CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
320 West 4th Street, Suite 200, Los Angeles

FACT SHEET

WASTE DISCHARGE REQUIREMENTS FOR CAMARILLO SANITARY DISTRICT (Camarillo Water Reclamation Plant)

NPDES No. CA0053597
Public Notice No.: R4-2003-004

FACILITY ADDRESS	FACILITY MAILING ADDRESS
Camarillo Water Reclamation Plant	Camarillo Sanitary District
150 East Howard Road	P.O. Box 248
Camarillo, CA 93012	Camarillo, CA 93011
Contact: Douglas Frost, Jr.	Contact: Robert Westdyke
Telephone: (805) 383-5668	Telephone: (805) 388-5309

I. Public Participation

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the above-referenced facility. As an initial step in the WDR process, the Regional Board staff has developed tentative WDRs. The Regional Board encourages public participation in the WDR adoption process.

A. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in person or by mail to:

Executive Officer
California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

To be fully responded to by staff and considered by the Regional Board, written comments should be received at the Regional Board offices by 5:00 p.m. on April 11, 2003 (for the Tentative Permit dated February 25, 2003) and on May 16, 2003 (for the Revised Tentative Permit dated May 6, 2003).

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February 25, 2003
Revised: May 6, 2003 & May 21, 2003

The Regional Board staff considered comments received by the April 11 and May 16, 2003 deadlines, and when appropriate, incorporated them into a revised tentative.

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B. Public Hearing

The Regional Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date, time, and location:

Date:	June 5, 2003
Time:	9:00 a.m.
Location:	City of Simi Valley, Council Chambers, 2929 Tapo Canyon Road, Simi Valley, California.

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Interested persons are invited to attend. At the public hearing, the Regional 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.

C. Information and Copying

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The Report of Waste Discharge (ROWD), related documents, tentative effluent limitations and special conditions, comments received, and other information are on file and may be inspected at 320 West 4th Street, Suite 200, Los Angeles, California 90013, at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged by calling the Los Angeles Regional Board at (213) 576-6600.

D. 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 Board, reference this facility, and provide a name, address, and phone number.

E. Waste Discharge Requirements Appeals

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
ATTN: Elizabeth Miller Jennings
P.O. Box 100
Sacramento, CA 95812

II. PURPOSE OF ORDER

Camarillo Sanitary District (hereinafter CSD or Discharger) discharges advanced secondary-treated wastewater, from its Camarillo Water Reclamation Plant (Camarillo WRP) located in Camarillo, to Conejo Creek, a water of the United States. The discharge is regulated under waste discharge requirements contained in Order No. 96-042, adopted by this Regional Board on June 10, 1996. Order No. 96-042 also serves as a permit under the National Pollutant Discharge Elimination System (NPDES No. CA0053597).

On September 29, 1997, the Regional Board adopted Order No. 97-125, which revised the NPDES permit to incorporate provisions from Resolution No. 97-10*, Support for Watershed Management in the Calleguas Creek Watershed*, into the permit and modify Camarillo's Monitoring and Reporting Program No. CI-1278. The "Expiration Date," and all other "Limitations, Requirements, and Provisions" of Order No. 96-042 were unchanged and remained in full force and effect. The modifications to the permit included: adding a finding regarding the Calleguas Creek Characterization Study and adding a footnote to the nitrogen effluent limitation and to the ammonia receiving water objective.

Order No. 96-042 has an expiration date of May 10, 2001. Section 122.6 of Title 40, Code of Federal Regulations (40 CFR) and section 2235.4 of Title 23, California Code of Regulations (CCR) state that an expired permit continues in force until the effective date of a new permit provided the permittee has timely submitted a complete application for a new permit. On November 3, 2000, CSD filed a Report of Waste Discharge (ROWD) and applied to the Regional Board for reissuance of waste discharge requirements (WDR) and NPDES permit to discharge advanced secondary-treated wastewater. Therefore, the Discharger's permit has been administratively extended until the Regional Board acts on the new WDR and permit.

The accompanying order is the reissuance of waste discharge requirements that serves as an NPDES permit for the Camarillo WRP.

III. FACILITY AND TREATMENT PROCESS DESCRIPTION

CSD owns and operates the Camarillo WRP, an advanced secondary wastewater treatment plant located at 150 East Howard Road, Camarillo, California. Figure 1 shows the location of the plant. The Camarillo WRP currently receives wastewater from the City of Camarillo and unincorporated sections of Ventura County. The wastewater is a mixture of domestic and industrial wastewater. The latter is pretreated pursuant to 40 CFR Part 403 prior to discharge to the sewers.

As reported in the ROWD, the Camarillo WRP has a design capacity of 6.75 million gallons per day (mgd) and serves approximately 41,150 people.

The United States Environmental Protection Agency (USEPA) and the Regional Board have classified Camarillo WRP as a major discharger. It has a Threat to Water Quality and Complexity Rating of 1-A, pursuant to CCR Section 2200.

Treatment at the Camarillo WRP consists of comminution, primary sedimentation, activated sludge treatment, secondary clarification, chlorination and dechlorination.

1. *Comminution*. The process simultaneously grinds and screens debris, to reduce the particle size of large objects found in the influent.

2. *Primary sedimentation*. The main objective of primary sedimentation is to remove solids from the wastewater by gravity. The heavier solids (settleable solids) precipitate out and are scraped out of the primary sedimentation basin. The lighter solids float to the top and are skimmed off.

3. *Activated sludge*. The activated sludge process is a treatment system in which the incoming wastewater is mixed with existing biological floc (microorganisms, bugs, or activated sludge) in an aeration basin. Activated sludge converts non-settleable and dissolved organic contaminants into biological floc, which can then be removed from the wastewater with further treatment.

4. *Secondary sedimentation with coagulation*. The main objective of secondary sedimentation is to remove biological floc from the wastewater. Chemicals, such as aluminum sulfate (alum), may be added as part of the treatment process to enhance solids removal. Alum causes the biological floc to combine into larger clumps (coagulate). This makes it easier to remove the floc.

5. *Chlorination*. Sodium hypochlorite solution is used as a disinfectant in the Camarillo WRP. Disinfectant 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 chlorine may be dosed prior to the serpentine chlorine contact chamber.

6. *Dechlorination*. Prior to discharge, sodium bisulfite is added to the treated effluent to remove residual chlorine.

7. *Sludge*. Primary sludge (sludge from the primary clarifiers) is anaerobically digested. Waste activated sludge is thickened and aerobically digested. Sewage solids separated from the wastewater are dried in sludge drying and transported off site. The majority of the sludge is hauled to either La Paz County in Arizona or to Kern County in California. A small fraction is disposed of at a landfill.

Water Recycling Facility. The Discharger recycles 32% of its treated effluent for crop irrigation on farmlands and landscape irrigation on a cemetery. In 2001, Camarillo recycled 421 million gallons out of 1,309 million gallons of treated effluent. The remaining 888 million gallons were discharged to Arroyo Conejo. The production, distribution and reuse of recycled water for direct, non-potable applications are presently regulated under Water Reclamation Requirements (WRR) Order No. 87-132, adopted by this Board on September 28, 1987.

Storm Water Management. CSD does not treat storm water runoff at the Camarillo WRP, except for stormwater infiltration and inflows in the sewer and stormwater that traverses

the treatment tanks. It has developed a Storm Water Pollution Prevention Plan (SWPPP) for storm water flows at the facility that do not enter the treatment system.

In the near future, CSD plans to capture 100% of the stormwater runoff that falls on their Camarillo WRP property, treat it along with its sewage wastewater, and discharge the treated stormwater through Discharge Serial No. 001. Once CSD eliminates its stormwater runoff flow from the Camarillo WRP, it will submit a Notice of Termination to be exempt from stormwater monitoring and reporting requirements.

IV. DISCHARGE OUTFALL AND RECEIVING WATER DESCRIPTION

The Camarillo WRP discharges advanced secondary-treated wastewater to Conejo Creek, a water of the United States, above the estuary, within the Calleguas Creek Watershed Management Area, at the following discharge point:

Discharge Serial No. 001: Under normal conditions final effluent is discharged by gravity flow into Conejo Creek, through Discharge Serial No. 001-A (approximate coordinates: Latitude 34° 11' 40" North, Longitude 119° 00' 00" West). However, when the water level rises in the stream to the extent that the discharge point is partially or completely submerged (i.e., during heavy storm events), the final effluent is pumped to Conejo Creek, through Discharge Serial No. 001-B, located approximately 40 feet away from the Discharge Serial No. 001-A. Discharge Serial Points 001-A and 001-B have the same approximate coordinates: Latitude 34° 11' 40" North, Longitude 119° 00' 00" West. Conejo Creek is tributary to both Calleguas Creek, and to Mugu Lagoon, waters of the United States. Mugu Lagoon is one of the few remaining salt marshes in California located along the Pacific Flyway.

CSD has requested the addition of a second discharge point (Discharge Serial No. 002, approximate location: latitude 34°09'30" North, longitude 119°03'30" West), which would discharge advanced secondary-treated effluent to Calleguas Creek, at a point below its intersection with Potrero Road. In a few years, pending the completion of an environmental impact report and related studies, the new proposed discharge point would replace Discharge Serial No. 001. The proposed Discharge Serial No. 002 is essentially downstream of the existing Discharge Serial No. 001, as a result there would be no net increase in loading downstream, and diminished loading in the reaches between the existing and new discharge locations.

During dry weather (May 1 – October 31), the primary sources of water flow in the receiving waters, downstream of the discharge point, is the Camarillo WRP effluent and other NPDES-permitted discharges, including urban runoff conveyed through the municipal separate storm sewer systems (MS4). Storm water and dry weather urban runoff from MS4 are regulated under an NPDES permit, *Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges within the Ventura County Flood Control District, County of Ventura, and the Cities of Ventura County* (Ventura Municipal Permit), NPDES Permit No. CAS004002.

The Ventura County Flood Control District channelized portions of Calleguas Creek to convey and control floodwater, and to prevent damage to homes located adjacent to the creek. Calleguas Creek is a water of the United States that conveys floodwater and urban runoff, along with treated water. The Conejo Creek is unlined near the point of discharge.

Groundwater recharge occurs incidentally, in these unlined areas of Conejo Creek and Calleguas Creek where the underlying sediments are highly transmissive to water as well as pollutants.

Notwithstanding that segments located further downstream of the discharge are concrete-lined, the watershed supports a diversity of wildlife. Threatened and endangered species such as the peregrine falcon, least tern, light-footed clapper rail, and the brown pelican are found in Calleguas Creek and Mugu Lagoon.

On November 9, 1990, CSD submitted the following report *Conejo and Calleguas Creeks Water Contact Recreation Study*, prepared on October 1990 by Black & Veatch. This study was conducted in response to NPDES finding 8, in Order 90-057, adopted by the Regional Board on May 21, 1990, which read, "There is limited public contact in the downstream areas, and the quality of wastewater discharged to Conejo Creek must be such that no public health hazard is created. The discharger will monitor and evaluate the extent of body-contact use of the receiving waters downstream of the discharge outfall." As such, the purpose of the study was to determine the existence and extent of any water contact recreation occurring in the receiving waters downstream of the Camariilo WRP's discharge point. The report presented the results of an initial survey, landowner questionnaires, observations of water contact activity, interviews of agencies, review of available water quality information, and conclusions.

- Evidence of recent activity was observed at four locations along Conejo Creek and Calleguas Creek from the Camarillo WRP discharge point to the Pacific Coast Highway. Each of the four locations was visited a total of 27 times (3 times per day for 9 days) during a four-week period, between August 18 and September 15, 1990.
- Water contact activity was observed on seven occasions. Three observations took place during Labor Day weekend. Observed activity included boys walking barefoot in the creek, dogs playing in the creek bed, a woman and two kids wading in the creek looking for crawdads, and five kids and one woman swimming in the creek.
- One of the land owners answered the questionnaire that he had seen two to three people using the stream four times a year.
- Neither the transmittal letter nor the report state any conclusions or recommendations for further action.

This report clearly documents the fact that the water contact (REC-1) beneficial use, a fishable/swimmable use, does exist. Existing fishable/swimmable beneficial uses cannot be removed or de-designated if they have been attained in a waterbody on or after existing from November 28, 1975. Therefore, a Use Attainability Analysis (UAA) to remove the REC-1 beneficial use is not appropriate. Limits contained in this permit will need to be protective of the existing REC-1 beneficial use.

V. DISCHARGE QUALITY

In 2001, Camarillo WRP's discharge monitoring reports showed the following:

- treated wastewater average annual flow rate of 2.47 mgd.
- average annual removal rate of 96% and 95%, of BOD and total suspended solids, respectively.

Deleted: The San Gabriel River conveys treated wastewater along with floodwater, and urban runoff; however, this is not the main purpose of the river. The San Gabriel River is unlined near the points of discharge. Groundwater recharge occurs in these unlined areas of the San Gabriel River. Segments further downstream of the discharge are concrete-lined. Nonetheless, the watershed does support 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, exist in the San Gabriel River Watershed.¶
Water Recycling Facility. The Discharger currently recycles 0.97% (0.879 million gallons per year) of the treated effluent and plans to continue doing so. The production, distribution, and reuse of recycled water is presently regulated under Water Reclamation Requirements (WRR) Order No. 88-107, adopted by this Board on October 24, 1988, 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. Recycled water is used for ornamental plant irrigation at a nursery. Recycled water is also delivered to the Los Angeles County Department of Public Works for groundwater recharge, under a separate permit (Regional Board Order No. 91-100), at the San Gabriel River Spreading Grounds or the Rio Hondo Spreading Grounds. CSDLAC is promoting additional reuse options for the treated effluent.¶
¶
As illustrated on the Schematic of Wastewater Flow (Attachment 2) for the Whittier Narrows WRP, the recycled water that is piped for reuse is not dechlorinated to maintain an adequate level of residual chlorine to prevent regrowth of bacteria during distribution.¶
¶
Stormwater. CSDLAC does not treat storm water runoff at the Whittier Narrows WRP, except for stormwater infiltration and inflows in the sewer and stormwater runoff entering the treatment tanks. On June 4, 1992, CSDLAC filed a Notice of Intent, and currently implements a Storm Water Pollution Prevention Plan (SWPPP), to comply with the State Board's General NPDES Permit No. ... [1]

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- 7-day median and daily maximum coliform values as <2 MPN/ 100 ml in the treated wastewater for ten of the twelve months, and averaged 3 MPN for the year.

The characteristics of the wastewater discharged, based on data submitted in the 2001 annual summary discharge monitoring report are as follows. Only the priority pollutants that were detected are shown below. Nondetect priority pollutants and the detection limits are given in Table D of the Fact sheet. (Note: The "<" symbol indicates that the pollutant was not detected (ND) at that concentration level.)

Table 1

CTR#	Constituent	Unit	Ave. or Range	Maximum	Minimum
	Flow	mgd	3.59	3.76	3.28
	pH	pH units	6.8	6.9	6.7
	Temperature (Nov. – April) (May – Oct.)	°F	68 winter 75 summer	72 77	64 73
	BOD_5 20°C	mg/L	10.3	17.5	6
	Suspended solids	mg/L	10.7	16.2	7.6
	Settleable solids	ml/L	<0.1	<0.1	<0.1
	Total dissolved solids	mg/L	863	949	764
	Chloride	mg/L	169	190	152
	Sulfate	mg/L	193	209	150
	Boron	mg/L	0.65	0.67	0.61
	Total Phosphate	mg/L	4.5	5.1	4.1
	Turbidity	NTU	3.7	2.7	5.6
	Oil and grease	mg/L	<5	<5	<5
	Fluoride	mg/L	0.41	0.69	0.27
	MBAS	mg/L	0.09	0.13	0.01
	Ammonia-N	mg/L	1.6	2.4	0.7
	Organic-N	mg/L	1.7	2.6	0.8
	Nitrate-N	mg/L	29.7	34.7	23.9
	Nitrite-N	mg/L	0.15	0.31	0.01
	Total Nitrogen	mg/L	33.1	38.4	27.8
1	Antimony	µg /L	<0.5-0.38	0.38	<0.5
2	Arsenic	µg /L	1.5 - <5	1.5	<5
4	Cadmium	µg /L	0.07 - <5	0.07	<5
	Total Chromium	µg /L	<10	<10	<10
6	Copper	µg /L	6.5 - <10	6.5	<10
	Iron	µg /L	40 - <100	40	<100
7	Lead	µg /L	0.42 - <50	0.42	<50
8	Mercury	µg /L	<0.5	<0.5	<0.5
9	Nickel	µg /L	<40 – 4.5	4.5	<40
10	Selenium	µg /L	<5 – 0.8	0.8	<5
11	Silver	µg /L	<10 – 0.1	0.1	<10
13	Zinc	µg /L	38.2	40	36.4
23	Dibromochloromethane	µg /L	<5 – 1.1	1.1	<5

Deleted: From July 1995 to June 2001, the Discharger's data from discharge monitoring reports showed that the average annual removal rate of BOD and total suspended solids has been >97.8% and >99%, respectively. The 7-day median and the daily maximum coliform values were reported as <1 MPN/100 ml in the effluent. The long term average annual flow rate of the treated wastewater was 9.85 mgd.¶
¶
Based on data submitted in the 2000 Annual Summary Report, the characteristics of the wastewater discharged are as follows: (The "<" symbol indicates that the pollutant was not detected (ND) at that concentration level. It is not known if the pollutant was present at a lower concentration.)

CTR#	Constituent	Unit	Ave. or Range	Maximum	Minimum
26	Chloroform	µg /L	4.3	6	2.7
27	Bromodichloromethane	µg /L	3.8	5	2.6

VI. APPLICABLE LAWS PLANS, POLICIES AND REGULATIONS

The requirements contained in the proposed Order are based on the requirements and authorities contained in the following:

A. ***Federal Clean Water Act***. The federal Clean Water Act (CWA) requires that point source discharges of pollutants to a water of the United States must be done in conformance with an NPDES permit. NPDES permits establish effluent limitations that incorporate various requirements of the CWA designed to protect and enhance water quality.

B. ***Basin Plan***. The Board adopted a revised *Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan) on June 13, 1994, amended on January 27, 1997, by Regional Board Resolution No. 97-02. This updated and consolidated plan represents the Board's master water quality control planning document and regulations. The revised Basin Plan was approved by the State Board and the State of California Office of Administrative Law (OAL) on November 17, 1994, and February 23, 1995, respectively. The Basin Plan (i) designates beneficial uses for surface and groundwaters, (ii) sets narrative and numeric objectives that must be attained or maintained to protect the designated (existing and potential) beneficial uses and conform to the state and federal antidegradation policies, and (iii) includes implementation provisions, programs, and policies to protect all waters in the Region. In addition, the Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other state pertinent water quality policies and regulations. The 1994 Basin Plan was prepared to be consistent with all applicable State and Regional Board plans and policies adopted from 1994 and earlier. The accompanying Order implements the plans, policies and provisions of the Board's Basin Plan.

C. ***Sources of Drinking Water Policy***. On May 19, 1988, the State 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 Board's SODW policy, on March 27, 1989, the Regional 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).*

D. Consistent with Regional Board Resolution No. 89-03 and State Board Resolution No. 88-63, in 1994 the Regional 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

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Attachment D contains a more extensive statistical analysis of the effluent priority pollutant data, from July 1995 to June 2001, as well as 6 months of interim monitoring results. Interim monitoring data is discusses in section VIII.a. Reasonable Potential Analysis – Reasonable Potential Determination of the fact sheet.¶

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Discharge Requirements as a result of these [potential MUN designations made pursuant to the SODW policy and the Regional Board's enabling resolution] until the Regional 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 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 Board finalizes the designations for these waters. This permit is designed to be consistent with the existing Basin Plan.

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E. ***Beneficial Uses***.

1. The designated beneficial uses in the Basin Plan for Conejo Creek, Calleguas Creek, and Mugu Lagoon:

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Conejo Creek - Hydrologic Unit 403.12

Existing: industrial service supply, industrial process supply, agricultural supply, ground water recharge, contact and non-contact water recreation, warm freshwater habitat, and wildlife habitat;

Potential: municipal and domestic supply;

The potential MUN beneficial use for the water body is consistent with Regional Board Resolution 89-03; however the Regional Board has only conditionally designated the MUN beneficial uses and at this time cannot establish effluent limitations designed to protect the conditional designation.

Calleguas Creek - Hydro Unit 403.12

Existing: industrial service supply, industrial process supply, agricultural supply, ground water recharge, contact and non-contact water recreation, warm freshwater habitat, and wildlife habitat;

Potential: municipal and domestic supply;

The potential MUN beneficial use for the water body is consistent with Regional Board Resolution 89-03; however the Regional Board has only conditionally designated the MUN beneficial uses and at this time cannot establish effluent limitations designed to protect the conditional designation.

Calleguas Creek - Hydro Unit 403.11

Existing: agricultural supply, groundwater recharge, freshwater replenishment, contact and non-contact water recreation, warm freshwater habitat, cold freshwater habitat, wildlife habitat, rare, threatened or endangered species, and wetland habitat;

Potential: municipal and domestic supply;

The potential MUN beneficial use for the water body is consistent with Regional Board Resolution 89-03; however the Regional Board has only conditionally designated the MUN beneficial uses and at this time cannot establish effluent limitations designed to protect the conditional designation.

Calleguas Creek Estuary - Hydro Unit 403.11

Existing: non-contact water recreation, commercial and sport fishing, estuarine habitat, wildlife habitat, rare, threatened or endangered species, migration of aquatic organisms, spawning, reproduction, and/or early development, and wetland habitat;

Potential: navigation, water contact recreation;

Mugu Lagoon - Hydro Unit 403.11

Existing: navigation, non-contact water recreation, commercial and sport fishing, estuarine habitat, marine habitat, wildlife habitat, preservation of biological habitats, rare, threatened or endangered species, migration of aquatic organisms, spawning, reproduction, and/or early development, shellfish harvesting, and wetland habitat; and,

Potential: water contact recreation.

2. The beneficial uses of the receiving ground waters are:

Pleasant Valley (Ventura Central Basin) – DWR Basin No. 4-6

Confined aquifers:	Existing-	municipal and domestic supply, industrial service supply; industrial process supply; and, agricultural supply.
Unconfined aquifers:	Existing-	industrial service supply; industrial process supply; and, agricultural supply;
	Potential-	municipal and domestic supply.

Deleted: <#>Since there is public contact in the receiving water downstream of the discharge; the quality of wastewater discharged to Rio Hondo, the Los Angeles River, and the San Gabriel River must be such that no public health hazard is created.¶
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Oxnard Plain (Ventura Central Basin) - DWR Basin No. 4-4

Confined aquifers:	Existing-	municipal and domestic supply, industrial service supply; industrial process supply; and, agricultural supply.
Unconfined aquifers:	Existing-	municipal and domestic supply; and, agricultural supply;
	Potential-	industrial service supply.
Oxnard Forebay:	Existing-	municipal and domestic supply, industrial service supply; industrial process supply; and, agricultural supply.

F. ***Title 22 of the California Code of Regulations***. The California Department of Health Services established primary and secondary maximum contaminant levels (MCLs) for a number of chemical and radioactive contaminants. These MCLs can be found in Title 22, CCR (Title 22). Chapter 3 of the Basin Plan incorporates Title 22 by reference. Title 22 MCLs have been incorporated into NPDES permits and Non-Chapter 15 WDRs to protect the municipal and domestic supply (MUN) and groundwater recharge (GWR) beneficial uses.

Groundwater Recharge. Sections of Conejo Creek, near the Camarillo WRP discharge point, are designated for GWR. Similarly, sections of Calleguas Creek downstream of the existing Discharge Serial No. 001 and proposed Discharge Serial No. 002 are also designated for GWR. Surface water from Conejo and Calleguas Creeks enter the Pleasant Valley and the Oxnard Plain Groundwater Basins. Since ground water from these basins is used to provide drinking water to people in Camarillo and in other cities, Title 22-based limits are needed to protect that drinking water supply. By limiting the contaminants in the Camarillo WRP discharges, the amount of pollutants entering the surface waters and groundwater basins are correspondingly reduced. Once groundwater basins are contaminated, it may take years to clean up, depending on the pollutant. Compared to surface water pollution, investigations and remediation of groundwater are often more difficult, costly, and extremely slow. For these reasons Title 22-based limits will remain in the NPDES permit to protect the GWR use and the MUN use in the ultimate receiving ground water.

G. ***Antidegradation Policy***. On October 28, 1968, the State Board adopted Resolution No. 68-16*, Maintaining High Quality Water*, which established an antidegradation policy for State and Regional Boards. Similarly, the CWA (section 304(d)(4)(B)) and USEPA regulations (40 CFR section 131.12) requires all permitting actions be consistent with the federal antidegradation policy.

H. ***California Toxics Rule (CTR)***. The USEPA promulgated the CTR criteria that became effective on May 18, 2000 (codified as 40 CFR section 131.38). The CTR established water quality criteria for priority toxic pollutants in California's inland surface water ways. The CTR also provides for schedules of compliance

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not to exceed 5 years from the date of permit renewal for an existing Discharger if the Discharger demonstrates that it is infeasible to promptly comply with the CTR criteria. The human health criteria for carcinogens in the CTR is based on an incremental cancer risk level of one in a million (10^{-6}). USEPA recognizes that adoption of criteria at a different risk factor is outside of the scope of the CTR. However, States have the discretion to adopt water quality criteria that result in a higher risk level, if the chosen risk level has been demonstrated to adequately protect the most highly exposed subpopulation, and all necessary public outreach participation has been conducted. This demonstration has not been conducted in California. Further, information that is available on highly exposed subpopulations in California supports the need to protect the general population at the 10^{-6} level. The Discharger may undertake a study, in accordance with the procedures set forth in Chapter 3 of USEPA's Water Quality Standards Handbook: Second Edition (EPA-823-B-005a, August 1994) to demonstrate that a different risk level is more appropriate for discharges subject to the Order. Upon completion of the study, the State Board and Regional Board will review the results and determine if the risk level proposed is more appropriate. In the mean time, the State will continue using a 10^{-6} risk level, as it has done historically, to protect the population against carcinogenic pollutants.

Prior to promulgating the criteria, USEPA conducted a costs and benefits analysis. USEPA assessed the potential compliance costs that facilities may incur to meet permit limits based on the CTR. The analysis included capital costs and operation and maintenance costs for end-of-pipe pollution control, indirect source controls, pollution prevention, monitoring, and costs of pursuing alternative methods of compliance. USEPA projected that for publicly owned treatment works (POTWs), the average cost per plant would range between $61,000 to $324,000 per year.

J. ***State Implementation Plan (SIP).*** Anticipating USEPA's promulgation of the CTR, the State Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (also known as the State Implementation Plan or SIP) on March 2, 2000. The SIP was amended by Resolution No. 2000-30, adopted on April 26, 2000, and the Office of Administrative Law approved the SIP on April 28, 2000. The SIP applies to discharges of toxic pollutants to inland surface waters, enclosed bays and estuaries of California which are subject to regulation under the State's Porter-Cologne Water Quality Control Act (Division 7 of the Water Code) and the Clean Water Act. The policy provides for the following:

a. implementation procedures for the priority pollutant criteria promulgated by USEPA through the CTR and for the priority pollutant objectives established by Regional Water Quality Control Boards (RWQCBs) in their Basin Plans;
b. monitoring requirements for priority pollutants with insufficient data to determine reasonable potential;
c. monitoring requirements for 2,3,7,8–TCDD equivalents; and,
d. chronic toxicity control.

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J. ***Watershed Approach.*** This Regional Board has been implementing a Watershed Management Approach (WMA), to address water quality protection in the Los Angeles Region, as detailed in the Watershed Management Initiative (WMI). The WMI is designed to integrate various surface and ground water regulatory programs while promoting cooperative, collaborative efforts within a watershed. It is also designed to focus limited resources on key issues and use sound science. Information about the Calleguas Creek Watershed and other watersheds in the region can be obtained from the Regional Board's web site at *http://www.swrcb.ca.gov/rwqcb4/* and clicking on the word "Watersheds".

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K. ***CWA 303(d) Listed Pollutants.*** On May 12, 1999, USEPA approved the State's 1998 list of impaired waterbodies prepared pursuant to CWA 303(d). The list (hereinafter referred to as the 303(d) list) identifies waterbodies where water quality standards are not expected to be met after the implementation of technology-based effluent limitations on point sources (water quality-limited waterbodies).

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Conejo Creek, Calleguas Creek, Mugu Lagoon, and its tributaries are on the 303(d) List for the following pollutants/stressors, from point and non-point sources:

Conejo Creek Reach 1 (confluence with Calleguas Creek to Santa Rosa Road) – Hydrologic Unit 403.12

- Algae, Ammonia, Organic enrichment/ low dissolved oxygen, Sulfates, Total dissolved solids, Toxicity, Cadmium (in fish tissue), Chem A[1] pesticides (in fish tissue), Chromium (in fish tissue), Dacthal (in fish tissue), DDT (in fish tissue), Endosulfan (in fish tissue), Nickel (in fish tissue), Silver (in fish tissue), and Toxaphene (in fish tissue and sediment).

Calleguas Creek Reach 1(Estuary to 0.5 miles South of Broome Rd.) -- Hydrologic Unit 405.15

- Ammonia, Nitrogen, Toxicity, Sediment Toxicity, Chem A pesticides (in fish tissue), Chlordane (in fish tissue), DDT (in fish tissue and sediment), Endosulfan (in fish tissue), PCBs (in fish tissue), and Toxaphene (in fish tissue and sediment).

Calleguas Creek Reach 2 (0.5 miles South of Broome Road to Potrero Road) – Hydrologic Unit 403.12

- Ammonia, Nitrogen, Toxicity, Sediment Toxicity, Chem A pesticides (in fish tissue), Chlordane (in fish tissue), Dacthal (in fish tissue), DDT (in fish tissue and sediment), Endosulfan (in fish tissue), PCBs (in fish tissue), and Toxaphene (in fish tissue and sediment).

Calleguas Creek Reach 3 (Potrero Road to Somis Road) -- Hydrologic Unit 403.12

- Chloride, total dissolved solids, Nitrate and nitrite.

[1] Chem A refers to the sum of the chemicals aldrin, dieldrin, chlordane, endrin, heptachlor, heptachlor epoxide, HCH (including lindane), endosulfan, and toxaphene.

Mugu Lagoon -- Hydrologic unit 403.11

- Copper, Mercury, Nickel, Nitrogen, Zinc, Chlordane (in fish tissue), Dacthal (in fish tissue), DDT (in fish tissue and sediment), Endosulfdan (in fish tissue), PCBs (in fish tissue), Sediment toxicity, and Sedimentation/Siltation.

The Regional Board revised the 303(d) list in 2002 and submitted the draft to the State Board for approval. The State Board had scheduled the draft 303(d) list, dated October 15, 2002, for approval at two of its meetings, however the item was postponed to hold additional workshops and to allow more time for the public to submit comments. The draft 303(d) list dated October 15, 2002, was revised on January 13, 2003, based on comments received. The draft 303(d) list, dated January 13, 2003, was adopted by the State Board at its February 4, 2003 meeting. The adopted 303(d) list is currently being reviewed by USEPA and is waiting approval.

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Total Maximum Daily Loads. A Total Maximum Daily Load (TMDL) is a determination of the amount of a pollutant from point, nonpoint, and natural background sources, with a margin of safety, that may be discharged to a water quality-limited water body. The regulatory requirements for TMDL are codified in 40 CFR section 130.7. Section 303(d) of the CWA requires that TMDLs must be developed for the pollutants of concern which impact the water quality of water bodies on the 303(d) list. Under the March 23, 1999, amended consent decree between the USEPA and Heal the Bay, et al., (Case No. C 98-4825 SBA, *Heal the Bay, Santa Monica Bay Keeper, et al. v. Browner, et.al.),* TMDLs for chloride in Calleguas Creek must be completed by March 2002; nutrients by March 2002; pesticides, historic pesticides, and PCBs by March 2005; and metals by 2006. The remaining TMDLs, such as sulfates are tentatively scheduled for completion in the 2003/2004 fiscal year.

Chloride TMDL and Chloride Limits. On March 22, 2002, the consent decree deadline for the establishment of a chloride TMDL, USEPA Region 9 established the Calleguas Creek Total Maximum Daily Load for chloride. Subsequently, on October 17, 2002, the State Board adopted Order WQO 2002-0017, in the matter of the petition of the City of Simi Valley, City of Thousand Oaks, Camarillo Sanitary District, Camrosa Water District, and Ventura County Waterworks District No. 1, which provided a stay, maintaining the 190 mg/L chloride interim effluent limitation of prior Regional Board resolutions and contained in the existing NPDES permits for the aforementioned POTWs. Consistent with the State Board's stay, upon expiration of the stay, the accompanying Order or its successors will be reopened and modified to include appropriate final effluent limits for chloride.

Nitrogen Compounds and Related Effects TMDL. On October 24, 2002, the Regional Board adopted Resolution No. 2002-017, Amendment to the Basin Plan for the Los Angeles Region to Include a TMDL for Nitrogen Compounds and Related Effects in Calleguas Creek *(Nitrogen Compounds and Related Effects* TMDL). The State Board approved the *Nitrogen Compounds and Related Effects* TMDL on March 19, 2003. Presently, the TMDL is awaiting final approvals from the Office of Administrative Law and U.S. EPA.

M. Pursuant to this Regional Board's watershed initiative framework, the Calleguas Creek Watershed Management Area was the targeted watershed for fiscal year 2001-2002. However, the NPDES permit renewals were re-scheduled so that provisions of the CTR and SIP could be incorporated into the permits.

In January 1996, the Regional Board published the *Calleguas Creek Preliminary Report: Water Quality* (State of the Watershed Report). This document contains a summary of water quality problems and issues in the Calleguas Creek Watershed, describes Calleguas Creek and its tributaries, presents an overview of the existing monitoring data, and suggests that further monitoring is required. In December 2001, the Regional Board published the *Watershed Management Initiative.*

As described in the State of the Watershed Report and in Chapter 2.10 of the *Watershed Management Initiative*, the Calleguas Creek Watershed drains a 343 square mile area of southern Ventura County and a small portion of western Los Angeles County. The northern boundary of the watershed is formed by the Santa Susana Mountains, South Mountain, and Oak Ridge. The southern boundary is formed by the Simi Hills and Santa Monica Mountains. Urban development is largely restricted to the city limits of Simi Valley, Moorpark, Thousand Oaks, and Camarillo. Although some residential development has occurred along the slopes of the watershed, most upland areas are still open space. Agricultural activities, primarily the cultivation of orchards and row crops are spread out along the valleys and on the Oxnard Plain. Mugu Lagoon, located at the mouth of the watershed is one of the few remaining significant saltwater wetland habitats in southern California. Groundwater supplies are critical to agricultural operations and to the sand and gravel mining industry in the watershed.

N. ***Performance Goals***. In Order No. 96-042, the Regional Board implemented the Water Quality Task Force[2] recommendations on the use of performance goals, rather than performance-based limits, when appropriate. In the absence of an Inland Surface Water Plan and Enclosed Bays and Estuaries Plan, performance goals were intended to minimize pollutant loadings (primarily toxics) and, at the same time, maintain the incentive for future voluntary improvement of water quality whenever feasible, without the imposition of more stringent limits based on improved performance. Effluent performance goals were not enforceable limitations or standards. This Order does not contain performance goals, but rather implements controls as referenced below to reflect technology-based effluent limits and water quality-based effluent limits (WQBELs).

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VII. REGULATORY BASIS FOR EFFLUENT LIMITS AND DISCHARGE REQUIREMENTS

A. ***Water Quality Objectives and Effluent Limits***. Water Quality Objectives (WQOs) and effluent limitations in this permit are based on:

[2] *Working Together for an Affordable Clean Water Environment*. A final report presented to the California Regional Water Quality Control Board, Los Angeles Region by Water Quality Advisory Task Force, September 1993.

- The plans, policies and water quality standards (beneficial uses + objectives + antidegradation policy) contained in the 1994 *Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*, as amended, including chemical constituent limitations established by incorporating the California Code of Regulations, Title 22, maximum contaminant levels designed to protect the existing drinking water use of the receiving groundwaters;
- California Toxics Rule (40 CFR 131.38);
- The State Board's "Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California" (the State Implementation Plan or SIP);
- USEPA Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity Programs Final May 31, 1996;
- USEPA Whole Effluent Toxicity (WET) Control Policy July 1994;
- Applicable Federal Laws and Regulations
  - Federal Clean Water Act, and
  - 40 CFR sections 122 125, and 131, among others; and,
- Best professional judgment (pursuant to 40 CFR section 122.44).

Where numeric water quality objectives have not been established in the Basin Plan, 40 CFR section 122.44(d) specifies that water quality based effluent limits may be set based on USEPA criteria and supplemented where necessary by other relevant information to attain and maintain narrative water quality criteria to fully protect designated beneficial uses.

B. U.S. EPA regulations, policy, and guidance documents upon which Best Professional Judgment (BPJ) was developed may include, in part:

- Inspectors Guide for Evaluation of Municipal Wastewater Treatment Plants, April 1979 (EPA/430/9-79-010);
- Fate of Priority Pollutants in Publicly Owned Treatment Works Pilot Study October 1979 (EPA-440/1-79-300);
- Technical Support Document for Water Quality Based Toxics Control March 1991 (EPA-505/ 2-90-001); and,
- USEPA NPDES Permit Writers' Manual, December 1996 (EPA-833-B-96-003).

C. ***Mass and Concentration 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; however, the mass-based limits do not apply during wet weather flows when storm water infiltration causes the plant to exceed its design capacity.

D. ***Maximum Daily Effluent Limitations.*** Pursuant to 40 CFR 122.45(d)(2), for a POTW's continuous discharges, all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall, unless impracticable, be stated as average weekly and average monthly discharge limitations. It is impracticable to only include average weekly and average monthly effluent limitations for certain pollutants in the permit, because a single daily discharge of certain pollutants, in excess amounts, can cause violations of water quality objectives. The effects of certain pollutants on aquatic organisms are often rapid. For many pollutants, an average weekly or average monthly effluent limitation alone is not sufficiently protective of beneficial uses. As a result, maximum daily effluent limitations, as referenced in 40 CFR section 122.45(d)(1), are included in the permit for certain constituents and are discussed in more detail in other sections of this Fact Sheet.

E. ***Pretreatment***. Pursuant to 40 CFR section 403, CSDLAC developed and has implemented an approved industrial wastewater pretreatment program. The accompanying Order requires implementation of the approved pretreatment program.

F. ***Sewage Sludge***. To implement CWA section 405(d), on February 19, 1993, USEPA promulgated 40 CFR section 503 to regulate the use and disposal of municipal sewage sludge. The accompanying Order implements the regulations and it is the responsibility of the Discharger to comply with said regulations, which are enforceable by USEPA.

G. **S*torm 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 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 Board Order No. 97-03-DWQ.

General NPDES permit No. CAS000001 is applicable to storm water discharges from the Camarillo WRP's premises. On March 30, 1992, CSD filed a Notice of Intent to comply with the requirements of the general permit. CSD developed and currently implements a Storm Water Pollution Prevention Plan (SWPPP), to comply with the State Board's Order No. 97-03-DWQ.

H. ***Federal Clean Water Act (CWA).*** Numeric and narrative effluent limitations are established pursuant to Section 301 (Effluent Limitations), Section 302 (Water Quality-Related Effluent Limitations), Section 303 (Water Quality Standards and

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Implementation Plans), Section 304 (Information and Guidelines [Effluent]), Section 305 (Water Quality Inventory), Section 307 (Toxic and Pretreatment Effluent Standards), and Section 402 (NPDES) of the CWA. The CWA and amendments thereto are applicable to the discharges herein.

l. **Antibacksliding** provisions are contained in Sections 303(d)(4) and 402(o) of the CWA, and in 40 CFR section 122.44(l). Those provisions require a reissued permit to be as stringent as the previous permit with some exceptions. Section 402(o) of the CWA establishes express statutory language prohibiting the backsliding of effluent limitations. It consists of the following three parts:

1. Section 402(o)(1) prohibits (subject to exceptions in section 303(d)(4) and/or 402(o)(2)) the relaxation of effluent limitations for two situations:

   a. When a permittee seeks to revise a technology-based effluent limitation based on BPJ to reflect a subsequently promulgated effluent guideline which is less stringent, and

   b. When a permittee seeks relaxation of an effluent limitation which is based upon a changed State treatment standard or water quality standard.

2. Section 402(o)(2) outlines specific exceptions to the general prohibition against establishment of less stringent effluent limitations. Section 402(o)(2) provides that the establishment of less stringent limits may be allowed where:

   a. There have been material and substantial alterations or additions to the permitted facility which justify this relaxation;

   b. Information (other than revised regulations, guidance, or test methods) is available that was not available at the time of permit issuance which would have justified a less stringent effluent limitation;

   c. Technical mistakes or mistaken interpretations of the law were made in issuing the permit under Section 402(a)(1)(b);

   d. Good cause exists due to events beyond the permittee's control (e.g., acts of God) and for which there is no reasonably available remedy;

   e. The permit has been modified under certain specified sections of the CWA; or,

   f. The permittee has installed and properly operated and maintained required treatment facilities, but still has been unable to meet the permit limitations (relaxation may only be allowed to the treatment levels actually achieved).

Although the statute identified six exceptions where effluent limitations may be relaxed, the language specifically stated that exception "c" (as listed above) does not apply to water quality-based effluent limitations. Further, exception "e" as listed above only concerns sections of the CWA governing technology-based limits. Thus, exceptions c & e would only apply to technology-based effluent limitations.

3. Section 402(o)(3) prohibits the relaxation of effluent limitations in all cases if a revised effluent limitation would result in a violation of applicable effluent limitation guidelines or water quality standards, including antidegradation requirements. Thus, even if any of the antibacksliding exceptions outlined in either the statute or regulations are applicable, Section 402(o)(3) acts as a floor and restricts the extent to which effluent limitations may be relaxed. This requirement affirms existing provisions of the CWA that require limits, standards, and conditions to ensure compliance with applicable technology-based limits and water quality standards.

J. ***Applicable Water Quality Objectives***. 40 CFR section 122.44(d)(vi)(A) requires the establishment of numeric effluent limitations to attain and maintain applicable narrative water quality criteria to protect the designated beneficial use.

The Basin Plan includes narrative and numeric Water Quality Objectives (WQOs). The CTR promulgates numeric aquatic life criteria for 23 toxic pollutants and numeric human health criteria for 57 toxic pollutants. A compliance schedule provision in the CTR and the SIP authorizes the State to issue schedules of compliance for new or revised NPDES permit limits based on the federal criteria when certain conditions are met.

Where numeric water quality objectives have not been established in the Basin Plan, 40 CFR section 122.44(d) specifies that WQBELs may be set based on USEPA criteria and supplemented, where necessary, by other relevant information to attain and maintain narrative water quality criteria to fully protect designated beneficial uses.

K. ***Types of Pollutants***. For CWA regulatory purposes, pollutants are grouped into three general categories under the NPDES program: conventional, toxic, and non-conventional. By definition, there are five conventional pollutants (listed in 40 CFR 401.16): 5-day biochemical oxygen demand, total suspended solids, fecal coliform, pH, and oil and grease. Toxic or "priority" pollutants are those defined in Section 307(a)(1) of the CWA (and listed in 40 CFR 401.12 and 40 CFR 423, Appendix A) and include metals and organic compounds. Non-conventional pollutants are those which do not fall under either of the two previously described categories and include such parameters as ammonia, nitrogen, phosphorous, chemical oxygen demand, and whole effluent toxicity, etc.

L. ***Technology-based Limits for Municipal Facilities (POTWs).*** Technology-based effluent limits require a minimum level of treatment for industrial/municipal point sources based on currently available treatment technologies while allowing the

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Discharger to use any available control techniques to meet the effluent limits. The 1972 CWA required POTWs to meet performance requirements based on available wastewater treatment technology. Section 301 of the CWA established a required performance level--referred to as "secondary treatment"--that all POTWs were required to meet by July 1, 1977. More specifically, Section 301(b)(1)(B) of the CWA required that EPA develop secondary treatment standards for POTWs as defined in Section 304(d)(1). Based on this statutory requirement, EPA developed national secondary treatment regulations which are specified in 40 CFR section 133. These technology-based regulations apply to all POTWs and identify the minimum level of effluent quality to be attained by secondary treatment in terms of five-day biochemical oxygen demand, total suspended solids, and pH.

M. ***Water Quality Based Effluent Limits (WQBELs)***. Water quality based effluent limits are designed to protect the quality of the receiving water by ensuring that State water quality standards are met by discharges from an industrial/municipal point source. If, after technology-based effluent limits are applied, a point source discharge will cause, have the reasonable potential to cause, or contribute to an exceedance of an applicable water quality criterion, then 40 CFR 122.44(d)(1) requires that the permit contain a WQBEL. Although the CWA establishes explicit technology-based requirements for POTWs, Congress did not exempt from POTWs from additional regulation to protect water quality standards. As a result, POTWs are also subject to WQBELs. Applicable water quality standards for the Calleguas Creek and its tributaries are contained in the Basin Plan and CTR, as described in previous findings.

N. ***Water Quality Based Effluent Limitations for Toxic Pollutants.*** Toxic substances are regulated in this permit by water quality based effluent limitations derived from the 1994 Basin Plan, the CTR, and/or best professional judgment (BPJ) pursuant to 40 CFR 122.44. If a discharge causes, has a reasonable potential to cause, or contribute to a receiving water excursion above a narrative or numeric objective within a State water quality standard, federal law and regulations, as specified in 40 CFR 122.44(d)(1)(i), and in part, the SIP, require the establishment of WQBELs that will protect water quality. As documented in Table R of the fact sheet, pollutants exhibiting reasonable potential in the discharge, authorized in the accompanying Order, are identified in the Reasonable Potential Analysis (RPA) section and have final effluent limits. The Discharger is required to gather the appropriate data and the Regional Board will determine if final effluent limits are needed. If final limits are needed, the permit will be reopened and limits will be included in the permit.

O. ***Basis for Effluent Limits for 303(d) Listed Pollutants***. For 303(d) listed pollutants, the Regional Board plans to develop and adopt total maximum daily loads (TMDLs) which will specify wasteload allocations (WLAs) for point sources and load allocations (LA) for non-point sources, as appropriate. Following the adoption of TMDLs by the Regional Board, NPDES permits will be issued, and where appropriate, reopened to include effluent limits consistent with the assumptions of the TMDL, based on applicable WLAs. In the absence of a TMDL, the permits will include water quality-based effluent limitations derived as provided in the CTR and SIP (if applicable). These effluent limits are based on criteria applied to end-of-pipe as explained in part IX.A.5 of this Fact Sheet.

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VIII. REASONABLE POTENTIAL ANALYSIS

As specified in 40 CFR section 122.44(d)(1)(i), permits are required to include limits for all pollutants "which the Director (defined as the Regional Administrator, State Director, or authorized representative in 40 CFR section 122.2) determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard."

A. Using the method described in the TSD, the Regional Board has conducted Reasonable Potential Analyses (RPA) for Chronic Toxicity, Ammonia, and other Nitrogen compounds.

1. Chronic Toxicity - RPA was conducted for Chronic Toxicity (Table C2 of this Fact Sheet) using the discharger's effluent data from their ROWD and annual self monitoring reports. Chronic Toxicity effluent data is summarized in Table C1 of this Fact Sheet. The RPA compares the effluent data with USEPA's 1 TUc water quality criteria. The Discharger's effluent demonstrated Chronic Toxicity during the last permit cycle. Based on this information, the Regional Board has determined that there is a reasonable potential that the discharge will cause toxicity in the receiving water and, consistent with SIP section 4, the Order contains a numeric effluent limitation for Chronic Toxicity. Furthermore, the Discharger has not conducted any Toxicity Identification Evaluations (TIEs) or Toxicity Reduction Evaluations (TREs). The circumstances warranting a numeric Chronic Toxicity effluent limitation are presently under review by the State Water Resources Control Board (State Board) in SWRCB/OCC Files A-1496 & A-1496(a) [Los Coyotes/Long Beach Petitions]. The State Board's decision is expected in July 2003. In the event the State Board removes the numeric chronic toxicity effluent limitation from the Los Coyotes/Long Beach permits or replaces the limit with a narrative chronic toxicity effluent limitation, this Order contains a reopener to allow the Regional Board to modify this permit, if necessary, consistent with the State Board order on the Los Coyotes/Long Beach Petitions.

2. Ammonia and Other Nitrogen Species - RPA was conducted for Ammonia, Nitrate plus Nitrite as Nitrogen, and Nitrite Nitrogen (Table A3 of this Fact Sheet) using the Discharger's effluent data from their self monitoring reports. Ammonia, Nitrate plus Nitrite as Nitrogen, and Nitrite Nitrogen effluent data is summarized in Table A1 of this Fact Sheet. Temperature and pH effluent data is summarized in Table A2 of this Fact Sheet. The RPA compares the effluent data with the Basin Plan water quality objectives (WQOs). The Discharger's effluent exceeded the Basin Plan WQOs for Ammonia, Nitrate plus Nitrite as Nitrogen, and Nitrite Nitrogen, during the last permit cycle. Based on this information, the Regional Board has determined that there is a reasonable potential that the discharge will cause or contribute to an exceedance of the Basin Plan WQOs and, consistent with 40 CFR 122.44(d), the Order contains numeric

effluent limitations for Ammonia, Nitrate plus Nitrite as Nitrogen, and Nitrite Nitrogen.

B. Using the method described in the SIP, the Regional Board has conducted a Reasonable Potential Analysis (RPA) using the Discharger's effluent data contained in Table D of this fact sheet. The RPA compares the effluent data with water quality objectives in the Basin Plan and CTR.

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a. ***Reasonable Potential Determination*** The RPA (per the SIP) involves identifying the observed maximum pollutant concentration in the effluent (MEC) for each constituent based on the effluent concentration data. There are three tiers to determining reasonable potential. If any of the following three tiers is triggered, then reasonable potential exists:

1. For the first tier, the MEC is compared with the lowest applicable Water Quality Objective (WQO), which has been adjusted for pH, hardness and translator data, if appropriate. If the MEC is greater than the (adjusted) WQO, then there is reasonable potential for the constituent to cause or contribute to an excursion above the WQO and a WQBEL is required. However, if the pollutant was not detected in any of the effluent samples and all of the reported detection limits are greater than or equal to the WQO, proceed with Tier 2. The Regional Board exercised its discretion in identifying all available, valid, relevant, representative data and information in accordance with SIP Section 1.2 (page 8).

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2. For the second tier, if the MEC is less than the adjusted WQO, then the observed maximum ambient background concentration (B) for the pollutant is compared with the adjusted WQO. If B is greater than the adjusted WQO, then a WQBEL is required. If B is less than the WQO, then a limit is only required under certain circumstances to protect beneficial uses. If a constituent was not detected in any of the effluent samples and all of the detection limits are greater than or equal to the adjusted WQO, then the ambient background water quality concentration is compared with the adjusted WQO. The Regional Board exercised its discretion in identifying all available, applicable ambient background data in accordance with SIP Section 1.4.3 (page 16).

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3. For the third tier, other information is used to determine RPA, such as the current CWA 303(d) List. Section 1.3 of the SIP describes the type of information that can be considered in Tier 3.

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For all parameters that have reasonable potential to cause or contribute to an exceedance of a WQO/criteria, numeric WQBELs are required. Section 1.4, Step 5 of the SIP (page 8) states that maximum daily effluent limitations (MDELs) shall be used for POTWs in place of average weekly limitations. WQBELs are based on CTR, USEPA water quality criteria, and Basin Plan objectives.

If the data are unavailable or insufficient to conduct an RPA for a pollutant, or if all reported detection limits of the pollutant in the effluent are greater than or equal to the WQO, the Regional Board shall establish interim requirements, in accordance with Section 2.2.2. of the SIP, that require additional monitoring for the pollutant in place of a WQBEL. Upon completion of the required monitoring, the Regional Board will use the gathered data to conduct a RPA and determine if a WQBEL is required. However, if Tier 1 or Tier 3 triggered reasonable potential for a pollutant, then the lack of receiving water data for Tier 2 evaluation would not inhibit the establishing WQBELs in the permit.

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A numeric limit has not been prescribed for a toxic constituent if it has been determined that it has no reasonable potential to cause or contribute to excursions of water quality standards. However, if the constituent had a limit in the previous permit derived from Quality Criteria for Water 1986 [EPA 440/5-86-001, May 1, 1986 (Gold Book)] and from California Code of Regulations (Title 22) maximum contaminant levels, and if none of the Antibacksliding exceptions apply, then the limit will be retained. A narrative limit to comply with all water quality objectives is provided in *Standard Provisions* for the priority pollutants which have no available numeric criteria.

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The limits for 11 metals (antimony, barium, cadmium, chromium VI, copper, lead, nickel, selenium, silver, zinc, iron); a few organics (tetrachloroethylene, 1,4-Dichlorobenzene, chlordane, endrin, gamma-BHC (lindane), methoxychlor, toxaphene, 2,4-D, 2,4,5-TP (Silvex), halomethanes); MBAS, arsenic, and fluoride contained in Order No. 96-042 will be retained. Existing effluent limitations for these constituents were derived from *Quality Criteria for Water 1986* [EPA 440/5-86-001, May 1, 1986 (Gold Book)] and from California Code of Regulations (Title 22) maximum contaminant levels for the protection of groundwater recharge. As explained above, the groundwater recharge use must protect the underlying receiving groundwater's MUN use. Consistent with antibacksliding statutes and regulations, the effluent limitations contained in this Order are at least as stringent as existing effluent limitation guidelines and are fullly protective of existing, intermittent, and potential designated uses.

b. ***RPA Data***. The RPA was based on effluent monitoring data for February 1996 through September 2002, and interim monitoring results from July 2001 to September 2002. Table R (Table R1) of the fact sheet summarizes the RPA, lists the constituents, and where available, the lowest, adjusted WQO, the MEC, the "Reasonable Potential" result, and the limits from the previous permit.

Metals Water Quality Objective. For metals, the lowest applicable Water Quality Objective (WQO) was expressed as total recoverable, and where applicable, adjusted for hardness. A spreadsheet (Table R2) was used to calculate the total recoverable CTR criteria. Hardness values from samples collected in the receiving water upstream of the discharge point were averaged and used to determine the appropriate CTR WQO for those hardness-dependent metals. However individual harness values greater than 400 mg/L were capped at 400 prior to calculating the average hardness. This is consistent with the

preamble to the CTR, contained in federal register Section E.f. *Hardness* (p.31692), 40 CFR Part 131.

Deleted: For metals, the lowest applicable Water Quality Objective (WQO) was expressed as total recoverable, and, where applicable, adjusted for hardness. Hardness values from samples collected in the receiving water upstream of the discharge point were averaged and used to determine the appropriate CTR WQO for those hardness-dependent metals. Under critical conditions effluent discharged from the Whittier Narrows WRP contributes the largest flow into the San Gabriel River Watershed in the vicinity of the discharge point.

Interim Monitoring Requirements. In accordance with the SIP, the Regional Board may impose interim monitoring requirements upon the Discharger, so that the Discharger obtains adequate ambient, background water data for priority pollutants upstream of the discharge point as well as suitable effluent data. The Executive Officer directed the Discharger to begin an interim monitoring program for the duration of 18 months, beginning July 2001. The Discharger has collected the eighteen required samples and is reporting the results quarterly to the Regional Board. After additional information is gathered, Regional Board staff will conduct RPA once again, to determine if additional numeric limitations are necessary. Section 1.3, Step 8, of the SIP authorizes the Regional Board to use the gathered data to conduct RPA, as outlined in Steps 1 through 7, and determine if a water quality-based effluent limitation is required.

A reopener provision is included in this Order that allows the permit to be reopened to allow the inclusion of new numeric limitations for any constituent that exhibits reasonable potential to cause or contribute to exceedance of applicable water quality objectives.

The Order is consistent with State and Federal antidegradation policies in that it does not authorize a change in the quantity of wastewater discharged by the facility, nor does it authorize a change or relaxation in the manner or level of treatment. As a result, both the quantity and quality of the discharge are expected to remain the same or improve, consistent with antidegradation policies. Further, the proposed Discharge Serial No. 002 is essentially downstream of the existing Discharge Serial No. 001. The additional discharge point would not increase the capacity of the facility. As a result, there would be no net increase in loading downstream, and diminished loading in the reaches between the existing and new discharge locations. The accompanying monitoring and reporting program requires continued data collection and if monitoring data show a reasonable potential for a constituent to cause or contribute to an exceedance of water quality standards, the permit will be reopened to incorporate appropriate WQBELs. Such an approach ensures that the discharge will adequately protect water quality standards for potential and existing uses and conforms with antidegradation policies and antibacksliding provisions.

The Regional Board also notes that the discharges regulated by the accompanying Order are discharges from a POTW. A POTW receives sewage from myriad domestic and industrial sources, with the industrial sources subject to pretreatment requirements. These diverse sewage sources are all subject to primary, secondary, and tertiary treatment and chlorination/dechlorination at the POTW. Due to the nature of a POTW, the discharger would not be able to adjust treatment techniques to exploit removed effluent limitations, without running the risk of violating effluent limits for nonpriority pollutants. It is technically difficult and would also trigger a reopening of the NPDES permit. As a result, the accompanying Order is consistent with antidegradation because the discharge will not change or increase.

For some priority pollutants, the applicable water quality objectives are below the levels that current technology can measure. Section 2.4.5 of the SIP discusses how compliance will be determined in those cases. The Discharger should work with the laboratory to lower detection levels to meet applicable and reliable detection limits; follow procedures set forth in 40 CFR section 136; and, report the status of their findings in the annual report. During the term of the permit, if and when monitoring with lowered detection limits shows any of the above at levels exceeding the applicable WQOs, the Discharger will be required to initiate source identification and control for the particular pollutant. Appendix 4 of the SIP lists the minimum levels and laboratory techniques for each constituent.

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IX. WASTE DISCHARGE REQUIREMENTS

Numeric toxic constituent limitations are based on the Basin Plan narrative water quality objective for toxic constituents, "All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in, human, plant, animal, or aquatic life"; the CTR; and, the interpretation of the Basin Plan narrative criteria using USEPA's 304(a) nationally recommended water quality criteria. For toxic constituents that have no reasonable potential to cause or contribute to excursions of water quality objectives, no numerical limitations are prescribed.

Pursuant to 40 CFR 122.45(d)(2), for a POTWs continuous discharges, all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall, unless impracticable, be stated as average weekly and average monthly discharge limitations for POTWs. It is impracticable to only include average weekly and average monthly effluent limitations for many constituents regulated by the permit, because a single daily discharge of a pollutant, in excess amounts, can cause violations of water quality objectives. The effects of pollutants on aquatic organisms are often rapid. For many pollutants, an average weekly or average monthly effluent limitation alone is not sufficiently protective of beneficial uses. As a result, maximum daily effluent limitations, as referenced in 40 CFR 122.45(d)(1), are included in the permit.

Furthermore, 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 6) 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.

Table R is the spreadsheet that staff used to calculate the AMELs and MDELs for priority pollutants.

A. Effluent Limitations:

Deleted: 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.¶

1. Limits for conventional and nonconventional pollutants for Discharge Serial Nos. 001-A, 001-B, and 002:

Constituent	Units	Discharge Limitations		
		Daily Maximum[1]	7-Day Average[2]	Monthly Average
BOD_5 20°C	mg/L	45	30	20
	lbs/day[3]	2,530	1,690	1,130
Suspended solids	mg/L	45	40	15
	lbs/day[3]	2,530	2,250	840
Settleable solids	ml/L	0.3	--	0.1
Oil and grease	mg/L	15	--	10
	lbs/day[3]	840	--	560
Total residual chlorine	mg/L	0.1[4]	--	--
Total dissolved solids	mg/L	--	--	850 [5]
	lbs/day[3]	--	--	47,900[5]
MBAS[6]	mg/L	--	--	0.5
	lbs/day[3]	--	--	28
Chloride	lbs/day	2,300 [7]	--	--
	lbs/day	2,200 [8]	--	--
Sulfate	mg/L	--	--	250 [5]
	lbs/day[3]	--	--	14,000[5]
Boron	mg/L	--	--	1.0 [5]
	lbs/day[3]	--	--	56[5]
Fluoride	mg/L	--	--	1.4
	lbs/day[3]	--	--	80
Total inorganic nitrogen	mg/L	--	--	10 [9]
(Nitrate + nitrite as nitrogen)	mg/L	--	--	9 [10]
	mg/L	37.75 [11]	--	36.23 [11]
	lbs/day[3]	--	--	560
Total ammonia	mg/L	[12]	--	[12]
	lbs/day	[3]	--	[3]
	mg/L	--	--	3.50 [13]
	mg/L	--	--	3.2 [14]
Nitrite-N (as N)	mg/L	--	--	0.9 [15]

[1] The daily maximum effluent concentration limit shall apply to both flow weighted 24-hour composite samples and grab samples, as specified in the Monitoring and Reporting Program (Attachment T).

[2] As defined in Standard Provisions, Attachment N.

[3] The mass emission rates are based on the plant design flow rate of 6.75 mgd. 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.

[4] Based on results of continuous monitoring, total residual chlorine concentration of up to 0.3 mg/L, at the point in the treatment train immediately following dechlorination, shall not be considered violations of this requirement provided the total duration of such excursions do not exceed 15 minutes during any 24-hour

period. Peaks in excess of 0.3 mg/L lasting less than one minute shall not be considered a violation of this requirement.

[5] These concentration-based effluent limits and their corresponding mass-based limits do not apply to Discharge Serial No. 002, because it is located below Potrero Road. The Basin Plan does not contain any WQO for these pollutants in Calleguas Creek below Potrero Road.

[6] Unlined reaches of Conejo Creek downstream of the discharge points are designated with the beneficial use of groundwater recharge (GWR) in the Basin Plan. In order to protect the underlying drinking water basins, this Title 22-based limit is prescribed.

[7] This is the waste load allocation (WLA) under routine conditions, according to the Chloride TMDL promulgated by USEPA on March 22, 2002.

[8] This is the waste load allocation (WLA) under drought conditions, according to the Chloride TMDL promulgated by USEPA on March 22, 2002.

[9] This is the water quality objective for nitrate plus nitrite as nitrogen in the current Basin Plan. This effluent limitation applies immediately and will stay in effect until the Nutrient TMDL for Calleguas Creek, Resolution 2002-017, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Include a TMDL for Nitrogen Compounds and Related Effects in Calleguas Creek* (*Nitrogen Compounds and Related Effects TMDL)*, is approved by USEPA (i.e., the effective date of the TMDL). At that time, the interim effluent limitation accompanying table footnote [11] will be effective. If U.S. EPA does not approve the *Nitrogen Compounds and Related Effects TMDL*, this effluent limitation will remain in effect until revised by the Regional Board.

[10] This is the waste load allocation, according to the *Nitrogen Compounds and Related Effects TMDL* adopted by the Regional Board on October 24, 2002. The waste load allocation will ultimately serve as the effluent limitation for the discharge. This limit becomes effective four years after the USEPA approves the *Nitrogen Compounds and Related Effects TMDL*, and will supercede any previously applicable effluent limitations for Total Inorganic Nitrogen. If U.S. EPA does not approve the *Nitrogen Compounds and Related Effects TMDL*, this effluent limitation will not apply.

[11] This is the interim limit for nitrate plus nitrite as nitrogen, according to the *Nitrogen Compounds and Related Effects TMDL* adopted by the Regional Board on October 24, 2002. This interim limit becomes effective when the USEPA approves the *Nitrogen Compounds and Related Effects TMDL* for Calleguas Creek Watershed and ends four years from the effective date of the *Nitrogen Compounds and Related Effects* TMDL. This interim limit will supercede the effluent limitation specified accompanying table footnote [9] and will remain in effect until superceded by the effluent limitation specified accompanying table footnote [10]. If U.S. EPA does not approve the *Nitrogen Compounds and Related Effects TMDL*, this effluent limitation will not apply.

[12] CSD must meet the total ammonia limitations contained in Attachment H, Basin Plan Tables 3-2 and 3-4, for the protection of freshwater aquatic habitat, by June 14, 2002. At a future date, these Ammonia Tables will be replaced with the 1999 USEPA Ammonia Update criteria for ammonia, according to the Ammonia Basin Plan Amendment, Resolution No. 2002-011 (adopted by the Los Angeles Regional Board on April 25, 2002). Following State Board, Office of Administrative Law, and USEPA approval of the Ammonia Basin Plan Amendment, the Regional Board will reopen this NPDES permit to revise the ammonia effluent limits using the new criteria. However, following State Board, Office of Administrative Law, and USEPA approval of the *Nitrogen Compounds and Related Effects* TMDL, the waste load allocation will become the limit for ammonia and will replace other ammonia limits in the NPDES permit.

[13] This is waste load allocation for ammonia, according to the *Nitrogen Compounds and Related Effects* TMDL adopted by the Regional Board on October 24, 2002. This limitation will apply on October 24, 2004, provided U.S. EPA approves the *Nitrogen Compounds and Related Effects TMDL*. If U.S. EPA does not approve the *Nitrogen Compounds and Related Effects TMDL*, then this effluent limitation will not apply.

[14] Under the authority of the *Nitrogen Compounds and Related Effects TMDL* this interim limit will supercede the effluent limitation specified accompanying table footnote [12] upon the effective date of the *Nitrogen Compounds and Related Effects TMDL* and will remain in effect until superceded by the effluent limitation specified accompanying table footnote [13]. If U.S. EPA does not approve the *Nitrogen Compounds and Related Effects TMDL*, then this effluent limitation will not apply.

[15] This is the waste load allocation, according to the *Nitrogen Compounds and Related Effects TMDL* adopted by the Regional Board on October 24, 2002. The waste load allocation will ultimately serve as the effluent limitation for the discharge. This limit becomes effective four years after the USEPA approves the *Nitrogen Compounds and Related Effects TMDL*, and will supercede any previously applicable effluent limitations for Nitrite Nitrogen. If U.S. EPA does not approve the *Nitrogen Compounds and Related Effects TMDL*, this effluent limitation will not apply.

2. Basis for Conventional and nonconventional pollutants:

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

Camarillo WRP provides advanced secondary treatment, as such, the limits in the permit are more stringent than simple secondary treatment requirements. The Plant achieves solids removal rates that are better than those of simple secondary-treated wastewater.

CSD has not had problems meeting the BOD or TSS effluent limitations. The monthly average, the 7-day average, and the daily maximum limits cannot be removed because none of the antibacksliding exceptions apply. Those limits were all included in previous permits (Order Nos. 90-057 and 96-042) and the Camarillo WRP has been able to meet all three limits (monthly average, the 7-day 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 Camarillo 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 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 average values of the raw wastewater influent pollutant concentrations to the facility and the 30-day average values of the effluent pollutant concentrations for a given time period.

b. *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 7-day average limitation, because short term spikes of settleable solid levels that would be permissible under a 7-day 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 96-042) and the Camarillo WRP has been able to meet both limits.

c. *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 nuissance 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 96-042) and the Camarillo WRP has been able to meet both limits.

d. *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 7-day average or a 30-day 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. CSD has been able to meet the limit, except for episodes of malfunctioning dechlorination equipment. The limit cannot be removed because none of the antibacksliding exceptions apply.

e. *Fluoride*

The existing permit effluent limitation of 1.6 mg/l for fluoride was developed based on the Basin Plan incorporation of Title 22, *Drinking Water Standards,* by reference, for the protection of GWR. It is practicable to express the limit as a monthly average, since fluoride is not expected to cause acute effects on beneficial uses. Both concentration and mass-based effluent limits were included in the previous permit (Order No. 96-042). The limit cannot be removed because none of the antibacksliding exceptions apply.

f. *Total Dissolved Solids, Sulfate, and Boron*

The limits for total dissolved solids, sulfate, and boron are based on Basin Plan Table 3-8 (page 3-12), for Calleguas Creek Watershed (above Potrero Road). TDS = 850 mg/L; Sulfate = 250 mg/L; and Boron = 1.0. It is practicable to express these limits as monthly averages, since they are not expected to cause acute effects on beneficial uses. These limits were included in the previous permit (Order No. 96-042) and cannot be removed because none of the antibacksliding exceptions apply.

g. *Chloride*

The water quality objective for chloride in the Basin Plan Table 3-8 (page 3-12), for Calleguas Creek Watershed (above Potrero Road) is 150 mg/L. However, the 150 mg/L effluent limit for chloride changed to 190 mg/L resulting from several resolutions.

On January 27, 1997, the Regional Board adopted Resolution No. 97-02*, Amendment to the Water Quality Control Plan to incorporate a Policy for Addressing Levels of Chloride in Discharges of Wastewaters*. It was approved by the State Board (SWRCB Resolution 97-94); approved by the Office of Administrative Law (OAL) on January 8, 1998; and served to revise the chloride water quality objective in Calleguas Creek and other surface waters.

On April 13, 1998, the Regional Board adopted Order No. 98-027, which temporarily amended Camarillo WRP's chloride daily maximum effluent limit to 190 mg/L. This interim limit expired on January 9, 2001.

On December 7, 2000, the Regional Board adopted Resolution No. 2000-22, to Extend the Interim Chloride Limits for Discharges to Calleguas Creek until March 31, 2001.

On March 22, 2002, USEPA Region 9 established the Calleguas Creek Total Maximum Daily Load for chloride which used the 150 mg/L objective in the Basin Plan to establish a waste load allocation of 2,300 lbs/day for the Camarillo WRP during normal conditions, and a waste load allocation of 2,200 lbs/day for the Camarillo WRP during drought conditions.

Effluent limitations to implement the 150 mg/L chloride objective were stayed on October 17, 2002, when the State Board adopted Order WQO 2002-0017. The stay maintains the 190 mg/L chloride interim effluent limitation, contained in the current NPDES permits for POTWs in Calleguas Creek Watershed. The 190 mg/L limit will remain until the stay is dissolved. However, the 190 mg/L chloride interim limit must be contained in a Time Schedule Order (TSO) because the Basin Plan does not have the authorizing provisions to allow the inclusion of compliance schedules and interim limits in NPDES permits for non-CTR based final effluent limits. Following State Board, OAL, and U.S.EPA approval of the *Resolution Amending the Water Quality Control Plan for the Los Angeles Region to Incorporate Language Authorizing Compliance Schedules in NPDES Permit*, adopted by the Regional Board on January 30, 2003, compliance schedules for non-CTR based limits may be included in NPDES permits.

On January 15, 2003, Larry Walker Associates submitted on behalf of the Calleguas Creek Watershed Management Plan Committee, the *Calleguas Creek Watershed Salts TMDL Work Plan (Salts TMDL Work Plan)*. On March 21, 2003, Regional Board TMDL staff wrote a letter commenting on the workplan. Regional Board staff met with Camrosa Water District, Larry Walker Associates, and USEPA Region IX TMDL staff, to further discuss the workplan. It was agreed that the stakeholders would revise the workplan, to include specific tasks and dates of completion for each tasked, and submit a revised workplan to the Board for approval. On April 30, 2003, a revised Salts TMDL Work Plan was submitted to the Regional Board. It is pending Regional Board approval.

h. *Iron*

The existing permit effluent limitation of 300 mg/l for iron was developed based on the USEPA Quality Criteria for Water 1986 [EPA 440/5-86-001, May 1, 1986 (Gold Book)], and on the incorporation of Title 22, *Drinking Water Standards,* by reference into the Basin Plan. 300 µg/L is the secondary MCL for iron. Although iron is not a priority pollutant, a limit is needed for the protection of the GWR beneficial use. The monthly average limit cannot be removed during the permit renewal process because none of the antibacksliding exceptions apply. The limit was included in the previous permit (Order 96-042) and the Camarillo WRP has been able to meet it.

i. *Methylene Blue Activated Substances (MBAS)*

The existing permit effluent limitation of 0.5 mg/l for MBAS was developed based on the Basin Plan incorporation of Title 22, *Drinking Water Standards,* by reference, to protect the surface water MUN beneficial use. However, the Regional Board has new information about the appropriate designated uses for the water body, and based on the current designated uses, a limit for MBAS is unnecessary and inappropriate unless discharge is to a reach used for groundwater recharge, where Title 22-based limits apply. Therefore, the accompanying Order will not contain a limit for MBAS to protect the GWR beneficial use. The MBAS effluent limitation was also included in the previous NPDES permit for CSD, Order No. 90-057. Since none of the Antibacksliding provisions apply, the MBAS limit will not be removed. Also, foaming has occasionally been observed in the receiving water, at the point of discharge.

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j. *Total inorganic nitrogen*

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.

1. **Algae**. Calleguas Creek is 303(d) listed for 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 303(d) listing for algae will be addressed by the Nitrogen Compounds TMDL (adopted by the Regional Board on October 24, 2002), after it is approved by State Board, OAL, and USEPA. Until the TMDL becomes implementable, algae will be addressed by applying the narrative WQO for biostimulatory substances, "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 the numeric nitrate plus nitrite as nitrogen effluent limitation.

2. **Concentration-based limit**. The effluent limit for total inorganic nitrogen (NO2-N + NO3-N) of 10 mg/L is based on Basin Plan Table 3-8 (page 3-12), for Calleguas Creek watershed (above Potrero Road). It will stay in effect until the Nitrogen Compounds TMDL (adopted by the Regional Board on October 24, 2002), is approved by the State Board, OAL, and USEPA. Once approved,

the TMDL waste load allocation of 9 mg/L will apply to the Camarillo WRP discharge. Regional Board staff will prepare a Time Schedule Order (TSO) or reopen and incorporate a compliance schedule, as appropriate, for CSD to come into compliance with the total inorganic nitrogen limitation by four years after the effective date of the TMDL. The time schedule will contain interim limits for total inorganic nitrogen from the effective date of the adopted Order R4-2003-0079 to four years following USEPA's adoption of the *Nutrient and Related Compounds* TMDL.

Order No. 90-057 contained a 40 mg/L Daily Maximum limit and a 30 mg/L 30-Day Average effluent limit for Total Nitrogen. Those limits were carried over when Order No. 96-042 was renewed in 1996. However, there is no known basis for this limit. It does not exist in Title 22, the Basin Plan, or any USEPA Guidance Document. To further add to the ambiguity of that effluent limit, the previous Orders and fact sheets did not include a definition of Total Nitrogen. CSD erroneously equated total Nitrogen with Total Kjeldahl Nitrogen (TKN). Total Nitrogen is defined as the sum of nitrate nitrogen, nitrite nitrogen, organic nitrogen, and ammonia nitrogen, where as TKN is defined as the sum of organic nitrogen and ammonia nitrogen. The new MRP contains footnote [6] which defines total nitrogen and TKN, to avoid future confusion. In Order No. R4-2003-0079, the erroneous Total Nitrogen effluent limitation will not be carried over. Instead, it will be deleted, in accordance with Antibacksliding provisions of the CWA Section 402(o)(2)(b), and replaced by a more stringent and applicable Basin Plan-based effluent limitation for Total Inorganic Nitrogen (NO_2 + NO_3 as N) of 10 mg/L, with corresponding mass-based limits. These final effluent limitations are required because the discharge has reasonable potential to exceed the 10 mg/L Basin Plan WQO. Refer to Table A3 of this fact sheet for the RPA calculation.

3. **Mass based limit.** The mass emission rates are based on the plant design flow rate of 6.75 mgd.

4. **Nitrite as nitrogen**. The 0.9 mg/L effluent limit for Nitrite as nitrogen is based on the Nitrogen Compound TMDL (adopted by the Regional Board on October 24, 2002). However, the limit will not go into effect until after the Nitrogen Compound TMDL is approved by the State Board, OAL, and USEPA.

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k. *Total ammonia*

Ammonia is a pollutant routinely found in the wastewater effluent of Publicly Owned Treatment Works (POTWs), in landfill-leachate, as well as in run-off from agricultural fields where commercial fertilizers and animal manure are applied. Ammonia exists in two forms – un-ionized ammonia (NH_3) and the ammonium ion (NH_4^+). They are both toxic, but the neutral, un-ionized 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. [There is groundwater recharge in these reaches]. Ammonia also combines with chlorine (often both are present in POTW treated effluent discharges) to form chloramines – persistent toxic compounds that extend the effects of ammonia and chlorine downstream.

Ammonia is 303(d) listed in Conejo Creek and Calleguas Creek. The Discharger's effluent ammonia-nitrogen concentration has ranged between 0.7 to 9.9 mg/L and averaged 2.28 mg/L, between January 1996 and December 2001. Although these concentrations are relatively low, they may not be consistently low enough to meet the 1994 Basin Plan Ammonia WQO. CSD has reasonable potential to cause or contribute to an excursion of the ammonia water quality objective, a water quality-based effluent limitation for ammonia is included in order to be protective of the water quality and the aquatic life beneficial use. This limit must be met at the end-of-pipe, because the studies to justify a dilution credit are nonexistent and dilution credits have not been authorized. The accompanying TSO allows a monthly average interim limit of 3.2 mg/L (based on the 95th percentile of their plant performance) for ammonia nitrogen until October 24, 2004. The total ammonia numeric limits are protective of warm freshwater aquatic habitat and take into account the effect of un-ionized ammonia on aquatic habitat. Therefore, a separate limit for un-ionized ammonia is not necessary. Numeric limits for total ammonia are contained in Basin Plan Tables 3-2 and 3-4 (Attachment H of the permit). At a future date, following State Board, OAL, and USEPA approval of the Basin Plan Amendment, these tables will be replaced with the 1999 USEPA Ammonia Update criteria for ammonia.

The values that appear in the 1994 Basin Plan Ammonia Tables were based on the *Quality Criteria for Water 1986* (EPA 440/5-86-001) document.

To express the 1-Hour and the 4-Day total ammonia concentrations as nitrogen, the tabulated values should be multiplied by the 0.822 conversion factor. The factor was obtained by using stoichiometry.

Atomic mass of nitrogen = 14.01. Atomic mass of hydrogen = 1.008. In one mole of ammonia (NH_3), there is one nitrogen for every 3 hydrogens. Therefore, the molecular weight of NH_3 = 14.01 + (3 x 1.008) = 17.034. The conversion factor is:

$$\frac{1 \text{ mole N}}{1 \text{ mole } NH_3} = \frac{14.01 \text{ mg N}}{17.037 \text{ mg } NH_3} = 0.822$$

Ultimately, if the State Board, the Office of Administrative Law, and the USEPA approve the *Nitrogen Compounds and Related Effects TMDL*, the waste load allocation for ammonia will supercede any ammonia limit in the NPDES permit.

I. *Coliform/Bacteria*

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:

1. Effluent Limitations:
   - The 7 day median number of coliform organisms at some point in the treatment process must not exceed 2.2 Most Probable Number (MPN) per 100 milliliters, and
   - The number of coliform organisms must not exceed 23 MPN per 100 milliliters in more than one sample within any 30-day period.

   These disinfection-based effluent limitations for coliform are for human health protection and are consistent with requirements established by the Department of Health Services. These limits for coliform must be met at the point of the treatment train immediately following disinfection, as a measure of the effectiveness of the disinfection process.

2. Receiving Water Limitation -
   In fresh waters designated for contact recreation (REC-1), the following geometric mean limits and single sample limits shall apply for fecal coliform concentrations in the receiving waters, as a result of wastes discharged:

   a. Geometric Mean Limits
      1. E.coli density shall not exceed 126/100 mL.
      2. Fecal coliform density shall not exceed 200/100 mL.

   b. Single Sample Limits
      1. E.coli density shall not exceed 235/100 mL.
      2. Fecal coliform density shall not exceed 400/100 mL.

   These receiving water limitations are based on Resolution No. 01-018, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Bacteria Objectives for Water Bodies Designated for Water Contact Recreation*, adopted by the Regional Board on October 25, 2001. The Resolution was approved by State Board, OAL, and USEPA, on July 18, 2002, September 19, 2002, and September 25, 2002, respectively.

m. 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.
The pH limitation contained in the existing permit (Order No. 96-042), "the pH shall be between 6.0 and 9.0," was derived from the minimum secondary-treatment requirements for POTWs contained in 40 CFR 133. It is being replaced by the following effluent limitation for pH which reads, "the wastes discharged shall at all times be within the range of 6.5 to 8.5." This more stringent limitation is based on 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. Since dilution is currently not allowed in any reach of the Calleguas Creek Watershed, the Basin Plan pH limitation must apply at the end of pipe.

n. 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 5 Nephelometric turbidity units (NTU) daily operating average effluent limitation for turbidity is based on the Basin Plan (page 3-17), for the protection of the GWR beneficial use and of the REC-1 beneficial use.

o. 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 existing effluent limitation for radioactivity which reads, "Radioactivity of the wastes discharged shall not exceed the limits specified in Title 22, Chapter 15, Article 5, Section 64443, of the CCR, or subsequent revisions," is based on the Basin Plan incorporation of Title 22, *Drinking Water Standards,* by reference, to protect the surface water MUN beneficial use. However, the Regional Board has new information about the appropriate designated uses for the water body, and based on the current designated uses, a limit for Radioactivity is unnecessary and inappropriate unless discharge is to a reach used for groundwater recharge, where Title 22-based limits apply. Therefore, the accompanying Order will contain a limit for radioactivity to protect the GWR beneficial use.

3. *Toxicity.*

Conejo Creek and Calleguas Creek are 303(d) listed for toxicity. Ambient monitoring data indicates that the background concentration in ambient water is toxic to aquatic organisms, and therefore exceeds water quality

standards. Final effluent water quality data, contained in the Discharger's monitoring reports, also shows that chronic toxicity in the effluent has exceeded 1TUc several times. (See Table C1 for Chronic Toxicity data.) Those same monitoring reports lack any information discussing TIE or TRE efforts on the part of the Discharger, which lead staff to conclude that TREs were not conducted. Therefore, pursuant to the SIP and the TSD, reasonable potential exists for toxicity. (See Table C2 for the Reasonable Potential Calculation.) As such, the permit contains numeric effluent limitations for toxicity.

The toxicity numeric effluent limitations are based on:

- 40 CFR 122.2 (Definition of Effluent Limitation)
- 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
- 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.
- Basin Plan objectives and implementation provisions for toxicity
- Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity Programs Final May 31, 1996,
- Whole Effluent Toxicity (WET) Control Policy July 1994
- Technical Support Document (several chapters and Appendix B)

Acute Toxicity Limitation:

The Dischargers may test for Acute toxicity by using USEPA's October 2002, *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*. Fifth Edition. USEPA, Office of Water, Washington, D.C. [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.

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 effluent limitation 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

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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: using 2.0 TUc as the maximum daily limit; or using a statistical approach to develop a maximum daily effluent limitation.

4. Limits for priority pollutants and other toxics for Discharge Serial Nos. 001-A, 001-B, and 002:

CTR #[1]	Constituent	Units	Discharge Limitations	
			Monthly Average[2]	Daily Maximum
1	Antimony	µg/L	6 [c]	--
		lbs/day[4]	0.3	--
2	Arsenic[3]	µg/L	50 [c]	--
		lbs/day[4]	2.8	--
	Barium[3]	µg/L	1,000 [c]	--
		lbs/day[4]	56	--
4	Cadmium[3]	µg/L	5 [c]	--
		lbs/day[4]	0.28	--
5b	Chromium VI [3]	µg/L	50 [c]	--
		lbs/day[4]	2.8	--
6	Copper	µg/L	1000 [e]	--
		lbs/day[4]	56	--
7	Lead[3]	µg/L	50 [e]	--
		lbs/day[4]	2.8	--
8	Mercury[3]	µg/L	2 [c]	--
		lbs/day[4]	0.1	--
9	Nickel[3]	µg/L	100 [c]	--
		lbs/day[4]	5.6	--
10	Selenium[3]	µg/L	50 [c]	--
		lbs/day[4]	2.8	--
11	Silver[3]	µg/L	50 [e]	--
		lbs/day[4]	2.8	--
13	Zinc[3]	µg/L	5,000 [e]	--
		lbs/day[4]	280	--
14	Cyanide	µg/L	3.9[5], [6], a	9.4[5], [6], a
		lbs/day[4]	0.22	0.53
38	Tetrachloroethylene	µg/L	5 [c]	--
		lbs/day[4]	0.28	--
68	Bis(2-Ethylhexyl)phthalate	µg/L	4 [d]	--
		lbs/day[4]	0.2	--
77	1,4-Dichlorobenzene	µg/L	5 [c]	--
		lbs/day[4]	0.28	--

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CTR #[1]	Constituent	Units	Discharge Limitations	
			Monthly Average[2]	Daily Maximum
105	Gamma-BHC (Lindane)	µg/L	0.2 [c]	--
		lbs/day[4]	0.01	--
107	Chlordane	µg/L	0.1 [c]	--
		lbs/day[4]	0.0056	--
109	4,4-DDE	µg/L	0.00059 [5], [6],b	0.0012b [5], [6],b
		lbs/day[4]	0.000033	0.0001
110	4,4-DDD	µg/L	0.00084 [5], [6],b	0.0017 [5], [6],b
		lbs/day[4]	0.000047	0.001
115	Endrin	µg/L	2 [c]	--
		lbs/day[4]	0.1	--
124	Aroclor 1254	µg/L	0.00017 [5], [6],b	0.00034 [5], [6],b
		lbs/day[4]	0.000096	0.000019
126	Toxaphene	µg/L	3 [c]	--
		lbs/day[4]	0.17	--
	Iron	µg/L	300 [e]	--
		lbs/day[4]	17	--
	Methoxychlor	µg/L	40 [c]	--
		lbs/day[4]	2.3	--
	2,4-D	µg/L	70 [c]	--
		lbs/day[4]	3.9	--
	2,4,5-TP (Silvex)	µg/L	50 [c]	--
		lbs/day[4]	2.8	--
	Halomethanes	µg/L	80 [7], c	--
		lbs/day[4]	4.5	--

[1] This number corresponds to the compound number found in Table 1 of CTR. It is simply the order in which the 126 priority pollutants were listed in 40 CFR section 131.38 (b)(1).

[2] Compliance may be determined from a single analysis or from the average of the initial analysis and three additional analyses within the month taken one week apart after the results of the initial analysis are obtained.

[3] Concentration expressed as total recoverable.

[4] The mass emission rates are based on the plant design flow rate of 6.75 mgd. 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.

[5] Section 2.4.5 of CTR *Compliance Determination*, reads, "Dischargers shall be deemed out of compliance with an effluent limitation if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported ML."

[6] This effluent limitation will not be in effect until April 10, 2008, and until that time the Discharger shall comply with the interim limits established in Section I.B.7. of NPDES Order No. R4-2003-0079.

[7] Halomethanes shall mean the sum of bromoform, bromodichloromethane, chloroform, and dibromochloromethane.

Additional Footnotes - Priority Pollutants:

a. Based on most stringent CTR criteria [Criterion Continuous Concentration (CCC)] for the protection of freshwater aquatic life. To arrive at this calculated limitation, the CTR CCC

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was adjusted, according to SIP Section 1.4. Monitoring data provided by the discharger indicate that there is reasonable potential to exceed the CTR criteria for this pollutant.

Federal Register Vol. 65, No. 97, page 31689, discusses the basis for the aquatic life criteria in the CTR. The Criterion Maximum Concentration (CMC), a short term concentration limit, and the Criterion Continuous Concentration (CCC), a four day concentration limit, are designed to provide protection of aquatic life and its uses from acute and chronic toxicity to animals and plants. The criteria are intended to identify average pollutant concentrations which will produce water quality generally suited to maintenance of aquatic life and designated uses while restricting the duration of excursions over the average so that total exposures will not cause unacceptable adverse effects.

Federal Register Vol. 65, No. 97, page 31691, discusses how CCC is intended to be the highest concentration that could be maintained indefinitely in a water body without causing an unacceptable effect on aquatic community or its uses.

b. Based on most stringent CTR criteria for the protection of human health from consumption of organisms only. CTR criteria was adjusted according to SIP Section 1.4, to arrive at this limitation. Monitoring data provided by the discharger indicate that there is reasonable potential to exceed the CTR criteria for this pollutant.

c. Based on the Basin Plan chemical constituent incorporation of Title 22, *Drinking Water Standards,* by reference, for the protection of GWR beneficial use. The previous Order No. 96-042, for the Camarillo WRP contained limits for this constituent. The limit cannot be removed because none of the antibacksliding exceptions apply.

d. Based on the Basin Plan chemical constituent incorporation of Title 22, *Drinking Water Standards,* by reference, for the protection of GWR beneficial use. Monitoring data provided by the discharger indicate that there is reasonable potential to exceed the Basin Pan objective for this pollutant.

e. Based on the USEPA document, *Water Quality Criteria for Water 1986* [EPA 440/5-86-001, May 1, 1986] (Gold Book), for human health protection. The previous Order No. 96-042, for the Camarillo WRP contained limits for this constituent. The limit cannot be removed because none of the antibacksliding exceptions apply.

5. Basis for priority pollutants:

Mixing zones and dilution credits are not used in the accompanying order and would be inappropriate to grant, at this time, in light of the following factors:

- The Camarillo WRP discharge contributes the largest flow into Conejo Creek in the vicinity of the discharge point and it overwhelms the receiving water providing limited mixing and dilution;
- Even in the absence of the Camarillo WRP discharge, the receiving water primarily consists of nuisance flows and other effluents, limiting its ability to assimilate additional waste;
- Several reaches of the Calleguas Creek [including those subject to this Order] are 303(d) listed (i.e, impaired) for certain constituents;
- Impaired waters do not have the capacity to assimilate pollutants of concern at concentrations greater than the applicable objective;

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- For the protection of the beneficial uses, such as rare, threatened, or endangered species.
- For the protection of warm freshwater habitat;
- For the protection of the beneficial uses, such as estuarine habitat; marine habitat; wildlife habitat;
- Because a mixing zone study has not been conducted; and
- Because a hydrologic model of the discharge and the receiving water has not been conducted.

Allowance of a mixing zone is discretionary under Section 1.4.2 of the SIP and under the Basin Plan (Basin Plan Chapter 4, page 30). If the Discharger subsequent conducts appropriate mixing zone and dilution credit studies, the Regional Board can evaluate the propriety of granting a mixing zone or establishing dilution credits.

6. Example calculation: Cyanide

Is a limit required? What is RPA?

- From Table R, *Reasonable Potential & Limit Derivation*, we determined that Reasonable potential analysis (RPA) = Yes, therefore a limit is required.

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 Water & Organisms = 700 µg/L.

Step 2 – Calculate effluent concentration allowance (ECA)
ECA = Criteria in CTR, since no dilution is allowed.

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

a. Calculate CV:
CV = Standard Deviation / Mean
= 9.66/10.39 = 0.9

b. Find the ECA Multipliers from SIP Table 1 (page 7), or by calculating them using equations on SIP page 6. When CV = 0.9, then:
ECA Multiplier acute = 0.224 and
ECA Multiplier acute = 0.404.

c. LTA acute = ECA acute x ECA Multiplier acute
= 22 µg/L x 0.224 = 4.93 µg/L

d. LTA chronic = ECA chronic x ECA Multiplier chronic
= 5.2 µg/L x 0.404 = 2.10 µg/L

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<#>because even in the absence of the Whittier Narrows WRP discharge, the receiving water is dominated by nuisance flows and other effluents, limiting its ability to assimilate additional waste;¶
<#>because several reaches of the San Gabriel River are 303(d) listed (i.e., impaired);¶
<#>because impaired waters don't have the capacity to assimilate pollutants at concentrations greater than the applicable objective;¶
<#>for the protection of the beneficial uses, such as rare, threatened, or endangered species.¶
<#>for the protection of warm freshwater habitat;¶
<#>for the protection of the beneficial uses, such as estuarine habitat; marine habitat; wildlife habitat;¶
- . because a mixing zone study has not been conducted; and¶
because a hydrologic model of the discharge and the receiving water has not been conducted.

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Step 4 – Select the lowest LTA.
In this case, LTA chronic < LTA acute, therefore lowest LTA = 2.10 µg/L

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

a. 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 0.9 in a previous step.
AMEL Multiplier = 1.85
MDEL Multiplier = 4.46

b. AMEL aquatic life = lowest LTA (from Step4) x AMEL Multiplier
= 2.10 µg/L x 1.85 = 3.89 µg/L

c. MDEL aquatic life = lowest LTA (from Step4) x AMEL Multiplier
= 2.74 µg/L x 4.46 = 9.37 µg/L

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

a. Find factors. Given CV = 0.9 and n = 4.
For AMEL human health limit, there is no factor.
The MDEL/AMEL human health factor = 2.41

b. AMEL human health = ECA = 220,000 µg/L

c. MDEL human health = ECA x MDEL/AMEL factor
= 220,000 µg/L x 2.41 = 530,200

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.

a. Lowest AMEL = 3.9 µg/L (Based on Aquatic life protection)

b. Lowest MDEL = 9.4 µg/L (Based on Aquatic life protection)

7 A numerical limit has not been prescribed for a toxic constituent if it has been determined that it has no reasonable potential to cause or contribute to excursions of water quality standards. A narrative limit to comply with all water quality objectives is provided in *Standard Provisions* for the priority pollutants which have no available numeric criteria.

8. The numeric limitations contained in the accompanying Order were derived using best professional judgement and are based on applicable state and federal authorities, and as they are met, will be in conformance with the goals of the aforementioned water quality control plans, and water quality criteria; and will protect and maintain existing and potential beneficial uses of the receiving waters.

X. INTERIM REQUIREMENTS

Nitrogen Compounds & Related Effects. The *Nitrogen Compounds and Related Effects* TMDL adopted by the Regional Board on October 24, 2002, includes waste load allocations for ammonia (NH_3), nitrite as nitrogen (NO_2–N), nitrate as nitrogen (NO_3–N), and total nitrogen (NO_2–N + NO_3–N). The TMDL authorizes interim limits (expressed as interim waste allocations) for total nitrogen (NO_3-N + NO_2-N). The interim waste load allocation applies until four years after the effective date of the TMDL. In addition, the Nutrient TMDL authorized, at the discretion of the Regional Board, interim limits for ammonia extending until no later than October 24, 2004, for POTWs that are not able to achieve immediate compliance with the ammonia waste load allocation.

Once the TMDL is effective, the TMDL's interim waste load allocations may be used, consistent with Section 303(d)(4)(A) and other applicable federal laws and regulations, to develop an interim effluent limitation in the NPDES. Until that approval, however, appropriate limits cannot be specified in the NPDES permit. As a result, a separate time schedule order proscribes the appropriate nutrient limits initially. Because the Regional Board knows the interim waste load allocations and the ammonia waste load allocation, the Order includes alternate *Nitrogen Compounds And Related Effects* limits, triggered on the effective date of the TMDLs. When approved by U.S. EPA, the TMDL will be effective and the interim waste load allocation for total nitrogen and the waste load allocation for ammonia will apply to the discharge, along with an interim limit for ammonia. The Executive Officer will notify the discharger when the U.S. EPA approves the Nutrient TMDL, but the notice will not effect the application of the interim limits.

Ammonia /Nitrogen. The 1994 Basin Plan provides that to protect aquatic life, the total ammonia concentrations in receiving waters shall not exceed the objectives for the corresponding in-stream conditions given in Tables 3-1 to 3-4 of the Basin Plan. The objectives for total ammonia take into account the effect of un-ionized ammonia on aquatic habitat. Compliance with this requirement was required by June 14, 2002. CSD currently discharges low concentrations of ammonia nitrogen because the nitrification process at the Camarillo WRP converts most ammonia to nitrate and nitrite nitrogen. However, CSD may not be able to comply with the 1994 Basin Plan WQO for ammonia because the existing treatment process may not sufficiently reduce the ammonia effluent concentrations.

CSD will not be able to immediately comply with the nitrate plus nitrite as nitrogen effluent limitation and needs time to address how it will comply with the nitrogen effluent limitation. The accompanying Time Schedule Order requires CSD to comply with the nitrate plus nitrite as nitrogen limitation within four years from the effective date of the TMDL. As discussed previously, CSD might not be able to immediately comply with the ammonia as nitrogen effluent limitation and requested time to come into compliance with the ammonia as nitrogen effluent limitation. The accompanying Time Schedule Order requires CSD to comply with the ammonia as nitrogen limitation by October 24, 2004. However, the Regional Board's Nitrogen Compounds and Related Effects TMDL includes explicit authority to incorporate interim ammonia effluent limitations into this permit. If approved by U.S. EPA, the TMDL would allow the limits specified in the accompanying Time Schedule Order to be incorporated into the NPDES permit as interim limits expiring on October 24, 2004. The decision to include interim limits in the permit is at the discretion of the Regional Board. The Regional Board has determined

that CSD will not be able to immediately comply with the nitrate plus nitrite as nitrogen and ammonia limits and waste load allocations, and believes it is appropriate to allow a compliance schedule for ammonia. In the interest of efficiency, this order provides interim limits for ammonia that become applicable if the Nitrogen Compounds and Related Effects TMDL is approved by U.S. EPA.

Because there is reasonable potential, the ammonia objective, which was a receiving water quality objective in the previous permit, is a WQBEL in this Order. The numeric limits for total ammonia applicable to the Camarillo WRP discharge are contained in Basin Plan Tables 3-2 and 3-4 (Attachment H of this Order).

The accompanying Order does not contain a statistically derived water quality based effluent limitation (WQBEL) for ammonia. Instead, the ammonia limit was taken directly from the Basin Plan Tables. This was done to prevent backsliding issues that might arise from the Ammonia Basin Plan Amendment (Resolution No. R02-011), adopted by the Regional Board on April 25, 2002. The Amendment updates the existing ammonia objectives in the 1994 Basin Plan with the 1999 USEPA criteria. The existing criteria for ammonia in the Basin Plan Tables are more stringent than the recently adopted ammonia criteria. Once the Ammonia Basin Plan Amendment has been approved by the Office of Administrative Law, and after it becomes effective, then the Regional Board will reopen the NPDES permit to update the ammonia effluent limits. At that time, revised WQBELs will be developed for ammonia.

Pollutant Minimization Program

1. The goal of the PMP is to reduce all potential sources of a pollutant through minimization (control) strategies, including pollution prevention measures, in order to maintain the effluent concentration at or below the effluent limitation.

   Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The completion and implementation of a Pollution Prevention Plan, required in accordance with California Water Code Section 13263.3(d) shall fulfill the PMP requirement in this section.

2. The Discharger shall develop a PMP, in accordance with Section 2.4.5.1., of the SIP, if all of the following conditions are true, and shall submit the PMP to the Regional Board within 120 days of determining the conditions are true:

   a. The calculated effluent limitation is less than the reported minimum level (ML);
   b. The concentration of the pollutant is reported as detected but not quantified (DNQ); and,
   c. There is evidence showing that the pollutant is present in the effluent above the calculated effluent limitation.

3. The Discharger shall develop a PMP, in accordance with Section 2.4.5.1., of the SIP, if all of the following conditions are true, and shall submit the PMP to the Regional Board within 120 days of determining the conditions are true:

a. the calculated effluent limitation is less than the method detection limit (MDL);
b. The concentration of the pollutant is reported as "Non-Detected", ND;
c. There is evidence that the pollutant is present in the effluent above the calculated effluent limitation.

4. The Discharger shall consider the following in determining whether the pollutant is present in the effluent at levels above the calculated effluent limitation:

a. health advisories for fish consumption;
b. presence of whole effluent toxicity;
c. results of benthic or aquatic organism tissue sampling;
d. sample results from analytical methods more sensitive than methods included in the permit;
e. the concentration of the pollutant is reported as DNQ and the effluent limitation is less than the method detection limit.

5. Elements of a PMP. The PMP shall include actions and submittals acceptable to the Regional board including, but not limited to, the following:

a. An annual review and semiannual monitoring of potential sources of the reportable pollutant, which may include fish tissue monitoring and other bio-uptake sampling;
b. Quarterly monitoring for the reportable pollutant in the influent to the wastewater treatment system;
c. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable pollutant in the effluent at or below the calculated effluent limitation;
d. Implementation of appropriate cost-effective control measures for the pollutant, consistent with the control strategy; and,
e. An annual status report that shall be sent to the Regional Board including:
   - All PMP monitoring results for the previous year;
   - A list of potential sources of the reportable pollutant;
   - A summary of all action taken in accordance with control strategy; and,
   - A description of actions to be taken in the following year.

Interim Limits

The Camarillo WRP may not be able to achieve immediate compliance with the limits for Cyanide, Aroclor 1254, 4,4-DDD, and 4,4-DDE contained in Section I.A.2.(b). Data submitted in previous self monitoring reports indicates that these constituents have been detected in the effluent, at least once, at a concentration greater than the new limit proposed in the accompanying Order.

40 CFR section 131.38(e) and the SIP provide conditions under which interim effluent limits and compliance schedules may be issued. The SIP allows inclusion of interim limits

in NPDES permits for CTR-based priority pollutants. The CTR provides for a five-year maximum compliance schedule, while the SIP allows for longer, TMDL-based compliance schedule. However, the USEPA has yet to approve the longer TMDL-based compliance schedules. Therefore, this Order includes interim limits and compliance schedules based on the CTR for CTR-based priority pollutants limits when the Discharger has been determined to have problems in meeting the new limits. This Order also includes a reopener to allow the Regional Board to grant TMDL-based compliance schedules if the USEPA approves the longer compliance schedule provisions of the SIP and the appropriate conditions are met. For new non-CTR-based limits prescribed in this Order for which the Discharger will not be able to meet immediately, interim limits and compliance dates are provided in an accompanying Time Schedule Order.

In conformance with the CTR and the relevant provisions of SIP Section 2.1, the Discharger must submit documentation regarding efforts made to quantify pollutant levels in the discharge and the sources of the pollutants entering the POTW. In addition, the Discharger already has a source control/ pretreatment program in place. The duration of interim requirements established in this order is as short as practicable.

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XI. MONITORING AND REPORTING PROGRAM

The Discharger will be required to conduct monitoring of influent, effluent, and receiving waters in conformance with Monitoring and Reporting Program No. CI-1278 (Attachment T). The monitoring and reporting program is designed to ensure compliance with the applicable provisions of this Order, and where necessary, to collect information necessary to conduct future reasonable potential analysis for CTR constituents.

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The San Gabriel River conveys treated wastewater along with floodwater, and urban runoff; however, this is not the main purpose of the river. The San Gabriel River is unlined near the points of discharge. Groundwater recharge occurs in these unlined areas of the San Gabriel River. Segments further downstream of the discharge are concrete-lined. Nonetheless, the watershed does support 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, exist in the San Gabriel River Watershed.

Water Recycling Facility. The Discharger currently recycles 0.97% (0.879 million gallons per year) of the treated effluent and plans to continue doing so. The production, distribution, and reuse of recycled water is presently regulated under Water Reclamation Requirements (WRR) Order No. 88-107, adopted by this Board on October 24, 1988, 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. Recycled water is used for ornamental plant irrigation at a nursery. Recycled water is also delivered to the Los Angeles County Department of Public Works for groundwater recharge, under a separate permit (Regional Board Order No. 91-100), at the San Gabriel River Spreading Grounds or the Rio Hondo Spreading Grounds. CSDLAC is promoting additional reuse options for the treated effluent.

As illustrated on the Schematic of Wastewater Flow (Attachment 2) for the Whittier Narrows WRP, the recycled water that is piped for reuse is not dechlorinated to maintain an adequate level of residual chlorine to prevent regrowth of bacteria during distribution.

Stormwater. CSDLAC does not treat storm water runoff at the Whittier Narrows WRP, except for stormwater infiltration and inflows in the sewer and stormwater runoff entering the treatment tanks. On June 4, 1992, CSDLAC filed a Notice of Intent, and currently implements a Storm Water Pollution Prevention Plan (SWPPP), to comply with the State Board's General NPDES Permit No. CAS000001 and Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities (Order No. 97-03-DWQ). The discharge of storm water runoff from the facility is regulated under Order No. 97-03-DWQ, adopted by the State Water Resources Control Board (State Board) on April 17, 1997.