

STATE OF CALIFORNIA

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION  
320 W. 4<sup>th</sup> Street, Suite 200, Los Angeles

**FACT SHEET**  
**WASTE DISCHARGE REQUIREMENTS**  
**for**  
**CITY OF SANTA CLARITA**

NPDES Permit No.: CA0061638  
Public Notice No.: R4-2003-018

FACILITY ADDRESS  
City of Santa Clarita  
Outlook Project Homes  
18657 Nathan Hill  
Santa Clarita, CA 91351

FACILITY MAILING ADDRESS  
City of Santa Clarita  
23920 Valencia Boulevard Ste 302  
Santa Clarita, CA 91355  
Contact: Ms. Grace A. Gasinski  
Telephone: (661) 255-4332

**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 4<sup>th</sup> 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 June 30, 2003.

**B. Public Hearing**

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

Date: July 10, 2003  
Time: 9:00 a.m.  
Location: Metropolitan Water District of Southern California  
700 North Alameda Street  
Los Angeles, California

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.

Please be aware that dates and venues may change. Our web address is [www.swrcb.ca.gov/rwqcb4](http://www.swrcb.ca.gov/rwqcb4) where you can access the current agenda for changes in dates and locations.

**C. 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, Senior Staff Counsel  
1001 I Street, 22<sup>nd</sup> Floor  
Sacramento, CA 95814

**D. Information and Copying**

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 4<sup>th</sup> 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 through the Los Angeles Regional Board by calling (213) 576-6600.

**E. 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.

## **II. Introduction**

City of Santa Clarita (hereinafter Discharger) discharges wastewater under WDRs contained in Order No. 96-079 adopted by the Regional Board on November 4, 1996. Order 96-079 serves as the National Pollutant Discharge Elimination System (NPDES) permit (CA0061638). The Discharger has filed a ROWD and has applied for renewal of its WDRs and NPDES permit. A pre-permit site inspection was also conducted on July 18, 2002, to observe operations and collect additional data to facilitate development of permit limitations and conditions.

## **III. Description of Facility and Waste Discharge**

A dewatering system was installed by American Landmark Development, Inc., at the base of shear keys for soil stabilization and drainage improvement in the area surrounding the Outlook Project Homes in the City of Santa Clarita. The system consists of two pump stations and several observation wells within the Drainage Benefit Assessment Areas Nos. 6 and 18. On February 22, 1991, the system was transferred to the City of Santa Clarita for operation and maintenance. The City of Santa Clarita (hereinafter Discharger) discharges wastewater from the dewatering system under waste discharge requirements (WDRs) contained in Order No. 96-079 adopted by the Regional Board on November 4, 1996.

The effluent from the dewatering operations is discharged via two Discharge Outfalls; Discharge Serial Nos. 001 and 002. Discharge Serial No. 001 from Pump Station No. 1 discharges effluent collected from Drainage Benefit Assessment Area No. 6. Pump Station No. 1 is located at 18657 Nathan Hill Road (near the intersection of Vicci Street) (see Figure 1) and discharges a maximum of 3,000 gallons per day (gpd) of groundwater. The dewatered groundwater is discharged to Private Drain 580 located at Latitude 34°, 25', 20" North and Longitude 118°, 27', 50" West. Drain 580 empties into a concrete lined flood control channel at the cul-de-sac of Shangri-LA Drive.

Discharge Serial No. 002 from Pump Station No. 2 discharges effluent collected from Drainage Benefit Assessment Area No. 18. Pump Station No. 2 is located at 27807 Bakerton Avenue (see Figure 1) and discharges a maximum of 60,000 gpd of groundwater directly to the channel.

The concrete lined flood control channel drains to the Santa Clara River, a water of the United States, at its intersection with Canyon View Drive, approximately 3,300 feet downstream from Soledad Canyon Road bridge, above the estuary. The Santa Clara River in this area is normally dry except during periods of extended rainfalls.

The Regional Board and the United States Environmental Protection Agency (USEPA) have classified the City of Santa Clarita facility as a minor discharge.

Effluent limitations contained in the existing permit for City of Santa Clarita Outlook Project Homes and representative monitoring data from the previous permit term are presented in the following table:

Constituent (units)	Existing Effluent Limitations		Reported Effluent Discharge (May 1997 – June 2002) Maximum	
	Daily Maximum	30-Day Average	Pump Station No. 001	Pump Station No. 002
Total waste flow (gpd)	106,223	----	1,334	50,101
Total dissolved solids (mg/L)	1,500	----	1,300	1,200
Chloride	250	----	280	240
Temperature (°F)	100	----	74	75
pH	---	---	7.6	7.7
Sulfates (mg/L)	150	----	190	190
Nitrate + Nitrite as Nitrogen (mg/L)	5.0	----	9.3	11.5
Boron	1.0	----	0.81	1.4
Suspended Solids (mg/L)	150	50	40	<10
Oil and Grease (mg/L)	15	10	<3	<3
Sulfides (mg/L)	1.0	----	<0.1	<0.1
Settleable solids (mg/L)	0.3	0.1	<0.1	<0.1
BOD <sub>5</sub> (mg/L)	60	20	2.8	<2

Effluent limit violations reported in the data submitted from May 1997 to June 2002 are listed below.

Pump No. 1			Pump No. 2		
Constituent	Value (mg/L)	Date Reported	Constituent	Value (mg/L)	Date Reported
Chloride	270	February 1997	Nitrate + Nitrite	11	March 1997
Chloride	270	May 1997	Nitrate + Nitrite	11	June 1997
Chloride	270	May 1998	Nitrate + Nitrite	11	Sept. 1997
Chloride	260	Sept. 1998	Nitrate + Nitrite	11.5	Sept. 1999
Chloride	270	Nov. 1998	Nitrate + Nitrite	10.9	Feb. 2000
Chloride	257	Sept. 1999	Nitrate + Nitrite	9.8	Aug. 2000
Chloride	274	Jan. 2000	Nitrate + Nitrite	10	Feb 2001
Chloride	266	Feb. 2000	Nitrate + Nitrite	10.2	Aug 2001
Chloride	259	May 2000	Sulfate	160	March 1997
Chloride	260	Dec. 2000	Sulfate	160	Sept. 1997
Chloride	270	May 2001	Sulfate	190	Sept. 1998
Chloride	262	Aug. 2001	Sulfate	160	May 1999
Chloride	280	Jan. 2002	Sulfate	168	Aug. 1999
Sulfate	180	Feb. 1997	Sulfate	170	Feb. 2000
Sulfate	190	Sept. 1997	Sulfate	155	Aug. 2000
Sulfate	160	Sept. 1998	Sulfate	164	Feb. 2001
Sulfate	162	Feb. 2000	Sulfate	166	Aug. 2001
Sulfate	154	Feb. 2001	Sulfate	161	Jan. 2002
Sulfate	157	Aug. 2001			
Sulfate	171	Jan. 2002			

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The data collected reveals a chronic problem with exceedances of chloride and sulfate from Pump 1 and with nitrate and nitrite as nitrogen and sulfate from Pump 2. The violations identified are being evaluated for appropriate enforcement action.

**IV. Applicable Plans, Policies, Laws, and Regulations**

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

1. The Federal Clean Water Act (CWA). The federal Clean Water Act requires that any point source discharge 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 water quality.
2. Title 40, Code of Federal Regulations (40 CFR) – Protection of Environment, Chapter 1, Environmental Protection Agency, Subchapter D, Water Programs, Parts 122-125 and Subchapter N, Effluent Guidelines. These CWA regulations provide effluent limitations for certain dischargers and establish procedures for NPDES permitting, including how to establish effluent limitations.
3. On June 13, 1994, the Regional Board adopted a revised *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan). The Basin Plan contains water quality objectives and beneficial uses for inland surface waters and for the Pacific Ocean. The receiving water for the permitted discharge covered by this permit is the Santa Clara River, a water of the United States, at its intersection with Canyon View Drive, approximately 3,300 feet downstream from Soledad Canyon Road bridge, above the estuary.

The discharged effluent enters the Santa Clara River east of Bouquet Canyon Creek. Based on the foregoing, the Santa Clara River has the following beneficial uses:

Santa Clara River – Hydrologic Unit 403.51

Existing: industrial service supply, industrial process supply, agricultural supply, groundwater recharge, warm freshwater habitat, contact and noncontact water recreation, freshwater replenishment, wildlife habitat, wetland habitat, and rare, threatened, or endangered species.

Potential: municipal and domestic supply.

Santa Clara River – Hydrologic Unit 403.41

Existing: industrial service supply, industrial process supply, agricultural supply, groundwater recharge, freshwater replenishment, warm freshwater habitat, contact and noncontact water recreation, wildlife habitat, migration of aquatic organisms, wetland habitat, and rare, threatened, or endangered species.

Potential: municipal and domestic supply.

Santa Clara River – Hydrologic Unit 403.31

Existing: industrial service supply, industrial process supply, agricultural supply, groundwater recharge, warm freshwater habitat, contact and noncontact water recreation, freshwater replenishment, wildlife habitat, migration of aquatic organisms, wetland habitat, and rare, threatened, or endangered species.

Potential: municipal and domestic supply.

Santa Clara River – Hydrologic Unit 403.21

Existing: industrial service supply, industrial process supply, agricultural supply, groundwater recharge, warm freshwater habitat, contact and noncontact water recreation, freshwater replenishment, wildlife habitat, migration of aquatic organisms, wetland habitat, and rare, threatened, or endangered species.

Potential: municipal and domestic supply.

Santa Clara River – Hydrologic Unit 403.11

Existing: industrial service supply, industrial process supply, agricultural supply, groundwater recharge, warm freshwater habitat, contact and noncontact water recreation, freshwater replenishment, cold freshwater habitat, wildlife habitat, migration of aquatic organisms, wetland habitat, and rare, threatened, or endangered species.

Potential: municipal and domestic supply.

Santa Clara River Estuary – Hydrologic Unit 403.11

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

Potential: shellfish harvesting.

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Ventura County Coastal - Nearshore Zone (Bounded by the shoreline and a line 1,000 feet from the shoreline or the 30-foot depth contour, whichever is farther from shore):

Existing: industrial service supply, navigation, water contact and non-contact water recreation, commercial and sport fishing, support of marine habitat, support of wildlife habitat, preservation of biological habitats, support of rare, threatened, or endangered species, migration of aquatic organisms, support of habitats suitable for spawning, reproduction, and/or early development, and support of habitats suitable for shellfish harvesting.

Ventura County Coastal - Offshore Zone:

Existing: navigation, water contact and non-contact water recreation, commercial and sport fishing, support of marine habitat, support of wildlife habitat, support of rare, threatened, or endangered species, migration of aquatic organisms, support of habitats suitable for spawning, and support of habitats suitable for shellfish harvesting.

The potential municipal and domestic supply beneficial (MUN) use for the Santa Clara River 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.

4. Ammonia Basin Plan Amendment. The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Tables 3-1 through Tables 3-4. However, those ammonia objectives were revised on April 25, 2002, by the Regional Board with the adoption of Resolution No. 2002-011, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters (including enclosed bays, estuaries and wetlands) with Beneficial Use designations for protection of Aquatic Life*. The ammonia Basin Plan amendment was approved by the State Board, the Office of Administrative Law, and USEPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively. Although the revised ammonia water quality objectives may be less stringent than those contained in the 1994 Basin Plan, they are still protective of aquatic life and are consistent with USEPA's 1999 ammonia criteria update.
5. The State Water Resources Control Board (State Board) adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters.
6. On May 18, 2000, the U.S. Environmental Protection Agency (USEPA) promulgated numeric criteria for priority pollutants for the State of California [known as the *California Toxics Rule* (CTR) and codified as 40 CFR 131.38]. In the CTR, USEPA promulgated criteria that protect the general population at an incremental cancer risk level of one in a million ( $10^{-6}$ ), for all priority toxic pollutants regulated as carcinogens. The CTR also provides a schedule of compliance 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.

7. On March 2, 2000, the State Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP was effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the National Toxics Rule (NTR), and to the priority pollutant objectives established by the Regional Boards in their basin plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by the USEPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP was effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The SIP requires the dischargers' submittal of data sufficient to conduct the determination of priority pollutants requiring water quality-based effluent limitations (WQBELs) and to calculate the effluent limitations. The CTR criteria for saltwater or human health for consumption of organisms, whichever is more stringent, are used to develop the effluent limitations in this Order to protect the beneficial uses of the Santa Clara River.
8. 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 uses. 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.
9. State and Federal antibacksliding and antidegradation policies require Regional Board actions to protect the water quality of a water body and to ensure that the waterbody will not be further degraded. The antibacksliding provisions are specified in section 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 where effluent limitations may be relaxed.
10. Effluent limitations are established in accordance with sections 301, 304, 306, and 307 of the CWA, and amendments thereto. These requirements, as they are met, will maintain and protect the beneficial uses of the Santa Clara River.
11. Existing waste discharge requirements contained in Board Order No. 96-082, adopted by the Regional Board on November 4, 1996. In some cases, permit conditions (effluent limitations and other special conditions) established in the existing waste discharge requirements have been carried over to this permit.

## **V. Regulatory Basis for Effluent Limitations**

The CWA requires point source discharges to control the amount of conventional, nonconventional, and toxic pollutants that are discharged into the waters of the United States. The control of the discharge of pollutants is established through NPDES permits that contain effluent limitations and standards. The CWA establishes two principal bases for effluent

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limitations. First, dischargers are required to meet technology-based effluent limitations that reflect the best controls available considering costs and economic impact. Second, they are required to meet WQBELs that are developed to protect applicable designated uses of the receiving water.

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

- Best practicable treatment control technology (BPT) is based on the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and nonconventional pollutants.
- Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and nonconventional pollutants.
- Best conventional pollutant control technology (BCT) is a standard for the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the “cost reasonableness” of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.
- New source performance standards (NSPS) that represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires EPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BCT, BAT, and NSPS. Section 402(a)(1) of the CWA and 40 CFR 125.3 of the NPDES regulations authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern.

If a reasonable potential exists for pollutants in a discharge to exceed water quality standards, WQBELs are also required under 40 CFR 122.44(d)(1)(i). WQBELs are established after determining that technology-based limitations are not stringent enough to ensure that state water quality standards are met for the receiving water. WQBELs are based on the designated uses of the receiving water, water quality criteria necessary to support the designated uses, and the state's antidegradation policy. For discharges to inland surface waters, enclosed bays, and estuaries, the SIP establishes specific implementation procedures for determining reasonable potential and establishing WQBELs for priority pollutant criteria promulgated by USEPA through the CTR and NTR, as well as the Basin Plan.

There are several other specific factors affecting the development of limitations and requirements in the proposed Order. These are discussed as follows:

**1. Pollutants of Concern**

The CWA requires that any pollutant that may be discharged by a point source in quantities of concern must be regulated through an NPDES permit. Further, the NPDES regulations and SIP require regulation of any pollutant that (1) causes; (2) has the reasonable potential to cause; or (3) contributes to the exceedance of a receiving water quality criteria or objective. The SIP includes provisions for priority pollutant criteria promulgated by USEPA in the CTR and NTR, and for those priority pollutants outlined in the Basin Plan.

Effluent limitations in the current permit were established for chloride, sulfates, nitrate and nitrite as nitrogen, boron, total suspended solids, total dissolved solids (TDS), oil and grease, sulfides, settleable solids, and BOD<sub>5</sub>20°C. Previous data indicated that TDS and chloride levels in the effluent exceeded the Basin Plan recommended criteria for the Santa Clara River. The previous permit based on the engineering investigation submitted by the City of Santa Clarita, put forth adjusted effluent limits for TDS and chloride of 1,500 and 250 mg/l, respectively. Basin Plan objectives for TDS and chloride for that reach of the Santa Clara River that appear in the Basin Plan are 800 and 100 mg/L, respectively.

The Discharger submitted an engineering report demonstrating that naturally occurring levels of TDS and chloride in the Santa Clara River upstream of the discharge point are above the objectives listed in the Basin Plan for this particular reach of the river. However, the information provided did not rise to the level where the Basin Plan could be amended to include the site-specific criteria. Therefore, those limits in the Basin Plan for the reach where the discharge enters the river apply to discharges to that reach.

**2. Technology-Based Effluent Limitations**

This permit will require the Discharger to develop and implement a *Storm Water Pollution Prevention Plan* (SWPPP). The SWPPP will outline site-specific management processes for minimizing storm water runoff contamination and for preventing contaminated storm water runoff from being discharged directly into surface waters. This permit will require that the Discharger develop and implement a SWPPP.

Due to the lack of national effluent limitations guidelines (ELGs) for dewatering activities and the absence of data available to apply BPJ, and pursuant to 40 CFR 122.44(k), the Regional Board will require the Discharger to develop and implement a *Best Management Practices Plan* (BMPP). The purpose of the BMPP is to establish site-specific procedures that will prevent the discharge of pollutants in the wastewaters. The BMPP should also address non-storm water discharges from outside the facility. The combination of the SWPPP and BMPP and existing permit limitations based on past performance and reflecting BPJ will serve as the equivalent of technology-based effluent limitations, in the absence of established ELGs, in order to carry out the purposes and intent of the CWA.

### 3. **Water Quality-Based Effluent Limitations**

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

The CTR contains both saltwater and freshwater criteria. According to 40 CFR 131.38(c)(3), freshwater criteria apply at salinities of 1 part per thousand (ppt) and below at locations where this occurs 95 percent or more of the time; saltwater criteria apply at salinities of 10 ppt and above at locations where this occurs 95 percent or more of the time; and at salinities between 1 and 10 ppt the more stringent of the two apply. The CTR criteria for freshwater or human health for consumption of organisms, whichever is more stringent, are used to prescribe the effluent limitations in this Order to protect the beneficial uses of the Santa Clara River.

#### ***(a) Reasonable Potential Analysis (RPA)***

In accordance with Section 1.3 of the SIP, the Regional Board will conduct a reasonable potential analysis (RPA) for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. The Regional Board would analyze effluent data to determine if a pollutant in a discharge has a reasonable potential to cause or contribute to an excursion above a state water quality standard. For all parameters that have a reasonable potential, numeric WQBELs are required. The RPA considers water quality objectives outlined in the CTR, NTR, as well as the Basin Plan. To conduct the RPA, the Regional Board must identify the maximum observed effluent concentration (MEC) for each constituent, based on data provided by the Discharger.

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

- 1) Trigger 1 – If the MEC is greater than or equal to the CTR water quality criteria or applicable objective (C), a limitation is needed. For certain constituents present in this discharge that were nondetect, the MEC was set at the method detection limit consistent with section 1.3 of the SIP.
- 2) Trigger 2 – If  $MEC < C$  and background water quality (B)  $> C$ , a limitation is needed.

- 3) Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, etc. indicates that a WQBEL is required.

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

***(b) Calculating WQBELs***

If a reasonable potential exists to exceed applicable water quality criteria or objectives, then a WQBEL must be established in accordance with one of three procedures contained in Section 1.4 of the SIP. These procedures include:

- 1) If applicable and available, use of the wasteload allocation (WLA) established as part of a total maximum daily load (TMDL).
- 2) Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).
- 3) Where sufficient effluent and receiving water data exist, use of a dynamic model, which has been approved by the Regional Board.

Attachment A includes the results of the Reasonable Potential Assessment, the Compliance Summary Report, and the WQBELs Calculation Summary for the discharges from the Drainage Benefit Assessment Areas Nos. 6 and 18. The analysis was completed using the California Permit Writer and Training Tool and the data submitted by the Discharger.

***(c) Impaired Water Bodies in 303 (d) List***

Section 303(d) of the CWA requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For all 303(d) listed water bodies and pollutants, the Regional Board plans to develop and adopt TMDLs that will specify WLAs for point sources and load allocations (LAs) for non-point sources, as appropriate.

The USEPA has approved the State's 1998 303(d) list of impaired water bodies. Certain receiving waters in the Los Angeles and Ventura County watersheds do not fully support beneficial uses and therefore have been classified as impaired on the 1998 303(d) list and have been scheduled for TMDL development.

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 2002 303(d) 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 2003 meeting. The adopted 303(d) list is currently being reviewed by USEPA for approval. Since the 2002 303(d) list has not yet been approved staff has used to 1998 303(d) list to determine the

The receiving water for the permitted discharge covered by this permit is the Santa Clara River. The Santa Clara River is the largest river system in Southern California that remains in a relatively natural state. It is a high quality natural resource for much of its length. The river originates in the northern slope of the San Gabriel Mountains in Los Angeles County, traverses Ventura County, and flows into the Pacific Ocean halfway between the cities of San Buenaventura and Oxnard.

Limited data (beyond mineral quality and nitrogen) is available for much of the Santa Clara River. Reach 9 of the Santa Clara River, which is in the vicinity of the discharge, appears on the 2002 Clean Water Act Section 303(d) list for high coliform content. Downstream reaches of the River have been listed for chloride, nitrate and nitrite, high coliform count, total dissolved solids and ammonia. The Santa Clara River Estuary is listed for high coliform count, toxaphene and Chem A (which includes the sum of aldrin, dieldrin, chlordane, endrin, heptachlor, heptachlor epoxide, HCH (including lindane) and endosulfan).

The TMDLs will assess the extent and sources of the ammonia and algae (nutrient/nitrogen) problems in the Santa Clara River. According to the TMDL schedule under the amended consent decree, *Heal the Bay, Santa Monica Bay Keeper, et al. v. Browner, et al.* (March 23, 1999), the nitrogen and chloride TMDLs for the Santa Clara River Watershed must be completed by March 2003 and March 2002 respectively. The remaining TMDLs, such as eutrophication, trash, and coliform are scheduled for completion in 2005 and 2006.

Chloride TMDL. On October 24, 2002, the Regional Board adopted Resolution No. 2002-018, Amendment to the Basin Plan for the Los Angeles Region to Incorporate a Total Maximum Daily Load to Reduce Chloride Loading in the Upper Santa Clara River. Subsequent to the effective date of the chloride TMDL, this Order or its successors will be reopened and modified to include final effluent limits that are consistent with the waste load allocations in the TMDL.

**(d) Whole Effluent Toxicity**

Whole Effluent Toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative “no toxics in toxic amounts” criterion while implementing

numeric criteria for toxicity. There are two types of WET tests: acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and measures mortality, reproduction, and growth.

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental response on aquatic organisms. Detrimental response includes but is not limited to decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota. The existing permit does not contain toxicity limitations or monitoring requirements.

In accordance with the Basin Plan, acute toxicity limitations dictate that the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test having less than 70% survival. Consistent with Basin Plan requirements, this Order includes acute toxicity limitations.

In addition to the Basin Plan requirements, Section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters.

The discharges from the facility occur continuously could contribute to long-term toxic effects. However, no chronic toxicity data is available for the discharge. Therefore, the Discharger will be required to conduct chronic toxicity testing in order to determine reasonable potential and establish WQBELs as necessary. In addition, the Order includes a chronic testing trigger hereby defined as an exceedance of 1.0 toxic units chronic (TU<sub>c</sub>) in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed 1.0 TU<sub>c</sub> in a critical life stage test.) If the chronic toxicity of the effluent exceeds 1.0 TU<sub>c</sub>, the Discharger will be required to immediately implement accelerated chronic toxicity testing according to Monitoring and Reporting Program, Item IV.D.1. If the results of two of the six accelerated tests exceed 1.0 TU<sub>c</sub>, the Discharger shall initiate a toxicity identification evaluation (TIE).

#### **4. Specific Rationale for Each Numerical Effluent Limitation**

Section 402(o) of the Clean Water Act and 40 CFR 122.44(l) require that effluent limitations standards or conditions in re-issued permits are at least as stringent as in the existing permit. For constituents or parameters likely to present in the discharge and that had limitations in the existing permit, the limitations have been carried forward consistent with federal anti-backsliding requirements.

The Regional Board has determined that reasonable potential exists for all pollutants that are regulated under the prior permit as well as all constituents proposed to be regulated under the accompanying order; therefore effluent limitations have been established for these pollutants. Furthermore, effluent limitations for certain metals have been established based on the revised water quality criteria contained in the CTR and the

requirements contained in Section 1.4 of the SIP. These limitations include establishing both MDELs and AMELs. Calculations of final WQBEL effluent limitations for metals and a summary of the RPA analysis are provided in Attachment A.

The Basin Plan lists water quality objectives for total dissolved solids (TDS), sulfate, chloride, boron, nitrogen and sodium adsorption ration (SAR) for the Santa Clara River. The criteria listed for TDS, sulfate, chloride, boron, and nitrate plus nitrite as nitrogen were included as limits in this permit. These Basin Plan objectives for these constituents are established to protect designated uses of the receiving waters. Further, the Basin Plan objectives are applied to the discharge end of pipe, because the receiving water has no dilution capabilities. As indicated previously, the receiving water only flows intermittently.

A modified limitation for biochemical oxygen demand (BOD<sub>5</sub>) of 30 mg/L is established in the revised permit. BOD<sub>5</sub> is an indicator of the amount of oxygen needed to degrade the organic matter carried by the wastewater. Elevated BOD<sub>5</sub> can adversely affect the level of oxygen in receiving water that is available to aquatic organisms and can adversely affect beneficial uses. A BOD<sub>5</sub> of 5 mg/L in a slow-moving stream may be enough to produce anaerobic conditions, while a rapid moving stream might be able to assimilate a BOD<sub>5</sub> of 50 mg/L without appreciable oxygen depletion. The 30 mg/L limit for BOD<sub>5</sub> is consistent with limits imposed for permittees enrolled under Order 97-045 General NPDES Permit No. CAG994001 for Groundwater Dischargers from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties and for other discharges of ground water to surface water bodies in the region. The data submitted to date indicates that the Discharger will be able to met the new effluent limit of 30 mg/L for BOD<sub>5</sub>.

Freshwater aquatic life criteria for certain metals are expressed as a function of hardness. Hardness or water quality characteristics that are usually correlated with hardness can reduce or increase the toxicities of some metals. Increasing hardness has the effect of decreasing the toxicity of metals. The WQBELs for several of the metals evaluated for reasonable potential for these discharges are hardness dependent. The receiving water data submitted from the City of Santa Clarita initially did not include hardness data and the default value of 100 mg/L as CaCO<sub>3</sub> was used to calculate the WQBELs. The comments submitted by the Discharger on March 21, 2003 on the tentative Order included hardness data collected in the vicinity of the discharge by the Castaic Lake Water Agency. The data indicated the hardness of the water in the Santa Clara River near the discharge point ranged from 343 to 570 mg/L as CaCO<sub>3</sub>. Hence, the maximum hardness that can be used in the CTR-based calculation of the WQBELs (400 mg/L as CaCO<sub>3</sub>) was used for the calculation in the revised tentative WDRs.

In compliance with 40 CFR 122.45(f), mass-based limitations have also been established in the proposed Order for conventional and priority pollutants and metals. Staff utilized the maximum permitted flow of 0.063 million gallons per day (MGD) to calculate the monthly average mass-based limitation and the daily maximum mass-based limitation.

When calculating the mass for discharges, the appropriate flow, daily maximum for daily maximum mass calculations, and the monthly average flowrate when calculating the monthly average mass discharged should be substituted in the following equation.

Mass (lbs/day) = flow rate (MGD) X 8.34 X effluent limitation (mg/L):  
 where: mass = mass limit for a pollutant in lbs/day  
 effluent limitation = concentration limit for a pollutant, mg/L  
 flow rate = discharge flow rate in MGD

The following table provides the final effluent limitations for the discharge from Outfall 001 and 002.

Constituent (units)	Discharge Limitations				Rationale <sup>2</sup>
	Daily Maximum		Monthly Average		
	Concentration	Mass <sup>1</sup> (lbs/day)	Concentration	Mass <sup>1</sup> (lbs/day)	
Temperature (°F)	100	--	--	--	TP
pH	6.5-8.5	--	--	--	BP
Oil and Grease (mg/L)	15	7.9	10	5.3	E
BOD <sub>5</sub> 20°C (mg/L)	30	15.8	20	10.5	BPJ
Total suspended solids (mg/L)	150	79	50	26.3	E
Settleable solids (ml/L)	0.3	--	0.1	--	E
Total dissolved solids (mg/L)	800	420	--	--	BP
Sulfate (mg/L)	150	79	--	--	E
Chloride (mg/L)	100	53	--	--	BP
Boron (mg/L)	1	0.53	--	--	BP
Nitrate + Nitrite as Nitrogen	5	2.6	--	--	BP
Sulfides (mg/L)	1	0.53	--	--	BP
Copper (µg/L) <sup>3</sup>	41.9	0.02	12.2	0.006	CTR
Cyanide (µg/L) <sup>3</sup>	8.5	0.004	4.3	0.002	CTR
Lead (µg/L) <sup>3</sup>	34.4	0.018	12.6	0.007	CTR
Mercury (µg/L) <sup>3</sup>	0.14	0.00007	0.05	0.00003	CTR
Thallium (µg/L) <sup>3</sup>	12.6	0.007	6.3	0.003	CTR
Bis(2-ethylhexyl)phthalate (µg/L)	11.8	0.01	5.9	0.003	CTR
Indeno(1,2,3-cd) pyrene (µg/L)	0.09	0.00005	0.05	0.00003	CTR
Acute toxicity (% survival)	100	--	--	--	BP
Chronic toxicity (TU <sub>c</sub> )	1	--	--	--	BP

<sup>1</sup> The mass-based effluent limitations are based on a maximum flow of 63,000 gpd for the daily maximum and the monthly average.

The equation used to calculate the mass is :

$$m = 8.34 * C * Q \text{ where:}$$

m = mass limit for a pollutant in lbs/day

C = concentration limit for a pollutant, mg/L

Q = discharge flow rate (0.063 million gallons per day (mgd)).

<sup>2</sup> E = Existing Permit, CTR = California Toxics Rule, BP = Basin Plan, BPJ = Best Professional Judgement, TP = Thermal Plan.

<sup>3</sup> Discharge limitations for these metals are expressed as total recoverable.

<sup>4</sup> The BOD<sub>5</sub> daily maximum limit has been changed to be consistent with the interpretation of the narrative limit presented in the Basin Plan.

## **5. Compliance Schedule**

A comparison between the MEC and calculated AMEL and MDEL values shows that the Discharger will be unable to consistently comply with effluent limitations established in the proposed Order for the following constituents: indeno(1,2,3-cd) pyrene, copper, lead, and mercury. As a result, the proposed Order contains interim limits and a compliance schedule for submitting progress reports and complying with the final effluent limitation by June 30, 2006.

40 CFR 131.38(e) and SIP provides conditions under which interim effluent limits and a compliance schedule may be issued. The SIP does allow inclusion of interim limits with specific compliance schedules included in a NPDES permit for priority pollutants if the limits for the priority pollutants are CTR-based. Since the WQBELs for indeno(1,2,3-cd) pyrene, copper, lead, and mercury are not feasible for the Discharger, interim limits for these analytes are contained in this Order.

The SIP requires that the Regional Board establish other interim requirements such as requiring the discharger to develop a pollutant minimization plan and/or source control measures. Those requirements are outlined in the Order.

Pursuant to the SIP (Section 2.2.1, Interim Requirements under a Compliance Schedule), when compliance schedules are established in an Order, interim limitations must be included based on current treatment facility performance, existing permit limitations or the maximum detected effluent limitation, whichever is more stringent. The facility performance limit was calculated assuming that the data was distributed normally and both the 99<sup>th</sup> percentile and 95<sup>th</sup> percentile values were calculated. The most stringent of the 99<sup>th</sup> percentile value from the data set, the maximum detected effluent concentration, and the existing permit limit for the daily maximum was used as the interim daily maximum effluent limit. The interim monthly average was determined by using the most stringent of the 95<sup>th</sup> percentile value from the data set and the existing permit limit.

Indeno(1,2,3-cd)pyrene was only detected one time out of seven observations. The detected value of 0.48 µg/L was used as the interim daily maximum limit; no monthly average limit was stipulated. The performance limits were calculated and used as the daily maximum and monthly average limits for copper, lead, and mercury. The 99<sup>th</sup> percentile confidence limit was used for the interim daily maximum WQBEL and the 95<sup>th</sup> percentile performance limit was used as the monthly average interim WQBEL.

The following table provides the interim effluent limitations for the discharge from Outfall 001.

Constituent	Discharge Limits				Rationale <sup>3</sup>
	Daily Maximum		Monthly Average		
	Concentration (mg/L)	Mass <sup>2</sup> (lbs/day)	Concentration (mg/L)	Mass <sup>2</sup> (lbs/day)	
Indeno(1,2,3-cd)pyrene	0.48	0.0003	--	--	MEC
Copper <sup>2</sup>	259	0.14	175	0.08	PL
Lead <sup>2</sup>	34	0.02	22.6	0.01	PL
Mercury <sup>2</sup>	0.24	0.0001	0.14	0.00007	PL

<sup>1</sup> Discharge limitations for these metals are expressed as total recoverable.

<sup>2</sup> The mass-based effluent limitations are based on a flow rate of 63,000 gpd for daily maximum and monthly average.

<sup>3</sup> E = Existing Permit, MEC = Maximum Effluent Concentration, PL = Performance Limit (99 percentile value for daily maximum and 95 percentile value for monthly average concentrations), CTR = California Toxics Rule.

The Discharger is currently unable to meet the Basin Plan limits for TDS, chloride, nitrate plus nitrite as nitrogen, and sulfate. The limits in the current permit for TDS and chloride were higher than the Basin Plan prescribed limits for the receiving water, the Santa Clara River. The Discharger, prior to the adoption of the current permit, demonstrated that the discharge would not immediately meet the Basin Plan criteria for TDS and chloride. The Discharger submitted an engineering work plan evaluating options for treating the discharge and was provided interim limits for the duration of the permit. Implementing a limit different from the Basin Plan limit requires that a site-specific study be completed providing evidence to support the new Basin Plan criteria. The new Basin Plan criteria must be approved by the Regional Board, the State Board and the Office of Administrative Law. The change would ultimately be implemented by a Basin Plan amendment.

The Discharger submitted a new feasibility study to the Board on January 17, 2003 evaluating several options for dealing with the elevated contaminant concentrations for TDS and chloride including:

- coverage under the General NPDES Permit for Construction and Project Dewatering;
- discharge to an infiltration basin located near Discharge Outfall 002
- discharge to an infiltration basin located at River Park;
- disposal to Los Angeles County Sanitation Districts wastewater collection system;
- on-site conventional water treatment;
- reuse of the water by the Santa Clarita Water Division of the Castaic Lakes Water Agency; and,
- sale of the effluent to the Castaic Lakes Water Agency in association with their Recycled Water Master Plan.

This study concluded that most of the options were either not feasible or cost prohibitive.

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It recommended that the Regional Board provide adjusted or interim limits to allow time for the Recycled Water Master Plan to be implemented by the Castaic Lakes Water Agency, which is currently planned for 2009. The City of Santa Clarita plans to send the dewatered groundwater to this agency for disposal when the system is operational. This would alleviate the need to discharge to the Santa Clara River.

The monitoring reports submitted also provide data that shows that the effluent limits for nitrate plus nitrite as nitrogen have been exceeded during every monitoring period at Discharge Serial No. 002. The data for sulfate shows an increasing trend and all samples collected after the year 2000 have exceeded the effluent limit of 150 mg/L. The Discharger has requested interim limits of 12 mg/L for nitrate plus nitrite as nitrogen and 190 mg/L for sulfate.

Since, the Discharger has demonstrated an inability to meet the limits immediately and compliance with the limits would require new or modified control measures that would require more than 30 calendar days to put into operation a TSO has been developed providing interim limits for TDS, chloride, nitrate plus nitrite as nitrogen, and sulfate discharged during the operation of the groundwater dewatering system. The TSO also requires semiannual reports to the Regional Board documenting compliance with an accepted engineering work plan. An agreement with the Castaic Lakes Water Agency to take the groundwater discharges must be secured and documentation of such presented to the Regional Board, any mitigating measures implemented and any changes to the original work plan schedule must be included in the report updates.

**6. Monitoring Requirements**

For regulated parameters, the previous permit for City of Santa Clarita required quarterly monitoring for oil and grease, total dissolved solids, chloride, sulfides and settleable solids; semi-annual monitoring for temperature, pH, sulfate, nitrate + nitrite as nitrogen, boron, suspended solids, and BOD<sub>5</sub>20°C. Monitoring requirements for metals, priority pollutants, and total petroleum hydrocarbons were annually. According to Section 1.3 of the SIP, if data are unavailable or insufficient to conduct the RPA, the Regional Board must establish interim requirements that require additional monitoring for the pollutants in place of a WQBEL. Upon completion of the required monitoring, the Regional Board must use the gathered data to conduct the RPA and determine if a WQBEL is required. As prescribed in the Monitoring and Reporting Program, the Regional Board shall require periodic monitoring for pollutants for which criteria or objectives apply and for which no effluent limitations have been established. This data will be used to complete an RPA on all of the priority pollutants.

***(a) Effluent Monitoring***

To demonstrate compliance with interim effluent limitations established in the permit, the monitoring requirements will in most cases be more frequent. Monitoring data during the previous permit term suggest that the Discharger has the potential to exceed the established effluent limitations for total suspended solids, chloride and several metals; therefore, the Board is requiring monthly monitoring for these constituents, to

ensure compliance with established effluent limitations. This monitoring schedule is effective upon adoption of the Order by the Regional. This permit also includes requirements for semiannual monitoring of acute and chronic toxicity.

***(b) Effluent Monitoring for Reasonable Potential Determination***

In compliance with the SIP, the Discharger is required to submit data sufficient for: (1) determining if WQBELs for priority pollutants are required, and (2) to calculate effluent limitations, if required. Therefore, the Discharger will be required to conduct an interim monitoring program for all CTR priority pollutants.

This monitoring shall occur at the following locations:

- Effluent discharge point.
- Receiving water. The monitoring stations shall be at 50 feet upstream from the discharge point into the Santa Clara River and shall continue until seven data sets are submitted.

***(c) Receiving Water Monitoring***

In addition to the requirements for monitoring the receiving water described in (b) above, the City of Santa Clarita will be required to perform general observations of the receiving water when discharges occur during the receiving water monitoring event and report the observations in the quarterly monitoring report. The Regional Board in assessing potential impacts of future discharges will use data from these observations. If no discharge occurred during the observation period, this shall be reported. Observations shall be descriptive where applicable, such that colors, approximate amounts, or types of materials are apparent.

***(d) Storm Water Monitoring***

The Discharger shall implement the Storm Water Pollution Prevention Plan Requirements as is enumerated in Attachment A of the Waste Discharge Requirements Order No. R4-2003-0099.