CHAPTER 3

WASTE DISCHARGE REQUIREMENTS, LAWS AND REGULATIONS

Requirements for Discharge

Federal Laws and Regulations

State and Local Laws and Regulations

Water Reuse and Reclamation Requirements

CHAPTER 3 WASTE DISCHARGE REQUIREMENTS, LAWS AND REGULATIONS

3.1 REQUIREMENTS FOR DISCHARGE

All six JOS treatment plants hold permits under the National Pollutant Discharge Elimination System (NPDES) which must be renewed every five years. NPDES permits are state permits issued pursuant to state laws which have been promulgated by EPA to carry out the purposes of the Federal Clean Water Act (CWA) and to provide adequate enforcement authority to guarantee compliance with that law. Waste discharge requirements which the Regional Water Quality Control Board (RWQCB) issues for discharge to surface waters are not federal permits. The NPDES permit program is "in lieu" of the federal program and is not a delegated one.

The purpose of the limitations, prohibitions, and provisions within the JWPCP permit is to implement the objectives of the 1990 California Ocean Plan. The NPDES permits for the WRPs contain limits that are consistent with specific receiving water quality objectives of the *1978 Water Quality Control Plan for the Los Angeles River Basin* (Basin Plan). In addition, all the WRPs have water reclamation requirements (reuse permits) and the PWRP, the SJCWRP, and the WNWRP are regulated under the Montebello Forebay groundwater recharge permit. The reuse permits for the WRPs contain limits that are consistent with specific water quality objectives for hydrologic subareas in the Basin Plan. According to the reuse permits, reclaimed water shall not contain trace constituents or other substances in concentrations which exceed the limits in the current California Department of Health Services Drinking Water Standards. Table 3.1-1 lists the applicable permit numbers for JOS wastewater treatment plants. The Districts have applied to the RWQCB for renewal of the NPDES permits for all JOS WRPs.

Table 3.1-1
WASTE DISCHARGE AND WATER REUSE PERMITS

	Effluent Discharge		Reuse	Recharge
Plant	NPDES/RWQCB Order	Expiration Date	RWQCB Order	RWQCB Order
JWPCP	CA0053813/No. 91-112	10/96		
LBWRP	CA0054119/No. 89-97	8/94	No. 87-47	
LCWRP	CA0054011/No. 89-95	8/94	No. 87-51	
WNWRP	CA0053716/No. 89-98	8/94	No. 88-107	No. 91-100
PWRP	CA0053619/No. 89-96	8/94	No. 81-34	No. 91-100
SJCWRP	CA0053911/No. 89-26	3/94	No. 87-50	No. 91-100

All JOS treatment facilities are subject to regulations administered by the Regional Water Quality Control Board (RWQCB); however, the discussion of waste discharge requirements will consider the JWPCP and the WRPs separately.

3.1.1 JWPCP

All JWPCP flow receives advanced primary treatment. Approximately sixty percent of the flow at the JWPCP currently receives secondary treatment. The final effluent, which is a blend of advanced primary and secondary effluents, travels 6.5 miles through two tunnels to Whites Point where it is discharged through two outfalls (a third is available as standby) approximately two miles off the coast and between the depths of 155 and 203 feet. The outfall diffusers provide an initial dilution of 166:1. The final effluent must meet the limits in Tables 3.1-2 through 3.1-5 prescribed by the State Ocean Plan and Order 91-112, the NPDES permit for the JWPCP. The 1990 California Ocean Plan limits are designed to maintain the indigenous marine life and a healthy and diverse marine community. Tables 3.1-2 through 3.1-4 indicate that, in most cases, NPDES permit limits are more restrictive than Ocean Plan limits.

Table 3.1-2a
JWPCP EFFLUENT LIMITS
MAJOR WASTEWATER CONSTITUENTS
COMPARISON OF NPDES AND OCEAN PLAN LIMITS (30-DAY AVERAGE)

Constituent	Units	Order 91-112[a]	Ocean Plan
BOD_5	mg/L	120	—
Suspended Solids	mg/L	90	[b]
Oil and Grease	mg/L	15	25
Settleable Solids	ml/L	0.5	1.0
Turbidity	NTU	75	75
Acute Toxicity	TU_a	1.5	1.5

Note: *(a) Order 91-112, Finding 17 states, "Until such time when a full secondary treatment system is operational, CSDLAC-JWPCP will operate under interim limits." Board Cease and Desist Order No. 88-134 contains these limits. These limits apply to BOD, Suspended Solids, Oil and Grease, Settleable Solids, and Turbidity.*

(b) 25 percent of influent suspended solids.

Table 3.1-2b
JWPCP EFFLUENT LIMITS, OTHER PARAMETERS

Constituent	Units	Minimum	Maximum	12-Month Average
pH		6	9	—
Temperature	°F		100	—

References: Order 91-112, Discharge Limitations A.2, A.4 and A.5
• *The NPDES & Ocean Plan limit are the same for pH and radioactivity.*

Table 3.1-3
JWPCP EFFLUENT LIMITS
TOXIC MATERIALS - MARINE AQUATIC LIFE TOXICANTS
COMPARISON OF NPDES AND OCEAN PLAN LIMITS

Constituent	Units	Order No. 91-112 30-Day Average	Ocean Plan 6-month Median
Arsenic	µg/L	14	838
Cadmium	µg/L	6	167
Copper	µg/L	57	169
Lead	µg/L	67	334
Mercury	µg/L	0.7	6.6
Nickel	µg/L	66	835
Selenium	µg/L	17	2,500
Silver	µg/L	11	90
Zinc	µg/L	197	2,010
Cyanide	µg/L	50	167
Ammonia Nitrogen	mg/L	44	100
Total Residual Chlorine	mg/L	0.3	0.3
Chromium	µg/L	70	334
Phenolic Compounds (Non-Chlorinated)	µg/L	3,000	5,010
Phenolic Compounds (Chlorinated)	µg/L	113	167
Endosulfan	ng/L	1,500	1,500
HCH	ng/L	700	700
Endrin	ng/L	400	400

Note: The chromium requirement in Order 91-112 is for hexavalent chromium, but can be met with total chromium.

Table 3.1-4
JWPCP EFFLUENT LIMITS
TOXIC MATERIALS - NON-CARCINOGENS
COMPARISON OF NPDES AND OCEAN PLAN LIMITS

Constituent	Units	Order 91-112 30-Day Average	Ocean Plan 30-Day Average (b)
Acrolein	µg/L	250	36,700
Antimony	µg/L	300	200,000
bis (2-chloroethoxy) methane	µg/L	450	735
bis (2-chloroisopropyl) ether	µg/L	1,000	200,000
Chlorobenzene	mg/L	10	95,200
Chromium (III)	mg/L	100	31,700
di-n-butyl phthalate	µg/L	500	584,000
dichlorobenzene (a)	µg/L	2,000	852,000
1,1,1-dichloroethylene	mg/L	280	1,190
diethyl phthalate	mg/L	200	5,510
dimethyl phthalate	mg/L	300	137,000
4,6-dinitro-2-methyl phenol	µg/L	1,700	36,700
2,4-dinitrophenol	µg/L	664	668
ethylbenzene	µg/L	50	685,000
fluoranthene	µg/L	240	2,500
hexachlorocyclopendadiene	µg/L	9,700	9,700
isophorone	mg/L	400	25,000
nitrobenzene	µg/L	540	818
thallium	µg/L	100	2,340
toluene	mg/L	50	14,200
1,1,2,2-tetrachloroethane	µg/L	50	200,000
tributylin	µg/L	0.233	0.234
1,1,1-trichloroethane	mg/L	250	90,200
1,1,2-trichloroethane	mg/L	10	7,180

Notes: *(a) Sum of 1,2-dichlorobenzene & 1,3-dichlorobenzene.*
(b) Ocean Plan Table B Objectives using initial dilution of 166:1

Table 3.1-5
JWPCP EFFLUENT LIMITS
TOXIC MATERIALS-CARCINOGENS
NPDES AND OCEAN PLAN LIMITS*

Constituent	30-Day Average (µg/L)
acrylonitrile	17
aldrin	0.004
benzene	985
benzidine	0.012
beryllium	5.5
bis (2-chloroethyl) ether	7.5
bis (2-ethylhexyl) phthalate	585
carbon tetrachloride	151
chlordane (a)	0.004
chloroform	22,000
DDT (b)	0.029
1,4-dichlorobenzene	3,006
3,3'-dichlorobezidine	1.353
1,2-dichloroethane	22,000
dichloromethane (c)	75,000
1,3-dichloropropene	1,500
dieldrin	0.007
2,4-dinitrotoluene	435
1,2-diphenylhydrazine	27
halomethanes (d)	22,000
heptachlor (e)	0.120
hexachlorobenzene	0.035
hexachlorobutadiene	2,338
hexachloroethane	415
n-nitrosodimethylamine	1,220
n-nitrosodiphenylamine	415
PAHs (f)	1.47
PCBs (g)	0.003
TCDD equivalents (h)	6.50E-07
tetrachloroethylene	16,540
toxaphene	0.035
trichloroethylene	4,510
2,4,6-trichlorophenol	49
vinyl chloride	6,012

** The NPDES & Ocean Plan limits are the same.*

Notes:
(a) Sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonoachlor-alpha, nonachlor-gamma and oxychlordane.
(b) Sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, & 2,4'DDD.
(c) Synonym is methylene chloride.
(d) Sum of bromoform, bromomethane, chloromethane, chlorodibromomethane (N.A.) & dichlorobromomethane.
(e) Sum of heptachlor & heptachlor epoxide.
(f) Sum of acenaphthylene, anthracene, benzo(A)pyrene, benzo(K)fluoranthene, chrysene, dibenzo(A,H)anthracene, fluorene, phenanthrene, pyrene, indeno(1,2,3-C,D)pyrene.
(g) Sum of Aroclors 1016,1221,1232,1242,1248,1254,1260.
(h) Sum of the concentration of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors as shown in a table in Order 91-112.

The limits shown in Table 3.1-2a are in effect until facilities that provide full secondary treatment at the JWPCP are completed. Once these facilities are operational, the 30-day average limits for BOD and suspended solids will both be 30 mg/L. The constituents listed in Table 3.1-2a have daily maximum and weekly average limits except BOD_5 and suspended solids, for which weekly average limits are prescribed. Table 3.1-3 lists marine aquatic life toxicants. Most of the 30-day average limits given in Table 3.1-3 were derived statistically, based on treatment plant performance data from 1986 to 1990. The 30-day averages in Table 3.1-3 are accompanied by daily maximums and instantaneous maximums, which may be derived by multiplying the 30-day average by four and ten, respectively. Mass emissions limits, which are listed in the permit for constituents in Tables 3.1-2a and 3.1-3, are based on 385 mgd plant flow, which is the current permitted plant capacity. Limits given for the remaining constituents in Table 3.1-3 are based on the Ocean Plan assuming an initial dilution of one part effluent to 166 parts of seawater.

Most of the permit limits in Table 3.1-4, which are for non-carcinogenic human health toxicants, were set at the practical quantitation limit, which is a measure of the lowest quantity that current laboratory methods can reliably detect. This results in limits that are orders of magnitude less than Ocean Plan limits. All the constituents listed in Table 3.1-5 are carcinogenic human health toxicants. Limits for these constituents are based on State Ocean Plan requirements assuming an initial dilution of one part effluent to 166 parts of seawater.

The NPDES permit also contains receiving water limitations. Bacteriological limits are based on water-contact standards and shellfish harvesting standards in the Water Quality Objective Chapter of the California Ocean Plan. Board Order No. 91-112 contains the following eight bacteriological limits:

Total Coliform

1. No more than 20 percent of the samples taken in a 30-day period shall have a coliform count greater than 1000/100 ml.

2. No single sample, when verified by a repeat sample taken within 48-hours, shall exceed 10,000/100 ml.

3. The median total coliform concentration for any six month period shall not exceed 70/100 ml.

4. No more than 10 percent of the samples during any 60-day period shall exceed 230/100 ml.

Fecal Coliform

5. The fecal coliform density, based on a minimum of not less than five samples for any 30-day period, shall not exceed a geometric mean of 200/100 ml.

6. The fecal coliform density, based on a minimum of not less than five samples for any 30-day period, shall not exceed 400 per 100 ml in more than ten percent of the total samples during any 60-day period.

Enterococcus

7. If a shore monitoring station exceeds a geometric mean enterococcus density of 24 organisms per 100 ml for a 30-day period, the discharger shall conduct a sanitary survey to determine if the discharge is the source of the contamination.

8. If a shore monitoring station exceeds 12 enterococcus organisms per 100 ml for a six month period, the discharger shall conduct a sanitary survey to determine if the discharge is the source of the contamination.

The Districts have seven shoreline monitoring stations and six nearshore monitoring stations along the Palos Verdes Peninsula for bacteriological monitoring. Monitoring is required daily at the shore stations. At the nearshore stations, monitoring is required fives times a month at three different depths, but the Districts actually sample between ten and twenty times a month. Of the above limits, numbers one, two, five and six correspond to "Water-Contact Standards" in the State Ocean Plan. Limits seven and eight are based on a new type of water contact standard under consideration by the state. Limits three and four correspond to shellfish standards in areas where shellfish may be harvested for human consumption. There are many other receiving water limitations in the permit that are intended to ensure that the discharges of JWPCP effluent do not degrade the marine environment.

The Districts have an extensive ocean monitoring program to ensure that the marine environment is not degraded. The Districts monitor ocean water conditions around the Palos Verdes Peninsula, on the shelf and slope, via monthly hydrographic surveys of temperature, salinity, pH, dissolved oxygen, and light transmission at 34 sites. Light energy is measured monthly at seven nearshore stations. Ammonia nitrogen is measured quarterly at 21 stations. The Districts have been conducting an extensive ecological monitoring program for approximately 25 years that includes the following elements: benthic (sediment dwelling) biota, sediment chemistry, trawls for fish and invertebrates, dive surveys, and analyses of bioaccumulation of contaminants in fish and invertebrate tissues. The outfalls are also inspected periodically by divers and by submarine. Detailed results and analyses of the monitoring program are reported to the RWQCB monthly and annually.

Full Secondary Treatment

The Federal Clean Water Act states that in order to carry out its objectives, all publicly owned treatment works in existence on July 1, 1977, shall achieve effluent limitations based upon secondary treatment. Secondary treatment is regulated in terms of three parameters: BOD_5, suspended solids, and pH (40 CFR 133.102). The concentration requirements for BOD_5, and suspended solids are that the 30-day average shall not exceed 30 mg/L, the seven day average shall not exceed 45 mg/L, and the 30-day average percentage removal of suspended solids shall not be less than 85 percent. The effluent values for pH shall be maintained between 6.0 to 9.0. In 1993, the average annual concentration of BOD_5 and suspended solids in the effluent were greater than the defined limits; however, 86 percent of the suspended solids were removed from the influent. The current effluent pH meets standards based on secondary treatment.

RWQCB Order No. 77-99, adopted on June 27, 1977, preceded Order No. 91-112 and contained full secondary treatment requirements and a time schedule for compliance. The time schedule in Order No. 77-99 was immediately superseded by Enforcement Order No. 77-116, also adopted on June 27, 1977, which contained a time schedule for compliance with the secondary treatment requirements by January 1, 1985. In 1979, the Districts requested a modification of secondary treatment requirements for JWPCP under the provisions of Section 301(h) of the Federal Clean Water Act which was amended in December, 1977, to allow such modified requirements.

In November 1981, the EPA Regional Administrator issued a tentative approval of the 1979 application. A revised application was submitted in 1983, and in January 1987, the EPA Regional Administrator issued a tentative decision to deny the 1983 revised application and to withdraw the previous approval of the 1979 application. In January 1988, the Districts resubmitted a revised waiver application. On December 21, 1990, EPA Region IX issued a final decision to deny the Districts' request to modify the requirement for secondary treatment of all flows at the JWPCP. The Districts filed for an evidentiary hearing (appeal) to challenge EPA's denial of the variance request. In January 1992, the U.S. EPA and the RWQCB filed suit against the Districts under Section 309 of the CWA to compel full secondary treatment at the JWPCP. These lawsuits were settled in 1993 through a Consent Decree which specifies that the Districts will construct and operate all facilities necessary for compliance with the secondary treatment requirements by December 31, 2002.

RWQCB Order No. 91-112 specifies that until full secondary treatment is operational, JWPCP will operate under the interim limits in Cease and Desist Order No. 88-134. The RWQCB adopted Cease and Desist Order No. 88-134 on November 28, 1988 which included the interim limits in Table 3.1-2a.

3.1.2 WATER RECLAMATION PLANTS

All the JOS WRPs provide tertiary treatment to influent wastewater. Treatment at these WRPs currently consists of primary sedimentation, activated sludge treatment, coagulation, filtration, chlorination and dechlorination. All WRPs have NPDES permits; the permit limits are listed in Table 3.1-6. All limits, unless otherwise specified, are daily maximum concentration limits. As shown in Table 3.1-1, the JOS WRPs must renew NPDES permits in 1994 (renewal is currently under review by the RWQCB).

The LBWRP and the LCWRP have limits on only four constituents because both plants discharge effluent which is not reused into lined channels. The LCWRP discharges reclaimed water into the lined portion of the San Gabriel River and the LBWRP discharges effluent into the lined portion of Coyote Creek (see Figure 2.1-5 for a map of the Districts' receiving waters). The reclaimed water from the SJCWRP can be discharged through an outfall and conveyed twelve miles downstream to a lined portion of the San Gabriel River, in which case only the limits given for BOD_5, suspended solids, settleable solids, and oil and grease apply to the effluent. The other limits listed for the SJCWRP apply when reclaimed water is discharged into unlined sections of San Jose Creek or the San Gabriel River upstream of the Whittier Narrows Dam.

The PWRP, which has limits on twenty-two additional constituents, discharges into San Jose Creek, which flows into the San Gabriel River. Sections of San Jose Creek, and the section of the San Gabriel River into which San Jose Creek flows, are unlined, which allows incidental percolation of reclaimed water to the groundwater. The WNWRP has limits on the same constituents. It has four discharge points, but only three are used; the fourth discharge point is a groundwater test basin that was last used for research in 1981. Reclaimed water from two of the discharge points generally flows down the Rio Hondo to the Rio Hondo Spreading Grounds and the reclaimed water from the other discharge point generally flows down the San Gabriel River to the San Gabriel Spreading Grounds. In addition to daily maximum concentration limits on total dissolved solids, sulfate, chloride, nitrate, nitrite, and fluoride, the PWRP and the WNWRP have 30-day average and daily maximum mass emission limits. The 30-day average and daily maximum mass emission limits for both the PWRP and the WNWRP are the same, and are based on a daily maximum concentration and an reclaimed water flow of 15 mgd.

Acute toxicity and radioactivity limits are identical for all JOS WRPs. The acute toxicity of the reclaimed water shall be such that the average survival in undiluted reclaimed water for any three consecutive 96-hour bioassay tests shall be at least 90 percent and no single test shall be less than 70 percent. Radioactivity of the wastes discharged shall not exceed the limits specified in Title 22, Chapter 15, Article 5, Section 64443, of the California Code of Regulations, or subsequent revisions thereto. Compliance is assumed if the average concentration of gross beta activity is less than 50 pCi/L and if the average concentration of Tritium and Strontium-90 are less than 20,000 pCi/L and 8 pCi/L, respectively. If the gross beta particle activity exceeds 50 pCi/L, an analysis of the sample must be performed to identify the major radioactive constituent present and appropriate organ and total body doses must be calculated.

Table 3.1-6
NPDES PERMIT LIMITS FOR JOS WRPs

Constituent	Units	Long Beach NPDES Permit	Los Coyotes NPDES Permit	Pomona NPDES Permit	San Jose Creek NPDES Permit	Whittier Narrows NPDES Permit
BOD5 (30 day)	mg/l	20	20	20	20	20
Suspended Solids (30 day)	mg/l	15	15	15	15	15
Settleable Solids (30 day)	mg/l	0.1	0.1	0.1	0.1	0.1
Total Dissolved Solids	mg/l			750	700	750
Nitrate Nitrogen	mg/l			10[b]	10[b]	10[b]
Nitrite Nitrogen	mg/l			10[b]	10[b]	10[b]
Sulfate	mg/l			300	250	300
Chloride	mg/l			150	150	150
Fluoride	mg/l			1.6	1.6	1.6
Oil & Grease	mg/l	10[a]	10[a]	10[a]	10[a]	10[a]
Lindane (gamma-BHC, gamma HCH)	µg/l			4	[c]	4
Endrin	µg/l			0.2	[c]	0.2
Toxaphene	µg/l			5	[c]	5
Methoxychlor	µg/l			100	[c]	100
2,4-D	µg/l			100	[c]	100
2,4,5-TP (Silvex)	µg/l			10	[c]	10
Arsenic	mg/l			0.05	0.05	0.05
Barium	mg/l			1.0	1.0	1.0
Cadmium	mg/l			0.01	0.010	0.01
Chromium, Total	mg/l			0.05	0.05	0.05
Copper	mg/l			1.0	1.0	1.0
Iron	mg/l			0.3	0.3	0.3
Lead	mg/l			0.05	0.05	0.05
Mercury	mg/l			0.002	0.002	0.002
Selenium	mg/l			0.01	0.01	0.01
Silver	mg/l			0.05	0.05	0.05
Zinc	mg/l			5.0	5.0	5.0

[a] = *Oil and grease limits are: 30-day average, 10mg/L; daily maximum, 15 mg/L*
[b] = *Limit for the sum of Nitrate-nitrogen plus nitrite-nitrogen limit is: daily maximum, 10 mg/L*
[c] = *No applicable limit*

Reclaimed water from the WRPs is considered to be adequately disinfected if the seven day median number of coliform organisms does not exceed 2.2/100 ml, and the coliform count does not exceed 23/100 ml in more than one sample in any 30-day period. The reclaimed water is considered to have received adequate filtration if the turbidity does not exceed an average operating turbidity of two turbidity units, and five turbidity units for more than five percent of the time during any 24 hour period.

All WRPs must meet similar receiving water requirements. The reclaimed water discharged shall not cause foaming in the receiving water and shall not cause the pH in the receiving water to be less than 6.5 or more than 8.5. Any time reclaimed water is discharged into an unlined channel or at a place where the channel makes a transition from lined to unlined, the chlorine residual shall not be greater than 0.1 mg/L.

The largest use of reclaimed water in the JOS is groundwater recharge. Table 3.1-7 contains recharge and reuse permit limits. Note that there is an additional constituent limit in the reuse permits, boron, and that reuse and recharge permits have requirements to meet California Drinking Water Standards. Current standards are listed in Table 3.1-8.

The Montebello Forebay groundwater recharge permit applies to reclaimed water discharged to the Rio Hondo or San Gabriel Coastal Basin Spreading Grounds and unlined sections of the Rio Hondo and the San Gabriel River from the SJCWRP, the WNWRP, and/or the PWRP. The Montebello Forebay extends southward from the Whittier Narrows and currently is the most important area of recharge in the Central Basin. Ten freshwater-bearing aquifers underlie the Montebello Forebay area. The permit allows an average quantity of reclaimed water to be spread, based on a running three year average, which shall not exceed 50,000 AF per year (44.6 mgd). The permit allows a maximum quantity of reclaimed water spread in any one water year which shall not exceed 60,000 AF (53.5 mgd) or 50 percent of the total inflow into the Montebello Forebay for that year, whichever is less. Additionally, the maximum quantity of reclaimed water spread in any three year period shall not exceed 150,000 AF or 35 percent of the total inflow of all sources into the Montebello Forebay during that period.

Table 3.1-7
RECHARGE AND REUSE PERMIT LIMITS FOR JOS WRPs

Constituent	Units	Montebello Forebay	Long Beach	Los Coyotes	Pomona	San Jose Creek	Whittier Narrows
		Recharge Permit	Reuse Permit	Reuse Permit	Reuse Permit	Reuse Permit	Reuse Permit
Total Dissolved Solids	mg/l	700	1,000	1,000	750	800	600
Nitrate Nitrogen	mg/l	10[b]					10[b]
Nitrite Nitrogen	mg/l	10[b]			300		10[b]
Sulfate	mg/l	250	250	250	150	250	150
Chloride	mg/l	250	250	250		250	100
Fluoride	mg/l	1.6			1.0		1.6
Boron	mg/l	1	1.5	1.5		1.5	0.5
Oil and Grease	mg/l	10[a]					10[a]

[a] = *Oil and grease limits are: 30-day average, 10mg/L; daily maximum, 15 mg/L*
[b] = *Limit for the sum of Nitrate-nitrogen plus nitrite-nitrogen is: daily maximum, 10 mg/L*

Table 3.1-8
CALIFORNIA DRINKING WATER STANDARDS

	Drinking Water Standards		
	Units	Primary MCL	Secondary MCL
Conductivity	umhos		1600[f]
Turbidity	Units		5
Color	Units		15
Odor-Threshold	Units		3
Total Dissolved Solids	mg/l		1000[f]
Nitrate Nitrogen	mg/l	10	
Sulfate	mg/l		500[f]
Chloride	mg/l		500[f]
Fluoride	mg/l	1.6[a]	
Foaming Agents (MBAS)	mg/l		0.5
Lindane (Gamma-BHC, gamma HCH)	µg/l	4	
Heptachlor	µg/l	0.01	
Heptachlor Epoxide	µg/l	0.01	
Endrin	µg/l	0.2	
Toxaphene	µg/l	5	
Methoxychlor	µg/l	100	
2,4-D	µg/l	100	
2,4,5-TP (Silvex)	µg/l	10	
Cis Chloride (Alpha chlordane)	µg/l	0.1[b]	
Trans Chlordane (Gamma chlordane)	µg/l	0.1[b]	
Trans Nonachlor (Gamma nonachlor)	µg/l	0.1[b]	
Oxychlordane (Oxychlordene)	µg/l	0.1[b]	
Total Detected Chlordanes	µg/l	0.1[b]	
Technical Chlordane	µg/l	0.1[b]	
Cis Chlordene (Alpha chlordene)	µg/l	0.1[b]	
Trans Chlordene (Gamma Chlordene)	µg/l	0.1[b]	
Cis Nonachlor (Alpha nonachlor)	µg/l	0.1[b]	
Atrazine (AAtrex)	µg/l	3	
Simazine (Princep)	µg/l	10	
Chloroform (Trichloromethane)	µg/l	100[c]	
1,1,1-Trichloroethane (1,1,1-TCA)	µg/l	200	
Carbon Tetrachloride	µg/l	0.5	
1,1-Dichloroethylene (1,1-DCE, 1,1-Dichloroethene)	µg/l	6	
Trichloroethylene (TCE)	µg/l	5	
Tetrachloroethylene (PCE)	µg/l	5	
Bromodichloromethane (Dibromochloromethane)	µg/l	100[c]	
Chlorodibromomethane (Dibromochloromethane)	µg/l	100[c]	
Bromoform (Tribromomethane)	µg/l	100[c]	
Monochlorobenzene (Chlorobenzene)	µg/l	30	
Vinyl Chloride (VC)	µg/l	0.5	
1,1-Dichloroethane (1,1-DCA)	µg/l	5	
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	µg/l	1,200	
1,1,2-Trichloroethane (1,1,2-TCA)	µg/l	32	
1,2-Dichloroethane (1,2-DCA)	µg/l	0.5	
Benzene	µg/l	1	
Ethylbenzene (Phenylethane)	µg/l	680	
o-Xylene	µg/l	1,750[d]	

Table 3.1-8
CALIFORNIA DRINKING WATER STANDARDS (Continued)

	Drinking Water Standards		
	Units	Primary MCL	Secondary MCL
p-Xylene	µg/l	1,750[d]	
trans-1,2-Dichloroethylene	µg/l	10	
1,2-Dichloropropane	µg/l	5	
Cis-1,3-Dichloropropene (trans-Propylene Dichloride)	µg/l	0.5[e]	
trans-1,3-Dichloropropene (trans-Propylene Dichloride)	µg/l	0.5[e]	
1,1,2,2-Tetrachloroethane	µg/l	1	
m-Xylene	µg/l	1,750[d]	
o+p-Xylene	µg/l	1,750[d]	
Trichlorofluoromethane (Freon 11)	µg/l	150	
Ethylene Dibromide (EDB)	µg/l	0.02	
Cis-1,2-Dichloroethylene	µg/l	6	
m+p-Xylene	µg/l	1,750[d]	
Arsenic	mg/l	0.05	
Barium	mg/l	1	
Aluminum	mg/l	1	
Cadmium	mg/l	0.010	
Chromium, Total	mg/l	0.05	
Copper	mg/l		1.0
Iron	mg/l		0.3
Lead	mg/l	0.05	
Manganese	mg/l		0.05
Mercury	mg/l	0.002	
Selenium	mg/l	0.01	
Silver	mg/l	0.05	
Zinc	mg/l		5.0
Di(2-ethylhexyl)phthalate (DEHP)	µg/l	4	
1,4-Dichlorobenzene (p-DCB)	µg/l	5	
Total Xylene Isomers	µg/l	1,750[d]	
1,2-Dibromo-3-chloropropane	µg/l	0.2	
Bentazon	µg/l	18	
Carbofuran (Furandan)	µg/l	18	
Glyphosphate	µg/l	700	
Molinate (Ordram)	µg/l	20	
Thiobencarb (Bolero)	µg/l	70	100

Drinking Water Standards:

[a] *Fluoride MCL of 1.6 mg/l is based on annual average air temperature.*

[b] *Chlordane MCL is 0.1 µg/l. Chlordane is not defined in the drinking water standards. The definition used in the 1990 Ocean Plan is, therefore, used here. It defines chlordane as the sum of cis-chlordane, trans-chlordane, cis-chlordene, trans-chlordene, cis-nonachlor, and oxychlordane.*

[c] *Total Trihalomethane MCL of 100 µg/l applies to the sum of chloroform, bromodichloromethane, chlorodibromomethane, and bromoform.*

[d] *Xylenes MCL is 1,750 µg/l. It applies to either a single isomer or the sum of the isomers. The database includes: o-Xylene, p-Xylene, m-Xylene, o+p-Xylene, and m+p-Xylene.*

[e] *1,3-Dichloropropene MCL is 0.5 µg/l. It is assumed to the sum of cis-1,3-Dichlororpropene and trans-1,3-Dichloropropene.*

[f] *Upper secondary drinking water standards are shown in the data summary for conductivity, TDS, sulfate, and chloride.*

MCL = Maximum Containment Level

3.2 FEDERAL LAWS AND REGULATIONS

3.2.1 CLEAN WATER ACT

The Federal Clean Water Act, which was enacted in 1972, established the national strategy for controlling water pollution. The CWA set effluent discharge limitations, required states to establish and enforce water quality standards, and initiated the NPDES permit program for municipal and industrial point source dischargers.

The Water Quality Act of 1987, also known as the CWA amendments, added provisions to the CWA requiring states to promulgate water quality standards for toxic pollutants for which water quality criteria had been developed (state laws and regulations are described in Section 3.3). The CWA amendments also required NPDES permits for municipal, industrial, and general construction activity storm water discharges.

Pretreatment Program Regulations

The general pretreatment regulations, which were adopted as part of the CWA (40 CFR Part 403), require that municipal treatment plants regulate nonresidential waste discharges into public sewers. The goal of this program is to protect treatment plants from adverse impacts that could occur if hazardous or toxic wastes are discharged into a sewage collection system. In general, individual municipalities or sanitation districts operating treatment plants with capacities greater than 5 mgd are required to develop pretreatment programs. These regulations give the operating agencies the authority to prohibit or limit discharges of any pollutant that could pass through the treatment processes into receiving waters, interfere with treatment plant operations, or limit biosolids disposal options. The general pretreatment regulations also established categorical pretreatment standards that regulate sewer discharges from specific types of industries.

The Districts' existing pretreatment program began in 1972 with the adoption of the Wastewater Ordinance. Local discharge limits for industrial wastewater dischargers were adopted in 1975. These limits specified maximum allowable discharge concentrations for various pollutants to assist in meeting State Ocean Plan standards included in the NPDES permit. Adoption and enforcement of local discharge limits and federal categorical standards are now required parts of the pretreatment program. The Districts' program was approved by the EPA and the RWQCB in March 1985. Local industrial wastewater discharge limits for each particular constituent are calculated to ensure compliance with treatment plant NPDES permit limits and waste discharge requirements, as well as to protect treatment plant operations and biosolids quality. Proposed modifications to the existing local limits were developed in 1990. The existing and proposed local limits are presented in Table 3.2-1. New 24-hour composite sample limits are scheduled to be imposed for metals

and instantaneous limits for cadmium and lead are to be reduced. EPA has recommended approval of the limits and the Districts are awaiting RWQCB approval before implementation.

Table 3.2-1
LOCAL INDUSTRIAL WASTEWATER DISCHARGE LIMITS

Constituent	24-Hour Composite Daily Maximum Limits (mg/l)*		Instantaneous Maximum Limits (mg/l)	
	Proposed	Existing	Proposed	Existing
Arsenic	4.92		3	3
Cadmium	0.87		9	15
Chromium	3.71		10	10
Copper	7.75		15	15
Cyanide	1.90		10	10
Lead	3.74		32	40
Mercury	0.667		2	2
Nickel	3.72		12	12
Silver	2.17		5	5
TICH[b]			none detected	none detected
Zinc	14.73		25	25

Note: *blank* = *no limit*
[a] *mg/l* = *milligrams per liter*
[b] *TICH* = *total identifiable chlorinated hydrocarbons (which include Aldrin, dieldrin, chlordane, heptachlor, DDT, endrin, hexachlorocyclohexane, toxaphene, and polychlorinated biphenyls).*

These two sources of numerical limits for nonresidential discharges to the sewer system form the basis for control of toxic compounds and other constituents of concern which are difficult to remove via conventional wastewater treatment processes. Monitoring and sampling are also conducted for various organic compounds such as phenols, chlorinated hydrocarbons, and cyanide. The program has been very successful in reducing the discharge of constituents of concern to treatment plants, especially the JWPCP, with many constituents (e.g., DDT, phenols) being reduced 90 percent or more from 1975 levels. Implementation of the pretreatment program has enabled the Districts to meet NPDES permit requirements for JOS treatment facilities.

3.2.2 SAFE DRINKING WATER ACT

The Safe Drinking Water Act (SDWA) established a national program for protecting the quality of drinking water supplied by municipal and industrial water suppliers. Under the SDWA, EPA has issued national primary drinking water standards to protect human health and national secondary standards for aesthetic parameters such as taste and odor. These are the minimum standards which must be established by all states. Under the SDWA, states such as California with approved programs have implementation and enforcement authority.

Amendments to the SDWA in 1986 require EPA to promulgate new standards for certain contaminants such as arsenic which are known or suspected to be present in drinking water. New standards for many of these parameters could be more stringent than existing standards. Reclaimed water that is used to recharge groundwater, or is discharged to a surface water body designated as a drinking water supply, must meet California drinking water standards for trace constituents, which are typically the same as the federal standards.

3.2.3 FEDERAL CLEAN AIR ACT

Air quality management in California is governed by the Federal Clean Air Act (Act), the California Clean Air Act, and the California Health and Safety Code. The EPA oversees implementation of the Federal Clean Air Act, which underwent substantial modifications in November 1990. The California Air Resources Board (ARB), a department of the California Environmental Protection Agency (CAL-EPA), oversees air quality planning and control throughout California and regulates directly emitted mobile source pollutants and fuel formulations. The ARB divides the state into air basins based on meteorological conditions and geography and, to the extent feasible, political boundaries. The EPA administers the Federal Clean Air Act through the California ARB and in turn through the local districts such as the South Coast Air Quality Management District (SCAQMD). The authority delegated to the ARB and local districts for Federal Clean Air Act enforcement is extensive, but there are certain areas of responsibility that the EPA specifically does not or cannot delegate to the states or the local districts.

The Federal Clean Air Act Amendments of 1990 modified several titles of the Federal Clean Air Act. The most noteworthy modifications were Title III (Toxics) and the addition of Title V (Operating Permits) and Title VII (Enforcement).

Under Title III, EPA is required to establish maximum achievable control technology standards (MACT) for major sources and for area sources of toxics under a variety of scenarios. A major source is one which emits 25 tons per year (tpy) of a combination of 189 toxic compounds listed in the Act. POTWs are specifically targeted for MACT standards by 1995 with an implementation date of 1998. Smaller area sources will be subject to less stringent, generally available control technology standard (GACT) at EPA's discretion. Eight years after promulgation of the MACT standards, residual risk standards must be promulgated for major sources exceeding a cancer risk of one in a million with the implicit goal of reducing that risk to one in a million. In addition, Title III requires the implementation of Section 112(r) of the Act dealing with accidental release provisions which will impose additional regulations on onsite storage, use, and control of most hazardous chemicals including chlorine, sulfur dioxide, and ammonia.

The Clean Air Act Amendments of 1990 included a new operating permit program under Title V. This will require all major sources, as defined in the Act, to obtain facility permits. These permits must be renewed every five years and permit renewal and issuance and any significant modifications must go through a prescribed EPA and public review process. Enhanced monitoring for compliance

is also required. The JWPCP, for instance, is a major source under the Title V permitting program and any new construction or modifications at the JWPCP will be subject to public review and EPA scrutiny regardless of the size of the project. With respect to upstream plant expansions, depending upon how certain imminent federal rules define how the "potential to emit" of a facility can be limited, it is possible that none of the upstream plant expansions would trigger Title V.

The Clean Air Act Amendments of 1990 also contain Title VI which deals with greenhouse gases and stratospheric ozone protection. This section was added as part of the efforts to curb national contributions to global warming potential. The EPA will regulate methane emissions which could possibly impact solids handling facilities including composting operations and landfills.

Title VII of the Clean Air Act Amendments imposes new authorities on the federal government to enforce all provisions of the Federal Clean Air Act including raising heretofore misdemeanor type offenses to criminal offenses and significantly enhancing the penalty program.

South Coast Air Quality Management District

The California Legislature adopted the Lewis Air Quality Act in 1976, which created the South Coast Air Quality Management District (SCAQMD) from a voluntary association of air pollution control districts in Los Angeles, Orange, Riverside, and San Bernardino counties. The new agency was charged with developing uniform plans and programs for the South Coast Air Basin to attain federal air quality standards by the dates specified in federal law. The agency was also mandated to meet state standards by the earliest date achievable through the use of reasonably available control measures. The SCAQMD is responsible for stationary and indirect source control, air monitoring, enforcement of delegated mandates and attainment plan preparation and submittal to ARB for approval.

Status of Existing Plans

The Federal Clean Air Act requires that the appropriate air quality authorities prepare air quality plans designed to achieve the federal ambient air quality standards. The SCAQMD is responsible for preparing an Air Quality Management Plan (AQMP), and submitting that plan to the ARB. The ARB then reviews the AQMP and, following approval, incorporates it into the California State Implementation Plan (SIP), which includes air quality plans prepared by other local air quality control districts. The ARB then forwards the SIP to Region IX of the EPA for approval. A separate compliance plan is required by the EPA for each non-attainment pollutant.

If the state plan which is submitted by the ARB is deemed insufficient, the EPA is required to prepare a federal implementation plan (FIP) to attain the federal ambient air quality standards.

Federal Implementation Plan

The 1977 Federal Clean Air Act Amendments required all areas of the United States to submit both ozone and CO plans in 1979 and in 1982 which demonstrated attainment of the national health base standards by 1987. Because massive emission reductions were needed to meet the standards in certain areas of California, including the SCAB, the SCAQMD determined that such plans were not feasible; EPA opted to work with the local districts rather than reject their AQMPs. As a result of a lengthy litigation process in which public interest groups successfully challenged EPA's decision not to disapprove the 1982 AQMPs for the South Coast and other California air districts, EPA was mandated to prepare a FIP for those regions by July 31, 1990. A FIP for the South Coast Air Basin was completed and published in the Federal Register as required. Following passage of the Federal Clean Air Act Amendments of 1990, EPA argued that it no longer had an obligation to issue the FIP since Congress had established comprehensive new state planning requirements and attainment deadlines. The EPA was again challenged in court relative to its FIP obligation and a court ruling determined that a new FIP for ozone and CO was required. Consequently, EPA is under a court order to prepare a FIP for the South Coast Air Basin which demonstrates attainment for ozone and CO. EPA is required to finalize the FIP by February 1995. The EPA has proposed 30 measures in the FIP for the SCAB. Eighteen of these will be included in miscellaneous control measures found within the 1994 SCAQMD Air Quality Management Plan and will be implemented by the SCAQMD. Some of those measures could impact the proposed project such as control of VOC emissions from composting operations and POTWs. The 12 measures not subsumed by the SCAQMD 1994 AQMP are for federally regulated sources such as on-road and off-road mobile source control strategies, trains, airports and ports and other statewide area sources such as pesticide use. These 12 FIP measures are included in the 1994 AQMP and are expected to be implemented by the EPA. In association with the 1994 AQMP, the FIP measures are expected to bring the Basin into compliance with the national ambient air quality standards for ozone and CO.

State Implementation Plan

In developing the FIP, the EPA has worked closely with the SCAQMD because the SCAQMD is developing its own AQMP as required by the Federal Clean Air Act Amendments of 1990. The AQMP will be forwarded to the ARB for adoption as part of the SIP. This SIP must be adopted by the ARB and submitted to the EPA by November 15, 1994. If the SIP is approved by the EPA, then the SIP could be used in lieu of the FIP for federal air quality planning in the SCAB, if it also is approved by the SCAQMD Board (U.S. EPA 1994).

The EPA has developed a procedure for determining whether projects that are considered federal actions conform to applicable SIPs or FIPs (40 CFR parts 51 and 93). Conformity

procedures at least as stringent as those proposed by the EPA must be incorporated into the applicable SIP. In the absence of a federally approved SIP containing general conformity procedures, all federal actions must be shown to conform to the requirements in the federal conformity guidance.

3.2.4 FEDERAL ENDANGERED SPECIES ACT

The Federal Endangered Species Act (ESA) regulates the take of a species listed as threatened or endangered. "Take" is broadly defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The U.S. Fish and Wildlife Service (USFWS) involvement with the Districts' 2010 Plan could take place under Section 7, Section 9, or Section 10 of the Federal ESA (16 USC 1531 et seq.).

Section 7

Section 7 of the Federal ESA applies if a project involves a federal action, such as a federal permit or federal funding. It requires that the federal agency consult with USFWS regarding the potential effect of the agency's action on those species listed as threatened or endangered. Section 7 compliance also applies to agencies applying for state revolving fund (SRF) loans. The consultation process includes:

- obtaining from the USFWS a list of species in the action area that are listed or proposed for listing as threatened or endangered under the Federal ESA;
- preparing a biological assessment which contains information concerning species that are listed or proposed for listing, habitat that may be present in the area, and an evaluation of the potential effects (direct, indirect, and cumulative) of the proposed action on the species and habitat; and
- preparing a biological opinion, which specifies whether the proposed action is likely to jeopardize the continued existence of listed species or result in the adverse modification of critical habitat (the biological opinion may include an incidental take statement if the proposed action will result in take of a listed species incidental to the federal action).

If projects in the 2010 Plan are funded by the SRF, the portion of the plan that is funded will require Section 7 consultation. The SWRCB and EPA are currently developing a Section 7 process for SRF projects.

Section 9 and Section 10

Section 9 of the Federal ESA prohibits all persons subject to the jurisdiction of the United States from taking, importing, exporting, transporting, or selling any species of fish or wildlife listed as endangered or threatened. Although Section 9 prohibits the take of a federally listed species, Section 10 of the ESA is the mechanism to allow for an incidental take. The USFWS may issue a take permit for any taking that is incidental to, and not for the purpose of, the carrying out of an otherwise lawful activity. Along with the application for an incidental take permit, the applicant must submit a conservation plan that specifies likely impacts that would result from the take, mitigation measures to minimize those impacts, funding for the mitigation, and project alternatives analyzed.

3.2.5 NATIONAL HISTORIC PRESERVATION ACT

A programmatic agreement between the SWRCB and the State Historic Preservation Officer (SHPO) requires that projects receiving federal funds that are administered by the SWRCB comply with Section 106 of the National Historic Preservation Act (NHPA). Upgrading the level of treatment at the JWPCP to full secondary requires compliance with Section 106 of NHPA, because the Districts intend to use federal funds and/or SRF loans to fund a portion of this project.

The Section 106 review process is implemented using a five-step procedure: identifying and evaluating historic properties, assessing the effects of the undertaking on properties that are eligible for listing on the National Register of Historic Places (NRHP), consulting with the SHPO and other agencies for the development of an agreement that addresses the treatment of historic properties, receiving comments on the agreement or results of consultation from the Advisory Council on Historic Preservations, and proceeding with the project according to the agreements.

3.2.6 OTHER APPLICABLE FEDERAL REQUIREMENTS

Other federal requirements that apply to the 2010 Plan include federal requirements in accordance with the SRF program. These requirements are described below.

Executive Order 11988

This executive order relating to floodplain management was prepared in 1979 to avoid, to the extent possible, long- and short-term adverse impacts associated with the occupation and modification of floodplains and to avoid direct or indirect support of development in floodplains. This order requires that the agency reviewing the proposed action consider alternatives to avoid adverse effects and incompatible development in floodplains. If the only practicable alternative is to site a project in the floodplain and the reviewing agency concurs, the following must occur:

- design or modify the action to minimize potential harm to the floodplain, and
- prepare and circulate a notice containing an explanation of why the action is proposed to be located in the floodplain.

Executive Order 11990

This executive order was prepared to provide assistance for new construction located in wetlands if no practicable alternative exists, and to minimize the harm to wetlands that may result from the proposed use. The order requires early public review of any plans or proposals for new construction in wetlands, in addition to notification of the Office of Management and Budget regarding compliance with the order. The order establishes several factors that should be considered during evaluation of the effects of a project on the survival and quality of wetlands; these factors include public health and welfare, maintenance of natural systems, and other uses of wetlands in the public interest.

Executive Order 11593

This executive order provides for the protection and enhancement of the cultural environment. Section 106 of NHPA and CEQA compliance will fulfill the requirements of this order.

3.3 STATE AND LOCAL LAWS AND REGULATIONS

3.3.1 STATE WATER AND AIR LAWS

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969 established the State Water Resources Control Board (SWRCB), divided the state into nine hydrographic basins, and established a regional water quality control board (RWQCB) for each basin. The Porter-Cologne Act requires the SWRCB to adopt water quality control plans for protection of water quality. A water quality control plan must:

- identify "beneficial uses" of waters to be protected;
- establish water quality objectives for the reasonable protection of those beneficial uses; and
- establish an implementation program for achieving water quality objectives.

The SWRCB is the primary state agency responsible for formulating policies to protect surface waters and groundwater supplies and for approving the water quality control plan (basin plan) prepared by each regional board. The EPA has granted California primacy in administering and enforcing provisions of the CWA and the NPDES permitting processes. The Porter-Cologne Water Quality Control Act also provides for the issuance of Waste Discharge Requirements (WDRs) to dischargers. When the state issues WDRs for a point source discharge, that action also typically includes the issuance of an NPDES permit as required by the CWA.

Each regional board has developed basin plans that identify important water resources and their beneficial uses for its region. Basin plans generally are reviewed and updated every three years. The District's JOS facilities are under the jurisdiction of the LARWQCB. The LARWQCB is responsible for administering and enforcing NPDES permits, water quality control plans, and pretreatment programs in the Los Angeles basin.

California Clean Air Act

The California Clean Air Act (CCAA) was signed into law on September 30, 1988, became effective on January 1, 1989, and was amended in 1992. Also known as the Sher Bill (AB 2595), the California Clean Air Act established a legal mandate to achieve health based state air quality standards at the earliest practicable date. Through its many requirements, the CCAA serves as the focal point of the SCAQMD's planning efforts since it is generally

more stringent than the Federal Clean Air Act. Based on pollutant levels, the CCAA divides non-attainment areas into categories with progressively more stringent requirements. The SCAB is an extreme non-attainment area for ozone and is a serious non-attainment area for CO and NO_x. PM_{10} is not currently addressed in the CCAA, and the SCAB is nearly an attainment area for sulfates.

California Toxics Regulations

Identification of toxic air contaminants in California is governed by AB 1807 which requires the ARB to identify compounds as toxic air contaminants and to adopt air toxic control measures (ATCMs) for selected source categories. Local districts must adopt regulations to implement and enforce the ATCMs. Legislation enacted in 1992 requires the ARB to identify substances that are identified as "hazardous air pollutants" under the Federal Clean Air Act as "toxic air contaminants" under the state program. Hence, the ARB must incorporate all 189 federal hazardous air pollutants into the state Toxic Contaminant List. The proposed project is principally impacted, however, by the California Air Toxics "Hot Spots" Information and Assessment Act of 1987 (Hot Spots Act) as well as SCAQMD Rules 1401 and 1402 which will be discussed later in this document. The Hot Spots Act was designed to gather information on air emissions of hazardous substances from facilities that create localized concentrations or "hot spots" of such substances. The legislation focuses on the need to collect, evaluate, and disseminate information on the amount of hazardous substances certain facilities release into the air and on exposures and short term and long term health effects from those releases. The Hot Spots Act requires the ARB to prepare a list of substances that are to be inventoried under the Act. A facility is subject to the Act if it was listed in any air toxics use or emission survey compiled by an air district or if it manufactures, formulates, uses, or releases any of the substances on the toxics list in the Act. Prior to 1994, a facility subject to the Act was required to complete and update every two years a detailed inventory of its emissions of substances on the ARB list. Legislation enacted in 1993, however, extends the time within which to update the emissions inventory to four years. A facility subject to the inventory requirement must submit a proposed plan to the local district. The plan must be a "comprehensive characterization of the full range of hazardous materials that are to be released." Within 90 days after reviewing the resultant emissions inventories, the air district must prioritize the facilities and place them into three categories for risk assessment preparation: high priority, intermediate priority, and low priority. Facilities placed in the high priority category, for example, must prepare and submit health risk assessments to the pertinent districts within 150 days of their categorization. Upon approval of a risk assessment, a facility operator is required to give notice to all exposed persons if the air district concludes that the risk assessment indicates there is a significant health risk associated with the emissions from the facility. The cost of administering the Act is directly borne by the facilities that are subject to it.

Senate Bill 1731 adds to the Hot Spots Act by requiring risk reduction audits and plans for high risk facilities. The bill requires existing facilities to submit risk reduction plans and to reduce their risks below significant levels within five years of plan submission with extensions for specified circumstances. Local SCAQMD Rule 1402 implements SB 1731.

3.3.2 CALIFORNIA ENDANGERED SPECIES ACT

Under the California Endangered Species Act (Cal-ESA), all state lead agencies (as defined by CEQA) preparing initial studies, negative declarations, or EIRs must consult with the California Department of Fish and Game (DFG) to ensure that any action authorized, funded, or carried out by that lead agency is not likely to jeopardize the continued existence of any endangered or threatened species. This California ESA consultation requirement does not apply to local lead agencies, such as the Districts.

The California ESA also prohibits any party from importing into the state; exporting out of the state; or taking, possessing, purchasing, or selling within the state any part or product of any endangered or threatened species (except as provided in the Native Plant Protection Act or California Desert Native Plants Act). Through Section 2081 of the California ESA, the DFG may enter into a management agreement with the project applicant to allow for an incidental take, as the USFWS may under Section 10 of the Federal ESA. If the 2010 Plan projects were to cause an incidental take of a state-listed species, a Section 2081 management agreement would be required.

Section 1601, California Fish and Game Code

Through the California Fish and Game Code, the DFG is responsible for protecting and conserving the fish and wildlife resources of the state. As part of this responsibility, the DFG oversees all actions within the state that

> *divert, obstruct or change the natural flow or bed, channel or bank of any river, stream or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit, or will use material from the streambeds designated by the department.*

Typical actions include construction of berms, dredging, or channelization.

Section 1601 (for public entities) requires application to the DFG to obtain a streambed alteration agreement. This agreement is not considered a discretionary permit subject to CEQA; instead, it is a negotiated agreement between the local DFG warden and the project applicant. The agreement typically contains conditions, such as erosion control, intended to reduce the effect of the activity on fish and wildlife resources. The agreement may also include a long-term monitoring condition to assess the effectiveness of the proposed conditions related to the activity.

If construction activities such as excavation, filling, and land clearing affect streambeds in the 2010 Plan area, Section 1601 compliance would be required.

3.3.3 WATER AND AIR REGULATIONS OF OTHER STATE AND LOCAL AGENCIES

RWQCB Water Quality Control Plans

The CWA requires that water resources be protected from degradation resulting from waste discharges and that identified beneficial uses be maintained. There are three water quality control plans which are directly applicable to JOS facilities and to this project that implement the requirements of the CWA: the Inland Surface Waters Plan (ISWP), the Enclosed Bays and Estuaries Plan (EBEP), and the Basin Plan. The Basin Plan identifies the beneficial uses of specific water bodies in the region and contains water quality objectives and standards established to protect these uses. The designated beneficial uses for surface waters and groundwater are identified in the Basin Plan. In general, the beneficial uses for surface waters in the project area are: groundwater recharge, contact and noncontact recreation, warm water aquatic habitat, and wildlife habitat. The upper and lower canyon reaches of the San Gabriel River also have designated municipal and industrial water supply as beneficial uses.

The above plans contain both narrative and numeric standards and comprise the major programs which regulate wastewater discharges in the region. The Basin Plan provides narrative objectives for color, tastes, odors, floating material, suspended and settleable material, oil and grease, toxicity, and turbidity. Relevant numeric surface water quality objectives from the Basin Plan are presented in Table 3.3-1. Relevant numeric groundwater quality objectives from the Basin Plan are presented in Table 3.3-2. Other objectives for surface and groundwater designated as municipal water supply are presented in Tables 3.3-3 to 3.3-5.

The adoption of the ISWP and EBEP set forth new objectives for the protection of aquatic life and human health (in this plan, the EBEP applies to the tidal prism, and the ISWP applies to all other receiving waters of JOS WRPs). The water quality objectives in these plans were developed on a statewide basis, and apply to all waters therein. The plans contain objectives for priority toxic pollutants, as listed under the CWA. In areas where these numbers conflict with the older basin plan objectives, the stricter numeric or narrative objectives apply (California Regional Water Quality Control Board, Los Angeles Region 1992). The RWQCB also determines the location in the tidal prism area where objectives from the EBEP for saltwater or objectives for freshwater from either plan apply.

The ISWP and EBEP were the subject of a lawsuit brought against the SWRCB by a group of municipalities and one private company alleging that the plans violated provisions of the Porter-Cologne Water Quality Act and CEQA. On October 15, 1993, a tentative decision was issued which overturned these plans, and technically left the state without enforceable numeric objectives for toxic pollutants regulated by the respective plans. At this time, it is unknown when the plans will be readopted, how the current objectives will change, and how this could effect NPDES permit renewals.

Table 3.3-1
WATER QUALITY OBJECTIVES
FOR SURFACE WATERS IN THE JOS SERVICE AREA

	Objective (mg/l)[1]				
Stream/Station	TDS[2]	Sulfate	Chloride	Boron	Nitrogen[3]
San Gabriel River and tributaries-above Morris Dam as measured at Azusa Powerhouse	250	30	10	0.6	2
San Gabriel River and tributaries-Firestone Boulevard to Morris Dam	750	300	150	none	8
San Gabriel River and tributaries-Firestone Boulevard to Tidal Prism (approximately at Willow Street)	none specified (groundwater recharge is not a beneficial use in this reach)				
Rio Hondo and tributaries above spreading grounds (approximately Santa Ana Freeway)	750	300	150	none	8

[1] *mg/l=milligrams per liter*
[2] *TDS=total dissolved solids*
[3] *Nitrogen=nitrate and nitrite*
Source: Water Quality Control Plan, Los Angeles Region, 1994.

Table 3.3-2
WATER QUALITY OBJECTIVES
FOR GROUNDWATERS IN THE JOS SERVICE AREA

	Objective (mg/l)			
Area	TDS	Sulfate	Chloride	Boron
Los Angeles-San Gabriel River Hydrologic Unit				
Coastal Plain hydrologic area				
West Coast basin	800	250	250	1.5
Santa Monica basin	1,000	250	200	0.5
Hollywood basin	750	100	100	1.0
Central basin	700	250	150	1.0
San Gabriel Valley hydrologic area				
Puente basin	1,000	300	150	1.0
Main San Gabriel basin				
Westerly portion	450	100	100	0.5
Easterly portion	600	100	100	0.5
Spadra hydrologic area				
Spadra hydrologic subarea	550	200	120	1.0
Pomona hydrologic subarea	300	100	50	0.5
Live Oak hydrologic subarea	450	150	100	0.5

Source: Water Quality Control Plan, Los Angeles Region, 1994.

Table 3.3-3
OBJECTIVES FOR SURFACE WATERS AND GROUNDWATER DESIGNATED AS MUNICIPAL SUPPLY: LIMITING CONCENTRATIONS OF PESTICIDES

A. Chlorinated Hydrocarbons	Limiting Concentrations, (mg/l)
Endrin	0.0002
Lindane	0.004
Methoxychlor	0.1
Toxaphene	0.005
B. Chlorphenoxys	
2,4-D	0.1
2,4,5-TP-Silvex	0.01

Source: Water Quality Control Plan, Los Angeles Region, 1994.

Table 3.3-4
OBJECTIVES FOR SURFACE WATERS AND GROUNDWATER DESIGNATED AS MUNICIPAL SUPPLY: LIMITING CONCENTRATIONS OF INORGANIC CHEMICALS

Constituent	Limiting Concentration (mg/l)
Aluminum	1.
Arsenic	0.05
Barium	1.0
Cadmium	0.010
Chromium	0.05
Lead	0.05
Mercury	0.002
Nitrate (as NO_3)	45.0
Selenium	0.01
Silver	0.05

Source: Water Quality Control Plan, Los Angeles Region, 1994.

Table 3.3-5
OBJECTIVES FOR SURFACE WATERS AND GROUNDWATER DESIGNATED AS MUNICIPAL SUPPLY: LIMITING AND OPTIMUM CONCENTRATIONS OF FLUORIDE

Annual Average of Maximum Daily Air Temperature	Fluoride Concentration (mg/l)			Maximum Contaminant Level
	Lower	Optimum	Upper	
53.7 and below	0.9	1.2	1.7	2.4
53.8 to 58.3	0.8	1.1	1.5	2.2
58.4 to 63.8	0.8	1.0	1.3	2.0
63.9 to 70.6	0.7	0.9	1.2	1.8
70.7 to 79.2	0.7	0.8	1.0	1.6
79.3 to 90.5	0.6	0.7	0.8	1.4

Source: Water Quality Control Plan, Los Angeles Region, 1994.

Air Quality Management Plan

The SCAQMD has updated its 1991 Air Quality Management Plan (AQMP). The 1994 AQMP contains measures that the SCAQMD proposes to implement to attain both federal and state ambient air quality standards. The SCAQMD adopted their 1994 AQMP on September 9, 1994.

To meet the responsibility for air quality management and to address the unique characteristics of the Basin, the SCAQMD has adopted rules and control measures for permit applicants, which are included in the AQMP. These rules apply to permits to construct and permits to operate. All of the rules, proposed rules, and proposed control measures that apply to this plan are discussed in the accompanying EIR.

SCAQMD Rule 1401 prohibits the construction of any new or modified sources with cumulative potential cancer risks greater than 10 in a million. Best available toxics control technology is required in cases where a modification or new construction results in carcinogenic risks in excess of one in a million. More compounds are expected to be added to the Rule 1401 list in the future. SCAQMD Rule 1402 requires that any facility exceeding 100 in a million cancer risk or a total acute or chronic hazard index of five or greater to submit and implement a risk reduction plan within five years with extensions under extenuating circumstances.

Regional Comprehensive Plan

The Southern California Association of Governments (SCAG) is responsible for the preparation of regional growth forecasts for the SCAB. The SCAQMD has entered into a memorandum of understanding to use SCAG's growth forecast in the development of the SCAQMD's air quality management plans. The SCAB's 1994 SIP and the 1994 AQMP will be based on SCAG's most recent regional growth forecasts. The 1991 AQMP was based on a SCAG regional population forecast of 15.7 million for 2010, whereas the proposed 1994 AQMP will reflect SCAG's more recent forecast of 17.4 million for 2010. The draft FIP is based on the population forecast of 18.3 million.

Cultural Resources

The state requirements for cultural resources are outlined in Appendix K of the State CEQA Guidelines and Sections 5020, 5020.4, 5020.7, 5024.1, 5024.5, 5024.6, 21084, and 21084.1 of the Public Resources Code. Generally, compliance with the requirements of Section 106 of the NHPA is sufficient to ensure compliance with CEQA.

Other state requirements are outlined in Section 7052 of the California Public Health and Safety Code and Section 5097 of the Public Resources Code, which provide for the

protection of Native American remains and identify special procedures to be followed when Native American burial sites are found. When remains are found, the Native American Heritage Commission (NAHC) and the county coroner must be notified. The NAHC provides guidance concerning the most likely Native American descendants and the treatment of human remains and associated artifacts. Compliance with the provisions of these laws are separate from the requirements of CEQA and the NHPA.

3.3.4 REGULATIONS INVOLVING SOIL CONTAMINATION

The construction of proposed facilities will require subgrade preparation for facility foundations as well as the removal and disposal and/or remediation of any contaminated and/or unsuitable foundation materials that may be present in the underlying soils. For example, expansion of secondary treatment facilities at JWPCP will occur in some areas which were formerly used as solids drying beds or lagoons. Previous analyses of buried solids at the JWPCP have revealed the presence of DDT and its isomers at levels which would classify the material as a hazardous waste if disposed of in California. Some heavy metals and low levels of hydrocarbons were also discovered. In addition, rags from the bar screens were previously disposed of in several pits within the former lagoons. These pits may now contain methane and volatile organic compounds resulting from the decay of the rags and other organic matter.

Investigation and disposal and/or remediation of contaminated soils require regulatory oversight by either the RWQCB or the Department of Toxic Substances Control (DTSC). Regulatory oversight for the JWPCP is minimal at this time. However, regulatory approval for closure of these issues eventually will involve the RWQCB. The following is a discussion of various state regulations and guidelines that are relevant to contaminated soils at the JWPCP site.

Waste Classification and Related "Threat to Water Quality"

State guidelines offer specific directions for determining waste classification based on the threat that the waste poses to ground water quality. The "Designated Level Methodology for Waste Classification and Cleanup Level Determination" (RWQCB, 1989), a technical guideline, may be used to classify wastes using all site-specific factors. The significance of any potential threat to water quality depends on the presence and extent of any contaminant compounds or combinations, their concentrations, the depths to groundwater, and the characteristics of the unsaturated zone above the uppermost aquifer.

Hazardous Waste Classification

Section 66261.24 of Title 22 of the California Code of Regulations (CCR) contains the definition and criteria for determining if a waste is hazardous under the toxicity criteria, and Sections 66261.100 and 66261.101, Article 5 of Title 22 of the CCR summarize the criteria for classifying a waste as hazardous and non-hazardous under the Resource Conservation

and Recovery Act (RCRA), respectively. RCRA-listed hazardous wastes are contained in 40 CFR Part 261, Subpart D, which also contains criteria to classify wastes as hazardous with respect to toxicity. The nature of the buried solids material found at the JWPCP site is such that the other three hazardous characteristics criteria of reactivity, corrosivity and ignitability are not relevant.

Special Hydrocarbon Contamination Regulations

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Health and Safety Code (HSC) contain statutory provisions which generally exclude natural petroleum products from the definition of hazardous materials covered by each act. Section 25317 of the HSC states that a "Hazardous substance does not include...[p]etroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance...". Section 9201(14) of 42 CFR is essentially identical; differing only in the definition of a "listed" hazardous substance. The DTSC, however, has historically interpreted these exclusions more narrowly than the EPA, and considers them to cover only unrefined petroleum and crude oil. Recently, DTSC has issued a written statement that this policy interpretation impacts cleanups administered by the regional water boards, local health departments and other implementing agencies, as well as those administered by DTSC. In the case of the regional water boards, an August 1, 1990, Memorandum of Understanding between the SWRCB and the DTSC specifies which agency will be responsible for various cleanups. Any potential hydrocarbon materials at the JWPCP are anticipated to be crude and unprocessed natural petroleum from past and current oil production.

Transport of Hazardous Materials

Transportation of hazardous materials must be conducted in compliance with Article 6, Section 25160 of HSC. The provisions of Section 25160 require any generator of hazardous materials which are transported to an off site handling, treatment, storage, or disposal facility (or to a facility out-of-state) to complete a standard California Uniform Hazardous Waste Manifest (Manifest).

A Manifest must be transmitted to the DTSC within 30 days after any transport of hazardous waste, or submitting hazardous waste for out-of-state transport.

Control and Mitigation of Emissions of Volatile Organic Compounds From Decontamination of Soil

The SCAQMD has developed Rule 1166 to limit emissions of volatile organic compounds (VOCs) from excavation of soils contaminated with VOCs as a result of leakage from storage or transfer facilities, from accidental spillage, or other depositions. In the event that

soil contaminated with VOCs is detected as per Rule 1166, the SCAQMD must be notified and VOC contaminated soil mitigation measures, as approved by the SCAQMD, must be implemented for the collection and disposal of VOCs prior to or after excavation of VOC contaminated soil materials.

Miscellaneous Regulatory Compliance for Subsurface Investigations

All investigative methods involving excavations must be conducted in conformance with applicable administrative and regulatory codes in the State of California. All geologic logging and reporting of boreholes must be conducted under the direct supervision of a Certified Engineering Geologist (CEG) currently registered in the State of California. Geologic boreholes destined to become monitoring wells must be logged by a professionally registered geologist (RG) in the State of California. Geologic portions of the proposed reports must be in agreement with the California Department of Conservation, Division of Mines and Geology Notes #43 and #44. If necessary, any oily waste investigations must be done according to Chapter 4 of Division 2 of Title 14 of the CCR, and Sections 3208, 3228, 3229, 3230, 3232, 3237 and 3251.5 of Article 4, Chapter 1, Division 3 of the Public Resources Code. All laboratories must be certified by the State of California Department of Health Services for the constituents being analyzed.

3.4 WATER REUSE AND RECLAMATION REQUIREMENTS

Section 13523 of the California Water Code provides that a Regional Board, after consulting with and receiving the recommendations of the California State Department of Health Services (DOHS) and after any necessary hearing, may prescribe reclamation requirements for effluent which is used or proposed to be used as reclaimed water, if it determines such action to be necessary to protect the public health, safety, or welfare. Section 13523 further provides that such requirements shall include, or be in conformance with, the statewide reclamation criteria. The "prescribed water reclamation requirements" are the reuse and recharge permits listed in Table 3.1-1 with the associated limits that are listed in Tables 3.1-7 and 3.1-8.

To comply with requirements for discharge of effluent to local waterways, WRPs in the Los Angeles Basin must provide tertiary treatment since the receiving waters are designated as non-restricted recreational areas and direct human contact with reclaimed water has occurred regularly. Consequently, no additional treatment is required for direct, non-potable reuse. According to the DOHS, tertiary-treated effluent can be used for almost any purpose except for direct drinking water. Table 3.4-1 lists the possible uses of reclaimed water and the level of treatment required for these uses. Although there are uses for effluent which receives less than tertiary treatment, there are few opportunities for such uses in urban areas.

The DOHS is presently reviewing the reuse regulations. Revised regulations, which will be completed in the near future, will include the following additional reuse applications: toilet and urinal flushing; cooling towers; fire fighting; commercial laundries; artificial snow making; street cleaning; and various construction uses such as dust control, soil compaction, consolidation of backfill, sewer line flushing and concrete mixing.

To ensure that use of reclaimed water is safe for the public, Section 13522.5 of the Water Code and Section 60323 of the Wastewater Reclamation Criteria require the reclaimer to file an engineering report, prepared by a qualified engineer registered in California, of any material change or proposed change in character, location or volume of the reclaimed water or its uses. This report must be filed with the RWQCB and the DOHS. Additionally, the reclaimer shall be responsible for ensuring that all users of reclaimed water comply with the specifications and requirements for such use.

Table 3.4-1
SUITABLE USES OF RECLAIMED WATER

Use	Conditions in Which Use is Allowed			
	Disinfected Tertiary Reclaimed Water	Disinfected Secondary-2.2 Reclaimed Water[1]	Disinfected Secondary-23 Reclaimed Water[1]	Undisinfected Secondary Reclaimed Water
supply for a non-restricted recreational impoundment	Allowed	Not allowed	Not allowed	Not allowed
flushing toilets and urinals and priming drain traps	Allowed	Not allowed	Not allowed	Not allowed
all water uses other than potable use for food preparation	Allowed	Not allowed	Not allowed	Not allowed
irrigation of: parks, playgrounds, school yards, residential yards and golf courses associated with residences	Spray, drip, or surface	Not allowed	Not allowed	Not allowed
restricted access golf courses cemeteries, and freeway landscapes	Spray, drip, or surface	Spray, drip, or surface	Spray, drip, or surface	Not allowed
non-edible vegetation at other areas with limited public exposure	Spray, drip, or surface	Spray, drip, or surface	Spray, drip, or surface	Not allowed
sod farms	Spray, drip, or surface	Spray, drip, or surface	Spray, drip, or surface	Not allowed
ornamental plants for commercial use	Spray, drip, or surface	Spray, drip, or surface	Spray, drip, or surface	Not allowed
all food crops	Spray, drip, or surface	Not allowed	Not allowed	Not allowed
food crops that are above ground and not contacted by reclaimed water	Spray, drip, or surface	Drip or surface	Not allowed	Not allowed
pasture for milking, animals and other animals	Spray, drip, or surface	Spray, drip, or surface	Spray, drip, or surface	Not allowed
fodder (e.g., alfalfa), fiber (e.g., cotton), and seed crops not eaten by humans	Spray, drip, or surface	Spray, drip, or surface	Spray, drip, or surface	Drip or surface
orchards and vineyards bearing food crops	Spray, drip, or surface	Drip or surface	Drip or surface	Drip or surface
orchards and vineyards not bearing food crops	Spray, drip, or surface	Spray, drip, or surface	Spray, drip, or surface	Drip or surface
Christmas trees and other trees not grown for food	Spray, drip, or surface	Spray, drip, or surface	Spray, drip, or surface	Drip or surface
food crop which must undergo commercial pathogen-destroying processing before consumption (e.g., sugar beets)	Spray, drip, or surface	Spray, drip, or surface	Spray, drip, or surface	Drip or surface
other uses: industrial cooling utilizing cooling towers, forced air evaporation, spraying, or other feature that creates aerosols or other mist	Allowed	Not allowed	Not allowed	Not allowed

[1] — *The numbers refer to limits on the number of coliforms per 100 ml in the reclaimed water.*
Source: Title-22: California Water Reclamation Criteria, May 1994

Table 3.4-1
SUITABLE USES OF RECLAIMED WATER (Continued)

Use	Conditions in Which Use is Allowed			
	Disinfected Tertiary Reclaimed Water	Disinfected Secondary-2.2 Reclaimed Water[1]	Disinfected Secondary-23 Reclaimed Water[1]	Undisinfected Secondary Reclaimed Water
industrial cooling not utilizing cooling towers, forced air evaporation, spraying, nor other feature that creates aerosols or other mist	Allowed	Allowed	Allowed	Not Allowed
industrial process with exposure of workers	Allowed	Not allowed	Not allowed	Not allowed
industrial process without exposure of workers	Allowed	Allowed	Allowed	Not allowed
industrial boiler feed	Allowed	Allowed	Allowed	Not allowed
water jetting for consolidation of backfill material around pipelines for potable water during water shortages	Allowed	Not Allowed	Not Allowed	Not Allowed
water jetting for consolidation of backfill material around pipelines for reclaimed water, sewerage, storm drainage, and gas, and conduits for electricity	Allowed	Allowed	Allowed	Not Allowed
dampening soil for compaction at construction sites landfills, and elsewhere	Allowed	Allowed	Allowed	Not Allowed
washing aggregate and making concrete	Allowed	Allowed	Allowed	Not Allowed
dampening unpaved roads and other surfaces for dust control	Allowed	Allowed	Allowed	Not Allowed
dampening brushes and street surfaces during street sweeping	Allowed	Allowed	Allowed	Not Allowed
flushing sanitary sewers	Allowed	Allowed	Allowed	Not Allowed
fire fighting by dumping from aircraft	Allowed	Allowed	Allowed	Not Allowed
supply for a restricted recreational impoundment	Allowed	Allowed	Not Allowed	Not Allowed
supply for basins at fish hatcheries	Allowed	Allowed	Not Allowed	Not Allowed
washing corporation yards, lots, and sidewalks	Allowed	Allowed	Not Allowed	Not Allowed
supply for landscape impoundment without decorative fountain	Allowed	Allowed	Allowed	Not Allowed
supply for decorative fountain	Allowed	Not Allowed	Not Allowed	Not Allowed

[1] — *The numbers refer to limits on the number of coliforms per 100 ml in the reclaimed water.*
Source: Title-22: California Water Reclamation Criteria, May 1994.