliance with the effluent limitations specified in Order No. R4-2002-0121. On October 16, 2002, an effluent grab sample had a pH of 6.3, which is below the lower pH effluent limit of 6.5. The Discharger reported that the low pH was caused by low pH wastewater entering the facility. In August 2006, the monthly average effluent limitation for ammonia was exceeded. The monthly average effluent limitation for ammonia depends on the pH and temperature of the effluent. In August 2006, the monthly average effluent limit for ammonia was 1.9 mg-N/L and the monthly average concentration of ammonia discharged was 2.8 mg-N/L. The Discharger reported that the monthly average ammonia concentration was exceeded due to a combination of an aeration basin being out of service and a high influent ammonia concentration. The Discharger also reported two exceedances of interim limitations established for cyanide (one each in March 2003 and February 2004) but later reported that these apparent exceedances were false positives caused by the analytical preservation method used.

In accordance with applicable permits and regulations, the Discharger has reported 11 wastewater overflows in the service area of the Los Coyotes WRP in the period 2002 to 2006. Five of these overflows, totaling 46,000 gallons, occurred during dry weather and were caused by blockages (construction debris, roots, debris deposited by vandals). The other six spills occurred in January 2005 and February 2005, during periods of very high intensity rainfall, and totaled 436,500 gallons.

Time Schedule Order No. R4-2002-0122

Time Schedule Order No. R4-2002-0122 was adopted concurrently with Order No. R4-2002-0121. The purpose of this Time Schedule Order was to provide interim limits for nitrogen species while the Los Coyotes WRP completed conversion to a nitrification/denitrification activated sludge process (NDN). Interim limits were established in the Time Schedule Order for ammonia and total inorganic nitrogen, with the limits expiring October 1, 2003. The Discharger met all the requirements of the Time Schedule Order, and on February 16, 2007 a letter was sent to the Discharger stating that there were no further requirements to be fulfilled under the Time Schedule Order.

E. Planned Changes

The Discharger is in the process of upgrading the NDN process at the Los Coyotes WRP to improve the reliability of the process. Upgrades include increasing the aeration capacity by replacing coarse bubble diffusers with fine bubble diffusers, increasing the return sludge capacity, upgrading influent and effluent pumps, and adding infrastructure such as more baffles to improve flow characteristics. Improvements are expected to be complete by October 2007.

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 (commencing with section 13370). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100 through 21177.

C. State and Federal Regulations, Policies, and Plans

1. Water Quality Control Plans. The Regional Water Quality Control Board (Regional Water Board) adopted a Water Quality Control Plan for the Los Angeles region (hereinafter Basin Plan) on June 13, 1994 that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to San Gabriel River are as follows:

Table 3. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	San Gabriel River: Firestone Blvd to Estuary (Hydro. Unit No. 405.15)	<p><u>Existing:</u> Water contact recreation (REC-1)⁴, non-contact water recreation (REC-2)</p> <p><u>Intermittent:</u> None</p> <p><u>Potential:</u> Warm freshwater habitat (WARM), wildlife habitat (WILD), and municipal and domestic water supply (MUN)⁵.</p>

⁴ Access prohibited by Los Angeles County DPW in concrete-channelized areas.

⁵ The potential municipal and domestic supply beneficial uses for the water body is consistent with the State Water Resources Control Board Order No. 88-63 and Regional Water Board Resolution No. 89-003; however,

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	San Gabriel River Estuary (Hydro. Unit No. 405.15)	<p><u>Existing:</u> Industrial service supply (IND), navigation (NAV), water contact recreation (REC-1), non-contact water recreation (REC-2), commercial and sport fishing (COMM), estuarine habitat (EST), marine habitat(MAR), wildlife habitat (WILD), rare, threatened or endangered species (RARE), migration of aquatic organism (MIGR), and spawning, reproduction, and/or early development (SPWN)</p> <p><u>Intermittent:</u> None</p> <p><u>Potential:</u> Shellfish harvesting (SHELL)</p>

Requirements of this Order implement the Basin Plan and subsequent amendments.

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

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

4. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 C.F.R. 131.21, 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

the Regional Water Board has only conditionally designated the MUN beneficial uses and at this time cannot establish effluent limitations designed to protect the conditional designation.

- 5. Antidegradation Policy.** Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.
- 6. Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations⁶ section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. All conventional and non-conventional pollutants effluent limitations in the Order are at least as stringent as the effluent limitations in the previous Order. All priority pollutants except for cyanide from the previous Order were deleted because they did not show reasonable potential to cause or contribute to the exceedance of water quality objectives. In addition, new information on effluent and receiving monitoring data indicated that the following pollutants has no reasonable potential: mercury, Nickel, and Bis(2-ethylhexyl) Phthalate. As discussed in this Fact Sheet, this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

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

On November 30, 2006, USEPA approved the State's 2004-2006 303(d) list of impaired waterbodies with the exception of Walnut Creek for toxicity. The list (hereinafter referred to as the 303(d) list) was prepared in accordance with section 303(d) of the Federal Clean Water Act to identify specific impaired waterbodies where water quality standards are not expected to be met after the implementation of technology-based effluent limitations on point sources. This 303(d) list was amended by USEPA on March 8, 2007 to include lead and zinc for Coyote Creek and copper for San Gabriel River Estuary. The San Gabriel River and its tributaries related to this discharge are on the 303(d) list for the following pollutants/stressors, from point and non-point sources:

San Gabriel River Reach 1 (Estuary to Firestone) - Hydrologic unit 405.15
- Coliform bacteria, , and pH

⁶ All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

San Gabriel River Estuary - Hydrologic unit 405.15
- Copper

E. Other Plans, Policies and Regulations

1. **Sources of Drinking Water Policy.** On May 19, 1988, the State Water Board adopted Resolution No. 88-63, *Sources of Drinking Water (SODW) Policy*, which established a policy that all surface and ground waters, with limited exemptions, are suitable or potentially suitable for municipal and domestic supply. To be consistent with State Water Board's SODW policy, on March 27, 1989, the Regional Water Board adopted Resolution No. 89-03, *Incorporation of Sources of Drinking Water Policy into the Water Quality Control Plans (Basin Plans) – Santa Clara River Basin (4A)/ Los Angeles River Basin (4B)*.

Consistent with Regional Water Board Resolution No. 89-03 and State Water Board Resolution No. 88-63, in 1994 the Regional Water Board conditionally designated all inland surface waters in Table 2-1 of the 1994 Basin Plan as existing, intermittent, or potential for Municipal and Domestic Supply (MUN). However, the conditional designation in the 1994 Basin Plan included the following implementation provision: "no new effluent limitations will be placed in Waste Discharge Requirements as a result of these [potential MUN designations made pursuant to the SODW policy and the Regional Water Board's enabling resolution] until the Regional Water Board adopts [a special Basin Plan Amendment that incorporates a detailed review of the waters in the Region that should be exempted from the potential MUN designations arising from SODW policy and the Regional Water Board's enabling resolution]." On February 15, 2002, the USEPA clarified its partial approval (May 26, 2000) of the 1994 Basin Plan amendments and acknowledged that the conditional designations do not currently have a legal effect, do not reflect new water quality standards subject to USEPA review, and do not support new effluent limitations based on the conditional designations stemming from the SODW Policy until a subsequent review by the Regional Water Board finalizes the designations for these waters. This permit is designed to be consistent with the existing Basin Plan.

2. **Secondary Treatment Regulations.** Section 133 of 40 CFR establishes the minimum levels of effluent quality to be achieved by secondary treatment. These limitations, established by USEPA, are incorporated into this Order, except where more stringent limitations are required by other applicable plans, policies, or regulations.
3. **Storm Water.** CWA section 402(p), as amended by the Water Quality Act of 1987, requires NPDES permits for storm water discharges. Pursuant to this requirement, in 1990, USEPA promulgated 40 CFR, Section 122.26 that established requirements for storm water discharges under an NPDES program. To facilitate compliance with federal regulations, on November 1991, the State Water Board issued a statewide general permit, *General NPDES Permit No. CAS000001 and Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities*. This permit was amended in September 1992 and reissued on April 17, 1997 in

State Water Board Order No. 97-03-DWQ to regulate storm water discharges associated with industrial activity.

General NPDES permit No. CAS000001 is applicable to storm water discharges from the Los Coyotes WRP's premises. On June 4, 1992, CSDLAC filed a Notice of Intent to comply with the requirements of the general permit. CSDLAC developed and currently implements a Storm Water Pollution Prevention Plan (SWPPP), to comply with the State Water Board's (Order No. 97-03-DWQ).

4. **Sanitary Sewer Overflows.** The Clean Water Act prohibits the discharge of pollutants from point sources to surface waters of the United States unless authorized under an NPDES permit. (33 U.S.C. 1311, 1342). The State Water Board adopted Statewide General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems, Water Quality Order No. 2006-0003 on May 2, 2006, to provide a consistent, statewide regulatory framework to address Sanitary Sewer Overflows (SSOs). The WDR requires public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and report all SSOs to the State Water Board's online SSO database.

The requirements contained in this Order in Sections VI.C.3.b, VI.C.4, and VI.C.6. are intended to be consistent with the requirements in the SSO WDR. The Regional Water Board recognizes that there are areas of overlapping interest between the NPDES permit conditions and the SSO WDR requirements. The requirements of the SSO WDR are considered the minimum thresholds (see Finding 11 of WQ Order NO. 2006-0003). The Regional Water Board will accept the documentation prepared by the Permittee under the SSO WDR for compliance purposes, as satisfying the requirements in Sections .C.3.b, VI.C.4, and VI.C.6, provided for any more specific or stringent provisions enumerated in this Order, have also been addressed.

5. **Watershed Management** - This Regional Water Board has been implementing a Watershed Management Approach (WMA) to address water quality protection in the Los Angeles Region following the USEPA guidance in *Watershed Protection: A Project Focus* (EPA841-R-95-003, August 1995). The objective of the WMA is to provide a more comprehensive and integrated strategy resulting in water resource protection, enhancement, and restoration while balancing economic and environmental impacts within a hydrologically-defined drainage basin or watershed. The WMA emphasizes cooperative relationships between regulatory agencies, the regulated community, environmental groups, and other stakeholders in the watershed to achieve the greatest environmental improvements with the resources available. The accompanying Order fosters the implementation of this approach by protecting beneficial uses in the watershed and requiring the Discharger to participate with the *Los Angeles and San Gabriel River Watershed Council*, and other stakeholders, in the development and implementation of a watershed-wide monitoring program. The Monitoring and Reporting Program (Attachment E) requires the Discharger to participate in the implementation of the Watershed-wide Monitoring Program for the San Gabriel River, which was approved by the Regional Water Board on September 25, 2006.

The *Los Angeles & San Gabriel Rivers Watershed Council* is a nonprofit organization which is tracking activities throughout the Los Angeles and San Gabriel River watersheds. Its goal is to help facilitate a process to preserve, restore, and enhance all aspects of both watersheds.

6. **Relevant Total Maximum Daily Loads** - Section 303(d) of the Clean Water Act requires states to identify waterbodies that do not meet water quality standards and then to establish TMDLs for each waterbody for each pollutant of concern. TMDLs identify the maximum amount of pollutants that can be discharged to waterbodies without causing violations of water quality standards. Several reaches or tributaries of the San Gabriel River are included on the State of California's Section 303(d) list of polluted waters due to water quality impacts associated with discharges of metals and selenium. A schedule for development of TMDLs in the Los Angeles Region was established in a consent decree approved on March 22, 1999 (Heal the Bay Inc., et al. v. Browner C 98-4825 SBA). Under the consent decree, TMDLs are required to be established for metals by March 2007. The Regional Water Board publicly noticed these TMDLs on May 5, 2006, and adopted them on July 13, 2006. However, because the State was not able to complete its process for adopting these TMDLs and obtaining EPA approval in time to meet the consent decree, USEPA agreed to establish them. On March 26, 2007, USEPA established the San Gabriel River watershed metals TMDLs. This Order includes effluent limitations for metals established by USEPA TMDLs. These effluent limitations are consistent with the concentration-based Waste Load Allocations (WLA) established for the POTWs and other point sources in these TMDLs. In this permit, Regional Water Board staff translate WLAs into effluent limits by applying the CTR/SIP procedures or other applicable engineering practices authorized under federal regulations. The copper waste load allocation for San Gabriel River Reach 1 may be modified based on the results of new studies if USEPA approves a revised TMDL and Implementation Plan for Metals in the San Gabriel River. The Regional Water Board is scheduled to consider a revised TMDL and Implementation Plan for Metals in the San Gabriel River in late 2007.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: section 122.44(a) requires that permits include applicable technology-based limitations and standards; and section 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.

A. Discharge Prohibitions

Effluent and receiving water limitations in this Board Order are based on the Federal Clean Water Act, Basin Plan, State Water Board's plans and policies, U. S. Environmental Protection Agency guidance and regulations, and best practicable waste treatment

technology. This order authorizes the discharge of tertiary-treated wastewater, only through Discharge Point 001. It does not authorize any other types of discharges.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations, require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at Part 133.

2. Applicable Technology-Based Effluent Limitations

This facility is subject to the technology-based regulations for the minimum level of effluent quality attainable by secondary treatment in terms of BOD₅20°C, TSS, and pH.

Previous Order No. R4-2002-0121 had established technology-based effluent limits to meet applicable secondary treatment standards. All technology-based effluent limitations from the previous Order are for tertiary treated wastewater and have been carried over to avoid backsliding (see section IV.C.2.). Furthermore, mass-based effluent limitations based on a design flow rate of 37.5 MGD are also included. The following table summarizes the technology-based effluent limitations for the discharge from the Facility:

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

Table 4. Summary of Technology-based Effluent Limitations for Discharge Point 001

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
BOD ₅ 20 °C	mg/L	20	30	45	--	--
	lbs/day ⁷	6,300	9,400	14,100	--	--
Total Suspended Solids (TSS)	mg/L	15	40	45	--	--
	lbs/day ⁷	4,700	12,500	14,100	--	--
pH	standard units	--	--	--	6.5	8.5
Removal Efficiency for BOD and TSS	%	85	--	--	--	--

⁷ The mass emission rates are based on the plant design flow rate of 25 mgd, and are calculated as follows: Flow(MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day. During wet-weather storm events in which the flow exceeds the design capacity, the mass discharge rate limitations shall not apply, and concentration limitations will provide the only applicable effluent limitations.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. This Order contains requirements, expressed as a technology equivalence requirement, more stringent than secondary treatment requirements that are necessary to meet applicable water quality standards. The rationale for these requirements, which consist of tertiary treatment requirements, is discussed in Section IV.C.2.b.(i) and (ii).

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

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

- a. The Basin Plan establishes the beneficial uses for surface water bodies in the Los Angeles region. The beneficial uses of the San Gabriel River affected by the discharge have been described previously in this Fact Sheet.
- b. The Basin Plan also specifies narrative and numeric water quality objectives applicable to surface water as shown in the following discussions.

i. Biochemical Oxygen Demand (BOD) and Suspended solids

Biochemical oxygen demand (BOD) is a measure of the quantity of the organic matter in the water and, therefore, the water's potential for becoming depleted in dissolved oxygen. As organic degradation takes place, bacteria and other decomposers use the oxygen in the water for respiration. Unless there is a steady resupply of oxygen to the system, the water will quickly become depleted of oxygen. Adequate dissolved oxygen levels are required to support aquatic

life. Depressions of dissolved oxygen can lead to anaerobic conditions resulting in odors, or, in extreme cases, in fish kills.

40 CFR Part 133 describes the minimum level of effluent quality attainable by secondary treatment, for BOD and suspended solids, as:

- the 30-day average shall not exceed 30 mg/L and
- the 7-day average shall not exceed 45 mg/L.

Los Coyotes WRP provides tertiary treatment, as such, the BOD and suspended solids limits in the permit being more stringent than secondary treatment requirements are based on Best Professional Judgment. The Facility achieves solids removal that are better than secondary-treated wastewater by adding a polymer (Alum) to enhance the precipitation of solids, and by filtering the effluent.

The monthly average, the weekly average, and the daily maximum limits cannot be removed because none of the antibacksliding exceptions apply. Those limits were all included in the previous permit (Order No. R4-2002-0121) and the Los Coyotes WRP has been able to meet all three limits (monthly average, the weekly average, and the daily maximum), for both BOD and suspended solids.

In addition to having mass-based and concentration-based effluent limitations for BOD and suspended solids, the Los Coyotes WRP also has a percent removal requirement for these two constituents. In accordance with 40 CFR sections 133.102(a)(3) and 133.102(b)(3), the 30-day (monthly) average percent removal shall not be less than 85 percent. Percent removal is defined as a percentage expression of the removal efficiency across a treatment plant for a given pollutant parameter, as determined from the 30-day (monthly) average values of the raw wastewater influent pollutant concentrations to the facility and the 30-day (monthly) average values of the effluent pollutant concentrations for a given time period.

ii. **pH**

The hydrogen ion activity of water (pH) is measured on a logarithmic scale, ranging from 0 to 14. While the pH of "pure" water at 25°C is 7.0, the pH of natural waters is usually slightly basic due to the solubility of carbon dioxide from the atmosphere. Minor changes from natural conditions can harm aquatic life. In accordance with 40 CFR section 133.102(c), the effluent values for pH shall be maintained within the limits of 6.0 to 9.0 unless the POTW demonstrates that: (1) Inorganic chemicals are not added to the waste stream as part of the treatment process; and (2) contributions from industrial sources do not cause the pH of the effluent to be less than 6.0 or greater than 9.0. The effluent limitation for pH in this permit requiring that the wastes discharged shall at all times be within the range of 6.5 to 8.5 is taken from the Basin Plan (page 3-15) which reads "the pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharge."

iii. **Settleable solids**

Excessive deposition of sediments can destroy spawning habitat, blanket benthic (bottom dwelling) organisms, and abrade the gills of larval fish. The limits for settleable solids are based on the Basin Plan (page 3-16) narrative, "Waters shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses." The numeric limits are empirically based on results obtained from the settleable solids 1-hour test, using an Imhoff cone.

It is impracticable to use a weekly average limitation, because short-term spikes of settleable solid levels that would be permissible under a weekly average scheme would not be adequately protective of all beneficial uses. The monthly average and the daily maximum limits cannot be removed because none of the antibacksliding exceptions apply. The monthly average and daily maximum limits were both included in the previous permit (Order No. R4-2002-0121) and the Los Coyotes WRP has been able to meet both limits.

iv **Oil and grease**

Oil and grease are not readily soluble in water and form a film on the water surface. Oily films can coat birds and aquatic organisms, impacting respiration and thermal regulation, and causing death. Oil and grease can also cause nuisance conditions (odors and taste), are aesthetically unpleasant, and can restrict a wide variety of beneficial uses. The limits for oil and grease are based on the Basin Plan (page 3-11) narrative, "Waters shall not contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses."

The numeric limits are empirically based on concentrations at which an oily sheen becomes visible in water. It is impracticable to use a 7-day average limitation, because spikes that occur under a 7-day average scheme could cause a visible oil sheen. A 7-day average scheme would not be sufficiently protective of beneficial uses. The monthly average and the daily maximum limits cannot be removed because none of the antibacksliding exceptions apply. Both limits were included in the previous permit (Order No. R4-2002-0121) and the Los Coyotes WRP has been able to meet both limits.

v. **Residual chlorine**

Disinfection of wastewaters with chlorine produces a chlorine residual. Chlorine and its reaction products are toxic to aquatic life. The limit for residual chlorine is based on the Basin Plan (page 3-9) narrative, "Chlorine residual shall not be present in surface water discharges at concentrations that exceed 0.1 mg/L and shall not persist in receiving waters at any concentration that causes impairment of beneficial uses."

It is impracticable to use a weekly average or a monthly average limitation, because it is not as protective as of beneficial uses as a daily maximum limitation is. Chlorine is very toxic to aquatic life and short term exposures of chlorine may cause fish kills.

vi. **Total Inorganic Nitrogen (NO₂ + NO₃ as N)**

Total inorganic nitrogen is the sum of Nitrate-nitrogen and Nitrite-nitrogen. High nitrate levels in drinking water can cause health problems in humans. Infants are particularly sensitive and can develop methemoglobinemia (blue-baby syndrome). Nitrogen is also considered a nutrient. Excessive amounts of nutrients can lead to other water quality impairments.

(a). **Algae.**

Excessive growth of algae and/or other aquatic plants can degrade water quality. Algal blooms sometimes occur naturally, but they are often the result of excess nutrients (i.e., nitrogen, phosphorus) from waste discharges or nonpoint sources. These algal blooms can lead to problems with tastes, odors, color, and increased turbidity and can depress the dissolved oxygen content of the water, leading to fish kills. Floating algal scum and algal mats are also an aesthetically unpleasant nuisance.

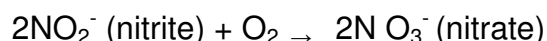
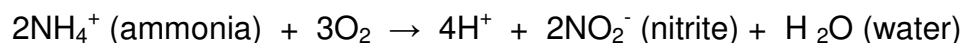
The WQO for biostimulatory substances are based on Basin Plan (page 3-8) narrative, "Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses," and other relevant information to arrive at a mass based-limit intended to be protective of the beneficial uses, pursuant to 40 CFR section 122.44(d). Total inorganic nitrogen will be the indicator parameter intended to control algae, pursuant to 40 CFR section 122.44(d)(1)(vi)(C).

(b). **Concentration-based limit.** Basin Plan Table 3-8 (page 3-13) reads, "no waterbody specific objectives," for the San Gabriel River watershed between Firestone Boulevard and San Gabriel River estuary (downstream from Willow Street) including Coyote Creek. In addition, there are no applicable water quality criteria for these constituents to protect the designated uses of this reach of the San Gabriel River. The effluent limit for total inorganic nitrogen of 8 mg/L was set based on the average concentration achievable by nitrification/ denitrification (NDN) technology by the Discharger. The limit is intended to prevent the facility from discharging unlimited amounts of nutrients to the San Gabriel River.

(c). **Mass-based limit.** The mass emission rates are based on the plant design flow rate of 37.5 mgd.

vii. Nitrite as Nitrogen

A final nitrite limitation of 1 mg/L has been added to the Order based upon best professional judgment and Basin Plan water quality objective for nitrite nitrogen, because in the process of reducing ammonia concentrations by a process such as nitrification-denitrification, the ammonia and organic nitrogen are oxidized to nitrite before final conversion to nitrate. Therefore there is reasonable potential for nitrite to be present in the discharge if the oxidation process is not complete.



viii. Total Ammonia

Ammonia is a pollutant routinely found in the wastewater effluent of POTWs, in landfill leachate, and in runoff from agricultural fields where commercial fertilizers and animal manure are applied. Ammonia exists in two forms – unionized ammonia (NH_3) and the ammonium ion (NH_4^+). They are both toxic, but the neutral, unionized ammonia species (NH_3) is much more toxic, because it is able to diffuse across the epithelial membranes of aquatic organisms much more readily than the charged ammonium ion. The form of ammonia is primarily a function of pH, but it is also affected by temperature and other factors. Additional impacts can also occur as the oxidation of ammonia lowers the dissolved oxygen content of the water, further stressing aquatic organisms. Oxidation of ammonia to nitrate may lead to groundwater impacts in areas of recharge. However, there is no groundwater recharge in the reaches downstream of this facility. Ammonia also combines with chlorine to form chloramines – persistent toxic compounds that extend the effects of ammonia and chlorine downstream.

The 1994 Basin Plan contained water quality objectives for ammonia to protect aquatic life, in Tables 3-1 through Tables 3-4. However, those ammonia objectives were revised on April 25, 2002 by the Regional Water Board, with the adoption of Resolution No. 2002-011, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters (Including enclosed bays, estuaries and wetland) with Beneficial Use designations for the protection of Aquatic Life*. Resolution No. 2002-011 was approved by the State Water Board, the Office of Administrative Law, and USEPA on April 20, 2003, June 5, 2003, and June 19, 2003, respectively, and is now in effect.

On December 1, 2005, The Regional Water Board adopted Resolution No. 2005-014, *An Amendment to the Water Quality Control Plan for the Los Angeles Region to Revise Early Life Stage Implementation Provision of the Freshwater Ammonia Objectives for Inland Surface Waters (including*

enclosed bays, estuaries and wetlands) for Protection of Aquatic Life. The amendment contains ammonia objectives to protect Early Life Stages (ELS) of fish in inland surface water supporting aquatic life. However, this resolution has not yet been approved by the USEPA. This amendment will revise the implementation provision included as part of the freshwater ammonia objectives relative to the protection of ELS of fish in inland surface waters. ELS of fish has been determined to be absent in Reach 1 of San Gabriel River to Estuary.

The limitations for ammonia prescribed in this Order are based on the ammonia criteria as revised by Resolution 2002-011 and Resolution 2002-014.

Table 3 (Basin Plan Beneficial Uses) of this Fact Sheet summarizes the applicable beneficial uses for the receiving water body. This table indicates that the San Gabriel River Estuary (the immediate downstream of Discharge Point 001) has an existing "MIGR" beneficial use.

(a). One-Hour Average Objective

The Facility discharges into a receiving waterbody that has "MIGR" beneficial use designation. According to the Basin Plan, it is assumed that salmonids may be present in waters designated in the Basin Plan as "COLD" or "MIGR." However, in the USEPA approval letter dated June 19, 2003, of the 2002 Ammonia Basin Plan Amendment, USEPA discussed it clearly that the acute criteria are dependent on pH and whether sensitive coldwater fish are present. Although the Estuary has an MIGR, it has no COLD beneficial use designation. There are no coldwater fish present in the receiving water. Therefore, the receiving water will be designated as "Waters not Designated Cold or MIGR." The one-hour average objective is pH dependent and fish species salmonids present but not temperature.

For water, the one-hour average concentration of total ammonia as nitrogen (in mg N/L) shall not exceed the values in Table 3-1 (amended on April 25, 2002) of the Basin Plan or as described in the equation below:

$$\text{One-hour Average Concentration} = \frac{0.411}{1 + 10^{7.204 - \text{pH}}} + \frac{58.4}{1 + 10^{\text{pH} - 7.204}}$$

The 90th percentile of effluent pH is 7.5. Use of 90th percentile pH to set effluent limitations is appropriate because of the shorter time scale of the one-hour average. It is conservative, because it is overprotective 90% of the time. Additionally, there is little variability in the effluent pH data. Using the pH value of 7.5 in the formula above, the resulting One-hour Average Objective is equal to 19.9 mg/L.

(b). 30-Day Average Objective

Early life stage of fish is presumptively present and must be protected at all times of the year unless the water body is listed in Table 3-X of the Basin Plan (as in Resolution No. 2005-014) or unless a site-specific study is conducted, which justifies applying the ELS absent condition or a seasonal ELS present condition. Coyote Creek to Estuary and San Gabriel River from Firestone Boulevard to Estuary are listed in Table 3-X. Therefore, the above-mentioned receiving waters are considered “ELS Absent” condition. For freshwaters subject to the “Early Life Stage Absent” condition, the thirty-day average concentration of total ammonia as nitrogen (in mg N/L) shall not exceed the values in Table 3-3 of the Basin Plan or as described in the equation below:

$$\text{30-day Average Concentration} = \left(\frac{0.0577}{1 + 10^{7.688 - \text{pH}}} + \frac{2.487}{1 + 10^{\text{pH} - 7.688}} \right) * 1.45 * 10^{0.028 * (25 - \text{MAX}(T, 7))}$$

Where T = temperature expressed in °C.

The 30-day average objective⁸ is dependent on pH, temperature, and the presence or absence of early life stages of fish. The 50th percentile of effluent pH and temperature is 7.4 pH and 26.1 °C, respectively. Use of the 50 percentile pH and temperature is appropriate to set the 30-day average objective, because the 30-day average represents more long-term conditions. Additionally, there is little variability in the effluent pH data, and the 30-day objective is primarily dependent upon pH. Using the Discharger’s monitoring data in the formula above, the resulting 30-day Average Objective is equal to 2.24 mg/L.

(c). Site Specific Objective (SSO) 30-Day Average Objective

On June 7, 2007, the Regional Water Board adopted *Amendments to the Water Quality Control Plan-Los Angeles Region-To Incorporate Site-Specific Objectives for Select Inland Surface Waters in the San Gabriel River, Los Angeles River and Santa Clara River Watersheds*. This amendment to the Basin Plan will incorporate site-specific 30-day average objectives for ammonia along with corresponding site-specific early life stage implementation provisions for select waterbody reaches and tributaries in Santa Clara, Los Angeles, and San Gabriel River watersheds. Once the amendment is approved by USEPA, this permit

⁸ This is the current Basin Plan definition of the 30-day average objective, according to the Ammonia Basin Plan Amendment, Resolution No. 2002-011, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters (including enclosed bays, estuaries and wetlands) with Beneficial Use designations for protection of “Aquatic Life,”* adopted by the Los Angeles Regional Water Quality Control Board on April 25, 2002. It will be amended by Resolution No. 2005-014, adopted by the Regional Board on December 1, 2005 and was approved by the USEPA on April 5, 2007. This new Resolution will implement ELS Provision as described under “implementation”, subparagraph 3. In this Resolution, the Discharger’s receiving waterbody is designated as ELS absent.

will be reopened to incorporate the SSO-derived 30-day objective. The application of the SSO is not considered backsliding under Exception (2) of Section 4029(o)(2) of the Clean Water Act 40 CFR 122.44. At this time, any calculation of SSO-derived effluent limitations will not be included in this permit.

This permit includes final effluent ammonia effluent limitations based on effluent pH and temperature. Conditions in the effluent may be significantly different than the receiving water conditions. The Basin Plan's water quality objective for ammonia shall be met at the receiving water at all times. In this permit, the Discharger has to meet the ammonia water quality objectives within the first 100 feet downstream of the discharge outfall. In order to determine the variability and changing conditions in the receiving water, additional receiving water monitoring and compliance determinations will be required in addition to the effluent limits, to ensure that ammonia water quality objectives are met in the receiving water at all times.

This permit requires the Discharger to submit an approvable workplan to determine the pH and temperature fluctuations in the first 100 feet downstream of the discharge outfall. This workplan shall be submitted to this Regional Board for approval by the Executive Officer within 60 days from the date of adoption of this permit.

The incorporation of effluent limitations for ammonia based on effluent pH and temperature is not considered to be the long-term solution to compliance with the ammonia limitations. The receiving water pH and temperature study, plant operational adjustments where possible (to reduce variability), and further site-specific objective studies will inform the longer term solutions to compliance with ammonia limitations.

(d). Translation of Ammonia Nitrogen Objectives into Effluent Limitations

In order to translate the water quality objectives for ammonia as described in the preceding discussions into effluent limitations, the Implementation Provisions of the 2002 Basin Plan Amendment, Section 5 – Translation of Objectives into Effluent Limits, was followed and was discussed below. This method is similar to the method contained in “Policy for Implementation of Toxics Standard for Inland Surface Waters, Enclosed Bays, and Estuaries of California (2000). The method is also consistent with that outlined in the US EPA “Technical Support Document for Water Quality-based Toxics Control (1991).

Step 1 – Identify applicable water quality criteria.

Effluent pH and temperature are used to calculate effluent ammonia limits. This is appropriate when using the translation procedure, because the

translation procedure uses variability in ammonia effluent concentrations to set the limits from the objectives. Additionally, conditions in the effluent may be significantly different than conditions in the receiving water. Use of effluent data to set effluent ammonia limits will ensure that ammonia water quality objectives are met in the effluent at all times, even in the case where effluent conditions are less favorable than receiving water conditions. Additional receiving water monitoring and compliance determinations will be required in addition to the effluent limits, to ensure that ammonia water quality objectives are met in the receiving water at all times.

From the Discharger's effluent , the following data are summarized below:

pH = 7.5 at 90th percentile

pH = 7.4 at 50th percentile
Temperature = 26.1 °C

The receiving water is classified as *Waters Not Designated COLD and/or MIGR*.

From Table 3-1 of the Basin Plan, when pH is equal to 7.5 ;

One-hour Average Objective = 19.9 mg/L

From Table 3-2 of the Basin Plan, when pH = 7.4 and temperature = 26.1 °C;

30-day Average Objective = 2.24 mg/L

From Basin Plan amendment;

4-day Average Objective = 2.5 times the 30-day average objective.
4-day Average Objective = 2.5 X 2.24 = 5.60 mg/L

Ammonia Water Quality Objectives (WQO) Summary:

One-hour Average	= 19.9 mg/L
Four-day Average	= 5.60 mg/L
30-day Average	= 2.24 mg/L

Step 2 – For each water quality objective, calculate the effluent concentration allowance (ECA) using the steady-state mass balance model. Since mixing has not been allowed by the Regional Board, this equation applies:

ECA = WQO

Step 3 – Determine the Long-Term Average discharge condition (LTA) by multiplying each ECA with a factor (multiplier) that adjust for variability. By using Table 3-6, calculated CV (i.e., standard deviation/mean for ammonia), the following are the Effluent Concentration Allowance.

ECA multiplier when CV = 0.5

One-hour Average	= 0.373
Four-day Average	= 0.581
30-day Average	= 0.812

Using the LTA equations:

$$LTA_{1\text{-hour}/99} = ECA_{1\text{-hour}} \times ECA \text{ multiplier}_{1\text{-hour}99} = 19.9 \times 0.373 = 7.42 \text{ mg/L}$$

$$LTA_{4\text{-day}/99} = ECA_{4\text{-day}} \times ECA \text{ multiplier}_{4\text{-day}99} = 5.60 \times 0.581 = 3.25 \text{ mg/L}$$

$$LTA_{30\text{-day}/99} = EC_{30\text{-day}} \times ECA \text{ multiplier}_{30\text{-day}99} = 2.24 \times 0.812 = 1.82 \text{ mg/L}$$

Step 4 – Select the (most limiting) of the LTAs derived in Step 3 (LTA_{\min})

$$LTA_{\min} = 1.82 \text{ mg/L}$$

Step 5 – Calculate water based effluent limitation MDEL and AMEL by multiplying LTA_{\min} as selected in Step 4, with a factor (multiplier) found in Table 3-7.

Monthly sampling frequency (n) is 30 times per month or less, and the minimum LTA is the $LTA_{30\text{-day}/99}$, therefore $n = 30$, $CV = 0.5$. $CV = 0.5$ was obtained from analysis of effluent data.

$$\text{MDEL multiplier} = 2.68$$

$$\text{AMEL multiplier} = 1.16$$

$$\text{MDEL} = LTA_{\min} \times \text{MDEL multiplier}_{99} = 1.82 \times 2.68 = 4.88 \text{ mg/L}$$

$$\text{AMEL} = LTA_{\min} \times \text{AMEL multiplier}_{95} = 1.82 \times 1.16 = 2.11 \text{ mg/L}$$

Table 5. Translated Ammonia Effluent Limitations

Constituent	MDEL mg/L	AMEL mg/L
Ammonia Nitrogen	4.9	2.1

(e). Receiving Water Ammonia Limitation

To ensure that downstream receiving waters are protected at all times, the Discharger will be required to establish a monitoring location in the San Gabriel River that is within 100 feet of the discharge (RSW-002A). The purpose of the monitoring location will be to ensure that ammonia water quality objectives are met in the receiving water, even immediately downstream of the discharge when there has been little time for uptake or volatilization of ammonia in the receiving water. Concurrent sampling of ammonia, pH, and temperature will be required at this monitoring location. The Discharger will be required to compare ammonia results to Basin Plan ammonia water quality objectives, based on the real-time pH and temperature data collected at the time of ammonia sampling.

ix. Coliform

Total and fecal coliform bacteria are used to indicate the likelihood of pathogenic bacteria in surface waters. Given the nature of the facility, a wastewater treatment plant, pathogens are likely to be present in the effluent in cases where the disinfection process is not operating adequately. As such, the permit contains the following filtration and disinfection technology-based effluent limitations for coliform:

- the median number of total coliform bacteria at some point in the disinfected effluent must not exceed an MPN or CFU of 2.2 per 100 milliliters;
- the number of total coliform bacteria must not exceed an MPN or CFU of 23 per 100 milliliters in more than one sample within any 30-day period; and
- no sample shall exceed an MPN or CFU of 240 total coliform bacteria per 100 milliliters in more than one sample in any 30 day period.

These limits for coliform must be met at the point of the treatment train immediately following disinfection. Coliform is 303d listed in Reach one of the San Gabriel River to which the Los Coyotes WRP discharges. The disinfection and filtration processes employed by the Facility can reduce the likelihood of having pathogens in the effluent. Since most of the time the coliform analyses results are reported as less than 1 MPN/ 100 mL, it is not likely that the 303d listing of coliform is due to the discharge of treated effluent from the Facility. Therefore, the technology-based effluent limitation is protective of water quality.

x. Turbidity

Turbidity is an expression of the optical property that causes light to be scattered in water due to particulate matter such as clay, silt, organic matter, and microscopic organisms. Turbidity can result in a variety of water quality impairments. The effluent limitation for turbidity which reads, "For the protection of the water contact recreation beneficial use, the wastes discharged to water courses shall have received adequate treatment, so that the turbidity of the wastewater does not exceed: (a) a daily average of 2 Nephelometric turbidity units (NTU); (b) 5 NTU more than 5 percent of the time (72 minutes) during any 24 hour period; and (c) 10 NTU at any time" is based on the Basin Plan (page 3-17) and Section 60301.320 of Title 22, Chapter 3, "Filtered Wastewater" of the California Code of Regulations.

xi. **Radioactivity**

Radioactive substances are generally present in natural waters in extremely low concentrations. Mining or industrial activities increase the amount of radioactive substances in waters to levels that are harmful to aquatic life, wildlife, or humans. The discharge is subject to the Basin Plan's (Basin Plan page 3-15) narrative limitation on radionuclides, "Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life or that result in accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life."

c. **CTR and SIP**

The California Toxics Rule (CTR) and State Implementation Policy (SIP) specify numeric objectives for toxic substances and the procedures whereby these objectives are to be implemented. The procedures include those used to conduct reasonable potential analysis to determine the need for effluent limitations for priority and non-priority pollutants.

3. Determining the Need for WQBELs

The Regional Water Board developed WQBELs for copper that have available wasteload allocations under a Total Maximum Daily Loads (TMDL) established by USEPA on March 26, 2007. The effluent limitations for these pollutants were established regardless of whether or not there is reasonable potential for the pollutants to be present in the discharge at levels that would cause or contribute to a violation of water quality standards. The Regional Water Board developed water quality-based effluent limitations for these pollutants pursuant to section 122.44(d)(1)(vii), which does not require or contemplate a reasonable potential analysis. Similarly, the SIP at Section 1.3 recognizes that reasonable potential analysis is not appropriate if a TMDL has been developed.

In accordance with Section 1.3 of the SIP, Regional Water Board staff conducted a reasonable potential analysis (RPA) for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. Regional

Water Board staff analyzed effluent data to determine if a pollutant in a discharge has a reasonable potential to cause or contribute to an excursion above a state water quality standard. For all parameters that demonstrate reasonable potential, numeric WQBELs are required. The RPA considers water quality criteria from the CTR and NTR, and when applicable, water quality objectives specified in the Basin Plan. To conduct the RPA, Regional Water Board staff identified the maximum effluent concentration (MEC) and maximum background concentration in the receiving water for each constituent, based on data provided by the Discharger. The monitoring data cover the period from October 2003, when the Discharger is required to be in compliance with nitrogen limits, to June 2006. However, the cyanide effluent data only cover the period from January 2006 to January 2007 because the Discharger considers cyanide effluent data prior to January 2006 to be questionable.

Section 1.3 of the SIP provides the procedures for determining reasonable potential to exceed applicable water quality criteria and objectives. The SIP specifies three triggers to complete a RPA:

Trigger 1 – If the MEC is greater than or equal to the CTR water quality criteria or applicable objective (C), a limitation is needed.

Trigger 2 – If background water quality (B) > C and the pollutant is detected in the effluent, a limitation is needed.

Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, then best professional judgment is used to determine that a limit is needed.

Sufficient effluent and ambient data are needed to conduct a complete RPA. If data are not sufficient, the Discharger will be required to gather the appropriate data for the Regional Water Board to conduct the RPA. Upon review of the data, and if Regional Water Board staff determines that WQBELs are needed to protect the beneficial uses, the permit will be reopened for appropriate modification.

The RPA was performed for the priority pollutants regulated in the CTR for which data are available. Based on the RPA, the only pollutant that demonstrates reasonable potential is cyanide. The following table summarizes results from RPA.

Table 6. Summary of Reasonable Potential Analysis

CTR No.	Constituent	Applicable Water Quality Criteria (C) µg/L	Maximum Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc.(B) µg/L	RPA Result - Need Limitation?	Reason
1	Antimony	4300	2	0.8	No	C>B, C>MEC
2	Arsenic	150	2.1	2.2	No	C>B, C>MEC
3	Beryllium	Narrative	0.1	<0.25	No	C>B, C>MEC
4	Cadmium	4.0	1	0.2	No	C>B, C>MEC
5a	Chromium III	339	1.05	1	No	C>B, C>MEC
5b	Chromium VI	11	7.7	2	No	C>B, C>MEC
6	Copper	17.6	10	10	Yes	TMDL
7	Lead	5.9	4.0	1	No	C>B, C>MEC
8	Mercury	0.051	0.03	0.017	No	C>B, C>MEC
9	Nickel	101.3	26.5	56	No	C>B, C>MEC
10	Selenium	5	1.1	0.6	No	C>B, C>MEC
11	Silver	11.4	0.059	0.23	No	C>B, C>MEC
12	Thallium	6.3	0.06	0.04	No	C>B, C>MEC
13	Zinc	210.8	96	82	No	C>B, C>MEC
14	Cyanide	5.2	3.6	6	Yes	B>C
15	Asbestos	7x10 ⁶ fibers/L	No sample	No sample	No	N/A
16	2,3,7,8-TCDD (Dioxin)	1.4x10 ⁻⁰⁸	No sample	No sample	No	N/A
17	Acrolein	780	0.49	<2	No	C>B, C>MEC
18	Acrylonitrile	0.66	<2	<2	No	C>B, C>MEC
19	Benzene	71	<0.5	<0.5	No	C>B, C>MEC
20	Bromoform	360	1	0.4	No	C>B, C>MEC
21	Carbon Tetrachloride	4.4	0.2	<0.5	No	C>B, C>MEC
22	Chlorobenzene	21,000	<0.5	<0.5	No	C>B, C>MEC
23	Dibromochloromethane	34	4	1.4	No	C>B, C>MEC
24	Chloroethane	No criteria	<0.5	<0.5	No	No criteria
25	2-chloroethyl vinyl ether	No criteria	<0.5	<0.5	No	No criteria
26	Chloroform	No criteria	12	13	No	No criteria
27	Dichlorobromomethane	46	10	5	No	C>B, C>MEC
28	1,1-dichloroethane	No criteria	<0.5	<0.5	No	No criteria
29	1,2-dichloroethane	99	<0.5	<0.5	No	C>B, C>MEC
30	1,1-dichloroethylene	3.2	<0.5	<0.5	No	C>B, C>MEC
31	1,2-dichloropropane	39	<0.5	<0.5	No	C>B, C>MEC
32	1,3-dichloropropylene	1,700	<0.5	<0.5	No	C>B, C>MEC
33	Ethylbenzene	29,000	<0.5	<0.5	No	C>B, C>MEC
34	Methyl bromide	4,000	<0.5	<0.5	No	C>B, C>MEC
35	Methyl chloride	No criteria	0.1	0.2	No	No criteria
36	Methylene chloride	1,600	2.4	1	No	C>B, C>MEC
37	1,1,2,2-tetrachloroethane	11	<0.5	0.5	No	C>B, C>MEC
38	Tetrachloroethylene	8.85	<0.5	0.2	No	C>B, C>MEC
39	Toluene	200,000	0.2	0.2	No	C>B, C>MEC

CTR No.	Constituent	Applicable Water Quality Criteria (C) µg/L	Maximum Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc.(B) µg/L	RPA Result - Need Limitation?	Reason
40	Trans 1,2-Dichloroethylene	140,000	<0.5	<0.5	No	C>B, C>MEC
41	1,1,1-Trichloroethane	No criteria	<0.5	<0.5	No	No criteria
42	1,1,2-Trichloroethane	42	<0.5	<0.5	No	C>B, C>MEC
43	Trichloroethylene	81	<0.5	<0.5	No	C>B, C>MEC
44	Vinyl Chloride	525	<0.5	<1	No	C>B, C>MEC
45	2-chlorophenol	400	<5	<5	No	C>B, C>MEC
46	2,4-dichlorophenol	790	<5	<5	No	C>B, C>MEC
47	2,4-dimethylphenol	2,300	<2	<2	No	C>B, C>MEC
48	4,6-dinitro-o-resol(aka 2-methyl-4,6-Dinitrophenol)	765	<5	<5	No	C>B, C>MEC
49	2,4-dinitrophenol	14,000	<5	<5	No	C>B, C>MEC
50	2-nitrophenol	No criteria	<10	<10	No	No criteria
51	4-nitrophenol	No criteria	<10	<10	No	No criteria
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	No criteria	<1	<1	No	No criteria
53	Pentachlorophenol	8.2	<1	<5	No	C>B, C>MEC
54	Phenol	4,600,000	<1	<1	No	C>B, C>MEC
55	2,4,6-trichlorophenol	6.5	1.4	1.6	No	C>B, C>MEC
56	Acenaphthene	2,700	<1	<1	No	C>B, C>MEC
57	Acenaphthylene	No criteria	<10	<10	No	No criteria
58	Anthracene	110,000	<10	<10	No	C>B, C>MEC
59	Benzidine	0.00054	<5	<5	No	C>B, C>MEC
60	Benzo(a)Anthracene	0.049	<5	<5	No	C>B, C>MEC
61	Benzo(a)Pyrene	0.049	<0.02	<0.02	No	C>B, C>MEC
62	Benzo(b)Fluoranthene	0.049	0.008	0.007	No	C>B, C>MEC
63	Benzo(ghi)Perylene	No criteria	<5	<5	No	No criteria
64	Benzo(k)Fluoranthene	0.049	0.008	0.007	No	C>B, C>MEC
65	Bis(2-Chloroethoxy) methane	No criteria	<5	<5	No	No criteria
66	Bis(2-Chloroethyl)Ether	1.4	<1	<1	No	C>B, C>MEC
67	Bis(2-Chloroisopropyl) Ether	170,000	<2	<2	No	C>B, C>MEC
68	Bis(2-Ethylhexyl)Phthalate	5.9	3.2	0.73	Yes	B>C, MEC>C
69	4-Bromophenyl Phenyl Ether	No criteria	<5	<5	No	No criteria
70	Butylbenzyl Phthalate	5,200	<10	<10	No	C>B, C>MEC
71	2-Chloronaphthalene	4,300	<10	<10	No	C>B, C>MEC
72	4-Chlorophenyl Phenyl Ether	No criteria	<5	<5	No	No criteria
73	Chrysene	0.049	<0.02	0.037	No	C>B, C>MEC
74	Dibenzo(a,h)	0.049	<0.02	0.077	No	C>B, C>MEC

CTR No.	Constituent	Applicable Water Quality Criteria (C) µg/L	Maximum Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc.(B) µg/L	RPA Result - Need Limitation?	Reason
	Anthracene					
75	1,2-Dichlorobenzene	17,000	<2	<2	No	C>B, C>MEC
76	1,3-Dichlorobenzene	2,600	<1	<1	No	C>B, C>MEC
77	1,4-Dichlorobenzene	2,600	0.46	<1	No	C>B, C>MEC
78	3-3'-Dichlorobenzidine	0.077	<5	<5	No	C>B, C>MEC
79	Diethyl Phthalate	120,000	<2	<2	No	C>B, C>MEC
80	Dimethyl Phthalate	2,900,000	<2	<2	No	C>B, C>MEC
81	Di-n-Butyl Phthalate	12,000	<10	<10	No	C>B, C>MEC
82	2-4-Dinitrotoluene	9.1	<5	<5	No	C>B, C>MEC
83	2-6-Dinitrotoluene	No criteria	<5	<5	No	No criteria
84	Di-n-Octyl Phthalate	No criteria	<10	<10	No	No criteria
85	1,2-Diphenylhydrazine	0.54	<1	<1	No	C>B, C>MEC
86	Fluoranthene	370	<1	<1	No	C>B, C>MEC
87	Fluorene	14,000	<10	<10	No	C>B, C>MEC
88	Hexachlorobenzene	50	<1	<1	No	C>B, C>MEC
89	Hexachlorobutadiene	50	<1	<1	No	C>B, C>MEC
90	Hexachlorocyclopentadiene	17,000	<5	<5	No	C>B, C>MEC
91	Hexachloroethane	8.9	<1	<1	No	C>B, C>MEC
92	Indeno(1,2,3-cd)Pyrene	0.049	<0.02	<0.02	No	C>B, C>MEC
93	Isophorone	600	<1	<1	No	C>B, C>MEC
94	Naphthalene	No criteria	<1	<1	No	No criteria
95	Nitrobenzene	1,900	<1	<1	No	C>B, C>MEC
96	N-Nitrosodimethylamine	8.1	<5	3.6	No	C>B, C>MEC
97	N-Nitrosodi-n-Propylamine	1.4	<5	<5	No	C>B, C>MEC
98	N-Nitrosodiphenylamine	16	<1	<1	No	C>B, C>MEC
99	Phenanthrene	No criteria	<5	<5	No	No criteria
100	Pyrene	11,000	<10	<10	No	C>B, C>MEC
101	1,2,4-Trichlorobenzene	No criteria	<5	<5	No	No criteria
102	Aldrin	0.00014	<0.01	<0.01	No	C>B, C>MEC
103	Alpha-BHC	0.013	<0.01	<0.01	No	C>B, C>MEC
104	Beta-BHC	0.046	<0.01	<0.01	No	C>B, C>MEC
105	Gamma-BHC (aka Lindane)	0.063	0.06	0.01	No	C>B, C>MEC
106	delta-BHC	No criteria	<0.01	<0.01	No	No criteria
107	Chlordane	0.00059	<0.05	<0.05	No	C>B, C>MEC
108	4,4'-DDT	0.00059	<0.01	<0.01	No	C>B, C>MEC
109	4,4'-DDE	0.00059	<0.01	<0.01	No	C>B, C>MEC
110	4,4'-DDD	0.00084	<0.01	<0.01	No	C>B, C>MEC
111	Dieldrin	0.00014	<0.01	<0.01	No	C>B, C>MEC
112	Alpha-Endosulfan	0.056	<0.01	<0.01	No	C>B, C>MEC
113	Beta-Endosulfan	0.056	<0.01	<0.01	No	C>B, C>MEC

CTR No.	Constituent	Applicable Water Quality Criteria (C) µg/L	Maximum Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc.(B) µg/L	RPA Result - Need Limitation?	Reason
114	Endosulfan Sulfate	240	<0.01	<0.01	No	C>B, C>MEC
115	Endrin	0.036	<0.01	<0.01	No	C>B, C>MEC
116	Endrin Aldehyde	0.81	<0.01	<0.01	No	C>B, C>MEC
117	Heptachlor	0.00021	<0.01	<0.01	No	C>B, C>MEC
118	Heptachlor Epoxide	0.00011	<0.01	<0.01	No	C>B, C>MEC
119	PCB 1016	0.00017	<0.1	<0.1	No	C>B, C>MEC
120	PCB 1221	0.00017	<0.1	<0.1	No	C>B, C>MEC
121	PCB 1232	0.00017	<0.1	<0.1	No	C>B, C>MEC
122	PCB 1242	0.00017	<0.1	<0.1	No	C>B, C>MEC
123	PCB 1248	0.00017	<0.1	<0.1	No	C>B, C>MEC
124	PCB 1254	0.00017	<0.05	<0.05	No	C>B, C>MEC
125	PCB 1260	0.00017	<0.1	<0.1	No	C>B, C>MEC
126	Toxaphene	0.0002	<0.5	<0.5	No	C>B, C>MEC

4. WQBEL Calculations

- a. **Calculation Options.** Once RPA has been conducted using either the TSD or the SIP methodologies, WQBELs are calculated. Alternative procedures for calculating WQBELs include:
 - i. Use WLA from applicable TMDL
 - ii. Use a steady-state model to derive Maximum Daily Effluent Limits and Average Monthly Effluent Limits.
 - iii. Where sufficient data exist, use a dynamic model which has been approved by the State Water Board.
- b. **SIP Calculation Procedure.** Section 1.4 of the SIP requires the step-by-step procedure to “adjust” or convert CTR numeric criteria into Average Monthly Effluent Limitations (AMELs) and Maximum Daily Effluent Limitations (MDELs), for toxics.

Step 3 of Section 1.4 of the SIP (page 8) lists the statistical equations that adjust CTR criteria for effluent variability.

Step 5 of Section 1.4 of the SIP (page 8) lists the statistical equations that adjust CTR criteria for averaging periods and exceedance frequencies of the criteria/objectives. This section also reads, “For this method only, maximum daily effluent limitations shall be used for publicly-owned treatment works (POTWs) in place of average weekly limitations.

Sample calculation for Cyanide:

Step 1: Identify applicable water quality criteria.

From California Toxics Rule (CTR), we can obtain the Criterion Maximum Concentration (CMC) and the Criterion Continuous Concentration (CCC).

Freshwater Aquatic Life Criteria:

CMC = 22 µg/L (CTR page 31712, column B1) and

CCC = 5.2 µg/L (CTR page 31712, column B2); and

Human Health Criteria for Organisms only = 220,000 µg/L (CTR page 31712, column D2).

Step 2: Calculate effluent concentration allowance (ECA)

ECA = Criteria in CTR, since no dilution is allowed.

$ECA_{acute} = CMC = 22 \mu\text{g/L}$

$ECA_{chronic} = CCC = 5.2 \mu\text{g/L}$

Step 3: Determine long-term average (LTA) discharge condition

i. Calculate Coefficient of Variation (CV):

$$CV = \text{Standard Deviation}/\text{Mean} = 0.70456/2.384615 \\ = 0.3$$

ii. Find the ECA Multipliers from SIP Table 1 (page 7), or by calculating them using equations on SIP page 6. When CV = 0.3, then:

ECA Multiplier_{acute} = 0.527 and

ECA Multiplier_{chronic} = 0.715

iii. $LTA_{acute} = ECA_{acute} \times ECA \text{ Multiplier}_{acute}$

$$= 22 \mu\text{g/L} \times 0.527 = 11.594 \mu\text{g/L}$$

iv. $LTA_{chronic} = ECA_{chronic} \times ECA \text{ Multiplier}_{chronic}$

$$= 5.2 \mu\text{g/L} \times 0.715 = 3.718 \mu\text{g/L}$$

Step 4: Select the lowest LTA

In this case, $LTA_{chronic} < LTA_{acute}$, therefore the lowest LTA = 3.718 µg/L.

Step 5: Calculate the Average Monthly Effluent Limitation (AMEL) & Maximum Daily Effluent Limitation (MDEL) for AQUATIC LIFE

- i. Find the multipliers. You need to know CV and n (frequency of sample collection per month). If effluent samples are collected 4 times a month or less, then $n = 4$. CV was determined to be 0.3 in a previous step.

$$\text{AMEL Multiplier} = 1.26$$

$$\text{MDEL Multiplier} = 1.90$$

- ii. AMEL aquatic life = lowest LTA (from Step4) x AMEL Multiplier
 $= 3.718 \mu\text{g/L} \times 1.26 = 4.68468 \mu\text{g/L}$
- iii. MDEL aquatic life = lowest LTA (from Step4) x MDEL Multiplier
 $= 3.718 \mu\text{g/L} \times 1.90 = 7.0642 \mu\text{g/L}$

Step 6: Find the Average Monthly Effluent Limitation (AMEL) & Maximum Daily Effluent Limitation (MDEL) for HUMAN HEALTH

- i. Find factors. Given $CV = 0.3$ and $n = 4$.

For AMEL human health limit, there is no factor.
The MDEL/AMEL human health factor = 1.50

- ii. AMEL human health = ECA = 220,000 $\mu\text{g/L}$
- iii. MDEL human health = ECA x MDEL/AMEL factor
 $= 220,000 \mu\text{g/L} \times 1.50 = 330,000 \mu\text{g/L}$

Step 7: Compare the AMELs for Aquatic life and Human health and select the lowest. Compare the MDELs for Aquatic life and Human health and select the lowest

- i. Lowest AMEL = 4.68 $\mu\text{g/L}$ (Based on aquatic life protection)
- ii. Lowest MDEL = 7.06 $\mu\text{g/L}$ (Based on aquatic life protection)

- c. **Metals TMDLs Calculation Procedure.** Section 7 (Implementation Recommendations) of the USEPA-established metals TMDLs for San Gabriel River and Impaired Tributaries describes the implementation procedures and regulatory mechanisms that could be used to provide reasonable assurances that water quality standards will be met. For POTWs NPDES permits, USEPA suggests that permit writers could translate waste load allocations (WLAs) into effluent limits by applying the SIP procedures or other applicable engineering practices authorized under federal regulations. Wet-weather WLAs will not be used to determine monthly permit limits but will only be used in a determination of a daily limit. For permits subject to both dry- and wet-weather WLAs, USEPA expects that permit writers would write a monthly limit based on dry-weather WLA and two separate daily maximum limits based on dry- and wet-weather WLAs.

According to Table 2-9, Summary of dry-weather and wet weather impairments, San Gabriel River Estuary has only dry-weather impairment for copper. Although Reach 1 of the San Gabriel River Coyote Creek has no impairments for any metals, a concentration-based allocation for copper should be developed for an upstream source, which finally discharges to the estuary. Discharge to upstream reaches can cause or contribute to exceedances of water quality standards and contribute to impairments downstream. Therefore, dry-weather allocation for copper is assigned to Reach 1 of the San Gabriel River and its tributaries to meet the copper TMDL in the Estuary.

For copper, dry-weather allocation will be applied to the facility's effluent discharge to meet the TMDL in downstream reaches. By following the USEPA recommendations discussed above, copper is subject to dry-weather allocation. Therefore, for copper, the facility would have an average monthly effluent limit based on dry-weather WLA.

Sample Calculation for End of Pipe Copper Effluent Limitations

Dry-Weather Criteria:

- i. The CTR chronic criteria (as total recoverable copper) adjusted for hardness using the following equations:

$$\begin{aligned} \text{CCC}_{\text{SIP}} &= \text{WER} \times (\exp\{mC[\ln(\text{hardness})] + bC\}) \\ &= 1 \times (\exp\{0.8545[\ln(217)] - 1.702\}) \\ &= 18.09 \mu\text{g/L Total Recoverable Metal} \end{aligned}$$

where, hardness is equal to the TMDL median hardness of 217 mg/L as CaCO₃, Footnote 3, page 40.

There is no site specific translator for dry-weather criteria. Therefore, 18.09 μg/L becomes the CCC value for total recoverable copper that will be used to calculate the final effluent limitations using SIP procedures. Based on the available data for copper from October 2003 to June 2006, the calculated Coefficient of Variation (CV) equals to 0.5. Following the above SIP procedures, the following effluent limitations for copper for dry-weather discharge can be calculated:

$$\begin{aligned} \text{Average Monthly Effluent Limitation (based on Dry-weather)} &= 15 \mu\text{g/L} \\ \text{Maximum Daily Effluent Limitation (based on Dry-weather)} &= 28 \mu\text{g/L} \end{aligned}$$

- d. **Mass based limits.** 40 CFR section 122.45(f)(1) requires that except under certain conditions, all permit limits, standards, or prohibitions be expressed in terms of mass units. 40 CFR section 122.45(f)(2) allows the permit writer, at its discretion, to express limits in additional units (e.g., concentration units). The regulations mandate that, where limits are expressed in more than one unit, the permittee must comply with both.

Generally, mass-based limits ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limits. Concentration-based effluent limits, on the other hand, discourage the reduction in treatment efficiency during low-flow periods and require proper operation of the treatment units at all times. In the absence of concentration-based effluent limits, a permittee would be able to increase its effluent concentration (i.e., reduce its level of treatment) during low-flow periods and still meet its mass-based limits. To account for this, this permit includes mass and concentration limits for some constituents.

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

Table 7. Summary of Water Quality-based Effluent Limitations for Discharge Point 001

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Cyanide	µg/L	4.7	--	7.1	--	--
	lbs/day ⁹	1.5	--	2.2	--	--
Copper (dry weather) ¹⁰ , Total Recoverable	µg/L	15	--	28	--	--
	lbs/day ⁹	4.7	--	8.8	--	--
Ammonia	mg/L	2.1 ¹¹	--	4.9 ¹¹	--	--
	lbs/day ⁹	660	--	1500	--	--

⁹ The mass emission rates are based on the plant design flow rate of 37.5 MGD, and are calculated as follows: Flow(MGD) x Concentration(mg/L) x 8.34(conversion factor) = lbs/day. During wet-weather storm events in which the flow exceeds the design capacity, the mass discharge rate limitations shall not apply, and concentration limitations will provide the only applicable effluent limitations.

¹⁰ Dry-weather effluent limitation will apply when the maximum daily flow in the San Gabriel River is less than 260 cfs as measured at USGS flow gauging station 11087020, located in Reach 3 above the Whittier Narrows Dam. This gauging station is operated and maintained by the USGS.

¹¹ This is the translated effluent limitation for ammonia based on the water quality objective for ammonia in the current Basin Plan, Table 3-3 and Table 3-1, which resulted from Resolution No. 2002-011, and 2005-014 adopted by the Regional Water Board on April 25, 2002, and December 1, 2005, respectively. This effluent limitation is derived according to the Implementation Section of Resolution No. 2002-011.

5. Whole Effluent Toxicity (WET)

Because of the nature of industrial discharges into the POTW sewershed, it is possible that other toxic constituents could be present in the Los Coyotes WRP effluent, or could have synergistic or additive effects. Also, because numeric limits for certain toxic constituents that did not show RP have been removed, the acute toxicity limit may provide a backstop to preventing the discharge of toxic pollutants in toxic amounts. In addition, four out of the 74 chronic toxicity tests conducted from January 2002 through June 2006 exceeded the monthly median chronic toxicity trigger of 1.0 TUc. Although all 15 acute toxicity testing results reported during the term of the previous Order exhibited survival rates greater than 90% and thus did not exceed any acute toxicity requirements, Regional Water Board staff determined that, pursuant to the SIP, reasonable potential exists for toxicity. As such, the permit contains effluent limitations for toxicity.

The toxicity numeric effluent limitations are based on:

- a. 40 CFR 122.44(d)(v) – limits on whole effluent toxicity are necessary when chemical-specific limits are not sufficient to attain and maintain applicable numeric or narrative water quality standards;
- b. 40 CFR 122.44(d)(vi)(A) – where a State has not developed a water quality criterion for a specific pollutant that is present in the effluent and has reasonable potential, the permitting authority can establish effluent limits using numeric water quality criterion;
- c. Basin Plan objectives and implementation provisions for toxicity;
- d. Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity Programs Final May 31, 1996;
- e. Whole Effluent Toxicity (WET) Control Policy July 1994; and,
- f. Technical Support Document (several chapters and Appendix B).

However, the circumstances warranting a numeric chronic toxicity effluent limitation when there is reasonable potential were under review by the State Water Resources Control Board (State Water Board) in SWRCB/OCC Files A-1496 & A-1496(a) [Los Coyotes/Long Beach Petitions]. On September 16, 2003, at a public hearing, the State Water Board adopted Order No. 2003-0012 deferring the issue of numeric chronic toxicity effluent limitations until a subsequent Phase of the SIP is adopted. In the meantime, the State Water Board replaced the numeric chronic toxicity limit with a narrative effluent limitation and a 1 TUc trigger, in the Long Beach and Los Coyotes WRP NPDES permits. This permit contains a similar narrative chronic toxicity effluent limitation, with a numeric trigger for accelerated monitoring. Phase II of the SIP has been adopted, however, the toxicity control provisions were not revised.

On January 17, 2006, the State Board Division of Water Quality held a California Environmental Quality Act (CEQA) scoping meeting to seek input on the scope and content of the environmental information that should be considered in the planned revisions of the Toxicity Control Provisions of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP). However, the Toxicity Control Provisions of the SIP continue unchanged.

This Order contains a reopener to allow the Regional Water Board to modify the permit, if necessary, consistent with any new policy, law, or regulation. . Until such time, this Order will have toxicity limitations that are consistent with the State Board's precedential decision.

a. Acute Toxicity Limitation:

The Dischargers may test for acute toxicity by using USEPA's *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, October 2002 (EPA-821-R-02-012). Acute toxicity provisions in the accompanying Order are derived from the Basin Plan's toxicity standards (Basin Plan 3-16 and 3-17). The provisions require the Discharger to accelerate acute toxicity monitoring and take further actions to identify the source of toxicity and to reduce acute toxicity.

b. Chronic Toxicity Limitation and Requirements:

Chronic toxicity provisions in the accompanying Order are derived from the Basin Plan's toxicity standards (Basin Plan 3-16 and 3-17). The provisions require the Discharger to accelerate chronic toxicity monitoring and take further actions to identify the source of toxicity and to reduce chronic toxicity. The monthly median trigger of 1.0 TU_c for chronic toxicity is based on *USEPA Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity (WET) Programs* Final May 31, 1996 (Chapter 2 – Developing WET Permitting Conditions, page 2-8). In cases where effluent receives no dilution or where mixing zones are not allowed, the 1.0 TU_c chronic criterion should be expressed as a monthly median. The "median" is defined as the middle value in a distribution, above which and below which lie an equal number of values. For example, if the results of the WET testing for a month were 1.5, 1.0, and 1.0 TU_c, the median would be 1.0 TU_c.

The *USEPA Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity (WET) Programs* Final May 31, 1996 (Chapter 2 – Developing WET Permitting Conditions, page 2-8) recommends two alternatives for setting up maximum daily limit: using 2.0 TU_c as the maximum daily limit; or using a statistical approach outlined in the TSD to develop a maximum daily effluent limitation. In this permit, neither a maximum daily limitation nor a trigger for chronic toxicity is prescribed.

D. Final Effluent Limitations

1. Satisfaction of Anti-Backsliding Requirements

The effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order, with the exception of effluent limitations for mercury, nickel, cyanide, and bis(2-ethylhexyl) phthalate. The effluent limitations for mercury, nickel, and bis(2-ethylhexyl) phthalate are deleted because they did not show reasonable potential to cause or contribute to an excursion above the respective water quality standards. The new average monthly effluent limitation for cyanide that is less stringent than that in the previous permit is derived from the calculation procedures specified in the SIP. This relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

2. Satisfaction of Antidegradation Policy

On October 28, 1968, the State Water Board adopted Resolution No. 68-16, *Maintaining High Quality Water*, which established an antidegradation policy for State and Regional Water Boards. The State Water Board has, in State Water Board Order No. 86-17 and an October 7, 1987 guidance memorandum, interpreted Resolution No. 68-16 to be fully consistent with the federal antidegradation policy. Similarly, the CWA (section 304(d)(4)(B)) and USEPA regulations (40 CFR, Section 131.12) require that all permitting actions be consistent with the federal antidegradation policy. Together, the State and Federal policies are designed to ensure that a water body will not be degraded resulting from the permitted discharge. Discharges in conformance with the provisions of this Order will not result in a lowering of water quality and therefore conform to the antidegradation policies.

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD, TSS, pH, and percent removal of BOD and TSS. Restrictions on BOD, TSS, pH are discussed in Section IV.C.2. of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum, federal technology-based requirements that are necessary to meet water quality standards.

Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for

calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless “applicable water quality standards for purposes of the CWA” pursuant to section 131.21(c)(1). Collectively, this Order’s restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA and the applicable water quality standards for purposes of the CWA.

Summary of Final Effluent Limitations Discharge Point 001

Table 8. Summary of Final Effluent Limitations for Discharge Point 001

Parameter	Units	Effluent Limitations					Basis Average Weekly
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
BOD ₅ 20 °C	mg/L	20	30	45	--	--	Existing
	lbs/day ¹²	6,300	9,400	14,100	--	--	
Total Suspended Solids (TSS)	mg/L	15	40	45	--	--	Existing
	lbs/day ¹²	4,700	12,500	14,100	--	--	
pH	Standard units	--	--	--	6.5	8.5	Existing
Removal Efficiency for BOD and TSS	%	85	--	--	--	--	Existing
Oil and Grease	mg/L	10	--	15	--	--	Existing
	lbs/day ¹²	3,100	--	4,700	--	--	
Settleable Solids	ml/L	0.1	--	0.3	--	--	Existing
Total Residual Chlorine	mg/L		--	0.1	--	--	Existing
	lbs/day ¹²		--	31	--	--	
Copper (dry weather) ¹³ , Total Recoverable	µg/L	15	--	28	--	--	TMDL
	lbs/day ¹²	4.7	--	8.8	--	--	
Cyanide	µg/L	4.7	--	7.0	--	--	CTR,SIP
	lbs/day ¹²	1.5	--	2.2	--	--	
Ammonia as N	mg/L	2.1 ¹⁴	--	4.9 ¹⁴	--	--	Basin Plan
	lbs/day ¹²	660	--	1500	--	--	
Nitrate + Nitrite as N	mg/L	8	--	--	--	--	Existing
	lbs/day ¹²	2500	--	--	--	--	
Nitrite as N	mg/L	1	--	--	--	--	Basin Plan
	lbs/day ¹²	310	--	--	--	--	

¹² The mass emission rates are based on the plant design flow rate of 37.5 MGD, and are calculated as follows: Flow(MGD) x Concentration(mg/L) x 8.34(conversion factor) = lbs/day. During wet-weather storm events in which the flow exceeds the design capacity, the mass discharge rate limitations shall not apply, and concentration limitations will provide the only applicable effluent limitations.

¹³ Dry-weather effluent limitation will apply when the maximum daily flow in the San Gabriel River is less than 260 cfs as measured at USGS flow gauging station 11087020, located in Reach 3 above the Whittier Narrows Dam. This gauging station is operated and maintained by the USGS.

¹⁴ This is the translated effluent limitation for ammonia based on the water quality objective for ammonia in the current Basin Plan, Table 3-3 and Table 3-1, which resulted from Resolution No. 2002-011, and 2005-014 adopted by the Regional Water Board on April 25, 2002, and December 1, 2005, respectively. This effluent limitation is derived according to the Implementation Section of Resolution No. 2002-011.

E. Reclamation Specifications

The production, distribution, and reuse of recycled water are presently regulated under Water Reclamation Requirements (WRR) Order No. 87-47, adopted by this Board on April 27, 1987, continued in Board Order No. 97-072, adopted on May 12, 1997. Pursuant to California Water Code section 13523, these WRRs were revised in 1997 and were readopted without change in Order No. 97-072, adopted May 12, 1997.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

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

A. Influent Monitoring

Influent monitoring is required to:

- Determine compliance with NPDES permit conditions.
- Assess treatment plant performance.
- Assess effectiveness of the Pretreatment Program

Influent monitoring in this Order follows the influent monitoring requirements in the previous Order with minor modification. The monitoring frequencies for parameters with effluent limitations including cyanide and copper have been increased from semiannually to quarterly.

B. Effluent Monitoring

The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are given in the proposed Monitoring and Reporting Program (Attachment E). This provision requires compliance with the Monitoring and Reporting Program, and is based on 40 CFR 122.44(i), 122.62, 122.63, and 124.5. The Monitoring and Reporting Program is a standard requirement in almost all NPDES permits (including the proposed Order) issued by the Regional Water Board. In addition to containing definition of terms, it specifies general sampling/analytical protocols and the requirements of reporting spills, violation, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Regional Water Board policies. The Monitoring and Reporting Program also contains sampling program specific for the Discharger's wastewater treatment plant. It defines the sampling stations and frequency, pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all pollutants for which effluent limitations are specified. Further, in accordance with Section 1.3 of the SIP, a periodic monitoring is required for all priority pollutants defined by the CTR, for which criteria apply and for which no effluent limitations have been established, to evaluate reasonable potential to cause or contribute to an excursion above a water quality standard.

Monitoring for those pollutants expected to be present in the discharge from the facility, will be required as shown on the proposed Monitoring and Reporting Program (Attachment E) and as required in the SIP.

The effluent monitoring in this Order follows the effluent monitoring requirements in the existing Order. The changes are summarized in the following table.

Table 9. Effluent Monitoring Program Comparison Table

Parameter	Monitoring Frequency (2002 Permit)	Monitoring Frequency (2007 Permit)
Total residual chlorine	continuous	continuous ¹⁵
Total residual chlorine	--	5 days/week ¹⁶
Algal biomass (Chlorophyll a)	monthly	--
Iron	quarterly	--
Arsenic	monthly	quarterly
Lead	monthly	quarterly
Mercury	monthly	quarterly
Nickel	monthly	quarterly

¹⁵ Total residual chlorine shall be continuously recorded. The recorded data shall be maintained by the Permittee for at least five years. The Permittee shall extract the maximum daily peak, minimum daily peak, and daily average from the recorded data and shall make available upon request of the Regional Water Board. The continuous monitoring data are not intended to be used for the compliance determination purposes.

¹⁶ Daily grab samples shall be collected at monitoring location EFF-001B, Monday through Friday only, except for holidays. Analytical results of daily grab samples will be used to determine compliance with total residual chlorine effluent limitation. Furthermore, additional monitoring requirements as specified in section IV.A.2. shall be followed.

Parameter	Monitoring Frequency (2002 Permit)	Monitoring Frequency (2007 Permit)
Silver	monthly	quarterly
Bromoform	quarterly	semiannually
Dibromochloromethane	quarterly	semiannually
Chloroform	quarterly	semiannually
Bromodichloromethane	quarterly	semiannually
Methyl bromide	quarterly	semiannually
Methylene chloride	quarterly	semiannually
Tetrachloroethylene	quarterly	semiannually
1,1,1-Trichloroethane	quarterly	semiannually
2,4-Dimethylphenol	quarterly	semiannually
3-Methyl-4-chlorophenol	quarterly	semiannually
Phenol	quarterly	semiannually
Benzo(a)pyrene	quarterly	semiannually
Benzo(b)fluoranthene	quarterly	semiannually
Benzo(k)fluorathene	quarterly	semiannually
Bis(2-ethylhexyl)phthalate	monthly	semiannually
Chrysene	quarterly	semiannually
Dibenzo(a,h)anthracene	quarterly	semiannually
Diethyl phthalate	quarterly	semiannually
Di-n-butyl phthalate	quarterly	semiannually
Indeno(1,2,3-cd)pyrene	quarterly	semiannually
Gamma-BHC (Lindane)	monthly	semiannually
Perchlorate	--	semiannually
1,4-Dioxane	--	semiannually
1,2,3-Trichloropropane	--	semiannually

The reduction of monitoring frequencies for priority pollutants listed in the above table is based on the fact that previous monitoring data for these pollutants indicate that the discharge did not demonstrate reasonable potential to exceed water quality standards.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

This requirement establishes conditions and protocol by which compliance with the Basin Plan narrative water quality objective for toxicity will be demonstrated and in accordance with Section 4.0 of the SIP. Conditions include required monitoring and evaluation of the effluent for acute and chronic toxicity and numerical values for chronic toxicity evaluation to be used as 'triggers' for initiating accelerated monitoring and toxicity reduction evaluation(s).

D. Receiving Water Monitoring

1. Surface Water

Receiving water monitoring is required to determine compliance with receiving water limitations and to characterize the water quality of the receiving water. Requirements are based on the Basin Plan.

To implement findings of the San Gabriel River Regional Monitoring Program technical workgroup, the receiving water monitoring program in this Order includes the following modifications to the existing receiving water monitoring program:

- For constituents currently monitored on a weekly basis (temperature, pH, dissolved oxygen, chlorine, ammonia nitrogen, nitrate nitrogen, nitrite nitrogen, total Kjeldahl nitrogen, total phosphorus, ortho phosphate, total hardness, total coliform and fecal coliform), shifting from weekly to monthly monitoring .
- Eliminating receiving water station R9E (for Long Beach Water Reclamation Plant) from the monitoring program.
- Eliminating chlorophyll a from the list of required analytes for the San Gabriel River watershed receiving water stations.
- Shifting bioassessment monitoring from the fall season to the spring/summer period.
- Conducting bioassessment monitoring according to the current version of the California Stream Bioassessment Procedure recommended by the State's Surface Water Ambient Monitoring Program (SWAMP).

The proposed receiving water monitoring program will improve coordination and efficiency of receiving water monitoring for existing discharges in the San Gabriel River watershed by streamlining monitoring efforts and reducing redundancies throughout the watershed and will provide more useful water quality data on both watershed and site-specific scales.

E. Other Monitoring Requirements

1. Watershed Monitoring and Bioassessment Monitoring

The goals of the Watershed-wide Monitoring Program including the bioassessment monitoring for the San Gabriel River Watershed are to:

- Determine compliance with receiving water limits;
- Monitor trends in surface water quality;
- Ensure protection of beneficial uses;
- Provide data for modeling contaminants of concern;
- Characterize water quality including seasonal variation of surface waters within the watershed;
- Assess the health of the biological community; and

- Determine mixing dynamics of effluent and receiving waters in the estuary.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

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

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

B. Special Provisions

1. Reopener Provisions

This provision is based on 40 CFR Part 123. The Regional Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new regulations, modification in sludge use or disposal practices, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Basin Plan.

2. Special Studies and Additional Monitoring Requirements

- Antidegradation Analysis and Engineering Report for Proposed Plant Expansion.** This provision is based on the State Water Resources Control Board Resolution No. 68-16, which requires the Regional Water Board in regulation the discharge of waste to maintain high quality waters of the State, the Discharger must demonstrate that it has implemented adequate controls (e.g., adequate treatment capacity) to ensure that high quality waters will be maintained. This provision requires the Discharger to clarify it has increase plant capacity through the addition of new treatment system(s) to obtain alternative effluent limitations for the discharge from the treatment system(s). This provision requires the Discharger to report specific time schedules for the plants projects. This provision requires the Discharger to submit report to the Regional Water Board for approval.

- b. **Operations Plan for Proposed Expansion.** This provision is based on Section 13385(j)(1)(D) of the CWC and allows a time period not to exceed 90 days in which the Discharger may adjust and test the treatment system(s). This provision requires the Discharger to submit an Operations Plan describing the actions the Discharger will take during the period of adjusting and testing to prevent violations.
- c. **Treatment Plant Capacity.** The treatment plant capacity study required by this Order shall serve as an indicator for the Regional Water Board regarding Facility's increasing hydraulic capacity and growth in the service area.

3. Best Management Practices and Pollution Prevention

- a. **Storm Water Pollution Prevention Plan (SWPPP).** CWA section 402(p), as amended by the Water Quality Act of 1987, requires NPDES permits for storm water discharges. Pursuant to this requirement, in 1990, USEPA promulgated 40 CFR 122.26 that established requirements for storm water discharges under an NPDES permit. To facilitate compliance with federal regulations, on November 1991, the State Board issued a statewide general permit, *General NPDES Permit No. CAS000001 and Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities*. This permit was amended in September 1992 and reissued on April 17, 1997 as State Board Order No. 97-03-DWQ. JWPCP is covered under this general permit and an updated SWPPP is required.
- c. **Spill Contingency Plan (SCP).** Since spill or overflow is a common event in the treatment plant service areas, this Order requires the Discharger to review and update, if necessary, SCP after each incident. The Discharger shall ensure that the up-to-date SPC is readily available to the sewage system personnel at all times and that the sewage personnel are familiar with it.
- b. **Pollutant Minimization Program.** This provision is based on the requirements of Section 2.4.5 of the SIP.

4. Construction, Operation, and Maintenance Specifications

This provision is based on the requirements of 40 CFR 122.41(e) and the previous Order.

5. Special Provisions for Municipal Facilities (POTWs Only)

- a. **Biosolids Requirements.** To implement CWA Section 405(d), on February 19, 1993, USEPA promulgated 40 CFR 503 to regulate the use and disposal of municipal sewage sludge. This regulation was amended on September 3, 1999. The regulation requires that producers of sewage sludge meet certain reporting, handling, and disposal requirements. It is the responsibility of the Discharger to comply with said regulations that are enforceable by USEPA, because California has not been delegated the authority to implement this program. The Discharger

is also responsible for compliance with WDRs and NPDES permits for the generation, transport and application of biosolids issued by the State Board, other Regional Water Boards, Arizona Department of Environmental Quality or USEPA, to whose jurisdiction the Facility's biosolids will be transported and applied.

- b. **Pretreatment Requirements.** This permit contains pretreatment requirements consistent with applicable effluent limitations, national standards of performance, and toxic and performance effluent standards established pursuant to Sections 208(b), 301, 302, 303(d), 304, 306, 307, 403, 404, 405, and 501 of the CWA, and amendments thereto. This permit contains requirements for the implementation of an effective pretreatment program pursuant to Section 307 of the CWA; 40 CFR 35 and 403; and/or Section 2233, Title 23, California Code of Regulations.
- c. **Spill Reporting Requirements.** This Order established a reporting protocol for how different types of spills, overflow or bypasses of raw or partially treated sewage from its collection system or treatment plant covered by this Order shall be reported to regulatory agencies.

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

Furthermore, the General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. The Discharger must comply with both the General Order and this Order.

6. Compliance Schedules

This Order does not contain interim effluent limitations or compliance schedule.

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Los Angeles 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 Los Coyotes Water Reclamation Plant. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided by posting notices at Cerritos City Hall, Los Coyotes WRP, and at JOS office, Whittier, California.

B. Written Comments

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

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on May 31, 2007.

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: September 6, 2007
Time: 9:00 AM
Location: City of San Buenaventura City Hall, Council Chambers
501 Poli Street
Ventura, California.

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/losangeles/> where you can access the current agenda for changes in dates and locations.

D. Nature of Hearing

This will be a formal adjudicative hearing pursuant to section 648 et seq. of title 23 of the California Code of Regulations. Chapter 5 of the California Administrative Procedure Act (commencing with section 11500 of the Government Code) will not apply to this proceeding.

Ex Parte Communications Prohibited: As a quasi-adjudicative proceeding, no board member may discuss the subject of this hearing with any person, except during the public hearing itself. Any communications to the Regional Board must be directed to staff.

E. Parties to the Hearing

The following are the parties to this proceeding:

1. The applicant/permittee
2. Regional Board Staff

Any other persons requesting party status must submit a written or electronic request to staff not later than [20] business days before the hearing. All parties will be notified if other persons are so designated.

F Public Comments and Submittal of Evidence

Persons wishing to comment upon or object to the tentative waste discharge requirements, or submit evidence for the Board to consider, are invited to submit them in writing to the above address. To be evaluated and responded to by staff, included in the Board's agenda folder, and fully considered by the Board, written comments must be received no later than close of business May 31, 2007. Comments or evidence received after that date will be submitted, ex agenda, to the Board for consideration, but only included in administrative record with express approval of the Chair during the hearing. Additionally, if the Board receives only supportive comments, the permit may be placed on the Board's consent calendar, and approved without an oral testimony.

Written comments are no longer accepted with regard to this version (revised dated July 9, 2007) of the revised tentative waste discharge requirements. Persons wishing to comment upon or object to the revised tentative waste discharge requirements may be able to do so at the time of the scheduled Board hearing on September 6, 2007.

G. Hearing Procedure

The meeting, in which the hearing will be a part of, will start at 9:00 a.m. Interested persons are invited to attend. Staff will present the matter under consideration, after which oral statements from parties or interested persons will be heard. For accuracy of the record, all important testimony should be in writing. The Board will include in the administrative record written transcriptions of oral testimony that is actually presented at the hearing. Oral testimony may be limited to 30 minutes maximum or less for each speaker, depending on the number of persons wishing to be heard. Parties or persons with similar concerns or opinions are encouraged to choose one representative to speak. At the conclusion of testimony, the Board will deliberate in open or close session, and render a decision.

Parties or persons with special procedural requests should contact staff. Any procedure not specified in this hearing notice will be waived pursuant to section 648(d) of title 23 of the California Code of Regulations. Objections to any procedure to be used during this

hearing must be submitted in writing not later than close of [15] business days prior to the date of the hearing. Procedural objections will not be entertained at the hearing.

If there should not be a quorum on the scheduled date of this meeting, all cases will be automatically continued to the next scheduled meeting on October 4, 2007. A continuance will not extend any time set forth herein.

H. 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

I. 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 (213) 576-6600.

J. 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.

K. Additional Information

Requests for additional information or questions regarding this order should be directed to Jau Ren Chen at (213) 576-6656.