C. Any discharge of untreated groundwater to surface water in the San Diego Reigon threatens to cause or contribute to excursions above narrative water quality objectives contained in the Basin Plan as a result of the potential discharge of petroleum related compounds, solvents, and metals.

On May 26, 1989, USEPA enacted revisions to NPDES program regulations (40 CFR 122). When a proposed discharge of a compound or chemical threatens to cause or contribute to an excursion above a State narrative water quality standard and a numeric water quality standard for the specific chemical has not been established, the NPDES program regulations require the Regional Board to do the following: 1) Establish effluent limitations using a proposed State water quality objective or standard, or an explicit State policy or regulation interpreting its narrative water quality objective which will protect and maintain water quality and designated beneficial uses of the receiving water; 2) Establish effluent limitations on a case-by-case basis, using USEPA's water quality criteria published under CWA section 307(a); or 3) Establish effluent limitations on an indicator parameter for the pollutants of concern; and

D. 40 CFR section 122.44(l) requires that when a permit is renewed or reissued, effluent limitations must be at least as stringent as the effluent limitations in the previous permit. Since this permit is a renewal of a previous permit, anti-backsliding is applicable and the following pollutants are included:

Settleable Solids
Total Suspended Solids
Hydrogen Sulfide
Total Residual Chlorine
pH
Benzene
Ethylbenzene
Toluene
Xylene
Total Petroleum Hydrocarbons
Arsenic
Cadmium
Chromium (hexavalent)
Copper
Lead
Mercury
Nickel
Silver
Zinc
Cyanide
Phenolic Compounds (non-chlorinated)
Chlorinated Phenolics
1,1,2,2-tetrachlorethane (PCA)
1,1,1-trichloroethane (TCA)
1,1,2-trichloroethane (TCA)
1,2-dichloroethane
Tetrachloroethylene (PCE)
Trichloroethylene (TCE)
Vinyl chloride
Carbon tetrachloride
Base/Neutral Organic Compounds
Acute Toxicity
Chronic Toxicity
Tributyltin (TBT)
Total Coliform
Fecal Coliform
Dissolved Oxygen (DO)

E. Methyl Tertiary-Butyl Ether (MTBE), is a chemical compound that is manufactured by the chemical reaction of methanol and isobutylene.

MTBE is produced in very large quantities (over 200,000 barrels per day in the U.S. in 1999) and is almost exclusively used as a fuel additive in motor gasoline. It is one of a group of chemicals commonly known as "oxygenates" because they raise the oxygen content of gasoline. At room temperature, MTBE is a volatile, flammable and colorless liquid that dissolves rather easily in water.

Because MTBE dissolves easily in water and does not "cling" to soil very well, it migrates faster and farther in the ground than other gasoline components, thus making it more likely to migrate to groundwater extraction wells. MTBE does not degrade (breakdown) easily and is difficult and costly to remove from groundwater.

On January 1, 1998, Senate Bill (SB) 521 was passed. SB521 adds language to the Health & Safety Code which is applicable to leaking underground storage tanks as follows: "Section 25299.37.1. No closure letter pursuant to this chapter shall be issued unless the soil or groundwater, or both, where applicable, at the site have been tested for Methyl Tertiary Butyl Ether (MTBE) and the results of that testing are known to the Regional Board." Subsequently, on February 20, 1998, the Regional Board, Site Mitigation & Cleanup Unit, issued written notification to interested parties of Mandatory MTBE Sampling For Underground Storage Tank (UST) Site Closures-Senate Bill (SB) 521. The February 20, 1998, notification specifies that "For ground water impacted sites or soil sites that may threaten ground water, both soil and ground water sampling and analysis for MTBE will be required."

Sections 13272.1 and Section 13285 of the CWC address discharges of MTBE. The California Department of Health Services (DHS) adopted limits for Maximum Contaminant Levels for MTBE. The Primary MCL of 13 µg/L was adopted by DHS on May 17, 2000. The Secondary MCL (for taste and odor not health affects) of 5 µg/L was adopted on January 7, 1999. The UST program uses the more conservative secondary MCL of 5 µg/L.

F. Discharge Prohibitions

Discharges under this WDR are required to be nontoxic. Toxicity is the adverse response of organisms to chemicals or physical agents. This prohibition is based on the Basin Plan, which require that all waters be maintained free of toxic substances in concentrations that are lethal or produce other detrimental responses in aquatic organisms. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species. The Basin Plan also requires waters to be free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, or animal life. This objective applies regardless of whether

the toxicity is caused by a single substance or the interactive effect of multiple substances.

Mass emission rate limitations will be determined using the discharge flowrate and effluent concentration limitations specified in this WDR; therefore, the daily maximum discharge flowrate limitation for each discharge will be specified in the discharge Notice of Enrollment from the Regional Board. The discharge flowrate will be designated as the maximum discharge flowrate and the Discharger shall be prohibited from discharging in excess of the maximum discharge flowrate.

1. The discharge of groundwater to surface waters is prohibited unless authorized, exempted, or issued an individual NPDES permit by the Regional Board.

2. The discharge of wastes to areas designated by the SWRCB, and recommended by the Regional Board, as areas of special biological significance is prohibited. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas.

3. The discharge of groundwater extraction waste to surface waters from permanent groundwater extraction operations in basins with designated beneficial uses of industrial, agricultural, or municipal and domestic supply are prohibited unless such extracted groundwater (not used beneficially) is used beneficially (Application Requirements, Section F.17, and F.18). If the Enrollee of such extracted groundwater wishes to discharge to surface waters, it shall be the responsibility of the Enrollee to obtain an individual NPDES Permit for the discharge.

4. The discharge of groundwater extraction waste to enclosed bays, harbors, lagoons, and estuaries, or tributaries thereto, is prohibited unless the Enrollee demonstrates to the satisfaction of the Regional Board that alternative disposal sites (e.g., surf zone) are not practicable as required in Application Requirements, Sections F.17, and F.18.

5. The discharge of groundwater extraction waste to any surface water from a groundwater extraction project after the date of completion of construction of structures requiring groundwater extraction, or from a groundwater remediation operation after the date the groundwater has been remediated to the satisfaction of the Regional Board, is prohibited.

6. The discharge of groundwater in excess of the flowrate specified in each Enrollee's Notice of Enrollment is prohibited unless the

Enrollee obtains a revised discharge Notice of Enrollment authorizing an increased flowrate.

7. No individual pesticide or combination of pesticides shall be present in the water column, sediments, or biota at concentration(s) that adversely affect beneficial uses. Pesticides shall not be present at levels which will bioaccumulate in aquatic organisms to levels which are harmful to human health, wildlife or aquatic organisms.

   Water designated for use as domestic or municipal supply (MUN) (drinking water) shall not contain concentrations of pesticides in excess of the maximum contaminant levels specified in California Code of Regulations, Title 22, Table 64444-A of Section 64444 (Organic Chemicals). (See Basin Plan Chapter 3-13).

8. Compliance with the waste discharge prohibitions contained in the Basin Plan is a condition of this Order.

9. The discharge of groundwater extraction waste to a storm water conveyance system without notifying and receiving authorization from the agency having jurisdiction over the storm water conveyance system is prohibited.

10. The discharge of wastes tributary or directly to areas designated as being of special biological significance by the SWRCB is prohibited. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas.

G. Technology-Based Effluent Limitations (TBELs)

1. Scope and Authority

The CWA requires that TBELs be established based on several levels of controls:

Best Practicable Treatment Control Technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. The 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. The BAT standards apply to toxic and nonconventional pollutants.

Best Conventional Pollutant Control Technology (BCT) represents 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) 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 USEPA to develop Effluent Limitations, Guidelines and Standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 CFR section 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. Where BPJ is used, the permit writer must consider specific factors outlined in 40 CFR section 125.3.

2. Applicable Technology-Based Effluent Limitations

The USEPA has not developed numeric Technology-Based effluent limitations for pollutants in discharges from groundwater extraction.

H. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The designated beneficial uses of surface waters throughout the State may include municipal, domestic, industrial, and agricultural supply; water contact and non-contact recreation; navigation; groundwater recharge and freshwater replenishment; hydropower generation; wildlife habitat; cold

freshwater and warm freshwater habitat; fish migration and fish spawning; marine habitat; estuarine habitat; shellfish harvesting; ocean commercial and sport fishing; areas of special biological significance; and preservation of rare and endangered species. To the extent that the Basin Plan designates additional or different beneficial uses, the Basin Plan shall apply.

3. Determining the Need for WQBELs

All applicable provisions of sections 301 and 402 of the CWA must be met for NPDES permits for discharges to surface waters. These provisions require controls of pollutant discharges that utilize BAT and BCT to reduce pollutant and any more stringent controls necessary to meet water quality standards.

As specified in the SIP, the Regional Board shall conduct an analysis for each priority pollutant with applicable criterion or objective to determine if a water quality-based effluent limitation is required.

Data are unavailable to conduct an analysis because a WDR as a General Permit, does not require a Report of Waste Discharge. Therefore, the discharger shall conduct an initial sample based on flow to determine the requirements.

Reasonable Potential Analysis (RPA)

In order to determine what to sample for and what frequency, an initial set of data is required.

If the discharger proposes to discharge less than 100,000 gallons per day, then the discharger shall initially conduct Monitoring Program A (sample for the entire constituents listed in III.D. and MTBE).

However it the discharger proposes to discharge 100,000 gallons per day or more, then the discharger shall initially conduct Monitoring Program B (sample the entire constituents listed in III.D., MTBE, and all 126 priority pollutants).

Based on the initial monitoring program if the discharge does not require treatment to meet the discharge specifications of this WDR, then the discharger will only need to conduct Monitoring Program A (if discharging less than 100,000 gallons per day) or Monitoring Program B (if discharging 100,000 gallons per day or more) once per year. This will provide data to identify reasonable potential for future effluent limits.

If the discharge will require treatment prior to discharge, then in addition to the once per year monitoring required listed above, the discharger will also monitor for all the constituents listed in the discharge specification with

effluent limits at the frequency required in the Monitoring and Reporting Program stated in Attachment E because of the reasonable potential of exceeding the effluent limits in the discharge specifications of this WDR.

If there are any contaminated sites within the radius of influence of the groundwater extraction activities, then the constituent of concern will be monitored at the frequency required in the Monitoring and Reporting Program stated in Attachment E because of the reasonable potential of exceeding the effluent limits in the discharge specifications of this WDR. If the constituent of concern is not listed in the Monitoring and Reporting Program stated in Attachment E then a monitoring and reporting frequency will be stated in the Notice of Enrollment.

Table summarizing effluent limits and monitoring

DISCHARGE	EFFLUENT LIMITS	MONITORING PROGRAM
< 100,000		• Program A Annual
>= 100,000		• Program B Annual
Treatment	Yes	• Monitoring and Reporting Program in Attachment E
Contaminated Site in Radius of Influence		• Monitor and Report constituent(s) of concern as stated in the Notice of Enrollment

4. WQBEL Calculations

The Average Monthly Effluent and Maximum Daily Effluent WQBELs were calculated using a statistical approach with the following considerations and assumptions:

No dilution credit is considered for the discharge. Therefore, the discharge must comply with the Water Quality Objective at the point of discharge.

The WQBEL based on the CTR were implemented using the procedure list in the SIP. The procedure is listed below with copper as the example.

CTR/SIP calculations - Copper Example:

Criteria for Priority Toxic Pollutant in the State of California is described in the CTR table listed in 40 CFR 131.38.

A		B Freshwater		C Saltwater		D Human Health (10^{-6} risk for carcinogens) For consumption of:	
# Compound	CAS Number	Criterion Maximum Conc. [d] B1	Criterion Continuous Conc. [d] B2	Criterion Maximum Conc. [d] C1	Criterion Continuous Conc. [d] C2	Water & Organisms (µg/L) D1	Organisms Only (µg/L) D2
1. Antimony	7440360					14 a,s	4300 a,t
2. Arsenic [b]	7440382	340 i,m,w	150 i,m,w	69 i,m	36 i,m		
3. Beryllium	7440417					n	n
4. Cadmium [b]	7440439	4.3 e,i,m,w,x	2.2 e,i,m,w	42 i,m	9.3 i,m	n	n
5a. Chromium (III)	16065831	550 e,i,m,o	180 e,i,m,o			n	n
5b. Chromium (VI) [b]	18540299	16 i,m,w	11 i,m,w	1100 i,m	50 i,m	n	n
6. Copper [b]	7440508	13 e,i,m,w,x	9.0 e,i,m,w	4.8 i,m	3.1 i,m	1300	

Saltwater criterion maximum concentration (CMC) = 4.8 µg/L
Saltwater criterion continuous concentration (CCC) = 3.1 µg/L

These criteria are expressed in terms of the dissolved fraction of the metal in the water column. [See footnote "m" to Table in paragraph (b)(1) of 40 CFR 131.38]

40 CFR 122.45(c) requires that this WDR include effluent limitations as a total recoverable concentration.

The SIP requires that if it is necessary to express a dissolved metal or selenium value as total recoverable and a site-specific translator has not yet been developed, the Regional Board shall use the applicable conversion factor from 40 CFR 131.38.

The term "Conversion Factor" (CF) represents the recommended conversion factor for converting a metal criterion expressed as the total recoverable fraction in the water column to a criterion expressed as the dissolved fraction in the water column [See note to Table 2 of Paragraph (b)(2) to 40 CFR 131.38]

Total recoverable concentration * CF = Dissolved concentration criterion

or

Total recoverable concentration = Dissolved concentration criterion / CF

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(iv) Table 2 to paragraph (b)(2) of this section:

Metal	Conversion factor (CF) for freshwater acute criteria	CF for freshwater chronic criteria	CF for saltwater acute criteria	CF for saltwater chronic criteria
Antimony	[4]	[4]	[4]	[4]
Arsenic	1.000	1.000	1.000	1.000
Beryllium	[4]	[4]	[4]	[4]
Cadmium	0.944	0.909	0.994	0.994
Chromium (III)	0.316	0.860	[4]	[4]
Chromium (VI)	0.982	0.962	0.993	0.993
Copper	0.960	0.960	0.83	0.83

CF for copper = 0.83

Total recoverable concentrations for copper:
4.8 µg/L dissolved (CMC) / 0.83 (CF) = 5.8 µg/L total recoveralbe for CMC
3.1 µg/L dissolved (CCC) / 0.83 (CF) = 3.7 µg/L total recoveralbe for CCC

Effluent variability multiplier and Coefficient of Variation (CV)
For each concentration based on an aquatic life criterion, the long-term average (LTA) is calculated by multiplying the concentration with a factor that adjusts for effluent variability. The multiplier can be found in Table 1 of the SIP. Since this is a WDR without existing data points, the number of effluent data points is less than ten; the CV shall be set equal to 0.6 per the SIP.

Table 1. Effluent Concentration Allowance (ECA) Multipliers for Calculating Long-Term Averages (LTAs)

Coefficient Of Variation (CV)	Acute Multiplier	Chronic Multiplier
	99th Percentile Occurrence Probability	99th Percentile Occurrence Probability
0.1	0.797	0.891
0.2	0.643	0.797
0.3	0.527	0.715
0.4	0.440	0.643
0.5	0.373	0.581
0.6	0.321	0.527

Therefore, from Table 1 of the SIP, the effluent variability multiplier will be as follows:
Acute Multiplier = 0.321
Chronic Multiplier = 0.527

The long-term average (LTA) is calculated by multiplying the total recoverable concentrations for copper with the acute and chronic multipliers:

LTA acute = 5.8 µg/L * 0.321 = 1.9 µg/L
LTA chronic = 3.7 µg/L * 0.527 = 2.0 µg/L

The MDEL and AMEL will be based on the most limiting of the acute and chronic LTA, in the case for copper it will be LTA acute of 1.9 µg/L.

Water quality-based effluent limits are calculated by multiplying the most limiting LTA with a factor (multiplier) that adjusts for the averaging periods and exceedance frequencies of the criteria and the effluent limitations. The multiplier can be found in Table 2 of the SIP. Since this is a WDR without existing data points, the CV will be set equal to 0.6 and since sampling frequency is four times a month or less, n shall be set equal to 4 per SIP (n=4).

Table 2. Long-Term Average (LTA) Multipliers for Calculating Effluent Limitations

Coefficient of Variation	MDEL Multiplier	AMEL Multiplier			MDEL/AMEL Multiplier		
	99th Percentile Occurrence Probability	95th Percentile Occurrence Probability			MDEL = 99th Percentile AMEL = 95th Percentile Occurrence Probability		
(CV)		n = 4	n = 8	n = 30	n = 4	n = 8	n = 30
0.1	1.25	1.08	1.06	1.03	1.16	1.18	1.22
0.2	1.55	1.17	1.12	1.06	1.33	1.39	1.46
0.3	1.90	1.26	1.18	1.09	1.50	1.60	1.74
0.4	2.27	1.36	1.25	1.12	1.67	1.82	2.02
0.5	2.68	1.45	1.31	1.16	1.84	2.04	2.32
0.6	3.11	1.55	1.38	1.19	2.01	2.25	2.62

Therefore, from Table 2 of the SIP, the LTA multipliers will be as follows:
MDEL Multiplier = 3.11
AMEL Multiplier = 1.55

The MDEL and AMEL limits are calculated by multiplying the LTA with an LTA multiplier for each limit:
Maximum Daily Effluent Limit (MDEL) = 1.9 µg/L * 3.11 = 5.8 µg/L
Average Monthly Effluent Limit (AMEL) = 1.9 µg/L * 1.55 = 2.9 µg/L

I. Whole Effluent Toxicity (WET)

Whole effluent toxicity (WET) tests measure the aggregate toxic effect of a mixture of pollutants that may be present in a waste stream and provides information on potential toxic impacts to receiving waters from the

discharge of wastes. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach provides a means of assessing compliance with the narrative toxicity water quality objective for aquatic life protection of the Basin Plan 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 may measure mortality, reproduction, and development.

The SIP requires that a Toxicity Reduction Evaluation (TRE) be conducted if a discharge causes or contributes to chronic toxicity in a receiving water body. This WDR requires the Discharger to periodically monitor the toxicity of its discharge and to develop a TRE Workplan if the toxicity effluent limitations are exceeded.

J. Anti-Backsliding Effluent Limitations

Sections 402(o)(2) and 303(d)(4) of the CWA and 40 CFR section 122.44(l) prohibit backsliding in NPDES permits. The following limits designated with AB in the Final Effluent Limitations table below have the same limit as the previous permit.

K. Final Effluent Limitations

Summary of Water Quality-Based Effluent Limitations
Discharge Point
Summary of Water Quality-based Effluent Limitations Table

Mass Limits

All permit limitations, standards or prohibitions shall be expressed in terms of mass except for pH, or other pollutants which cannot appropriately be expressed by mass or under certain circumstances including "when applicable standards and limitations are expressed in terms of other units of measurement." (40 CFR § 122.45(f)(1)). Therefore, all concentration limits stated above except for Settleable Solids, Acute Toxicity, Chronic Toxicity, Total Coliform, Fecal Coliform, pH, and Dissolved Oxygen shall also have a mass limit based on its concentration limit times the discharge flow limit in the Notice of Enrollment expressed in pounds per day (lbs/d) as shown in the equations below:

Concentration Limit * Flow Limit * Conversion Factor = Mass Limit
(mg/l) * (MGD) * 8.34 [lb*L/(Million Gallons*mg)] = lbs/day
(µg/l) * (MGD) * 0.00834 [lb*L/(Million Gallons*µg)] = lbs/day
(mg/l) * (gpd) * 0.00000834 [lb*L/(Gallons*mg)] = lbs/day
(µg/l) * (gpd) * 0.00000000834 [lb*L/(Million Gallons*µg)] = lbs/day

B. DISCHARGE SPECIFICATIONS

1. DISCHARGES TO BAYS AND HARBORS

The discharge of groundwater extraction waste to Mission Bay, Oceanside Harbor, Del Mar Boat Basin, or Dana Point Harbor shall not contain pollutants in excess of the following effluent limitations:

General / Inorganic / Biological

Parameter	Units	Effluent Limitations				
		AMEL	AWEL	MDEL	Instantaneous Maximum	6-Month Median
Settleable Solids	ml/L	1.0 [OP]	1.5 [OP]	-	3.0 [OP]	-
Total Suspended Solids	mg/L	30 [AB]	-	-	50 [AB]	-
Hydrogen Sulfide	µg/L	2 [AB]	-	4 [AB]	10 [AB]	-
Total Residual Chlorine	µg/L	-	-	8 [OP]	60 [OP]	2 [OP]
Acute Toxicity	Tua			0.3 [OP]		
Chronic Toxicity	Tuc			1.0 [OP]		
Total Coliform	MPN/ 100 ml				1000.0 [AB]	
Fecal Coliform	MPN/ 100 ml				200.0 [AB]	
pH	Units	Within limit of 6.0 to 9.0 at all times [OP]				

Parameter	Units	Effluent Limitations				
		AMEL	AWEL	MDEL	Instantaneous Minimum	6-Month Median
Dissolved Oxygen (DO)	mg/L				> 5.0 [AB]	

Petroleum

Parameter	Units	Effluent Limitations				
		AMEL	AWEL	MDEL	Instantaneous Maximum	6-Month Median
MTBE	µg/L				5 [DHS]	
Benzene	µg/L	-	-	-	5 [AB]	-
Ethylbenzene	µg/L	-	-	-	5 [AB]	-
Toluene	µg/L	-	-	-	5 [AB]	-
Xylene	µg/L	-	-	-	5 [AB]	-

Parameter	Units	Effluent Limitations				
		AMEL	AWEL	MDEL	Instantaneous Maximum	6-Month Median
Total Petroleum Hydrocarbons	mg/L	-	-	-	0.5 [AB]	-

Metals

Parameter	Units	Effluent Limitations			
		AMEL	MDEL	Instantaneous Maximum	6-Month Median
Tributyltin (TBT)	µg/L	0.0014 [OP]			

Organics

Parameter	Units	Effluent Limitations			
		AMEL	MDEL	Instantaneous Maximum	6-Month Median
Phenolic Compounds (non-chlorinated)	µg/L	-	120 [OP]	300 [OP]	30 [OP]
Chlorinated Phenolics	µg/L	0.025 [CTR]	0.049 [CTR]	10 [OP]	1 [OP]
1,1,2,2-tetrachlorethane (PCA)	µg/L	2.3 [OP]	-	-	-
1,1,1-trichloroethane (TCA)	µg/L	5.4E5 [OP]	-	-	-
1,1,2-trichloroethane (TCA)	µg/L	9.4 [OP]	-	-	-
1,2-dichloroethane	µg/L	28 [OP]	-	-	-
Tetrachloroethylene (PCE)	µg/L	2.0 [OP]	-	-	-
Trichloroethylene (TCE)	µg/L	27 [OP]	-	-	-
Vinyl chloride	µg/L	36 [OP]	-	-	-
Carbon tetrachloride	µg/L	0.90 [OP]	-	-	-
Base/Neutral Organic Compounds	µg/L			10 [AB]	

Parameter	Units	Effluent Limitations			
		AMEL	MDEL	Instantaneous Maximum	6-Month Median
Ammonia (as N)	µg/L		2400 [OP]	6000 [OP]	600 [OP]

Parameter	Units	Effluent Limitations			
		AMEL	MDEL	Instantaneous Maximum	6-Month Median
Endosulfan	ng/L	-	18 [OP]	27 [OP]	9 [OP]
HCH	ng/L	-	8 [OP]	12 [OP]	4 [OP]
Dichloromethane	µg/L	450 [OP]	-	5 [AB]	-
Halomethanes	µg/L	-	-	5 [AB]	-
PAHs	ng/L	8.8 [OP]	-	-	-
TCDD Equivalents	pg/L	0.0039 [OP]	-	-	-
Turbidity	µg/L	75 [OP]	2.2 [CTR]	225	-

Parameter	Units	Effluent Limitations			
		AMEL	AWEL	Instantaneous Minimum	6-Month Median
Turbidity	NTU	75 [OP]	100 [OP]	225 [OP]	-
Turbidity	NTU	Shall not exceed the turbidity of the receiving water. [AB]			
126 Priority Pollutants from "Inland Surface Waters"					

2. DISCHARGES TO LAGOONS/ESTUARIES

The discharge of groundwater extraction waste discharges to saline lagoons (only Buena Vista Lagoon is fresh water) and estuaries of the region shall not contain pollutants in excess of the following effluent limitations:

Includes limits to the Bays and Harbors Limitations

Parameter	Units	Effluent Limitations			
		AMEL	MDEL	Instantaneous Maximum	6-Month Median
Total Nitrogen	mg/L	-	-	2.0 [AB]	1.0 [AB]
Total Phosphorus	mg/L	-	-	.0.2 [AB]	0.1 [AB]
pH	Units	Within limit of 7.0 to 8.5 at all times [AB]			
All Parameters and Effluent Limitations from "Bays and Harbors"					

3. DISCHARGES TO THE SURF ZONE

The discharge of groundwater extraction waste to the surf zone (3:1 dilution factor) shall not contain pollutants in excess of the following effluent limitations:

Discharges to the Surf Zone Calculation

The formula used to calculate effluent limits for consituents discharged to the surf zone is from Table B in the Ocean Plan except for Toxicity and Radioactivity.

Ce=Co+Dm(Co-Cs)

Ce = the effluent concentration limit, ug/L
Co = the concentration (water quality objective) to be met at the completion of initial dilution, ug/L
Dm = minimum probable initial dilution expressed as parts seawater per part wastewater Dm = 3 from findings from the 2001-96 Order.
Cs = background seawater concentration (see Table C), ug/L

Table C
BACKGROUND SEAWATER CONCENTRATIONS (Cs)

Waste Consituent	Cs (ug/L)
Arsenic	3
Copper	2
Mercury	0.0005
Silver	0.16
Zinc	8
For all other Table B parameters	0

DISCHARGES TO THE SURF ZONE
(3:1 DILUTION FACTOR) [AB]

Parameter	Units	Effluent Limitations			
		AMEL	MDEL	Instantaneous Maximum	6-Month Median
TCR	µg/L		32 [OP]	240 [OP]	8 [OP]
Ammonia (as Nitrogen)	µg/L		9600 [OP]	24,000 [OP]	2400 [OP]
Arsenic	µg/L		119 [OP]	311 [OP]	23 [OP]
Cadmium	µg/L		16 [OP]	40 [OP]	4 [OP]
Chromium (hexavalent)	µg/L		32 [OP]	80 [OP]	8 [OP]
Copper	µg/L		42 [OP]	114 [OP]	6 [OP]
Lead	µg/L		32 [OP]	80 [OP]	8 [OP]

Parameter	Units	Effluent Limitations			
		AMEL	MDEL	Instantaneous Maximum	6-Month Median
Mercury	µg/L		0.64 [OP]	1.60 [OP]	0.16 [OP]
Nickel	µg/L		80 [OP]	200 [OP]	20 [OP]
Silver	µg/L		10.7 [OP]	27.5 [OP]	2.32 [OP]
Zinc	µg/L		296 [OP]	776 [OP]	56 [OP]
Cyanide	µg/L		16 [OP]	40 [OP]	4 [OP]
Phenolic Compounds (Non-chlorinated)	µg/L		480 [OP]	1200 [OP]	120 [OP]
1,1,2,2-tetrachloroethane	µg/L		9.2 [OP]		
Tributyltin (TBT)	µg/L		0.0056 [OP]		
1,1,-trichoroethane	µg/L		2,160,000 [OP]		
1,1,2-trichloroethane	µg/L		37.6 [OP]		
Carbon tetrachloride	µg/L		3.6 [OP]		
PCBs	µg/L		0.000076 [OP]		
Tetrachloroethylene	µg/L		8 [OP]		
Trichloroethylene	µg/L		108 [OP]		
Vinyl chloride	µg/L		144 [OP]		
Selenium	µg/L		240 [OP]	600 [OP]	60 [OP]
Endosulfan	µg/L		0.072 [OP]	0.108 [OP]	0.036 [OP]
Endrin	µg/L		0.016 [OP]	0.024 [OP]	0.008 [OP]
HCH	µg/L		0.032 [OP]	0.048 [OP]	0.016 [OP]
Acrolein	µg/L	880 [OP]			
Antimony	µg/L	4800 [OP]			
bis(2-chloroethoxy) methane	µg/L	17.6 [OP]			
bis(2-chloroisopropyl) ether	µg/L	4800 [OP]			
Chlorobenzene	µg/L	2280 [OP]			
di-n-butyl phthalate	µg/L	14,000 [OP]			

Parameter	Units	Effluent Limitations			
		AMEL	MDEL	Instantaneous Maximum	6-Month Median
Dichlorobenzenes	µg/L	20,400 OP			
1,1-dichloroethylene	µg/L	3.6 OP			
Diethyl phthalate	µg/L	132,000 OP			
Dimethyl phthalate	µg/L	3,280,000 OP			
4,6-dinitro-2-methylphenol	µg/L	880 OP			
2,4-dinitrophenol	µg/L	16 OP			
Ethylbenzene	µg/L	16,400 OP			
Fluoranthene	µg/L	60 OP			
Hexachlorocyclopentadiene	µg/L	232 OP			
Nitrobenzene	µg/L	19.6 OP			
Thallium	µg/L	8 OP			
Acrylonitrile	µg/L	0.4 OP			
Aldrin	µg/L	0.000088 OP			
Benzene	µg/L	23.6 OP			
Benzidine	µg/L	0.000276 OP			
Beryllium	µg/L	0.132 OP			
Bis(2-chloroethyl) ether	µg/L	0.18 OP			
Bis(2-ethylhexyl) phthalate	µg/L	14 OP			
Chlordane	µg/L	0.000092 OP			
Chloroform	µg/L	520 OP			
DDT	µg/L	0.00068 OP			
3,3-dichlorobenzidine	µg/L	0.0324 OP			
1,2-dichloroethane	µg/L	112 OP			
Dichloromethane	µg/L	1,800 OP			
1,3-dichloropropene	µg/L	35.6 OP			

Parameter	Units	Effluent Limitations			
		AMEL	MDEL	Instantaneous Maximum	6-Month Median
Dieldrin	µg/L	0.00016 OP			
2,4-dinitrotoluene	µg/L	10.4 OP			
1,2-diphenylhydrazine	µg/L	0.64 OP			
Halomethanes	µg/L	520 OP			
Heptachlor	µg/L	0.0002 OP			
Hexachlorobenzene	µg/L	0.00084 OP			
Hexachlorobutadine	µg/L	56 OP			
Hexachloroethane	µg/L	10 OP			
N-nitrosodimethylamine	µg/L	29.2 OP			
N-nitrosodiphenylamine	µg/L	10 OP			
PAHs	µg/L	0.0352 OP			
TCDD equivalents	µg/L	1.56E-08 OP			
Toxaphene	µg/L	0.00084 OP			
2,4,6-trichlorophenol	µg/L	1.16 OP			

Parameter	Units	Effluent Limitations			
		AMEL	AWEL	Instantaneous Maximum	MDEL
Settleable Solids	ml/L	1 OP	1.5 OP	3 OP	
Suspended Solids		75% OP *			
		*Suspended Solids AMEL is 75% removal unless the average monthly influent is 80 mg/L or less, then the effluent limit shall be 60 mg/L. OP			
pH		Within limit of 6.0 and 9.0 at all times. OP			
Toluene		340,000 OP			
Xylene				5 AB	
Total Petroleum Hydrocarbons				500 AB	
Aute Toxicity	TUa				0.3 OP

Parameter	Units	Effluent Limitations			
		AMEL	AWEL	Instantaneous Maximum	MDEL
Chronic Toxicity	TUc				1 [OP]
Turbidity	NTU	75 [OP]	100 [OP]	225 [OP]	

Parameter	Units	Effluent Limitations			
		AMEL	AWEL	Instantaneous Maximum	Shellfish Harvesting
Total Coliform	MPN/ 100 mL	1,000 [OP]		10,000 [OP]	
Total Coliform	MPN/ 100 mL			1,000 [OP] *	
		*Total coliform density shall not exceed 1,000 per 100 mL when the ratio of fecal/total coliform exceeds 0.1 [OP]			
Total Coliform					70 [OP] **
Total Coliform					230 [OP] **
		**The median total coliform density shall not exceed 70 per 100 mL, and not more than 10 percent of the samples shall exceed 230 per 100 mL. [OP]			
Fecal Coliform	MPN/ 100 mL	200 [OP]		400 [OP]	
Enterococcus	MPN/ 100 mL	35 [OP]		104 [OP]	

Parameter	Units	Effluent Limitations				
		AMEL	AWEL	MDEL	Instantaneous Minimum	6-Month Median
Dissolved Oxygen (DO)	mg/L				5.0 [AB]	

[OP] Basis – Ocean Plan 2005
[AB] Basis – Anti-Backsliding, values from the previous permit
[DHS] Basis – Department of Health Services
[CTR] Basis – California Toxics Rule/ State Implementation Plan 2005

4. DISCHARGES TO INLAND SURFACE WATERS

The discharge of groundwater extraction waste to inland surface waters (including Buena Vista Lagoon) shall not contain pollutants in excess of the following effluent limitations:

GENERAL CONSTITUENTS

Constituent	Unit	AMEL	Daily Maximum	Instantaneous Maximum	Basis
Settleable Solids	ml/L	0.1	---	0.2	AB
Total Suspended Solids	mg/L	30	---	50	
Percent Sodium	%	---	---	60	AB
Total Nitrogen	mg/L	1.0		2.0	"
Total Phosphorus	mg/L	0.1		0.2	"
Methylene Blue Active Substances	mg/L	---	---	0.5	"
Turbidity	NTU	Shall not exceed the ambient turbidity of the surface water at any time.			"
Fluoride	mg/L	---	---	1.0	"
Hydrogen Sulfide	µg/L	2	4	10	AB
Total Residual Chlorine (TRC)	µg/L	2	8	10	AB
pH	Units	Within the limits of 6.5 and 8.5 at all times.			AB
Acute Toxicity	TUa	---	---	0.59	AB
Chronic Toxicity	TUc	---	1	---	AB
Dissolved Oxygen	mg/L	Shall not be less than 5.0 at any time in waters with designated warm fresh-water habitat beneficial uses or less than 6.0 in waters with cold fresh water habitat beneficial uses.			AB
Total Coliform	MPN/100mL	---	---	1000	"
Fecal Coliform	MPN/100mL	---	---	200	"

VOLATILES, METALS, PRIORITY POLLUTANTS:

Beneficial Use:	Municipal/Potable Supply Instantaneous			Non-municipal/Non-potable Instantaneous		
Constituent	Unit	Maximum	Basis	Unit	Maximum	Basis
Dibromochloropropane	µg/L	0.2	DOHS	µg/L	0.2	AB
Ethylene Dibromide	µg/L	0.02	DOHS	µg/L	0.02	AB
Xylene	µg/L	5	AB	µg/L	5	AB
Chlorinated Phenolics	µg/L	1	DOHS	µg/L	10	AB
Remaining Base/Neutral Compounds	µg/L	10	AB	µg/L	10	AB
Total Petroleum Hydrocarbons	mg/L	0.5	"	mg/L	0.5	AB
Iron	mg/L	0.3	"	mg/L	0.3	AB
Manganese	mg/L	0.05	"	mg/L	0.05	AB
MTBE	µg/L	5	DOHS			
126 Priority Pollutants (Including metals)	40 CFR 131.38 - Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California.					See Below

126 Priority Pollutants - 40 CFR 131.38 - Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California.

The effluent limits for eight priority pollutants will be developed on a case-by-case basis because the freshwater criteria are based on site-specific water quality data.

Seven metals are dependent on water hardness, Cadmium, Copper, Chromium (III), Lead, Nickel, Silver, and Zinc [See Table 1 to 40 CFR 131.38(b)(2)], and the "Conversion Factors" for Cadmium and Lead are also water hardness dependent. [See Table 3 of 40 CFR 131.38(b)(2)]

In order to calculate the effluent limits for these seven metals the following equations from 40 CFR 131.38(b)(2) will be needed:

Cd CFa=1.136672-((LN(hardness))*0.041838)
Cd CFc = 1.101672-((LN(hardness))*0.041838)
Pb CFa&c = 1.46203-((LN(hardness))*0.145712)
Criterion=WER*CFx*(exp(mA*LN(hardness)+bA

Pentachlorophenol is dependent on the pH value. [See Footnote "f" to Table in 40 CFR 131.38(b)(1)]

To calculate the effluent limit for Pentachlorophenol use this equation:
CMC = exp(1.005(pH)−4.869). CCC = exp(1.005(pH)−5.134)

The remainder of the criteria is not water quality dependent and the effluent limits can be calculated. However, not all the effluent limits will apply to all sites because of the Beneficial use designation for "Municipal" may not apply to all sites.

These priority pollutant effluent limits were calculated the same way as the effluent limits for the bays and harbors.

Effluent Limitations calculated from CTR and SIP

Effluent Limits for Human Health Municipal and Non-Municipal

		Human Health			
		MUN		NON-MUN	
		AMEL (µg/L)	MDEL (µg/L)	AMEL (µg/L)	MDEL (µg/L)
A					
1	Antimony	14	28	4300	8600
2	Arsenic				
3	Beryllium				
4	Cadmium				
5a	Chromium (III)				

		Human Health			
		MUN		NON-MUN	
		AMEL (µg/L)	MDEL (µg/L)	AMEL (µg/L)	MDEL (µg/L)
5b	Chromium (IV)				
6	Copper	1300	2600		
7	Lead				
8	Mercury	0.05	0.1	0.051	0.1
9	Nickel				
10	Selenium				
11	Silver				
12	Thallium				
13	Zinc	700	1400	220000	440000
14	Cyanide	7000000	14000000		
15	Asbestos	1.3E-08	2.6E-08	1.4E-08	2.8E-08
16	2,3,7,8-TCDD (Dioxin)	320	640	780	1600
17	Acrolein	0.059	0.12	0.66	1.3
18	Acrylonitrile	1.2	2.4	71	140
19	Benzene	4.3	8.6	360	720
20	Bromoform	0.25	0.5	4.4	8.8
21	Carbon Tetrachloride	680	1400	21000	42000
22	Chlorobenzene	0.41	0.82	34	68
23	Chlorodibromomethane				
24	Chloroethane				
25	2-Chloroethylvinyl Ether				
26	Chloroform				
27	Dichlorobromomethane	0.56	1.1	46	92
28	1,1-Dichloroethane				
29	1,2-Dichloroethane	0.38	0.76	99	200
30	1,1-Dichloroethylene	0.057	0.11	3.2	6.4
31	1,2-Dichloropropane	0.52	1	39	78
32	1,3-Dichloropropylene	10	20	1700	3400
33	Ethylbenzene	3100	6200	29000	58000
34	Methyl Bromide	48	96	4000	8000
35	Methyl Chloride				
36	Methylene Chloride	4.7	9.4	1600	3200
37	1,1,2,2-Tetrachloroethane	0.17	0.34	11	22

		Human Health			
		MUN		NON-MUN	
		AMEL (µg/L)	MDEL (µg/L)	AMEL (µg/L)	MDEL (µg/L)
38	Tetrachloroethylene	0.8	1.6	8.9	18
39	Toluene	6800	14000	200000	400000
40	1,2-Trans-Dichloroethylene	700	1400	140000	280000
41	1,1,1-Trichloroethane				
42	1,1,2-Trichloroethane	0.6	1.2	40	80
43	Trichloroethylene	2.7	5.4	81	160
44	Vinyl Chloride	2	4	530	1100
45	2-Chlorophenol	120	240	400	800
46	2,4-Dichlorophenol	93	190	790	1600
47	2,4-Dimethylphenol	540	1100	2300	4600
48	2-Methyl-4,6-Dinitrophenol	13	27	770	1500
49	2,4-Dinitrophenol	70	140	14000	28000
50	2-Nitrophenol				
51	4-Nitrophenol				
52	3-Methyl-4-Chlorophenol				
53	Pentachlorophenol	0.28	0.56	8.2	16
54	Phenol	21000	42000	4500000	9000000
55	2,4,6-Trichlorophenol	2.1	4.2	6.5	13
56	Acenaphthene	1200	2400	2700	5400
57	Acenaphthylene				
58	Anthracene	9600	19000	110000	220000
59	Benzidine	0.00012	0.00024	0.00054	0.0011
60	Benzo(a)Anthracene	0.0044	0.0088	0.049	0.098
61	Benzo(a)Pyrene	0.0044	0.0088	0.049	0.098
62	Benzo(b)Fluoranthene	0.0044	0.0088	0.049	0.098
63	Benzo(ghi)Perylene				
64	Benzo(k)Fluoranthene	0.0044	0.0088	0.049	0.098
65	Bis(2-Chloroethoxy)Methane				
66	Bis(2-Chloroethyl)Ether	0.031	0.062	1.4	2.8
67	Bis(2-Chloroisopropyl)Ether	1400	2800	170000	340000
68	Bis(2-Ethylhexyl)Phthalate	1.8	3.6	5.9	12
69	4-Bromophenyl Phenyl Ether				
70	Butylbenzyl Phthalate	3000	6000	5200	10000

		Human Health			
		MUN		NON-MUN	
		AMEL (µg/L)	MDEL (µg/L)	AMEL (µg/L)	MDEL (µg/L)
71	2-Chloronaphthalene	1700	3400	4300	8600
72	4-Chlorophenyl Phenyl Ether				
73	Chrysene	0.0044	0.0088	0.049	0.098
74	Dibenzo(a,h)Anthracene	0.0044	0.0088	0.049	0.098
75	1,2 Dichlorobenzene	2700	5400	17000	34000
76	1,3 Dichlorobenzene	400	800	2600	5200
77	1,4 Dichlorobenzene	400	800	2600	5200
78	3,3'-Dichlorobenzidine	0.04	0.08	0.077	0.15
79	Diethyl Phthalate	23000	46000	120000	240000
80	Dimethyl Phthalate	310000	630000	2900000	5800000
81	Di-n-Butyl Phthalate	2700	5400	12000	24000
82	2,4-Dinitrotoluene	0.11	0.22	9.1	18
83	2,6-Dinitrotoluene				
84	Di-nOctyl Phthalate				
85	1,2-Diphenylhydrazine	0.04	0.08	0.54	1.1
86	Fluoranthene	300	600	370	740
87	Fluorene	1300	2600	14000	28000
88	Hexachlorobenzene	0.00075	0.0015	0.00077	0.0015
89	Hexachlorobutadiene	0.44	0.88	50	100
90	Hexachlorocyclopentadiene	240	480	17000	34000
91	Hexachloroethane	1.9	3.8	8.9	18
92	Inden(1,2,3-cd) Pyrene	0.0044	0.0088	0.049	0.098
93	Isophorone	8.4	17	600	1200
94	Naphthalene				
95	Nitrobenzene	17	34	1900	3800
96	N-Nitrosodimethylamine	0.00059	0.0012	8.1	16
97	N-Nitrosodi-n-Propylamine	0.005	0.01	1.4	2.8
98	N-Nitrosodiphenylamine	5	10	16	32
99	Phenanthrene				
100	Pyrene	960	1900	11000	22000
101	1,2,4-Trichlorobenzene				
102	Aldrin	0.00013	0.00026	0.00014	0.00028
103	alpha-BHC	0.0039	0.0078	0.013	0.026

		Human Health			
		MUN		NON-MUN	
		AMEL (µg/L)	MDEL (µg/L)	AMEL (µg/L)	MDEL (µg/L)
104	beta-BHC	0.014	0.028	0.046	0.092
105	gamma-BHC	0.019	0.038	0.063	0.13
106	delta-BHC				
107	Chlordane	0.00057	0.0011	0.00059	0.0012
108	4,4'-DDT	0.00059	0.0012	0.00059	0.0012
109	4,4'-DDE	0.00059	0.0012	0.00059	0.0012
110	4,4'-DDD	0.00083	0.0017	0.00084	0.0017
111	Dieldrin	0.00014	0.00028	0.00014	0.00028
112	alpha-Endosulfan	110	220	240	480
113	beta-Endosulfan	110	220	240	480
114	Endosulfan Sulfate	110	220	240	480
115	Endrin	0.76	1.5	0.81	1.6
116	Endrin Aldehyde	0.76	1.5	0.81	1.6
117	Heptachlor	0.00021	0.00042	0.00021	0.00042
118	Heptachlor Epoxide	0.0001	0.0002	0.00011	0.00022
119	Polychlorinated biphenyls (PCBs)	0.00017	0.00034	0.00017	0.00034
120	"				
121	"				
122	"				
123	"				
124	"				
125	"				
126	Toxaphene	0.00073	0.0015	0.00075	0.0015

Effluent Limits for Freshwater and Saltwater

		Freshwater		Saltwater	
		MDEL (µg/L)	AMEL (µg/L)	MDEL (µg/L)	AMEL (µg/L)
A					
1	Antimony				
2	Arsenic	250	120	59	29
3	Beryllium				
4	Cadmium	*	*	16	8
5a	Chromium (III)	*	*		
5b	Chromium (IV)	16	8.1	83	41
6	Copper	*	*	5.8	2.9
7	Lead	*	*	14	7
8	Mercury				
9	Nickel	*	*	14	6.8
10	Selenium	8.2	4.1	120	58
11	Silver	*	*	2.2	1.1
12	Thallium				
13	Zinc	*	*	95	47
14	Cyanide	8.5	4.2	1	0.5
15	Asbestos				
16	2,3,7,8-TCDD (Dioxin)				
17	Acrolein				
18	Acrylonitrile				
19	Benzene				
20	Bromoform				
21	Carbon Tetrachloride				
22	Chlorobenzene				
23	Chlorodibromomethane				
24	Chloroethane				
25	2-Chloroethylvinyl Ether				
26	Chloroform				
27	Dichlorobromomethane				
28	1,1-Dichloroethane				
29	1,2-Dichloroethane				
30	1,1-Dichloroethylene				

		Freshwater		Saltwater	
		MDEL (µg/L)	AMEL (µg/L)	MDEL (µg/L)	AMEL (µg/L)
31	1,2-Dichloropropane				
32	1,3-Dichloropropylene				
33	Ethylbenzene				
34	Methyl Bromide				
35	Methyl Chloride				
36	Methylene Chloride				
37	1,1,2,2-Tetrachloroethane				
38	Tetrachloroethylene				
39	Toluene				
40	1,2-Trans-Dichloroethylene				
41	1,1,1-Trichloroethane				
42	1,1,2-Trichloroethane				
43	Trichloroethylene				
44	Vinyl Chloride				
45	2-Chlorophenol				
46	2,4-Dichlorophenol				
47	2,4-Dimethylphenol				
48	2-Methyl-4,6-Dinitrophenol				
49	2,4-Dinitrophenol				
50	2-Nitrophenol				
51	4-Nitrophenol				
52	3-Methyl-4-Chlorophenol				
53	Pentachlorophenol	**	**	13	6.5
54	Phenol				
55	2,4,6-Trichlorophenol				
56	Acenaphthene				
57	Acenaphthylene				
58	Anthracene				
59	Benzidine				
60	Benzo(a)Anthracene				
61	Benzo(a)Pyrene				
62	Benzo(b)Fluoranthene				
63	Benzo(ghi)Perylene				
64	Benzo(k)Fluoranthene				

		Freshwater		Saltwater	
		MDEL (µg/L)	AMEL (µg/L)	MDEL (µg/L)	AMEL (µg/L)
65	Bis(2-Chloroethoxy)Methane				
66	Bis(2-Chloroethyl)Ether				
67	Bis(2-Chloroisopropyl)Ether				
68	Bis(2-Ethylhexyl)Phthalate				
69	4-Bromophenyl Phenyl Ether				
70	Butylbenzyl Phthalate				
71	2-Chloronaphthalene				
72	4-Chlorophenyl Phenyl Ether				
73	Chrysene				
74	Dibenzo(a,h)Anthracene				
75	1,2 Dichlorobenzene				
76	1,3 Dichlorobenzene				
77	1,4 Dichlorobenzene				
78	3,3'-Dichlorobenzidine				
79	Diethyl Phthalate				
80	Dimethyl Phthalate				
81	Di-n-Butyl Phthalate				
82	2,4-Dinitrotoluene				
83	2,6-Dinitrotoluene				
84	Di-nOctyl Phthalate				
85	1,2-Diphenylhydrazine				
86	Fluoranthene				
87	Fluorene				
88	Hexachlorobenzene				
89	Hexachlorobutadiene				
90	Hexachlorocyclopentadiene				
91	Hexachloroethane				
92	Inden(1,2,3-cd) Pyrene				
93	Isophorone				
94	Naphthalene				
95	Nitrobenzene				
96	N-Nitrosodimethylamine				
97	N-Nitrosodi-n-Propylamine				
98	N-Nitrosodiphenylamine				

		Freshwater		Saltwater	
		MDEL (µg/L)	AMEL (µg/L)	MDEL (µg/L)	AMEL (µg/L)
99	Phenanthrene				
100	Pyrene				
101	1,2,4-Trichlorobenzene				
102	Aldrin	3	1.5	1.3	0.65
103	alpha-BHC				
104	beta-BHC				
105	gamma-BHC	0.95	0.47	0.16	0.08
106	delta-BHC				
107	Chlordane	0.007	0.0035	0.0066	0.0033
108	4,4'-DDT	0.0016	0.00082	0.0016	0.00082
109	4,4'-DDE				
110	4,4'-DDD				
111	Dieldrin	0.092	0.046	0.0031	0.0016
112	alpha-Endosulfan	0.092	0.046	0.014	0.0071
113	beta-Endosulfan	0.092	0.046	0.014	0.0071
114	Endosulfan Sulfate				
115	Endrin	0.059	0.029	0.0038	0.0019
116	Endrin Aldehyde				
117	Heptachlor	0.0062	0.0031	0.0059	0.0029
118	Heptachlor Epoxide	0.0062	0.0031	0.0059	0.0029
119	Polychlorinated biphenyls (PCBs)	0.023	0.011	0.049	0.025
120	"				
121	"				
122	"				
123	"				
124	"				
125	"				
126	Toxaphene	0.00033	0.00016	0.00033	0.00016

* Use equations from 40 CFR 131.38(b)(2)
** Use equations from 40 CFR 131.38(b)(1) footnote "f"

5. Groundwater extraction waste discharged to surface waters must be essentially free of:

   a. Material that is floatable or will become floatable upon discharge.

   b. Settleable material or substances that form sediments which degrade[23] benthic communities or other aquatic life.

   c. Substances which will accumulate to toxic levels in aquatic sediments or biota.

   d. Substances that significantly[24] decrease the natural light to benthic communities and other aquatic life.

   e. Materials that result in aesthetically undesirable discoloration of surface waters.

6. Groundwater extraction waste discharged to surface waters shall not cause natural water quality conditions to be altered in areas designated as being of special biological significance or areas that existing marine laboratories use as a source of seawater.

7. Groundwater extraction waste discharged to surface waters shall be discharged in such a manner as to provide maximum protection to aquatic environments.

8. Groundwater extraction waste that contains pathogenic organisms or viruses shall be discharged a sufficient distance from shellfishing and water-contact sports areas to maintain applicable bacterial standards without disinfection. Where conditions are such that an adequate distance cannot be attained, reliable disinfection in conjunction with a reasonable separation of the discharge point from the area must be provided. Disinfection procedures that do not increase effluent toxicity and that constitute the least environmental and human hazard shall be used.

9. The Enrollee shall comply with all items of the " 40 CFR Standard Provisions References" that are part of this Order (Attachment B).

IV. Rationale for Receiving Water Limitations

A. Surface Water

Receiving Water Limitations are based upon water quality objectives contained in the Basin Plan. The discharge of groundwater extraction waste from any site shall not, separately or jointly with any other discharge, cause violations of the following water quality objectives in the surface waters of the San Diego Region.

1. Bacterial Characteristics

a. Water-Contact Standards

Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water-contact sports, as determined by the Regional Board, the following bacterial objectives shall be maintained throughout the water column:

(1) Samples of water from each sampling station shall have a density of total coliform organisms less than 1,000 per 100 ml (10 per ml); provided that not more than 20 percent of the samples at any sampling station, in any 30-day period, may exceed 1,000 per 100 ml (10 per ml), and provided further that no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 ml (100 per ml).

(2) The fecal coliform density based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200 per 100 ml nor shall more than 10 percent of the total samples during any 60-day period exceed 400 per 100 ml.

b. Shellfish Harvesting Standards

At all areas where shellfish may be harvested for human consumption, as determined by the Regional Board, the following bacterial objectives shall be maintained throughout the water column:

1) The median total coliform density shall not exceed 70 per 100 ml; and

2) Not more than 10 percent of the samples shall exceed 230 per 100 ml.

2. Physical Characteristics

a. Floating particulates and grease and oil shall not be visible.

b. The discharge of waste shall not cause aesthetically undesirable discoloration of the surface waters.

c. Natural light shall not be significantly reduced.

d. The rate of deposition of solids and the characteristics of inert solids in the sediments shall not be changed such that benthic communities are degraded.

3. Chemical Characteristics

a. The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as a result of the discharge of oxygen demanding waste materials.

b. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.

c. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.
d. The concentration of substances set forth in the Discharge Specifications in marine sediments shall not be increased to levels which would degrade indigenous biota.
e. The concentration of organic materials in the sediments shall not be increased to levels which would degrade marine life.
f. Nutrient materials shall not cause objectionable aquatic growth or degrade indigenous biota.

4. Biological Characteristics

a. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded.
b. The natural taste, odor, and color of fish, shellfish, or other aquatic resources used for human consumption shall not be altered.
c. The concentration of organic materials in fish, shellfish or other aquatic resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.

5. Radioactivity

Discharge of radioactive waste shall not degrade marine life.

6. Toxic Materials Limitations

Since there is no dilution, toxic materials limits are the same as the effluent limits.

V. Rationale for Monitoring and Reporting Requirements

Section 122.48 of 40 CFR requires all NPDES permits to specify recording and reporting of monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Board to require technical and monitoring reports. The MRP, Attachment E of this WDR, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this permit.

A. Influent Monitoring (Not applicable)

B. Effluent Monitoring

In reviewing the monitoring reports, the State Board found that although Dischargers were reporting Total Petroleum Hydorcarbons (TPH), a distinction between diesel and gasoline was not always made. Results for TPH should be reported as total TPH, TPH diesel (TPH-d), and TPH gasoline (TPH-g). Also, for detections of TPH-g, the amount of benzene, ethylbenzene, toluene, and xylene

should be reported. Benzene, ethylbenzene, and toluene are priority pollutants. (40 CFR § 131).

C. Whole Effluent Toxicity (WET) Testing Requirements

A WET Limit is required if a discharge causes, has a reasonable potential to cause, or contributes to an exceedance of applicable water quality standards, including numeric and narrative. Since these types of discharges are prohibited under this WDR, WET limits are not applicable.

D. Receiving Water Monitoring

States are required to adopt numeric criteria where they are necessary to protect designated uses. (CWA §§ 303(a) – 303(c)). The Regional Board adopted numeric criteria in the Basin Plan. The Basin Plan is a regulatory reference for meeting the State and Federal requirements for water quality control. (40 CFR 131.20). State Board Resolution 68-16, the Antidegradation Policy, does not allow changes in water quality less than that prescribed in Water Quality Control Plans (Basin Plans). The Basin Plan states that; "The numerical and narrative water quality objectives define the least stringent standards that the Regional Water Board will apply to regional waters in order to protect the beneficial uses." This WDR contains Receiving Water Limitations based on the Basin Plan numerical and narrative water quality objectives for Biostimulatory Substances, Chemical Constituents, Color, Dissolved Oxygen, Floating Material, Oil and Grease, pH, Pesticides, Radioactivity, Salinity, Sediment, Settleable Material, Suspended Material, Tastes and Odors, Temperature, Toxicity and Turbidity.

Section 13267 of the California Water Code states, in part,

> (a) A regional board, in establishing ... waste discharge requirements ... may investigate the quality of any waters of the state within its region" and "(b) (1) In conducting an investigation ... the regional board may require that any person who ... discharges ... waste ... that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports.

The attached Monitoring and Reporting Program is issued pursuant to CWC section 13267. The groundwater extraction waste discharge monitoring and reporting program required by this WDR and the attached Monitoring and Reporting Program are necessary to determine compliance with these waste discharge requirements. The Discharger is responsible for the discharges of waste at the facility subject to this WDR.

E. Other Monitoring Requirements (Not Applicable)

VI. Rationale for Provisions

A. Standard Provisions

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

B. Special Provisions

1. Reopener Provisions (Not Applicable)

2. Special Studies and Additional Monitoring Requirements (Not Applicable)

3. Best Management Practices and Pollution Prevention Plan (Not Applicable)

4. Compliance Schedules (Not Applicable)

5. Construction, Operation, and Maintenance Specifications (Not Applicable)

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

7. Other Special Provisions

The Dischargers shall dispose of solids removed from liquid wastes in a manner that is consistent with Title 27 of the CCR and approved by the Regional Board.

VII. Public Participation

In considering the re-issuance and adoption of this WDR the Regional Board has developed a draft WDR. The Regional Board encouraged public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Board notified interested agencies and persons of its intent to prescribe waste discharge requirements in this WDR and provided them with an opportunity to submit their written comments and recommendations. Notification was posted on the Regional Board's webpage on February 5, 2008, and published in the San Diego Union Tribune, The Riverside Press-Enterprise, and The Orange County Register newspapers on February 8, 2008. On March 12, 2008, the Regional Board sent out notification through the Regional Board Agenda by an electronic mail list.

B. Written Comments

Interested persons were invited to submit written comments concerning the tentative WDR. Comments were to be submitted in person, by fax, email, or mail to the Executive Officer at the Regional Board at the address on the cover page of this Permit.

To be fully addressed and considered by the Regional Board, written comments must have been received at the Regional Board office by 5 p.m. on March 5, 2008.

C. Public Hearing

The Regional Board held a public hearing on the tentative WDR during its regular meeting on the following date and at the following location:

Date: **March 12, 2008**
Location: **California Regional Water Quality Control Board**
San Diego Region
Regional Board Meeting Room
9174 Sky Park Court, Suite 100
San Diego, California 92123

Interested persons were invited to attend. At the public hearing, the Regional Board heard testimony pertinent to the discharge and WDR.

D. Information and Copying

WDR-related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. A partial list of these items are on the Regional Board's web site at: www.waterboards.ca.gov/sandiego

Copying of documents may be arranged through the Regional Board by calling (858) 467-2952.

E. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDR was invited to contact the Regional Board, reference this WDR, and provide a name, address, and telephone number.

F. Additional Information

Requests for additional information or questions regarding this WDR may be directed to Vicente Rodriguez at (858) 627-3940 or at: VRodriguez@waterboards.ca.gov

This WDR will expire on March 12, 2012. Enrollees covered under this WDR at the time of expiration will be required to re-enroll under the reissued permit.

EXHIBIT 12

STATE OF CALIFORNIA

REGIONAL WATER QUALITY CONTROL BOARD

SAN DIEGO REGION

GRANT DESTACHE, PANEL CHAIRMAN

In the Matter of:)
)
THE REGIONAL BOARD)
PUBLIC MEETING/HEARING)
)
(ITEM NO. 7 ONLY))
)

CERTIFIED
COPY

PARTIAL TRANSCRIPT OF PROCEEDINGS

San Diego, California

Wednesday, September 14, 2011

Reported by:

SOPHIA C. WASHINGTON
CSR No. 13408

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STATE OF CALIFORNIA

REGIONAL WATER QUALITY CONTROL BOARD

SAN DIEGO REGION

GRANT DESTACHE, PANEL CHAIRMAN

In the Matter of:	)
	)
THE REGIONAL BOARD	)
PUBLIC MEETING/HEARING	)
	)
(ITEM NO. 7 ONLY)	)
	)

PARTIAL TRANSCRIPT OF PROCEEDINGS, taken at 9174 Sky Park Court, San Diego, California, commencing on Wednesday, September 14, 2011, heard before the REGIONAL WATER QUALITY CONTROL BOARD, reported by SOPHIA C. WASHINGTON, CSR No. 13408, a Certified Shorthand Reporter in and for the State of California.

APPEARANCES:

Grant Destache, Chair

Eric Anderson, Vice Chair

George Loveland, Board Member

Bill Green, Board Member

Gary Strawn, Board Member

David Gibson, Executive Officer

Jimmy Smith, Assistant Executive Officer

Catherine Hagan, Regional Board Attorney

Jessica Newman, Regional Board Attorney

I N D E X

ITEM NO.		PAGE
7 -	Time Schedule Order: Kinder Morgan Energy Partners, Mission Valley Terminal Remediation Dewatering Discharge Project: The San Diego Water Board will consider adoption of a Time Schedule Order for Kinder Morgan Energy Partners to ensure that the discharge from the dewatering project does not cause, have a reasonable potential to cause, or contribute to an in-stream excursion above the water quality objective for Total Dissolved Solids as required by Discharge Prohibition No. IV.c of Order No. R9-2008-0002 (NPDES Permit No. CAG919002). (Tentative Order No. R9-2011-0052)	
	Benjamin Neill	7 44
	Eric Nichols	19 55
	Marsi Steiner	20
	Richard Opper	26
	Kris McFadden	31
	Rob Hutsel	39
	Gabriel Solmer	42
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San Diego, California, Wednesday, September 14, 2011

(Partial transcript)

MR. DESTACHE: I'd like to call this meeting back to order. If everyone could grab a seat, we'll --

This is agenda Item number 7, and I'm going to read a statement to begin this proceeding. This is a time and place for the public hearing to consider the issuance of the Time Schedule Order to Kinder Morgan Energy Partners for the Mission Valley Terminal Remediation Dewatering Project. This hearing will be conducted in accordance to the hearing procedures published with the meeting agenda.

The procedure for this hearing is as follows: First, we will receive testimony from staff. Next, we will hear any testimony from the Discharger or interested persons. Following interested persons, the staff will have the opportunity to respond to comments and to provide a closing statement.

All persons expecting to testify, please stand at this time, and raise your right hand to take the following oath.

(Swearing in)

THE AUDIENCE: I do.

MR. DESTACHE: Please state your name and affiliation and whether you have taken -- you may be seated now. Please state your name and affiliation and whether you have taken the oath before testifying. We will begin with testimony from the staff. Mr. Gibson?

MR. GIBSON: Mr. Chairman, Benjamin Neill of your staff will be providing the staff's presentation. While he's coming to the podium, I'd like to point out that there is a flow request by Kinder Morgan that is not part of the action today. We have not noticed any action by the Board regarding that. You may hear comments on the subject.

What I would like to convey to you, as I conveyed to the City yesterday and today, is that I will not take action on that request until you have decided the issue of the T.S.O., and I will not do so without adequate opportunity to meet with the City, and consider their concerns in this matter. So as you go into this today, I would like you to have those thoughts in mind as regards to the flow issue, which is a separate issue from the Time Schedule Order.

MR. DESTACHE: There is information regarding the flow issue within the documents we have today in front of us.

MR. GIBSON: That is correct. It's including the executive officer's summary report you received on the

second mailing.

MR. DESTACHE: Very good.

MR. NEILL: Ready? Thanks, Dave. Good morning, Chairman and the members of the Board. My name is Ben Neill. That's spelled, N-e-i-l-l, and I'm an engineer in the Core Regulatory Unit headed up by Mr. Bob Morris. And I took the oath just a couple minutes ago.

So I present to you today Time Schedule Order R9-2011-0052 -- it has, kind of, a lengthy title -- for Kinder Morgan Energy Partners, Mission Valley Terminal Remediation Dewatering Discharge Project. It's a lengthy title, but I'll explain what it means.

This Time Schedule Order is to ensure that Kinder Morgan's dewatering discharge does not cause an exceedance above our Basin Plan's water quality objective for total dissolved solids. And at this time, I request that the file for this Item be entered into the record for this hearing.

So briefly, the way I look at this is, this is a short enforcement order dealing with the relatively small part of a larger water quality issue in this water shed.

For my presentation, I'll do it the way we like to do things now is, I'll give a brief overview of the watershed and how this discharge is related to the watershed. I'll explain how Kinder Morgan is doing their

groundwater cleanup, briefly, and their discharge, and then go into the Time Schedule Order and comments that we received on the Time Schedule Order.

Okay. So to start, this is San Diego (indicating), and the big yellow star is where Kinder Morgan's facility is. It's in the lower San Diego River Watershed. It's near the intersection of Interstate 15 and Interstate 8, and it's just north of Qualcomm Stadium. So there's a big blue line across the map, and that represents San Diego River, and there's a thin blue line going up next to I-15, and that's Murphy Canyon Creek, which discharges into San Diego River.

I'd also like to point out that this item is one of those rare items coming before the Board where our office is actually in this watershed. We are -- run off outdoor in the parking lot, goes to this Murphy Canyon Creek and into the San Diego River. The facility discharges to Murphy Canyon Creek about half mile up stream from the San Diego River.

The Murphy Canyon Creek sub watershed is mostly developed. It's got some residential housing east of the 15, and some commercial offices west of the 15. There's a small section of undeveloped land up on Miramar Air Base north of the 52. The beneficial uses for

Murphy Canyon Creek are agricultural and industrial supply, contact and non-contact recreational uses, and warm wild and rare habitat uses. And the watershed is exempted from municipal beneficial use.

This section of the San Diego River Watershed is on the Clean Water Act, Section 303d, list of water quality limited segments for several pollutants, bacteria, including enterococcus, fecal coliform, low dissolved oxygen, manganese, nitrogen, phosphorus, toxicity, and total dissolved solids, which is the main subject of today's order. And I'll use the term total dissolved solids, or the acronym T.D.S.

The water quality grade for the lower watershed by the San Diego River Park Foundation is a C, with water quality improving in the winter and deteriorating in the summer.

So, bioassessment. The bioassessment in the watershed was very poor at all the stations. The bio assessment examines the type and number of the benthic macroinvertebrates; and with the information about the habitat and water chemistry in the river, you get a comprehensive score that can range from very poor all the way up to excellent.

And all seven stations were very poor below El Capitan Reservoir, including -- there's one station

that was right next to the discharge point, right there (indicating) in Murphy Canyon Creek near Qualcomm Stadium. And very poor is the lowest score possible for the bioassessment.

Now, total dissolved solids is one factor contributing to this very poor score, but it is not the only factor. So what -- so before I talk about this slide, I want to tell you about what exactly is T.D.S. because that's the subject of this Time Schedule Order.

Total dissolved solids is the dissolved salts, minerals, organic compounds, things that dissolved in the water. The higher the amount of the T.D.S., the saltier the water is. So for example, the tap water is around 500 milligrams per liter. The imported Colorado River water historically is averaged around 700 milligrams per liter. Recycled water has an upper limit of 1200 milligrams per liter, and ocean water is a whopping 30,000 milligrams per liter, so the higher milligrams per liter.

The basic plan objective in this watershed is 1500 milligrams per liter for the surface waters, and it's 3,000 milligrams per liter for grounds waters.

So why is T.D.S. bad? High T.D.S. levels can have negative effects on people's taste of their drinking water. It can also hurt agricultural crops, causing plant burnout. Very high T.D.S. levels in the receiving waters

can cause a habitat type change from fresh water habitats to plant types that are more tolerant to brackish waters.

And after looking at the existing levels of T.D.S. in the watershed, I don't expect this discharge to alter the existing habitat conditions because T.D.S. levels are comparable to the existing discharge.

So this map shows the locations and the results for T.D.S. in the City's dry weather monitoring. And as I said, the objective is 1500 milligrams per liter, and we have ten out of 12 of the stations do not meet the water quality objective. The station on the upper left was the highest at 7600 milligrams per liter. The station over in the right was the lowest at 1300 milligrams per liter, and all of the others were varying somewhere in between.

We did our own monitoring just up stream and down stream of the discharge point, and we found T.D.S. levels as high 2600 milligrams per liter just up stream of Kinder Morgan's discharge point. So basically, T.D.S. is a pervasive problem throughout the urbanized portion of this watershed, and this Time Schedule Order is just addressing one of the many sources of T.D.S. causing problems in this watershed.

Okay. Now, on to the discharge. This map -- okay. In the red outline is the Mission Valley Terminal property. You could see the big Qualcomm Stadium, their

parking lot. Their outfall is located here within this cloverleaf going to Murphy Canyon Creek, which is along Interstate 15 and Murphy Canyon Creek goes through this broad blue swath of San Diego River, going across the screen.

Mission Valley Terminal is a fuel storage facility and pipeline transfer station for San Diego area. They've had historic petroleum and storage distribution operations since the 1960s. The soil and groundwater has been impacted because of accidental releases of gasoline from the facility. So these leaks and spills, they originated on-site, but then the impacts actually extended below Qualcomm Stadium in their parking lot, off-site of the property.

So we took appropriate actions. The San Diego Water Board issued a cleanup and abatement order in 1992 to the Kinder Morgan to clean up the soil and groundwater contamination. The clean up process began in 1994, and they've expanded it several times to include soil vapor extraction, along with groundwater extraction, and most recently they have reported the mediation appears to have met their December 31st, 2010 off terminal soil cleanup criteria for most of the their site.

So in order to clean up the groundwater contamination of gasoline, Kinder Morgan pumps out the

contaminated groundwater, removes the contaminates, and then subsequently discharges the treated groundwater to the surface waters of Murphy Canyon Creek.

So a little history on this: In 2008, Kinder Morgan was subjected to mandatory minimum penalties due to effluent limitation violations. As a result, they've made improvements to their treatment process so that they could meet their effluent limitations.

So unfortunately, in the T.D.S. concentration of the groundwater here is around 2400-milligrams per liter, which doesn't meet the surface water quality objective of 1500 milligrams per liter for Murphy Canyon Creek. The current treatment system that they employ there doesn't result in any changes to the T.D.S. levels, which leads us to suspect that the discharge to surface waters has a reasonable potential to exceed the surface water's basic plan objective.

So we have a Time Schedule Order. And this Time Schedule Order requires Kinder Morgan to meet the water quality objective for T.D.S. by November 30th, 2015. They either need to construct additional treatment systems or find some alternative solution to meet that water quality objective.

We have an interim limitation of 2400 milligrams per liter, and we think it's reasonable considering the

existing conditions in the watershed. We also require of Kinder Morgan a monthly sample of their influent and effluent for T.D.S., and they have to conduct upstream monitoring for T.D.S. They need to do this monitoring to be able to adequately characterize the fluctuations of T.D.S. in their discharge, and to plan and construct an adequate treatment system.

Time schedule also requires downstream receiving waters monitoring and bioassessment to assess any impacts there may be to the receiving waters. This monitoring meshes with the overall San Diego Watershed monitoring and assessment project, and can be used in conjunction with that.

This data can also be used to develop the mitigation plan to compensate for excess T.D.S. loading in the watershed. Also, I think this data can be helpful to all stakeholders in the watershed when they start to look at T.D.S. on the wider area.

So following the 30-day public comment period, we received two comment letters, both from the City of San Diego, two different departments, the Public Utilities Department and the Transportation and Stormwater Department. I provided those letters to you in the agenda package. It's Supporting Document number 6.

In general, the comment letters were concerned

with the appropriateness of the Time Schedule Order provisions and authorization to increase the discharge flow. I wrote up a response to these comment letters. That's in your agenda package, Supporting Document number 7, and it addresses all the City's comments about the Time Schedule Order. I'd like to go into a little more detail about a couple of the responses.

First, about the timing of the order. This order's final compliance deadline is November 30th, 2015, whereas it looks like the cleanup deadline is two years prior, on December 31st, 2013. But I wanted to point out that the cleanup deadline is only for the off-site groundwater pollution, which I, kind of, showed here in yellow.

That cleanup deadline doesn't address the on-site, the actual Mission Valley Terminal property, which that cleanup is going to be ongoing for many years afterwards. Also, we think that we needs the sufficient time to monitor and develop a treatment system and mitigation for -- or some alternative to address the T.D.S.

The other comment that I'd like to address is, the City had a concern about increased vegetation growth due to the discharge that could eventually contribute to flooding in the area. And I don't know what any potential

increased rate of vegetation growth there would be to any increased flow rates. That's something that is unmeasurable. But what I do know is that the downstream channel in this area and San Diego River is already heavily, heavily vegetated, and also in this case, the groundwater is shallow and would otherwise naturally discharge to the San Diego River.

So Supporting Document number 8 is the errata sheet for this Time Schedule Order, and it removes the authorization for the discharge flow rate increase. Mr. Gibson already spoke about that. We hope to plan to address that through a separate letter through the executive officer. And any increase in flow must also comply with the terms of this Time Schedule Order.

And that concludes my presentation. I'll leave you -- there's a shot of the downstream discharge point.

My recommendation is to adopt the Time Schedule Order with errata. Thank you for listening, and I'm happy to answer any questions. We also have Sean McClain from our cleanup unit if there's specific questions about the groundwater cleanup.

MR. GREEN: The question on the downstream vegetation area, are they wanting to make that a contingency that there needs to be a clean out? It seems like there was an issue for that. Can you address that a little more

appropriately?

MR. NEILL: Right. The way I understand it, it's a flood control issue that they want to go in and maintain it, and remove vegetation to increase flood control capacity. If you remember last year, Qualcomm Stadium actually got flooded during an event. They had to go out and pump out water out of Qualcomm Stadium to hold a Chargers game.

So if there's more water going into the channel, there's -- they say there could be more vegetation growing out of that channel, more need for maintenance to prevent flooding.

MR. GREEN: So are they asking for permits to clean or is that, pretty much, a core engineer --

MR. NEILL: I'm not sure what their solution is to that. They just were bringing it to our attention. That's something we could look into when we have the letter that increases the flow rate authorization. There's nothing specifically in the Time Schedule Order addressing it because that's dealing with the T.D.S.

MR. GREEN: It seems there's somewhat of a system that works together in that area that needs to be -- if you're going to be requiring one thing, we need to make sure it's a doable requirement.

MR. DESTACHE: I have a couple questions.

MR. NEILL: Yeah.

MR. DESTACHE: You said that the T.D.S. level above the Kinder Morgan release site -- or discharge site was 2600?

MR. NEILL: Yes.

MR. DESTACHE: And on the original map that had the whole area, there was a discharge point that was 1900. Is that above, that 1900 monitoring?

MR. NEILL: Yes.

MR. DESTACHE: What's the relationship between those two?

MR. NEILL: Okay. This discharge point that reads 1900 here (indicating), this is a City of San Diego dry weather monitoring station. It is above Kinder Morgan's discharge point. It's actually about as close as the back wall is to where you're sitting from the discharge point. The 2600 was we had staff from our Water Board to go out to do our own T.D.S. monitoring. And it was also upstream of the discharge point, and we recording results of 2600 at the time. It -- the T.D.S. fluctuates a lot with the rainfall.

MR. DESTACHE: All right. So the Time Schedule Order requires them to get to the 1500 by 2015, November 30th, 2015?

MR. NEILL: Yes.

MR. DESTACHE: And is -- does Murphy Creek flow during the dry season on a regular basis?

MR. NEILL: Yes.

MR. DESTACHE: So it's a continual blue stream flow?

MR. NEILL: It flows -- I can move back to the other slide that -- the portion of Murphy Canyon Creak starts flowing once you hit urban development. Up here on the base, there's nothing. It's all dry. But once you get urban development, the residences, the commercial properties, maybe some whatever, it starts to flow.

MR. DESTACHE: So this is all part of the dry season runoff from irrigation systems and everything else. Okay. All right. Any other questions?

So we'll go to the testimony from the Discharger or interested persons. And I have question. The City of San Diego, I see you have a lot of cards, a lot of people that are wanting to speak. Ms. Steiner, are you -- there is -- you were going to give brief comments and then ten minutes from Chris McFadden, and then there is Fritz Ortlieb, so that gets fold into there. All right. So the Discharger, I guess we'll start with them, and then we'll move on to other interested parties.

MR. NICHOLS: Good morning, Chairman and members of the Board. My name is Eric Nichols. I'm the national technical manager for Arcadis U.S. We're the technical

consultant to Kinder Morgan, the Discharger in this matter.

At this point, I would like to say that we stand in support with the Board staff in recommending adoption of the Time Schedule Order because in doing so, it will allow Kinder Morgan to continue and accelerate the pace of cleanup of the Mission Valley Aquifer and more rapidly restore the water quality of the aquifer. And at this point, we have no further technical comments to add to those that have already been put forth in the record, but I would welcome any questions from the Board. Thank you.

MR. DESTACHE: I'm seeing no questions. We'll move on to -- and so you're the representative for the actual Discharger?

MR. NICHOLS: That's correct.

MR. DESTACHE: Okay. All right. So we'll move on to the City of San Diego from there.

MR. NICHOLS: Thank you.

MS. STEINER: Good morning. I'm Marsi Steiner, and I've taken the oath. I'm with the City of San Diego Public Utilities Department, and my job is to oversee the development and distribution of new sources, clean and safe waters to the citizens of San Diego. This is a role that's a different task of the Regional Board, and we depend upon you to help us get our job done.

Local supplies of water within our region are very limited, and the Mission Valley Aquifer is a unique local source of water, which we really need to help develop in terms of making our local supply safe and dependable. The City has been waiting since the early 1990s for Kinder Morgan to clean up their contamination so that we can develop this local water supply source.

This aquifer can not be developed, regardless of what you might have been told, while it is suffering from a contamination that's been put there by Kinder Morgan's various spills. Drinking water is regulated by the California Department of Public Health, not the Regional Board, and they have indicated that it would be a very large challenge to permit a public source of drinking water from a contaminated aquifer.

The California Supreme Court confirmed decades ago that the City has provo (phonetic) water rights to San Diego River, which are the highest priority rights in the state. In fact, the City development operated a well field in this aquifer for over 30 years. We need to use it again. If it were clean, it would provide two to three million gallons of water per day to city residents. And the ownership -- or the slide that you saw, that's the stadium property, and the reason why the City has ownership on the land on either side of the river is for

this reason.

Meanwhile, instead of eliminating all petroleum products that were released into the aquifer, Kinder Morgan now reports that they have determined even more contamination then was previous suspected. So they are not meeting the cleanup deadlines that have been extended to them time and time again, since 1992.

They have never asked us permission to use the City's water, or for permission to discard it into Murphy Canyon, where it flows into the sea. Now we're learning the water discarded there is loaded with T.D.S. associated with this T.S.O. The Regional Board may allow them to pour water that is high in T.D.S. into a water body that has been listed for impairments specifically because of T.D.S.

We believe that this is a violation of both the Basin Plan and a violation of their N.P.D.E.S. permit. We don't understand this. And we don't really understand how this action could possibly be justified. Plus, it's unnecessary. There's no reason why Kinder Morgan can't reduce the T.D.S. levels by upgrading their system now, rather than waiting until 2015 as the T.S.O. proposes.

We suggest that they install reverse osmosis, which is modern technology. In fact, in San Diego within our region, there are various manufactures that are

well-known that produce and manufacture locally reverse osmosis means that would assist in this process.

There's also a claim that I was issued that they haven't applied for a permit to discharge the brine into the City sewer system. Even if sewer capacity were not available, it would simply be a matter of them trucking this brine to an appropriate disposal site. We also know that in order to protect the City from more spills Kinder Morgan's Terminal intend to use the City water in the forcible future. And you saw this on one of the last slides that Mr. Neill showed in terms of the on-site.

We don't understand why they would be allowed to use the City's water to continue to contain their clean up and the contamination on their property. We believe that this is an unnecessary use of precious water.

As Mr. Gibson mentioned at the start of this hearing on this particular Item, that his comments about the flow issue and the increase in that, we look forward to working with him on that. But we are really concerned about the possibility of that action being granted, which would increase the utilization of our groundwater from 795 gallons per day to 1.26 million gallons a day.

Again, this water belongs to the citizens of San Diego, and we don't believe that Kinder Morgan should be allowed to use this water free in order to clean up the

mess that they created more than 20 years ago.

The value of this water at 1.6 million gallons a day, if we were to find equivalent amount of untreated water from the San Diego County Water Authority is more than $2,000 a day. The City requests that Kinder Morgan be ordered to provide replacement water for that water which it is using. This is authorized in the California Water Code. It's Section 13304a.

Finally, we're alarmed by the dates that are proposed in the T.S.O. Are these dates the precursor to an amended C.A.O. which pushes out the cleanup deadline? This is not clear to us. Mr. Neill's comments were associated with the 2015 date that's in the order, and the cleanup is 2013, but there's no mention in the order as to why these two extra years are warranted. And we're naturally concerned about this because, as I mentioned, the cleanup has been going on for so long.

We also don't understand the comment that was made about the T.S.O. advancing the cleanup of the contamination. There's nothing that we've written or had access to that has indicated anything of the sort, and we encourage additional information to be provided to us on that matter.

The state mission of Cleanup and Land Discharge Basins Branch of the Regional Board is to ensure timely

and effective regional compliance with requirements for investigation, cleanup and abatement of groundwater pollution caused by unauthorized releases of hazardous substances of storage and conveyance system, discharges of solid and liquid waste to land, and effective regulation in discharges of recycled and reclaimed wastewater, thereby supporting the mission of the San Diego Regional Water Quality Control Board.

We believe that this is a fine mission, and I encourage you to further those objectives by rejecting the T.S.O., including the request to increase the discharges to Murphy Canyon Creek by requiring Kinder Morgan to find replacement water for the water it is using.

We appreciate your attention this morning, and I'm going to turn it over -- the floor, to my colleague from the stormwater park.

MR. DESTACHE: I think we have a question.

MS. STEINER: Okay.

MR. LOVELAND: You stated that the City has provo (phonetic) water rights to this water, which is going to be used as a carrying capacity for the discharge. Why is it, then, that the City does not have the right to second charge Kinder Morgan for the use of that water?

MS. STEINER: That we should just start sending them a bill?

MR. LOVELAND: Yes.

MS. STEINER: I don't know. Is there a legal reason?

MR. OPPER: There is, as you know, Mr. Loveland --

MR. DESTACHE: State your name.

MR. OPPER: I'm sorry, Richard Opper. I did not take the oath, but I will gladly take one. I was just answering the question that there is no regulatory framework for selling untreated groundwater out of city aquifers. It is an interesting proposal that I don't think has been considered and one that probably could be thought through, but there's no basis for it.

There's no price schedule, and right now, the City is trying to use all of its groundwater for conjunctive uses with the City water system.

MR. LOVELAND: Well, there's no basis for it, but isn't this basin adjudicated?

MR. OPPER: Excuse me, sir?

MR. LOVELAND: Isn't this basin adjudicated?

MR. OPPER: It is an adjudicated basin.

MR. LOVELAND: That's what I thought. So it seems -- I don't understand why the City doesn't simply adopt a schedule for sale of this water, and charge it. I don't know if Ms. Hagan has any other comment regarding the legality, but it seems that's your dime to spend.

MR. OPPER: Well, this has, of course, been going on

since the 1990s, and I think, originally, Kinder Morgan proposed a system that required using City water, soil vapor extraction system, and that was approved without anybody thinking that the City's permission was required.

And so now we're 15 years into this, so it might be late to rethink the systems, but it's certainly -- our pitch is that it's certainly incorporated in the Water Code that replacement water can be ordered when orders, such as those before the Board, require replacing water that's being used for purposes other than what --

MR. LOVELAND: Well, I understand that, but it just seems the simplest way to do that replacement water is for you to bill them and buy it. But I --

MS. STEINER: But they're not part of that --

MR. LOVELAND: I'm sorry?

MS. STEINER: I was going to say that I don't know what -- I think the point of the comments, and my comments as well as Mr. Opper's is the fact that the basis for this is a part of action that you could be taking. Because as a part of actions that the Board has taken associated with the cleanup method, water is requirement.

MR. LOVELAND: Well --

MR. DESTACHE: Can I add?

MR. LOVELAND: Yeah.

MR. DESTACHE: As a member of a Water Board that

actually prorates water to their customers the -- if someone was pumping out of an aquifer that we had an adjudicated right to, we certainly would be billing them for it, without a doubt. And the secondary question is that you mentioned that brine was being dumped -- that they were dumping brine discharge into the sewer system; is that the case?

MR. OPPER: No.

MR. DESTACHE: Where is the brine being discharged?

MS. STEINER: No. What I was commenting on was that there's an ability to reduce the amount of the T.D.S. that would be discharged back into the system under the T.S.O., and we were recommending that they be required to install a reverse osmosis system, and collect the brine, and either work the City to discharge the brine into the sewer system, or to transport it off-site for further elimination, versus just being allowed the high rate of T.D.S. that it is to discharge it into Murphy Canyon Creek.

MR. DESTACHE: And I would agree with that. I thought that they were currently putting brine into the system.

However, I would venture to say that the City has a right to charge them for the water they're using in their aquifer. So I think you need to go back and take a look at that. Although it's been 15 years, water is all a

new game, and it's critical that the aquifers that we have get cleaned up, and also that they're being used for the public good. So I wouldn't disagree with that at all.

Mr. Gibson?

MR. GIBSON: Mr. Chairman, I'm reluctant to dive in at the moment. But on this topic of conversation, I noted in the materials that were provided to us that the water was offered to the City of San Diego. I understand there were practicable limitations to receiving and using that water, but I would like to suggest that you ask that the City has considered if that's, in fact, feasible, particularly, over the long-term if this cleanup will take place over some years.

MR. DESTACHE: Yeah, because we're talking about thousands of acre feet of water, and if there is an effective way to do that. George, you have --

MR. LOVELAND: Well, yeah. I'm wondering if the request for R.O. doesn't tie into that. If the effluent were treated to R.O. levels, would it be suitable for blending with the City system?

MS. STEINER: We actually undertook -- well, we've been asked that question previously, and we thought it was a good question. And we actually hired an engineering firm a couple of years ago to, actually, conduct a study for us as to what it would take for us to have that source

of water to be permitted to be put into our distribution systems. And we actually have large diameter pipes of treated water, drinking water pipes, in Friars Road, and it would require that we would need to construct a separate treatment plant that was on the stadium parking lot for additional treatment to meet safe drinking water standards.

And we had several discussions with the Department of Public Health, and, basically, there were a number of costs that were associated with constructing the plant. As well as, due to the source of water that was contaminated, it would require full-time staff around the clock.

And they indicated that it would be probably be difficult for us to get a permit, and we need to be operational for some period of time before it may or may not ever be acceptable to them. And then based upon that, we, basically, dropped it because it would be a very large capital expense for the City, as well as, there were fairly high ongoing O and M costs.

MR. LOVELAND: Was that treatment protocol, R.O. technology?

MS. STEINER: It's -- it was -- it could be -- have been macrofiltration or ultrafiltration, and then it would be some sort of disinfection to be put into the

drinking water supply.

MR. DESTACHE: I think we want to keep moving forward. And we can come back and address this further, but I think -- I appreciate your testimony, and we will go to Mr. McFadden, and allow him to give us his PowerPoint presentation, and we'll go from there.

You have a pretty high-end operator there.

MR. MC FADDEN: Thank you, and good morning. I'm Kris McFadden. I'm the deputy director for the transportation in the stormwater department. I'm actually the stormwater division in the City of San Diego. I have taken the oath, and we have submitted the PowerPoint presentation for the administrative record. I'm joined by members of my monitoring communication and legal team to address any questions that you have.

To begin, of course we do applaud the efforts to clean up this aquifer. We do recognize that's very important to quality and condition of Murphy Canyon. But we do not believe that the current order is appropriate. This order falls short of both the Board's mission and the legal requirements associated with increasing discharges like those planned for Kinder Morgan, and I'll take a few minutes just to describe those.

We believe the order violates the requirements of the State Water Resource and Control Board, specifically,

Resolution 68-16. The resolution requires specific findings to justify any degradation of water quality. Kinder Morgan has not sufficiently demonstrated the technical or economic feasibility for treating T.D.S. There are, at minimum, reverse osmosis systems that could work here.

And despite some confusion on this issue, it is very clear that the unit M.S.4 operator must authorize the discharge into our system as City of San Diego. We are the M.S.4 operator at this location. The City has never been asked to authorize this discharge or were the previous discharge for Kinder Morgan, and we believe that we'll find this to be in violation of the permit that's applicable here.

There were underlying issues with water quality already. I appreciate what Ms. Steiner brought to your attention, and I just want to add to her interpretation of the limitations that are included in the order.

The regulation is specific. A discharger cannot cause or contribute to an exceedance in stream. With no mixing point considered here, the effluent concentrations proposed by Kinder Morgan must be considered equal or similar discharges made directly to receiving waters. The tentative order itself states that Murphy Canyon Creek, quote, "has limited, if any, assimilative capacity," which

is an important statement, for additional T.D.S. loading. That statement alone would seem to contradict what is being recommended in this order.

Furthermore, by allowing Kinder Morgan to increase T.D.S. loads, the award would be placing increasing burdens on the City's efforts to comply with future T.M.D.L.s expected in this area. It is not fair and is an unreasonable burden to the City of San Diego.

There's insufficient justification for considering Kinder Morgan's request for increasing T.D.S. at Murphy Canyon Creek. The creek itself is different than you would understand from this order. It's not entirely concrete. Actually, a large section of it is riffraff, especially at the end before it discharges into the San Diego River. Wet weather flows through the creek are impeded by the vegetation, and you saw a very good picture of that thriving on the dry weather flows already discharged by Kinder Morgan.

Again, the creek does not have capacity for T.D.S., let alone additional flows. While putting more water in the creek may seem inconsequential, result of the additional discharge contributes to a nuisance and maintenance costs that the City has to incur. And even at the admission of the Board staff, it is unknown, they're not sure what the impacts of this discharged could be on

the vegetation and flood control at this location.

Kinder Morgan's discharges increase flood risks in the creek. As a result, the City must pay money, redirect additional resources, and suffer through flooding at a very important civic facility.

As you can see here (indicating), a picture just last December was what resulted in this area from the rains. You can see the vegetation, even trees located in the channel that have been able to grow up from the constant flows in this channel.

Here's a picture just last December of the breaching of the bank that we experienced, again, caused by the clogging of the creek downstream.

MR. LOVELAND: Were those two photos Murphy Creek or San Diego River?

MR. MC FADDEN: Murphy Canyon Creek, just north -- due east of the Charger Stadium.

Kinder Morgan has already built berms protecting their facility, but it doesn't mean they should be allowed to dispose of their water problems through the City's M.S.4 system. This order is not sufficient and, as you can see, does place the City at risk.

It's important for you to know that this T.S.O. seems to be in conflict with your mission. There was scant attention paid to the water quality objectives here,

and we have for the creek and its receiving waters. The T.S.O. would let Kinder Morgan materially contribute to exceed Basin Plan objectives, and it fails to address anti-degradation requirements and misses the real impact of dischargers given the lack of the mixing zone for the constituent and concern being discharged by Kinder Morgan.

We, at the City, are concerned that these important issues are being inappropriately delegated. We believe that the Board should remain keenly interested in what Kinder Morgan will be required to do under the T.S.O. We believe that the Board itself should be the discretionary authority on this issue and for any request to increase the discharge amount.

There are some solutions. Kinder Morgan should be responsible for immediately installing a treatment system to meet the T.D.S. requirements. As was stated, there are treatment systems available.

There needs to be a more careful review of the permits at hand. The City is the M.S.4 operator, and our authorization for this discharge is required. We, of course, will consider any appropriate requests.

We also like -- ask that you, the Board, consider the extent and the value of our experience and understanding of the impacts of erosion of sedimentation at this particular location. We've been trying to help

that for quite some time. Kinder Morgan could be of assistance in our efforts to, of course, improve the creek. The Board could condition its approval on appropriate order of Kinder Morgan's participation in the City's maintenance plan at this location. The Board should also issue a statement of interest in getting that maintenance effort initiated and maintained.

Finally, we believe that it is very clear that Kinder Morgan's proposal will contribute to degradation of the creek and downstream. And the company either needs to treat for T.D.S. problems or should be listed as a point source for the T.D.S. in the San Diego River.

As you know, there is an issue, T.M.D.L. for bacteria. The City, along with the other dischargers, are putting together a comprehensive load reduction plan, which, actually, does address T.D.S. in this watershed. So this is the time we're actually all taking action.

This concludes my presentation, and I'll be happy to answer any questions if you have them.

MR. GREEN: I heard your, kind of, debrief there about, kind of, a treatment system to keep the T.D.S. at appropriate levels. I think we all concur with that. Being a water quality member of the Board here, we want to make sure that is part of the Basin Plan, and also make sure that we're M.S. compliant. Obviously, that's the

goal, to make sure that happens.

As far as you're looking for participation in the maintenance, can you determine how much the differential between the urban runoff in the area versus what Kinder Morgan is contributing in this discharge?

MR. MC FADDEN: We have not quantified that, but I would offer that that has not been quantified with the Board yet at this time.

MR. GREEN: It seems like if you want some participation, that's a big burden for them to pick up the tab for the City or County's maintenance responsibility.

MR. MC FADDEN: As you know, the City has an aggressive outreach policy along with a large practice reducing these dry weather flows. And it's our concern that even if we reduce all, 100%, of the dry weather flows, which we're in the process of doing, especially through the comprehensive load reduction plan, we'll still have, potentially, over one million gallons per year, 365 days a year, that we have to comply with.

MR. DESTACHE: The -- I guess a question for the clogging of the creek is, what is the status of the evasive species there, and what is being done to reduce that because that has a major impact on flooding and -- in the valley? And traditionally, the San Diego River Valley has a history of flooding, but we all know solving dry

weather issues and reducing any impacts to is -- is going to help during dry whether season. Can you enlighten me on the invasive species side of it?

MR. MC FADDEN: Yes, of course. The City, actually, has been, for some time now, working on a comprehensive master plan to, actually, reduce -- get in, dredging a lot of these invasive, exotic species as they occur.

This is one of our hot areas. Actually, let's say it's in the top three hot areas. It was one of the ones we experienced last year, flooding. And it is part of this comprehensive plan. It is being put forward in, actually, this year, October of this year, and this would be one of the first channels that we would propose to clean out under that plan.

MR. DESTACHE: Very good. Any other questions? I think we'll move on to -- Jessica?

MS. NEWMAN: I just wanted to let everyone know we have a time certain item. Item number 8 was going to be time certain at 11:00 o'clock. So you guys can do whatever you would like. You can continue with it. The Item just couldn't occur before 11:00. So just for anyone who is in the audience for Item number 8, we are aware.

MR. DESTACHE: So Item number 8 could not occur before --

MS. NEWMAN: Before 11:00.

MR. DESTACHE: Okay. All right. Thank you, Mr. McFadden. We're going to move to Rob Hutsel. He's the chair of the San Diego River Coalition.

MR. HUTSEL: Good morning. Rob Hutsel, chair of San Diego River Coalition, and I did take the oath. I'm going to be very focused in my comments because I think there's a lot smarter people in the room about some of the issues than me.

We, as many of you know, have been following this issue in the coalition for ten years now, and have been an active participant in it in some way, and I've testified on this issue before. Our concerns are largely focused on the impacts of the T.D.S. and in the future of any flow increase.

We are -- when we saw that map, and we've seen it before, of the biological levels of the river being basically zero and the river being dead, in essence, we are concerned about that. You are concerned by that, I know. And so anything that would affect that, we're troubled by it, and we need to be working toward improving that to get it to a level that the river is actually functioning as it should be.

We are also concerned when people speak about sections of the river that are really flood conveyance primarily. We see it much more holistically. And we

look forward to solutions that actually restore natural functions. Don't simply dredge the river, as comments have been made today.

So I'm going to focus on two very narrow issues. One is the mitigation plan and the development of that, and the monitoring program that will be developed. We are very interested in the cumulative impact of this.

As you know -- I think many of you know the river is not natural downstream of here. It has drop structures, control structures, so we have ponded water. And so any impact on T.D.S., potentially, could increase the T.D.S. levels in those ponded areas in low flow conditions.

We have also seen studies, later on when you speak about flow, several years ago where increases in discharges into the river, live stream discharges, would have a downstream impact of the effectiveness of the title (inaudible) to the estuary. And so we're concerned about that. Our concern is not, we're opposed to it. It's more, we'd like to understand it better. We'd like more data.

I do want to applaud the cleanup efforts. We, actually, have partnered with Kinder Morgan and value them as a community member. We look forward to working with them. Of course the City of San Diego, we have worked

with them for many years, as well as your staff and yourselves.

And so I just want to focus on the monitoring program. We would like to be included in that. As many of you know, again, we have a very robust volunteer monitoring program. We have data for about six years now in this area, and we welcome that, and share that. It has gone through a Q.A.P. and so I think it is valued.

We, again, have partnered with the Regional Board on getting that information out. We also strongly encourage that whatever data is collected, as you always do, it's readily available by the public, so they can be informed and make good decisions. And I know the executive officer is committed to that. So I appreciate that.

And then finally, you know, very poor is not acceptable. I look forward to the day we can focus on that issue and moving forward with repairing this watershed, which needs our help. And as the City of San Diego indicated, this has been part of the life load of San Diego since day one. It's been an important water supply, but it's more than that. It's part of the community, and so that's what we look forward to work on. Thank you.

MR. DESTACHE: Thank you very much. We will move on

to Gabriel Solmer. I thought you left, but you're back.

MS. SOLMER: Good morning, again. Gabriel Solmer, executive director of the San Diego Coastkeeper; I did take the oath.

I just wanted to echo Rob's comments. I thought that they were very on point and very correct. Coastkeeper has also had a long history with Murphy Canyon Creek and with the San Diego River, and a long history with live stream discharge, and other areas of the city, specifically, in Rose Canyon -- Rose Creek, and areas up there. And there are a lot of concerns with live stream discharge, which is basically what you're looking at here.

In this case, we do agree with many of the City's points that they articulated. And from my comments this morning, that's not just us carrying the water for the City. We can obviously disagree with them sometimes, but in this case, we do see the same concern with the increase in T.D.S.

I had the same thought as Rob did when you see those very poor scores. When staff says that we don't expect this to change habitat conditions, it also means it's not going to change them for the better, and that's not something we should be shooting for.

Frankly, I don't think that we're thinking big

enough with this Time Schedule Order. I would like to see some sort of treatment so we're not using the river as our treatment in the creek. I think we need that treatment and that mitigation now, rather than monitoring over the next few years to see what the effects are. We know what the effects are, and we know what elevated T.D.S. does to our downstream creeks, and I venture to say we know about the effects of adding more T.D.S.

I would agree with the comments by the City that we have an anti-degradation issue here and haven't heard much from the staff. So it would be interesting to hear a little bit more about what -- the impacts there and how we do address that anti-degradation issue.

Also, I certainly understand that the flow rate will be agendized separately, or what we consider separately, but I think that's important because we do needs a holistic package. We need some sort of treatment monitoring mitigation that all works together. And so when we separate this out, and I understand it's been agendized that way, it doesn't give us that sense of the cohesive nature of the problem and the solution. Thank you.

MR. DESTACHE: Thank you very much. Comments? Questions? And I think we're going to bring staff back to make comments on Respondents, and then I have some

questions for staff myself. Mr. Loveland?

MR. LOVELAND: Question for staff and for the City Stormwater folks, is there any provision in the permit as it exist in this timeline for interruption of flow during wet whether to assist with City's concerns on flooding for increase of flow substantially? Can that be interrupted? Should it be interrupted? Has there been some thought about this?

MR. NEILL: Thank you. Ben Neill, I took the oath.

There's nothing in the Time Order about the flow rates. We're going to address all of that separately. And my understanding is that Kinder Morgan does have the capability to shut off some of their pumps to dramatically decrease the flow rate during storm events to help prevent. But I think the City's real issue was about increased vegetation growth due to increased water in the channel during the dry season.

MR. DESTACHE: Do you have comments on Respondents?

MR. NEILL: Why, yes, I do. I think most of the issues they brought up were in their written comments, and I had the time to draft a response letter on those written comments. I think I can expand on some of them if you have more questions later.

I wanted to -- I think maybe I should clarify, again, about the time schedule portion of the

Time Schedule Order, why the Time Schedule Order's final deadline is 2015, whereas the off-site cleanup deadline was 2013. And, you know, that's to give plenty of time to look at these other options of what to do with the water, how to clean it up, and then how to get rid of the water also.

And also sufficient time to monitor to look at what kind of impacts this is causing, and to develop some kind of mitigation plan to compensate for any impacts that -- the 2013 cleanup deadline is, again, just for the off-site plume, and it's not for the on-site portion of the contamination, which they still have to clean up.

I don't believe the Time Schedule Order is going to expedite the groundwater cleanup. I think the increase in the flow authorization letter would expedite the groundwater cleanup because then they could discharge more water. They could clean up more groundwater.

And speaking of the groundwater, I need to -- I'd like to emphasize that the groundwater is high in T.D.S. This is the groundwater. And this is shallow groundwater that, according to the studies, would, otherwise, be surfacing down in San Diego River. So when it's extracted from the aquifer, and then discharged to the surface waters, it's only intercepting, you know, a portion of that groundwater that otherwise would be resurfacing

downstream in the river.

Let's see. Bob, anything else? Would you like to speak? Introduce my supervisor, Mr. Bob Morris.

MR. MORRIS: For the record, my name is Bob Morris. I'm a senior engineer at the Water Quality Control Board.

Yeah, I -- again, I want to echo some of the comments made by the San Diego River Coalition. And if you read the Time Schedule Order, it really, kind of -- you would get the sense that we're trying to look at a broader issue of T.D.S. in the watershed because we call for a lot of stakeholder involvement in the development of the monitoring plan, and we directed Kinder Morgan to contact stakeholders to mesh their monitoring to the monitoring that's going on throughout the watershed.

We've asked for a mitigation plan. I mean, this is rare in my experience on Time Schedule Orders where we've asked a responsible party to develop a mitigation plan, especially for solidity. We've got to keep in mind, again, this issue regarding 1500, versus 2400, is that a significant difference when we're talking about the impacts to the beneficial uses?

Where did the 1500 come originally? It was, basically, from the 1975 Basin Plan at a time when the water resources were being used for drinking water supply. 1500 is the criteria for urgency use of drinking water.

Over time, the Regional Board has gone back to reevaluate the water quality objectives in this basin. And in 1985, '86, when we look at the groundwater objective, we relaxed from 1500 to 3,000. Again, it was based upon the water quality of the groundwater at the time, but also providing protection of beneficial uses.

At the time we did that, we did, kind of, do an assessment of the interaction between surface water and groundwater. We basically addressed the issue regarding whether or not, you know, T.D.S. in the groundwater was going to affect surface water; was surface water going to affect groundwater? Again, we've got an instance here where we're capturing high groundwater that would normally recharge this surface water aquifer, surface water discharge.

I would certainly share concerns by the -- that regarding if this was basically bringing in water into the basin, and then recharging the river. I can't tell you how many times I've come before the Board and objected, you know, raised objections issuing prohibitions against live stream discharges, or getting discharges that were going into surface waters terminated.

But in this particular case, I think for a short term that we're talking about in this time frame of the time schedule, that we are not going to have a significant,

if any, impact to the surface water beneficial uses in this situation.

So, again, I'm, kind of, touching into the concluding remarks, but I just, kind of, wanted to make those points. So I'll turn it back to Ben.

MR. NEILL: Thanks Bob. One last thing that wasn't mentioned is, Time Schedule Order is an enforcement order, and the reason we take enforcement is to improve water quality. As far as I know, this is the only source of T.D.S. in this watershed that will now have a schedule to improve it by this Board. So in light of all the factors that Bob said and what I've said earlier, I still recommend adoption of the order.

MR. DESTACHE: Okay. I'm going to start with a couple things. One is, water quality is critical, without a doubt. And with water becoming more of an issue, the length of the Time Schedule Order has some concerns for me, and -- but in lieu of that, the ability to take three-acre feet a day out of the ground, which costs money to pump it out of the ground, and in some way treat it, and put it into a system so it becomes a use that is -- can be spread city, countywide, is a huge number. I mean, a huge number of gallons.

Therefore, I think it's -- and I don't want to get into the flow side of this, but that comment has to

do with how do we approach this Time Schedule Order. And what we're going to -- and what I'm going to suggest that we do, I'm not of the inclination to look at the Time Schedule Order and over the next four years try and get this to a point where we select a contractor to put the system in place. I would hope that we could do that in a faster, more orderly fashion than what this time schedule says for us to do.

I do think that we've got to put the Time Schedule Order in place. And the fact that we're getting the first Time Schedule Order on a source impact of T.D.S. into the system is a good thing. But in the light of -- we need to move faster, and in light of "very poor" is not even close to where we want to be with water quality, and it's going to take a bigger challenge to get San Diego River overall -- with the City rolling out their new dry water season prohibition on dumping into the system, we're going to see a greater effect over the next couple of years.

I'm not sure that we could change this Time Schedule Order at this time to decrease the amount of time they have to spend on it. However, maybe, Jimmy, you can give my some feedback on to how, with this being an enforcement order, if that's possible and what would you see as a stumbling block for that?

MR. SMITH: Certainly. I think what we have before us, though, is our best guess at the time it would take to both study the problem and to come up with a feasible remedy, including mitigation and treatment. If the Board so chose to direct staff to come back and shorten that schedule to have a treatment option in much sooner, I think we would have to go back and re-notice this item and rehear the item. And I'm looking to my left to see if our legal counsel has an opinion on that. So I think the Board could do that very easily, but we just have to bring it back at a later date.

MR. GREEN: Mr. Chairman, let me ask one more question that might be in C.E.Q.A. compliance. Would we need to do an E.I.R., or anything like that, for advance treatment mitigation plans because those take 12 to 18 months throughout the program?

MR. SMITH: Probably not for a mitigation plan, and since this is an enforcement action of the Board, it is exempt from C.E.Q.A.

MR. GIBSON: Mr. Chairman, I'll allow Catherine Hagan and her counsel to fill it in in more detail. We've been conferring as Jimmy's been speaking. You can change the Time Schedule Order today to make it less time, make it almost effective immediately. It would no longer be a Time Schedule Order. It would be a directive, but you

have those options.

You can reject the order altogether, and direct us to come back with an order that directs them to comply immediately because today the water being discharged does not meet T.D.S. standards, and that really is the issue for today. It's not how many gallons per day. It's, doesn't meet it today.

You can reduce the time in the Time Schedule Order today to what you consider to be a more reasonable time and allow Kinder Morgan to respond to that. You can even provide them more time if you felt that that was appropriate; though, I don't hear anyone saying that. You have those options today, and you can defer the matter to another Board meeting, and allow us to bring another proposal back, if that's what you choose.

MR. DESTACHE: Okay. The comment on the flow was more of a -- I guess, a softball to the City of San Diego to understand that if, in fact, they become significant partners in the process that we're going to go through for the next phase of this, that the recovery of a significant amount of water for the cities, it would be a phenomenal feat in order to get done.

In lieu of your comment about shortening the time schedule, I would like to see that we, maybe, compress between September 30th, 2013, and March 31st, 2014, and

that's a seven-month crunch of the schedule right now. And I, just, am predisposed to, let's act on what we know is fact, and if we're not getting into any C.E.Q.A. or E.I.R. issues, and quite frankly, if you're going to dump it into the City water system after it's treated, the environmental impact is strictly pumping it out of the ground. So --

MS. HAGAN: I do just want to point out that depending on what is selected, there may be -- just because it's an enforcement order does not mean C.E.Q.A. does not apply. It will depend on what the proposal is, and what the environmental effects might be, and whether an exemption does apply, and we have to evaluate that.

MR. GIBSON: Mr. Chairman, I would observe at this point that putting it into the City's distribution system is only one of, perhaps, more than one option. The City of San Diego used to irrigate Interstate 15, and that section with Caltrans under a contract with Caltrans.

They used recycle wastewater there. It might be possible -- and, again, we don't know the particulars in this case, and that's one reason why I would recommend that we consider the flow issue separately and through a separate process, and it will assume the stakeholder driven process, and we could consider how the water might be used.

So that really is a separate question. It has high T.D.S. now, is being discharged now to Murphy Canyon Creek, and that is the problem before us today is, how to respond to that from a regulatory perspective.

MR. DESTACHE: Any other Board member comments or -- I'm looking at our conservancy.

MR. STRAWN: I guess I'm missing something here. I don't quite understand. I have to go back and read the summary page here that says that the deadline of November 30th, 2015, was prescribed -- as prescribed is reasonable to give Kinder Morgan time to evaluate and implement.

You're talking four years. Is that the time it takes to put a system in place, or is that to allow, you know, three of those four years so you can get together with everybody and figure out a monitoring plan? I'm just -- I know that's been talked about, but it's not clear in my mind why that date was selected.

MR. NEILL: Most of the time is to collect monitoring points in the receiving waters between November 30th, 2011, all the way up to June 28th, 2013. So most of the time in the time schedule -- and when that time to collect sufficient data to have a statistical data set to make decisions upon, that increased the time to

make it 2014.

To just treat the water and T.D.S., it could be quickly, but to also examine other options for water disposal, or, actually, how about reusing the water instead of wasting it, you know, doing -- instead of dumping it back into the river, how about we use it for irrigation or recycled water. Examining those on options would take more time also.

MR. STRAWN: One final question on that, have we looked at all the other sources of water quality data that Rob mentioned and Gabriel mentioned? There's a lot of N.G.O.s out there collecting water quality. Do we have any help from that, as far as going back, so that we don't have to start new on that collection basically?

MR. NEILL: Right. There is a provision in the Time Schedule Order to examine that data and to coordinate with other stakeholders in the watershed on the monitoring.

MR. STRAWN: But we haven't done it yet?

MR. NEILL: No.

MR. DESTACHE: Okay. I guess, at this point, we are --

MS. HAGAN: Close the public hearing?

MR. DESTACHE: We're going to close the public hearing, thank you, Catherine, and have then we can have some discussion of Board members and comments, and go from

there or -- Eric, you want to start?

MR. ANDERSON: Actually, I have a question, since the only one here representing Kinder Morgan is Eric Nichols, I was just wondering, do you have any comment about shortening the time schedule?

MR. DESTACHE: Do we have to reopen?

MS. HAGAN: Yeah.

MR. DESTACHE: We're going to reopen the public hearing, and then we'll get Mr. Anderson's question answered.

MR. NICHOLS: Thank you, Mr. Anderson, and other members of the Board, and Chairman. My name is Eric Nichols, again, from Arcadis representing Kinder Morgan, and I have taken the oath.

To respond to your question, the Time Schedule Order schedule, as Ben Neill and others have already mentioned, it has time in it for understanding the seasonal variations in water quality in order to better understand impact of this discharge to the creek. Ben already cited an example of where their own independent monitoring of the creek showed a very different T.D.S. at a location and a point in time as compared to some of the other existing monitoring data. And I think it's very important that we understand the fluctuations in T.D.S. before we can fully understand what the impact of our discharge would be to that receiving water.

I'd also like to just mention that, as has been pointed out, T.D.S. is not a result of discharges from Kinder Morgan's facility. This is a naturally occurring constituent, and the groundwater flowing out the Murphy Canyon Creek and into the Mission Valley aquifer terminates in the water naturally. The groundwater that we're intercepting and removing our contaminates from would naturally be discharging into the river and creating that same T.D.S. load, whether we become temporary stewards of that water or not.

MR. ANDERSON: Thank you.

MR. NICHOLS: Okay. Thank you.

MS. NEWMAN: There's one more change that we should make if you are going to consider adopting this today.

MR. DESTACHE: Okay.

MS. NEWMAN: We should add a finding to, kind of, insert it, and make a new finding, number 8, with regards to anti-degradation. So I can read that into the record at some point if you guys are considering adopting this.

MR. DESTACHE: Okay. And so now we're going to close the public hearing and we'll hear comments from the Board members, and we'll go from there. Mr. Green?

MR. GREEN: Well, maybe we need to hear a little bit more about additional information to update.

MS. NEWMAN: Sure. The new finding would state, "This

order is consistent with Resolution 9249, and Resolution 6816. This T.S.O. will not cause further degradation to the environment. The water currently does not meet water quality standards for T.D.S., and the T.S.O. will create a mechanism for treating this groundwater that is high in T.D.S. and discharging it. That will lower the total T.D.S. in the river and results -- and hopefully in compliance with water quality standards."

MR. GREEN: What I also heard Mr. Nichols mention that there's also a ongoing, we'll call it, historical problem upstream even, the T.D.S. there in that region of Murphy Canyon. So the sole burden of that whole thing is on Kinder Morgan here, but I think we brought that up earlier.

However, I believe that hearing there will be some insufficient -- or maybe there's insufficient -- well, sounds like the monitoring data is not quite up to speed yet, and we need to go through the next couple of years of monitoring. I would suggest that we want to enhance water quality, and we want to do it in a timely and sufficient manner.

So I don't really have an -- I'd sort of like to have it done in a timely manner, but I don't want to rush anything just to rush it along. I want to make sure we do a proper job.

MR. DESTACHE: Mr. Loveland? Okay. I think at this point, I'm going to call for a motion for approval with errata and also with the addition, Item number 8, to the findings.

MS. NEWMAN: Correct.

MR. DESTACHE: Per the reading by our legal counsel, and do I have a motion?

MR. GREEN: (No audible response)

MR. DESTACHE: Mr. Green made motion to approve Tentative Order number R9-2011-0052. Do I have a second?

MR. ANDERSON: Second.

MR. DESTACHE: We have a second from Mr. Anderson. With discussion, what I would suggest that -- on the enforcement side of this, that we monitor this significantly. I'd like to see staff or A.E.O. come back to us and tell us where we stand on this. I'd like to keep a close eye on it and make some significant progress.

I understand that we have to know what the dry weather and wet weather requirements are for this, but -- for the flows in Murphy Canyon Creek, but the sooner we get there, the better off we're going to be. And all other comments noted from Kinder Morgan, we're not dealing with non-T.D.S. water coming out of the ground to begin with. So we have to understand that also.

So with that, I'll take a vote to approve all

those in favor.

MR. LOVELAND: Aye.

MR. GREEN: Aye.

MR. STRAWN: Aye.

MR. ANDERSON: Aye.

MR. DESTACHE: Opposed? Thank you very much.

(End of partial transcript)

REPORTER'S CERTIFICATE

I, SOPHIA C. WASHINGTON, CSR NO. 13408, A CERTIFIED SHORTHAND REPORTER FOR THE STATE OF CALIFORNIA, DO HEREBY CERTIFY:

THAT THE FOREGOING TRANSCRIPT OF PROCEEDINGS WAS TAKEN BEFORE ME ON September 14, 2011 AT THE TIME AND PLACE THEREIN SET FORTH, WAS TAKEN DOWN BY ME IN SHORTHAND, AND THEREAFTER TRANSCRIBED INTO TYPEWRITING UNDER MY DIRECTION AND SUPERVISION;

AND I HEREBY CERTIFY THAT THE FOREGOING TRANSCRIPT OF PROCEEDINGS IS A FULL, TRUE AND CORRECT TRANSCRIPT OF MY SHORTHAND NOTES SO TAKEN.

I FURTHER CERTIFY THAT I AM NEITHER COUNSEL FOR NOR RELATED TO ANY PARTY TO SAID ACTION, NOR IN ANYWISE INTERESTED IN THE OUTCOME THEREOF.

IN WITNESS THEREOF, I HAVE HEREUNTO SUBSCRIBED MY NAME THIS 6th DAY OF October, 2011

Sophia C. Washington

SOPHIA C. WASHINGTON, CSR NO. 13408
CERTIFIED SHORTHAND REPORTER
FOR THE STATE OF CALIFORNIA

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EXHIBIT 13

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STATE WATER RESOURCES CONTROL BOARD

IN THE MATTER OF: **CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, SAN DIEGO REGION;** **TIME SCHEDULE ORDER NO. R9-2011-0052** **IN RE:** **CLEANUP AND ABATEMENT ORDER NO. 92.01, AS AMENDED** **DISCHARGER: KINDER MORGAN ENERGY PARTNERS** **RELEASE TO THE MISSION VALLEY AQUIFER**	**PETITION AND REQUEST FOR REVIEW AND INTERVENTION BY THE STATE WATER RESOURCES CONTROL BOARD** CAL. WATER CODE § 13320 23 CAL. CODE REGS.§§ 2050,2052

I, Kris McFadden, declare as follows:

1. I am Kris McFadden, Transportation & Storm Water Department, Storm Water Division Deputy Director, responsible for overseeing the development and implementation of all Total Maximum Daily Loads (TMDLs) programs within the City of San Diego. If called upon as a witness, I could and would testify as to the matters set forth herein.

2. On February 10, 2010, the California Regional Water Quality Control Board, San Diego Region adopted Resolution R9-2010-0001, a resolution amending the Water Quality Control Plan for the San Diego Basin (9) to incorporate revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (including

Tecolote Creek).

3. This TMDL Basin Plan amendment was subsequently approved by the State Water Resources Control Board on December 14, 2010, the Office of Administrative Law (OAL) on April 4, 2011, and the United States Environmental Protection Agency (USEPA) on June 22, 2011. Under state law, this TMDL Basin Plan Amendment became fully effective on April 4, 2011, the date of OAL approval.

4. Section 1, Executive Summary, Page 2, *Table 1-1. Bacteria-Impaired Water Quality Limited Segments Addressed in This Analysis* lists Mission San Diego HSA and Santee HSA that included Forester Creek, San Diego River (Lower), and the Pacific Ocean Shoreline.

5. Section 3.2, Impairment Overview, Page 21, *Table 3-1. Beach and Creeks Addressed in this TMDL Analysis,* Mission San Diego HSA (907.11) and Santee HSA (907.12) that included Forester Creek, San Diego River (Lower), and the Pacific Ocean Shoreline.

6. Section 1, Executive Summary, Page 8 "The Phase I MS4s and Caltrans will be required to submit Bacteria Load Reduction Plans (BLRPs) or Comprehensive Load Reduction Plans (CLRPs) outlining a proposed BMP program that will be capable of achieving the necessary load reductions required to attain the TMDLs in the receiving waters, acceptable to the San Diego Water Board, within 18 months after the effective date of these TMDLs," which is October 4, 2012.

7. Section 11.2.2. Waste Discharge Requirements, Page 104 "The Phase I MS4s will be required to submit Bacteria Load Reduction Plans (BLRPs) or Comprehensive Load Reduction Plans (CLRPs) to the San Diego Water Board within 18 months after the effective date of these TMDLs," which is October 4, 2012.

8. The State Water Board approved the 2010 Integrated Report on August 4, 2010. The 2010 Integrated Report includes changes to the 2006 Clean Water Act Section 303(d) list of impaired water bodies and Clean Water Act Section 305(b) report on the quality of waters in California. The 2010 Integrated Report and supporting documents were submitted to the USEPA for final approval on October 13, 2010.

9. On October 11, 2011, USEPA approved the State of California's 2010 Integrated Report with the updates to the Clean Water Act Section 303(d) list of impaired water bodies.

10. Pollutants listed on the USEPA approved 303(d) list for the lower 16 miles of the San Diego River HSA are: Enterococcus, Fecal Coliform, Low Dissolved Oxygen, Manganese, Nitrogen, Phosphorus, Total Dissolved Solids, and Toxicity.

11. The Comprehensive Load Reduction Plan will address those pollutants that are on the USEPA approved 303(d) list.

12. The Water Quality Control Plan for the San Diego Region (9), Table 3-2. Water Quality Objectives lists Total Dissolved Solids for the San Diego River – Mission San Diego HSA as 1,500 mg/L.

I declare under penalty of perjury, under the laws of the State of California, that the above is true and correct. Executed this 13 th day of October in San Diego, California.

Dated 10/13/11

By Kris McFadden

EXHIBIT 14

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
ORDER NO. R9-2007-0001
NPDES NO. CAS0108758
WASTE DISCHARGE REQUIREMENTS
FOR DISCHARGES OF URBAN RUNOFF FROM
THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)
DRAINING THE WATERSHEDS OF THE COUNTY OF SAN DIEGO,
THE INCORPORATED CITIES OF SAN DIEGO COUNTY,
THE SAN DIEGO UNIFIED PORT DISTRICT,
AND THE SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

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RECEIVING WATERS AND URBAN RUNOFF MONITORING AND REPORTING PROGRAM NO. R9-2007-0001

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

A. BASIS FOR THE ORDER

1. This Order is based on the federal Clean Water Act (CWA), the Porter-Cologne Water Quality Control Act (Division 7 of the Water Code, commencing with Section 13000), applicable state and federal regulations, all applicable provisions of statewide Water Quality Control Plans and Policies adopted by the State Water Resources Control Board (SWRCB), the Water Quality Control Plan for the San Diego Basin adopted by the Regional Board, the California Toxics Rule, and the California Toxics Rule Implementation Plan.

2. This Order renews National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108758, which was first issued on July 16, 1990 (Order No. 90-42), and then renewed on February 21, 2001 (Order No. 2001-01). On August 25, 2005, in accordance with Order No. 2001-01, the County of San Diego, as the Principal Permittee, submitted a Report of Waste Discharge (ROWD) for renewal of their MS4 Permit.

B. REGULATED PARTIES

1. Each of the persons in Table 1 below, hereinafter called Copermittees or dischargers, owns or operates a municipal separate storm sewer system (MS4), through which it discharges urban runoff into waters of the United States within the San Diego Region. These MS4s fall into one or more of the following categories: (1) a medium or large MS4 that services a population of greater than 100,000 or 250,000 respectively; or (2) a small MS4 that is "interrelated" to a medium or large MS4; or (3) an MS4 which contributes to a violation of a water quality standard; or (4) an MS4 which is a significant contributor of pollutants to waters of the United States.

Table 1. Municipal Copermittees

1.	City of Carlsbad	12.	City of Oceanside
2.	City of Chula Vista	13.	City of Poway
3.	City of Coronado	14.	City of San Diego
4.	City of Del Mar	15.	City of San Marcos
5.	City of El Cajon	16.	City of Santee
6.	City of Encinitas	17.	City of Solana Beach
7.	City of Escondido	18.	City of Vista
8.	City of Imperial Beach	19.	County of San Diego
9.	City of La Mesa	20.	San Diego Unified Port District
10.	City of Lemon Grove	21.	San Diego County Regional Airport Authority
11.	City of National City		

C. DISCHARGE CHARACTERISTICS

1. Urban runoff contains waste, as defined in the California Water Code (CWC), and pollutants that adversely affect the quality of the waters of the State. The discharge of urban runoff from an MS4 is a "discharge of pollutants from a point source" into waters of the U.S. as defined in the CWA.

2. The most common categories of pollutants in urban runoff include total suspended solids, sediment (due to anthropogenic activities); pathogens (e.g., bacteria, viruses, protozoa);

heavy metals (e.g., copper, lead, zinc and cadmium); petroleum products and polynuclear aromatic hydrocarbons; synthetic organics (e.g., pesticides, herbicides, and PCBs); nutrients (e.g., nitrogen and phosphorus fertilizers), oxygen-demanding substances (decaying vegetation, animal waste), and trash.

3. The discharge of pollutants and/or increased flows from MS4s may cause or threaten to cause the concentration of pollutants to exceed applicable receiving water quality objectives and impair or threaten to impair designated beneficial uses resulting in a condition of pollution (i.e., unreasonable impairment of water quality for designated beneficial uses), contamination, or nuisance.

4. Pollutants in urban runoff can threaten human health. Human illnesses have been clearly linked to recreating near storm drains flowing to coastal waters. Also, urban runoff pollutants in receiving waters can bioaccumulate in the tissues of invertebrates and fish, which may be eventually consumed by humans.

5. Urban runoff discharges from MS4s often contain pollutants that cause toxicity to aquatic organisms (i.e., adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). Toxic pollutants impact the overall quality of aquatic systems and beneficial uses of receiving waters.

6. The Copermittees discharge urban runoff into lakes, drinking water reservoirs, rivers, streams, creeks, bays, estuaries, coastal lagoons, the Pacific Ocean, and tributaries thereto within ten of the eleven hydrologic units (watersheds) comprising the San Diego Region as shown in Table 2 below. Some of the receiving water bodies have been designated as impaired by the Regional Board and the United States Environmental Protection Agency (USEPA) in 2002 pursuant to CWA section 303(d). Also shown below are the watershed management areas (WMAs) as defined in the Regional Board report, Watershed Management Approach, January 2002.

Table 2. Common Watersheds and CWA Section 303(d) Impaired Waters

REGIONAL BOARD WATERSHED MANAGEMENT AREA (WMA)	HYDROLOGIC UNIT(S)	MAJOR SURFACE WATER BODIES	303(d) POLLUTANT(S) OF CONCERN OR WATER QUALITY EFFECT[1]	COPERMITTEES
Santa Margarita River	Santa Margarita (902.00)	Santa Margarita River and Estuary, Pacific Ocean	1. Eutrophic 2. Nitrogen 3. Phosphorus 4. Total Dissolved Solids	1. County of San Diego
San Luis Rey River	San Luis Rey (903.00)	San Luis Rey River and Estuary, Pacific Ocean	1. Bacterial Indicators 2. Eutrophic 3. Chloride 4. Total Dissolved Solids	1. City of Escondido 2. City of Oceanside 3. City of Vista 4. County of San Diego
Carlsbad	Carlsbad (904.00)	Batiquitos Lagoon San Elijo Lagoon Agua Hedionda Lagoon Buena Vista Lagoon And Tributary Streams Pacific Ocean	1. Bacterial Indicators 2. Eutrophic 3. Sedimentation/Siltation 4. Nutrients 5. Total Dissolved Solids	1. City of Carlsbad 2. City of Encinitas 3. City of Escondido 4. City of Oceanside 5. City of San Marcos 6. City of Solana Beach 7. City of Vista 8. County of San Diego

[1] The listed 303(d) pollutant(s) of concern do not necessarily reflect impairment of the entire corresponding WMA or all corresponding major surface water bodies. The specific impaired portions of each WMA are listed in the State Water Resources Control Board's 2002 Section 303(d) List of Water Quality Limited Segments.

REGIONAL BOARD WATERSHED MANAGEMENT AREA (WMA)	HYDROLOGIC UNIT(S)	MAJOR SURFACE WATER BODIES	303(d) POLLUTANT(S) OF CONCERN OR WATER QUALITY EFFECT[1]	COPERMITTEES
San Dieguito River	San Dieguito (905.00)	San Dieguito River and Estuary, Pacific Ocean	1. Bacterial Indicators 2. Sulfate 3. Color 4. Nitrogen 5. Phosphorus 6. Total Dissolved Solids	1. City of Del Mar 2. City of Escondido 3. City of Poway 4. City of San Diego 5. City of Solana Beach 6. County of San Diego
Mission Bay	Peñasquitos (906.00)	Los Peñasquitos Lagoon Mission Bay, Pacific Ocean	1. Bacterial Indicators 2. Metals 3. Eutrophic 4. Sedimentation/Siltation 5. Toxicity	1. City of Del Mar 2. City of Poway 3. City of San Diego 4. County of San Diego
San Diego River	San Diego (907.00)	San Diego River, Pacific Ocean	1. Bacterial Indicators 2. Eutrophic 3. pH 4. Total Dissolved Solids 5. Oxygen (Dissolved)	1. City of El Cajon 2. City of La Mesa 3. City of Poway 4. City of San Diego 5. City of Santee 6. County of San Diego
San Diego Bay	Pueblo San Diego (908.00) Sweetwater (909.00) Otay (910.00)	San Diego Bay Sweetwater River Otay River Pacific Ocean	1. Bacterial Indicators 2. Metals 3. Sediment Toxicity 4. Benthic Community Degradation 5. Diazinon 6. Chlordane 7. Lindane 8. PAHs 9. PCBs	1. City of Chula Vista 2. City of Coronado 3. City of Imperial Beach 4. City of La Mesa 5. City of Lemon Grove 6. City of National City 7. City of San Diego 8. County of San Diego 9. San Diego Unified Port District 10.San Diego County Regional Airport Authority
Tijuana River	Tijuana (911.00)	Tijuana River and Estuary Pacific Ocean	1. Bacterial Indicators 2. Low Dissolved Oxygen 3. Metals 4. Eutrophic 5. Pesticides 6. Synthetic Organics 7. Trace Elements 8. Trash 9. Solids	1. City of Imperial Beach 2. City of San Diego 3. County of San Diego

7. The Copermittees' water quality monitoring data submitted to date documents persistent exceedances of Basin Plan water quality objectives for various urban runoff-related pollutants (diazinon, fecal coliform bacteria, total suspended solids, turbidity, metals, etc.) at various watershed monitoring stations. At some monitoring stations, such as Agua Hedionda, statistically significant upward trends in pollutant concentrations have been observed. Persistent toxicity has also been observed at some watershed monitoring stations. In addition, bioassessment data indicates that the majority of watersheds have Poor to Very Poor Index of Biotic Integrity ratings. In sum, the above findings indicate that urban runoff discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in San Diego County.

8. When natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, and parking lots, the natural absorption and infiltration abilities of the land are lost. Therefore, runoff leaving a developed urban area is significantly greater in runoff volume, velocity, and peak flow rate than pre-development runoff from the same area. Runoff durations can also increase as a result of flood control and other efforts to control peak flow rates. Increased volume, velocity, rate, and duration of runoff greatly accelerate the erosion of downstream natural channels. Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur

with as little as a 10% conversion from natural to impervious surfaces. The increased runoff characteristics from new development must be controlled to protect against increased erosion of channel beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

9. Urban development creates new pollution sources as human population density increases and brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc. which can either be washed or directly dumped into the MS4. As a result, the runoff leaving the developed urban area is significantly greater in pollutant load than the pre-development runoff from the same area. These increased pollutant loads must be controlled to protect downstream receiving water quality.

10. Development and urbanization especially threaten environmentally sensitive areas (ESAs), such as water bodies designated as supporting a RARE beneficial use (supporting rare, threatened or endangered species) and CWA 303(d) impaired water bodies. Such areas have a much lower capacity to withstand pollutant shocks than might be acceptable in the general circumstance. In essence, development that is ordinarily insignificant in its impact on the environment may become significant in a particular sensitive environment. Therefore, additional control to reduce pollutants from new and existing development may be necessary for areas adjacent to or discharging directly to an ESA.

11. Although dependent on several factors, the risks typically associated with properly managed infiltration of runoff (especially from residential land use areas) are not significant. The risks associated with infiltration can be managed by many techniques, including (1) designing landscape drainage features that promote infiltration of runoff, but do not "inject" runoff (injection bypasses the natural processes of filtering and transformation that occur in the soil); (2) taking reasonable steps to prevent the illegal disposal of wastes; (3) protecting footings and foundations; and (4) ensuring that each drainage feature is adequately maintained in perpetuity.

D. URBAN RUNOFF MANAGEMENT PROGRAMS

1. General

a. This Order specifies requirements necessary for the Copermittees to reduce the discharge of pollutants in urban runoff to the maximum extent practicable (MEP). However, since MEP is a dynamic performance standard which evolves over time as urban runoff management knowledge increases, the Copermittees' urban runoff management programs must continually be assessed and modified to incorporate improved programs, control measures, best management practices (BMPs), etc. in order to achieve the evolving MEP standard. Absent evidence to the contrary, this continual assessment, revision, and improvement of urban runoff management program implementation is expected to ultimately achieve compliance with water quality standards.

b. Although the Copermittees have generally been implementing the jurisdictional urban runoff management programs required pursuant to Order No. 2001-01 since February 21, 2002, urban runoff discharges continue to cause or contribute to violations of water quality standards. This Order contains new or modified requirements that are necessary to improve Copermittees' efforts to reduce the discharge of pollutants in urban runoff to the MEP and achieve water quality

standards. Some of the new or modified requirements, such as the expanded Watershed Urban Runoff Management Program section, are designed to specifically address these high priority water quality problems. Other new or modified requirements address program deficiencies that have been noted during audits, report reviews, and other Regional Board compliance assessment activities.

c. Updated Jurisdictional Urban Runoff Management Plans (JURMPs) and Watershed Urban Runoff Management Plans (WURMPs), and a new Regional Urban Runoff Management Plan (RURMP), which describe the Copermittees' urban runoff management programs in their entirety, are needed to guide the Copermittees' urban runoff management efforts and aid the Copermittees in tracking urban runoff management program implementation. It is practicable for the Copermittees to update the JURMPs and WURMPs, and create the RURMP, within one year, since significant efforts to develop these programs have already occurred.

d. Pollutants can be effectively reduced in urban runoff by the application of a combination of pollution prevention, source control, and treatment control BMPs. Pollution prevention is the reduction or elimination of pollutant generation at its source and is the best "first line of defense". Source control BMPs (both structural and non-structural) minimize the contact between pollutants and flows (e.g., rerouting run-on around pollutant sources or keeping pollutants on-site and out of receiving waters). Treatment control BMPs remove pollutants from urban runoff.

e. Urban runoff needs to be addressed during the three major phases of development (planning, construction, and use) in order to reduce the discharge of pollutants to the MEP and protect receiving waters. Development which is not guided by water quality planning policies and principles can unnecessarily result in increased pollutant load discharges, flow rates, and flow durations which can impact receiving water beneficial uses. Construction sites without adequate BMP implementation result in sediment runoff rates which greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters. Existing development generates substantial pollutant loads which are discharged in urban runoff to receiving waters.

f. Annual reporting requirements included in this Order are necessary to meet federal requirements and to evaluate the effectiveness and compliance of the Copermittees' programs.

2. Development Planning

a. The Standard Urban Storm Water Mitigation Plan (SUSMP) requirements contained in this Order are consistent with Order WQ-2000-11 adopted by the SWRCB on October 5, 2000. In the precedential order, the SWRCB found that the design standards, which essentially require that urban runoff generated by 85 percent of storm events from specific development categories be infiltrated or treated, reflect the MEP standard. The order also found that the SUSMP requirements are appropriately applied to the majority of the Priority Development Project categories contained in Section D.1 of this Order. The SWRCB also gave Regional Water Quality Control Boards the discretion to include additional categories and locations, such as retail gasoline outlets (RGOs), in future SUSMPs.

b. Controlling urban runoff pollution by using a combination of onsite source control and Low Impact Development (LID) BMPs augmented with treatment control BMPs before the runoff enters the MS4 is important for the following reasons: (1) Many end-of-pipe BMPs (such as diversion to the sanitary sewer) are typically ineffective during significant storm events. Whereas, onsite source control BMPs can be applied during all runoff conditions; (2) End-of-pipe BMPs are often incapable of capturing and treating the wide range of pollutants which can be generated on a sub-watershed scale; (3) End-of-pipe BMPs are more effective when used as polishing BMPs, rather than the sole BMP to be implemented; (4) End-of-pipe BMPs do not protect the quality or beneficial uses of receiving waters between the source and the BMP; and (5) Offsite end-of-pipe BMPs do not aid in the effort to educate the public regarding sources of pollution and their prevention.

c. Use of LID BMPs at new development projects can be an effective means for minimizing the impact of urban runoff discharges from the development projects on receiving waters. LID BMPs help preserve and restore the natural hydrologic cycle of the site, allowing for filtration and infiltration which can greatly reduce the volume, peak flow rate, velocity, and pollutant loads of urban runoff.

d. Retail Gasoline Outlets (RGOs) are significant sources of pollutants in urban runoff. RGOs are points of convergence for motor vehicles for automotive related services such as repair, refueling, tire inflation, and radiator fill-up and consequently produce significantly higher loadings of hydrocarbons and trace metals (including copper and zinc) than other urban areas. To meet MEP, LID, source control, and treatment control BMPs are needed at RGOs that meet the following criteria: (a) 5,000 square feet or more, or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day. These are appropriate thresholds since vehicular development size and volume of traffic are good indicators of potential impacts of urban runoff from RGOs on receiving waters.

e. Sites of heavy industry are significant sources of pollutants in urban runoff. Pollutant concentrations and loads in runoff from industrial sites are similar or exceed pollutant concentrations and loads in runoff from other land uses, such as commercial or residential land uses. As with other land uses, LID, source control, and treatment control BMPs are needed at sites of heavy industry in order to meet the MEP standard. These BMPs are necessary where the site of heavy industry is larger than one acre. The one acre threshold is appropriate, since it is consistent with requirements in the Phase II NPDES storm water regulations.

f. If not properly designed or maintained, certain BMPs implemented or required by municipalities for urban runoff management may create a habitat for vectors (e.g. mosquitoes and rodents). However, proper BMP design and maintenance can prevent the creation of vector habitat. Nuisances and public health impacts resulting from vector breeding can be prevented with close collaboration and cooperative effort between municipalities and local vector control agencies and the State Department of Health Services during the development and implementation of urban runoff management programs.

3. Construction and Existing Development

a. In accordance with federal NPDES regulations and to ensure the most effective oversight of industrial and construction site discharges, discharges of runoff from

industrial and construction sites are subject to dual (state and local) storm water regulation. Under this dual system, the Regional Board is responsible for enforcing the General Construction Activities Storm Water Permit, SWRCB Order 99-08 DWQ, NPDES No. CAS000002 (General Construction Permit) and the General Industrial Activities Storm Water Permit, SWRCB Order 97-03 DWQ, NPDES No. CAS000001 (General Industrial Permit), and each municipal Copermittee is responsible for enforcing its local permits, plans, and ordinances, which may require the implementation of additional BMPs than required under the statewide general permits.

b. Identification of sources of pollutants in urban runoff (such as municipal areas and activities, industrial and commercial sites/sources, construction sites, and residential areas), development and implementation of BMPs to address those sources, and updating ordinances and approval processes are necessary for the Copermittees to ensure that discharges of pollutants into and from its MS4 are reduced to the MEP. Inspections and other compliance verification methods are needed to ensure minimum BMPs are implemented. Inspections are especially important at high risk areas for pollutant discharges.

c. Historic and current development makes use of natural drainage patterns and features as conveyances for urban runoff. Urban streams used in this manner are part of the municipalities MS4 regardless of whether they are natural, man-made, or partially modified features. In these cases, the urban stream is both an MS4 and a receiving water.

d. As operators of the MS4s, the Copermittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or control. These discharges may cause or contribute to a condition of contamination or a violation of water quality standards.

e. Waste and pollutants which are deposited and accumulate in MS4 drainage structures will be discharged from these structures to waters of the U.S. unless they are removed or treated. These discharges may cause or contribute to, or threaten to cause or contribute to, a condition of pollution in receiving waters. For this reason, pollutant discharges into MS4s must be reduced to the MEP unless treatment within the MS4 occurs.

f. Enforcement of local urban runoff related ordinances, permits, and plans is an essential component of every urban runoff management program and is specifically required in the federal storm water regulations and this Order. Each Copermittee is individually responsible for adoption and enforcement of ordinances and/or policies, implementation of identified control measures/BMPs needed to prevent or reduce pollutants in storm water runoff, and for the allocation of funds for the capital, operation and maintenance, administrative, and enforcement expenditures necessary to implement and enforce such control measures/BMPs under its jurisdiction.

g. Education is an important aspect of every effective urban runoff management program and the basis for changes in behavior at a societal level. Education of municipal planning, inspection, and maintenance department staffs is especially critical to ensure that in-house staffs understand how their activities impact water

quality, how to accomplish their jobs while protecting water quality, and their specific roles and responsibilities for compliance with this Order. Public education, designed to target various urban land users and other audiences, is also essential to inform the public of how individual actions impact receiving water quality and how these impacts can be minimized.

h. Public participation during the development of urban runoff management programs is necessary to ensure that all stakeholder interests and a variety of creative solutions are considered.

4. Watershed and Regional Urban Runoff Management

a. Since urban runoff does not recognize political boundaries, watershed-based urban runoff management can greatly enhance the protection of receiving waters within a watershed. Such management provides a means to focus on the most important water quality problems in each watershed. By focusing on the most important water quality problems, watershed efforts can maximize protection of beneficial use in an efficient manner. Effective watershed-based urban runoff management actively reduces pollutant discharges and abates pollutant sources causing or contributing to watershed water quality problems; watershed-based urban runoff management that does not actively reduce pollutant discharges and abate pollutant sources causing or contributing to watershed water quality problems can necessitate implementation of the iterative process outlined in section A.3 of the Order. Watershed management of urban runoff does not require Copermittees to expend resources outside of their jurisdictions. Watershed management requires the Copermittees within a watershed to develop a watershed-based management strategy, which can then be implemented on a jurisdictional basis.

b. Some urban runoff issues, such as residential education, can be effectively addressed on a regional basis. Regional approaches to urban runoff management can improve program consistency and promote sharing of resources, which can result in implementation of more efficient programs.

c. Both regionally and on a watershed basis, it is important for the Copermittees to coordinate their water quality protection and land use planning activities to achieve the greatest protection of receiving water bodies. Copermittee coordination with other watershed stakeholders, especially Caltrans, the Department of Defense, and Native American Tribes, is also important. Establishment of a management structure, within which the Copermittees subject to this Order will fund and coordinate those aspects of their joint obligations, will help promote implementation of urban runoff management programs on a watershed and regional basis in a most cost effective manner.

E. STATUTE AND REGULATORY CONSIDERATIONS

1. The Receiving Water Limitations (RWL) language specified in this Order is consistent with language recommended by the USEPA and established in SWRCB Water Quality Order 99-05, adopted by the SWRCB on June 17, 1999. The RWL in this Order require compliance with water quality standards, which is to be achieved through an iterative approach requiring the implementation of improved and better-tailored BMPs over time. Compliance with receiving water limits based on applicable water quality standards is necessary to ensure that MS4 discharges will not cause or contribute to violations of water quality standards and the

creation of conditions of pollution.

2. The Water Quality Control Plan for the San Diego Basin (Basin Plan), identifies the following beneficial uses for surface waters in San Diego County: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Process Supply (PROC), Industrial Service Supply (IND), Ground Water Recharge (GWR), Contact Water Recreation (REC1) Non-contact Water Recreation (REC2), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE), Freshwater Replenishment (FRSH), Hydropower Generation (POW), and Preservation of Biological Habitats of Special Significance (BIOL). The following additional beneficial uses are identified for coastal waters of San Diego County: Navigation (NAV), Commercial and Sport Fishing (COMM), Estuarine Habitat (EST), Marine Habitat (MAR), Aquaculture (AQUA), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction, and/or Early Development (SPWN), and Shellfish Harvesting (SHELL).

3. This Order is in conformance with SWRCB Resolution No. 68-16 and the federal Antidegradation Policy described in 40 CFR 131.12.

4. Section 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) requires coastal states with approved coastal zone management programs to address non-point pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point pollution: agriculture, silviculture, urban, marinas, and hydromodification. This NPDES permit addresses the management measures required for the urban category, with the exception of septic systems. The adoption and implementation of this NPDES permit relieves the Permittee from developing a non-point source plan, for the urban category, under CZARA. The Regional Board addresses septic systems through the administration of other programs.

5. Section 303(d)(1)(A) of the CWA requires that "Each state shall identify those waters within its boundaries for which the effluent limitations...are not stringent enough to implement any water quality standard (WQS) applicable to such waters." The CWA also requires states to establish a priority ranking of impaired waterbodies known as Water Quality Limited Segments and to establish Total Maximum Daily Loads (TMDLs) for such waters. This priority list of impaired waterbodies is called the Section 303(d) List. The current Section 303(d) List was approved by the SWRCB on February 4, 2003 and on July 25, 2003 by USEPA.

6. This Order fulfills a component of the TMDL Implementation Plan adopted by this Regional Board on August 14, 2002 for diazinon in Chollas Creek by establishing Water Quality Based Effluent Limits (WQBELs) for the Cities of San Diego, Lemon Grove, and La Mesa, the County of San Diego, and the San Diego Unified Port District; and by requiring: 1) legal authority, 2) implementation of a diazinon toxicity control plan and a diazinon public outreach/ education program, 3) achievement of the Compliance Schedule, and 4) a monitoring program. The establishment of WQBELs expressed as iterative BMPs to achieve the Waste Load Allocation (WLA) compliance schedule is appropriate and is expected to be sufficient to achieve the WLAs specified in the TMDL.

7. This Order fulfills a component of the TMDL Implementation Plan adopted by this Regional Board on February 9, 2005 for dissolved copper in Shelter Island Yacht Basin (SIYB) by establishing WQBELs expressed as BMPs to achieve the WLA of 30 kg copper / year for the City of San Diego and the San Diego Unified Port District. The establishment of WQBELs expressed as BMPs is appropriate and is expected to be sufficient to achieve the WLA

specified in the TMDL.

8. This Order establishes WQBELs and conditions consistent with the requirements and assumptions of the WLAs in the TMDLs as required by 40 CFR 122.44(d)(1)(vii)(B).

9. Requirements in this Order that are more explicit than the federal storm water regulations in 40 CFR 122.26 are prescribed in accordance with the CWA section 402(p)(3)(B)(iii) and are necessary to meet the MEP standard.

10. Urban runoff treatment and/or mitigation must occur prior to the discharge of urban runoff into a receiving water. Federal regulations at 40 CFR 131.10(a) state that in no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the U.S. Authorizing the construction of an urban runoff treatment facility within a water of the U.S., or using the water body itself as a treatment system or for conveyance to a treatment system, would be tantamount to accepting waste assimilation as an appropriate use for that water body. Furthermore, the construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body. This is consistent with USEPA guidance to avoid locating structural controls in natural wetlands.

11. The issuance of waste discharge requirements and an NPDES permit for the discharge of urban runoff from MS4s to waters of the U.S. is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (CEQA) (Public Resources Code, Division 13, Chapter 3, section 21000 et seq.) in accordance with the CWC section 13389.

F. PUBLIC PROCESS

1. The Regional Board has notified the Copermittees, all known interested parties, and the public of its intent to consider adoption of an Order prescribing waste discharge requirements that would serve to renew an NPDES permit for the existing discharge of urban runoff.

2. The Regional Board has, at public meetings on (date), held public hearings and heard and considered all comments pertaining to the terms and conditions of this Order.

IT IS HEREBY ORDERED that the Copermittees, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, and the provisions of the Clean Water Act (CWA) and regulations adopted thereunder, shall each comply with the following:

A. PROHIBITIONS AND RECEIVING WATER LIMITATIONS

1. Discharges into and from municipal separate storm sewer systems (MS4s) in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC section 13050), in waters of the state are prohibited.

2. Discharges from MS4s containing pollutants which have not been reduced to the maximum extent practicable (MEP) are prohibited.[2]

[2] This prohibition does not apply to MS4 discharges which receive subsequent treatment to reduce pollutants to the MEP prior to entering receiving waters (e.g., low flow diversions to the sanitary sewer).

3. Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses and water quality objectives developed to protect beneficial uses) are prohibited.

   a. Each Copermittee shall comply with section A.3 and section A.4 as it applies to Prohibition 5 in Attachment A of this Order through timely implementation of control measures and other actions to reduce pollutants in urban runoff discharges in accordance with the Jurisdictional Urban Runoff Management Program and other requirements of this Order including any modifications. The Jurisdictional Urban Runoff Management Program shall be designed to achieve compliance with section A.3 and section A.4 as it applies to Prohibition 5 in Attachment A of this Order. If exceedance(s) of water quality standards persist notwithstanding implementation of the Jurisdictional Urban Runoff Management Program and other requirements of this Order, the Copermittee shall assure compliance with section A.3 and section A.4 as it applies to Prohibition 5 in Attachment A of this Order by complying with the following procedure:

      (1) Upon a determination by either the Copermittee or the Regional Board that MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Copermittee shall promptly notify and thereafter submit a report to the Regional Board that describes best management practices (BMPs) that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. The report may be incorporated in the annual update to the Jurisdictional Urban Runoff Management Program unless the Regional Board directs an earlier submittal. The report shall include an implementation schedule. The Regional Board may require modifications to the report;

      (2) Submit any modifications to the report required by the Regional Board within 30 days of notification;

      (3) Within 30 days following approval of the report described above by the Regional Board, the Copermittee shall revise its Jurisdictional Urban Runoff Management Program and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required;

      (4) Implement the revised Jurisdictional Urban Runoff Management Program and monitoring program in accordance with the approved schedule.

   b. So long as the Copermittee has complied with the procedures set forth above and is implementing the revised Jurisdictional Urban Runoff Management Program, the Copermittee does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the Regional Board to do so.

   c. Nothing in section A.3 shall prevent the Regional Board from enforcing any provision of this Order while the Copermittee prepares and implements the above report.

4. In addition to the above prohibitions, discharges from MS4s are subject to all Basin Plan prohibitions cited in Attachment A to this Order.

B. NON-STORM WATER DISCHARGES

1. Each Copermittee shall effectively prohibit all types of non-storm water discharges into its MS4 unless such discharges are either authorized by a separate National Pollutant Discharge Elimination System (NPDES) permit; or not prohibited in accordance with sections B.2 and B.3 below.

2. The following categories of non-storm water discharges are not prohibited unless a Copermittee or the Regional Board identifies the discharge category as a significant source of pollutants to waters of the U.S. For such a discharge category, the Copermittee shall either prohibit the discharge category or develop and implement appropriate control measures to reduce the discharge of pollutants to the MEP and report to the Regional Board pursuant to section J.

   a. Diverted stream flows;
   b. Rising ground waters;
   c. Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to MS4s;
   d. Uncontaminated pumped ground water;
   e. Foundation drains;
   f. Springs;
   g. Water from crawl space pumps;
   h. Footing drains;
   i. Air conditioning condensation;
   j. Flows from riparian habitats and wetlands;
   k. Water line flushing;
   l. Landscape irrigation;
   m. Discharges from potable water sources not subject to NPDES Permit No. CAG679001, other than water main breaks;
   n. Irrigation water;
   o. Lawn watering;
   p. Individual residential car washing; and
   q. Dechlorinated swimming pool discharges.

3. Emergency fire fighting flows (i.e., flows necessary for the protection of life or property) do not require BMPs and need not be prohibited. As part of the Jurisdictional Urban Runoff Management Plan (JURMP), each Copermittee shall develop and implement a program to reduce pollutants from non-emergency fire fighting flows (i.e., flows from controlled or practice blazes and maintenance activities) identified by the Copermittee to be significant sources of pollutants to waters of the United States.

4. Each Copermittee shall examine all dry weather field screening and analytical monitoring results collected in accordance with section D.4 of this Order and Receiving Waters Monitoring and Reporting Program No. R9-2007-0001 to identify water quality problems which may be the result of any non-prohibited discharge category(ies) identified above in section B.2. Follow-up investigations shall be conducted as necessary to identify and control any non-prohibited discharge category(ies) listed above.

C. LEGAL AUTHORITY

1. Each Copermittee shall establish, maintain, and enforce adequate legal authority to control pollutant discharges into and from its MS4 through ordinance, statute, permit, contract or similar means. This legal authority must, at a minimum, authorize the Copermittee to:

   a. Control the contribution of pollutants in discharges of runoff associated with industrial and construction activity to its MS4 and control the quality of runoff from industrial and construction sites. This requirement applies both to industrial and construction sites which have coverage under the statewide general industrial or construction storm water permits, as well as to those sites which do not. Grading ordinances shall be upgraded and enforced as necessary to comply with this Order.

   b. Prohibit all identified illicit discharges not otherwise allowed pursuant to section B.2 including but not limited to:

      (1) Sewage;
      (2) Discharges of wash water resulting from the hosing or cleaning of gas stations, auto repair garages, or other types of automotive services facilities;
      (3) Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility including motor vehicles, cement-related equipment, and port-a-potty servicing, etc.;
      (4) Discharges of wash water from mobile operations such as mobile automobile washing, steam cleaning, power washing, and carpet cleaning, etc.;
      (5) Discharges of wash water from the cleaning or hosing of impervious surfaces in municipal, industrial, commercial, and residential areas including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, etc.;
      (6) Discharges of runoff from material storage areas containing chemicals, fuels, grease, oil, or other hazardous materials;
      (7) Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; discharges of pool or fountain filter backwash water;
      (8) Discharges of sediment, pet waste, vegetation clippings, or other landscape or construction-related wastes; and
      (9) Discharges of food-related wastes (e.g., grease, fish processing, and restaurant kitchen mat and trash bin wash water, etc.).

   c. Prohibit and eliminate illicit connections to the MS4;

   d. Control the discharge of spills, dumping, or disposal of materials other than storm water to its MS4;

   e. Require compliance with conditions in Copermittee ordinances, permits, contracts or orders (i.e., hold dischargers to its MS4 accountable for their contributions of pollutants and flows);

   f. Utilize enforcement mechanisms to require compliance with Copermittee storm water ordinances, permits, contracts, or orders;

   g. Control the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements among Copermittees. Control of

the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements with other owners of the MS4 such as Caltrans, the Department of Defense, or Native American Tribes is encouraged;

h. Carry out all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with local ordinances and permits and with this Order, including the prohibition on illicit discharges to the MS4. This means the Copermittee must have authority to enter, monitor, inspect, take measurements, review and copy records, and require regular reports from industrial facilities discharging into its MS4, including construction sites;

i. Require the use of BMPs to prevent or reduce the discharge of pollutants into MS4s to the MEP; and

j. Require documentation on the effectiveness of BMPs implemented to reduce the discharge of pollutants to the MS4 to the MEP.

2. Each Permittee shall include as part of its JURMP a statement certified by its chief legal counsel that the Copermittee has taken the necessary steps to obtain and maintain full legal authority to implement and enforce each of the requirements contained in 40 CFR 122.26(d)(2)(i)(A-F) and this Order. This statement shall include:

a. Identification of all departments within the jurisdiction that conduct urban runoff related activities, and their roles and responsibilities under this Order. Include an up to date organizational chart specifying these departments and key personnel.

b. Citation of urban runoff related ordinances and the reasons they are enforceable;

c. Identification of the local administrative and legal procedures available to mandate compliance with urban runoff related ordinances and therefore with the conditions of this Order;

d. A description of how urban runoff related ordinances are implemented and appealed; and

e. Description of whether the municipality can issue administrative orders and injunctions or if it must go through the court system for enforcement actions.

D. JURISDICTIONAL URBAN RUNOFF MANAGEMENT PROGRAM

Each Copermittee shall implement all requirements of section D of this Order no later than 365 days after adoption of the Order, unless otherwise specified in this Order. Prior to 365 days after adoption of the Order, each Copermittee shall at a minimum implement its Jurisdictional URMP document, as the document was developed and amended to comply with the requirements of Order No. 2001-01.

Each Copermittee shall develop and implement an updated Jurisdictional Urban Runoff Management Program for its jurisdiction. Each updated Jurisdictional Urban Runoff Management Program shall meet the requirements of section D of this Order, reduce the discharge of pollutants from the MS4 to the MEP, and prevent urban runoff discharges from the MS4 from causing or contributing to a violation of water quality standards.

1. Development Planning Component

Each Copermittee shall implement a program which meets the requirements of this section and (1) reduces Development Project discharges of pollutants from the MS4 to the MEP, (2) prevents Development Project discharges from the MS4 from causing or contributing to a violation of water quality standards, and (3) manages increases in runoff discharge rates and durations from Development Projects that are likely to cause increased erosion of stream beds and banks, silt pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

a. GENERAL PLAN

Each Copermittee shall revise as needed its General Plan or equivalent plan (e.g., Comprehensive, Master, or Community Plan) for the purpose of providing effective water quality and watershed protection principles and policies that direct land-use decisions and require implementation of consistent water quality protection measures for Development Projects.

b. ENVIRONMENTAL REVIEW PROCESS

Each Copermittee shall revise as needed their current environmental review processes to accurately evaluate water quality impacts and cumulative impacts and identify appropriate measures to avoid, minimize and mitigate those impacts for all Development Projects.

c. APPROVAL PROCESS CRITERIA AND REQUIREMENTS FOR ALL DEVELOPMENT PROJECTS

For all proposed Development Projects, each Copermittee during the planning process and prior to project approval and issuance of local permits shall prescribe the necessary requirements so that Development Project discharges of pollutants from the MS4 will be reduced to the MEP, will not cause or contribute to a violation of water quality standards, and will comply with Copermittee's ordinances, permits, plans, and requirements, and with this Order. The requirements shall include, but not be limited to, implementation by the project proponent of the following:

(1) Source control BMPs that reduce storm water pollutants of concern in urban runoff, including storm drain system stenciling and signage, properly designed outdoor material storage areas, properly designed trash storage areas, and implementation of efficient irrigation systems;
(2) LID BMPs where feasible which maximize infiltration, provide retention, slow runoff, minimize impervious footprint, direct runoff from impervious areas into landscaping, and construct impervious surfaces to minimum widths necessary;
(3) Buffer zones for natural water bodies, where feasible. Where buffer zones are infeasible, require project proponent to implement other buffers such as trees, access restrictions, etc., where feasible;
(4) Measures necessary so that grading or other construction activities meet the provisions specified in section D.2 of this Order; and
(5) Submittal of proof of a mechanism under which ongoing long-term maintenance of all structural post-construction BMPs will be conducted.

d. STANDARD URBAN STORM WATER MITIGATION PLANS (SUSMPS) – APPROVAL PROCESS CRITERIA AND REQUIREMENTS FOR PRIORITY DEVELOPMENT PROJECTS

Each Copermittee shall implement an updated local SUSMP which meets the requirements of section D.1.d of this Order and (1) reduces Priority Development Project discharges of pollutants from the MS4 to the MEP, (2) prevents Priority Development Project runoff discharges from the MS4 from causing or contributing to a violation of water quality standards, and (3) manages increases in runoff discharge rates and durations from Priority Development Projects that are likely to cause increased erosion of stream beds and banks, silt pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.[3]

(1) Definition of Priority Development Project

(a) Priority Development Projects are: a) all new Development Projects that fall under the project categories or locations listed in section D.1.d.(2), and b) those redevelopment projects that create, add or replace at least 5,000 square feet of impervious surfaces on an already developed site that falls under the project categories or locations listed in section D.1.d.(2). Where redevelopment results in an increase of less than fifty percent of the impervious surfaces of a previously existing development, and the existing development was not subject to SUSMP requirements, the numeric sizing criteria discussed in section D.1.d.(6)(c) applies only to the addition, and not to the entire development. Where redevelopment results in an increase of more than fifty percent of the impervious surfaces of a previously existing development, the numeric sizing criteria applies to the entire development. Where a new Development Project feature, such as a parking lot, falls into a Priority Development Project Category, the entire project footprint is subject to SUSMP requirements.

(b) In addition to the Priority Development Project Categories identified in section D.1.d.(2), within three years of adoption of this Order Priority Development Projects shall also include all other pollutant generating Development Projects that result in the disturbance of one acre or more of land.[4] As an alternative to this one acre threshold, the Copermittees may collectively identify a different threshold, provided the Copermittees' threshold is at least as inclusive of Development Projects as the one acre threshold.

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[3] Updated SUSMP and hydromodification requirements shall apply to all priority projects or phases of priority projects which have not yet begun grading or construction activities at the time any updated SUSMP or hydromodification requirement commences. If a Copermittee determines that lawful prior approval of a project exists, whereby application of an updated SUSMP or hydromodification requirement to the project is infeasible, the updated SUSMP or hydromodification requirement need not apply to the project. Where feasible, the Copermittees shall utilize the SUSMP and hydromodification update periods to ensure that projects undergoing approval processes include application of the updated SUSMP and hydromodification requirements in their plans.

[4] Pollutant generating Development Projects are those projects that generate pollutants at levels greater than background levels.

(2) Priority Development Project Categories

(a) Housing subdivisions of 10 or more dwelling units. This category includes single-family homes, multi-family homes, condominiums, and apartments.
(b) Commercial developments greater than one acre. This category is defined as any development on private land that is not for heavy industrial or residential uses where the land area for development is greater than one acre. The category includes, but is not limited to: hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; airfields; and other light industrial facilities.
(c) Developments of heavy industry greater than one acre. This category includes, but is not limited to, manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas (bus, truck, etc.).
(d) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.
(e) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet shall meet all SUSMP requirements except for structural treatment BMP and numeric sizing criteria requirement D.1.d.(6)(c) and hydromodification requirement D.1.g.
(f) All hillside development greater than 5,000 square feet. This category is defined as any development which creates 5,000 square feet of impervious surface which is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater.
(g) Environmentally Sensitive Areas (ESAs). All development located within or directly adjacent to or discharging directly to an ESA (where discharges from the development or redevelopment will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. "Directly adjacent" means situated within 200 feet of the ESA. "Discharging directly to" means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.
(h) Parking lots 5,000 square feet or more or with 15 or more parking spaces and potentially exposed to urban runoff. Parking lot is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.
(i) Street, roads, highways, and freeways. This category includes any paved surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles.
(j) Retail Gasoline Outlets (RGOs). This category includes RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average

Daily Traffic (ADT) of 100 or more vehicles per day.

(3) Pollutants of Concern

As part of its local SUSMP, each Copermittee shall develop and implement a procedure for pollutants of concern to be identified for each Priority Development Project. The procedure shall address, at a minimum: (1) Receiving water quality (including pollutants for which receiving waters are listed as impaired under CWA section 303(d)); (2) Land use type of the Development Project and pollutants associated with that land use type; and (3) Pollutants expected to be present on site.

(4) Low Impact Development (LID) BMP Requirements

Each Copermittee shall require each Priority Development Project to implement LID BMPs which will collectively minimize directly connected impervious areas and promote infiltration at Priority Development Projects:

(a) The following LID site design BMPs shall be implemented at all Priority Development Projects as required below:

i. For Priority Development Projects with landscaped or other pervious areas, drain a portion of impervious areas (rooftops, parking lots, sidewalks, walkways, patios, etc) into pervious areas prior to discharge to the MS4. The amount of runoff from impervious areas that is to drain to pervious areas shall correspond with the total capacity of the project's pervious areas to infiltrate or treat runoff, taking into consideration the pervious areas' soil conditions, slope, and other pertinent factors.
ii. For Priority Development Projects with landscaped or other pervious areas, properly design and construct the pervious areas to effectively receive and infiltrate or treat runoff from impervious areas, taking into consideration the pervious areas' soil conditions, slope, and other pertinent factors.
iii. For Priority Development Projects with low traffic areas and appropriate soil conditions, construct a portion of walkways, trails, overflow parking lots, alleys, or other low-traffic areas with permeable surfaces, such as pervious concrete, porous asphalt, unit pavers, and granular materials.

(b) The following LID BMPs listed below shall be implemented at all Priority Development Projects where applicable and feasible.

i. Conserve natural areas, including existing trees, other vegetation, and soils.
ii. Construct streets, sidewalks, or parking lot aisles to the minimum widths necessary, provided that public safety and a walkable environment for pedestrians are not compromised.
iii. Minimize the impervious footprint of the project.
iv. Minimize soil compaction.
v. Minimize disturbances to natural drainages (e.g., natural swales, topographic depressions, etc.)

(5) Source Control BMP Requirements

Each Copermittee shall require each Priority Development Project to implement source control BMPs. The source control BMPs to be required shall:

(a) Minimize storm water pollutants of concern in urban runoff.
(b) Include storm drain system stenciling or signage.
(c) Include properly designed outdoor material storage areas.
(d) Include properly designed trash storage areas.
(e) Include efficient irrigation systems.
(f) Include water quality requirements applicable to individual priority project categories.

(6) Treatment Control BMP Requirements[5]

Each Copermittee shall require each Priority Development Project to implement treatment control BMPs which meet the following treatment control BMP requirements:

(a) Treatment control BMPs for all Priority Development Projects shall mitigate (infiltrate, filter, or treat) the required volume or flow of runoff (identified in section D.1.d.(6)(c)) from all developed portions of the project, including landscaped areas.

(b) All treatment control BMPs shall be located so as to infiltrate, filter, or treat the required runoff volume or flow prior to its discharge to any waters of the U.S. Multiple Priority Development Projects may use shared treatment control BMPs as long as construction of any shared treatment control BMP is completed prior to the use or occupation of any Priority Development Project from which the treatment control BMP will receive runoff.

(c) All treatment control BMPs for a single Priority Development Project shall collectively be sized to comply with the following numeric sizing criteria:

i. Volume-based treatment control BMPs shall be designed to mitigate (infiltrate, filter, or treat) the volume of runoff produced from a 24-hour 85th percentile storm event, as determined from the County of San Diego's 85th Percentile Precipitation Isopluvial Map; or

ii. Flow-based treatment control BMPs shall be designed to mitigate (infiltrate, filter, or treat) either: a) the maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour, for each hour of a storm event; or b) the maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity (for each hour of a storm event), as determined from the local historical rainfall record, multiplied by a factor of two.

[5] LID BMPs that are correctly designed to effectively infiltrate, filter, or treat runoff can be considered treatment control BMPs.

(d) All treatment control BMPs for Priority Development Projects shall, at a minimum:

i. Be ranked with a high or medium pollutant removal efficiency for the project's most significant pollutants of concern, as the pollutant removal efficiencies are identified in the Copermittees' Model SUSMP and the most current updates thereto. Treatment control BMPs with a low removal efficiency ranking shall only be approved by a Copermittee when a feasibility analysis has been conducted which exhibits that implementation of treatment control BMPs with high or medium removal efficiency rankings are infeasible for a Priority Development Project or portion of a Priority Development Project.
ii. Be correctly sized and designed so as to remove pollutants to the MEP.
iii. Target removal of pollutants of concern from urban runoff.
iv. Be implemented close to pollutant sources (where shared BMPs are not proposed), and prior to discharging into waters of the U.S.
v. Not be constructed within a receiving water.
vi. Include proof of a mechanism, to be provided by the project proponent or Copermittee, under which ongoing long-term maintenance will be conducted.

(7) Update of SUSMP BMP Requirements

The Copermittees shall collectively review and update the BMP requirements that are listed in their local SUSMPs. At a minimum, the update shall include removal of obsolete or ineffective BMPs, addition of LID and source control BMP requirements that meet or exceed the requirements of sections D.1.d.(4) and D.1.d.(5), and addition of LID BMPs that can be used for treatment, such as bioretention cells, bioretention swales, etc. The update shall also add appropriate LID BMPs to any tables or discussions in the local SUSMPs addressing pollutant removal efficiencies of treatment control BMPs. In addition, the update shall include review, and revision where necessary, of treatment control BMP pollutant removal efficiencies.

(8) Update of SUSMPs to Incorporate LID and Other BMP Requirements

(a) In addition to the implementation of the BMP requirements of sections D.1.d.(4-7) within one year of adoption of this Order, the Copermittees shall also develop and submit an updated Model SUSMP that defines minimum LID and other BMP requirements to be incorporated into the Copermittees' local SUSMPs for application to Priority Development Projects. The purpose of the updated Model SUSMP shall be to establish minimum standards to maximize the use of LID practices and principles in local Copermittee programs as a means of reducing stormwater runoff. It shall meet the following minimum requirements:

i. Establishment of LID BMP requirements that meet or exceed the minimum requirements listed in section D.1.d.(4) above.
ii. Establishment of source control BMP requirements that meet or exceed the minimum requirements listed in section D.1.d.(5) above.
iii. Establishment of treatment control BMP requirements that meet or exceed the minimum requirements listed in section D.1.d.(6) above.

iv. Establishment of siting, design, and maintenance criteria for each LID and treatment control BMP listed in the Model SUSMP, so that implemented LID and treatment control BMPs are constructed correctly and are effective at pollutant removal and/or runoff control. LID techniques, such as soil amendments, shall be incorporated into the criteria for appropriate treatment control BMPs.

v. Establishment of criteria to aid in determining Priority Development Project conditions where implementation of each LID BMP listed in section D.1.d.(4)(b) is applicable and feasible.

vi. Establishment of a requirement for Priority Development Projects with low traffic areas and appropriate or amendable soil conditions to construct a portion of walkways, trails, overflow parking lots, alleys, or other low-traffic areas with permeable surfaces, such a pervious concrete, porous asphalt, unit pavers, and granular materials.

vii. Establishment of restrictions on infiltration of runoff from Priority Development Project categories or Priority Development Project areas that generate high levels of pollutants, if necessary.

(b) The updated Model SUSMP shall be submitted within 18 months of adoption of this Order. If, within 60 days of submittal of the updated Model SUSMP, the Copermittees have not received in writing from the Regional Board either (1) a finding of adequacy of the updated Model SUSMP or (2) a modified schedule for its review and revision, the updated Model SUSMP shall be deemed adequate, and the Copermittees shall implement its provisions in accordance with section D.1.d.(8)(c) below.

(c) Within 365 days of Regional Board acceptance of the updated Model SUSMP, each Copermittee shall update its local SUSMP to implement the requirements established pursuant to section D.1.d.(8)(a). In addition to the requirements of section D.1.d.(8)(a), each Copermittee's updated local SUSMP shall include the following:

i. A requirement that each Priority Development Project use the criteria established pursuant to section D.1.d.(8)(a)v to demonstrate applicability and feasibility, or lack thereof, of implementation of the LID BMPs listed in section D.1.d.(4)(b).

ii. A review process which verifies that all BMPs to be implemented will meet the designated siting, design, and maintenance criteria, and that each Priority Development Project is in compliance with all applicable SUSMP requirements.

(9) Implementation Process

As part of its local SUSMP, each Copermittee shall implement a process to verify compliance with SUSMP requirements. The process shall identify at what point in the planning process Priority Development Projects will be required to meet SUSMP requirements. The process shall also include identification of the roles and responsibilities of various municipal departments in implementing the SUSMP requirements, as well as any other measures necessary for the implementation of SUSMP requirements.

(10) Downstream Erosion

As part of its local SUSMP, each Copermittee shall develop and apply criteria to Priority Development Projects so that runoff discharge rates, durations, and velocities from Priority Development Projects are controlled to maintain or reduce downstream erosion conditions and protect stream habitat. Upon adoption of the Hydromodification Management Plan (HMP) by the Regional Board (section D.1.g), individual Copermittee criteria for control of downstream erosion shall be superseded by criteria identified in the HMP.

(11) Waiver Provision

(a) A Copermittee may provide for a project to be waived from the requirement of meeting numeric sizing criteria (sections D.1.d.(6)(c) or D.1.d.(8)(a)iii) if infeasibility can be established. A waiver of infeasibility shall only be granted by a Copermittee when all available BMPs have been considered and rejected as infeasible. Copermittees shall notify the Regional Board within 5 days of each waiver issued and shall include the following information in the notification:

i. Name of the person granting each waiver;
ii. Name of developer receiving the waiver;
iii. Site location;
iv. Reason for waiver; and
v. Description of BMPs required.

(b) The Copermittees may collectively or individually develop a program to require project proponents who have received waivers to transfer the savings in cost, as determined by the Copermittee(s), to a storm water mitigation fund. This program may be implemented by all Copermittees that issue waivers. Funds may be used on projects to improve urban runoff quality within the watershed of the waived project. The waiver mitigation program should, at a minimum, identify:

i. The entity or entities that will manage the storm water mitigation fund (i.e., assume full responsibility for);
ii. The range and types of acceptable projects for which mitigation funds may be expended;
iii. The entity or entities that will assume full responsibility for each mitigation project including its successful completion; and
iv. How the dollar amount of fund contributions will be determined.

(12) Infiltration and Groundwater Protection

To protect groundwater quality, each Copermittee shall apply restrictions to the use of treatment control BMPs that are designed to primarily function as centralized infiltration devices (such as large infiltration trenches and infiltration basins). Such restrictions shall be designed so that the use of such infiltration treatment control BMPs shall not cause or contribute to an exceedance of groundwater quality objectives. At a minimum, each treatment control BMP designed to primarily function as a centralized infiltration device shall meet the restrictions below, unless it is demonstrated that a restriction is not necessary to

protect groundwater quality. The Copermittees may collectively or individually develop alternative restrictions on the use of treatment control BMPs which are designed to primarily function as centralized infiltration devices. Alternative restrictions developed by the Copermittees can partially or wholly replace the restrictions listed below. The restrictions are not intended to be applied to small infiltration systems dispersed throughout a development project.

(a) Urban runoff shall undergo pretreatment such as sedimentation or filtration prior to infiltration;
(b) All dry weather flows containing significant pollutant loads shall be diverted from infiltration devices;
(c) Pollution prevention and source control BMPs shall be implemented at a level appropriate to protect groundwater quality at sites where infiltration treatment control BMPs are to be used;
(d) Infiltration treatment control BMPs shall be adequately maintained so that they remove pollutants to the MEP;
(e) The vertical distance from the base of any infiltration treatment control BMP to the seasonal high groundwater mark shall be at least 10 feet. Where groundwater basins do not support beneficial uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained;
(f) The soil through which infiltration is to occur shall have physical and chemical characteristics (such as appropriate cation exchange capacity, organic content, clay content, and infiltration rate) which are adequate for proper infiltration durations and treatment of urban runoff for the protection of groundwater beneficial uses;
(g) Infiltration treatment control BMPs shall not be used for areas of industrial or light industrial activity; areas subject to high vehicular traffic (25,000 or greater average daily traffic on main roadway or 15,000 or more average daily traffic on any intersecting roadway); automotive repair shops; car washes; fleet storage areas (bus, truck, etc.); nurseries[6]; and other high threat to water quality land uses and activities as designated by each Permittee; and
(h) Infiltration treatment control BMPs shall be located a minimum of 100 feet horizontally from any water supply wells.

e. TREATMENT CONTROL BMP MAINTENANCE TRACKING

(1) Each Copermittee shall develop and utilize a watershed-based database to track and inventory approved treatment control BMPs and treatment control BMP maintenance within its jurisdiction. At a minimum, the database shall include information on treatment control BMP type, location, watershed, date of construction, party responsible for maintenance, maintenance certifications or verifications, inspections, inspection findings, and corrective actions.

(2) Each Copermittee shall develop and implement a program to verify that approved treatment control BMPs are operating effectively and have been adequately maintained. At a minimum, the program shall include the following:

(a) An annual inventory of all approved treatment control BMPs within the Copermittee's jurisdiction. The inventory shall also include all treatment control BMPs approved during the previous permit cycle.

[6] Except with regard to treated nursery runoff or clean storm water runoff.

(b) The prioritization of all projects with approved treatment control BMPs into high, medium, and low priority categories. At a minimum, projects with drainage insert treatment control BMPs shall be designated as at least a medium priority. Prioritization of other projects with treatment control BMPs shall include consideration of treatment control BMP size, recommended maintenance frequency, likelihood of operational and maintenance issues, location, receiving water quality, and other pertinent factors.

(c) 100% of projects with treatment control BMPs that are high priority shall be inspected by the Copermittee annually. 50% of projects with drainage insert treatment control BMPs shall be inspected by the Copermittee annually. Treatment control BMPs that are low priority shall be inspected as needed. All inspections shall verify effective operation and maintenance of the treatment control BMPs, as well as compliance with all ordinances, permits, and this Order. A minimum of 20% of the total number of projects with approved treatment control BMPs, and a maximum of 200% of the average number of projects with treatment control BMPs approved per year, shall be inspected annually.

(d) Requirement of annual verification of effective operation and maintenance of each approved treatment control BMP by the party responsible for the treatment control BMP maintenance.

(3) Operation and maintenance verifications shall be required prior to each rainy season.

(4) Inspections of high priority treatment control BMPs shall be conducted prior to each rainy season.

f. BMP VERIFICATION

Prior to occupancy of each Priority Development Project subject to SUSMP requirements, each Copermittee shall inspect the constructed LID, source control, and treatment control BMPs to verify that they have been constructed in compliance with all specifications, plans, permits, ordinances, and this Order. This initial BMP verification inspection does not constitute an operation and maintenance inspection, as required above in section D.1.e.(2)(c).

g. HYDROMODIFICATION - LIMITATIONS ON INCREASES OF RUNOFF DISCHARGE RATES AND DURATIONS[7]

Each Copermittee shall collaborate with the other Copermittees to develop and implement a Hydromodification Management Plan (HMP) to manage increases in runoff discharge rates and durations from all Priority Development Projects, where such increased rates and durations are likely to cause increased erosion of channel

[7] Updated SUSMP and hydromodification requirements shall apply to all priority projects or phases of priority projects which have not yet begun grading or construction activities at the time any updated SUSMP or hydromodification requirement commences. If a Copermittee determines that lawful prior approval of a project exists, whereby application of an updated SUSMP or hydromodification requirement to the project is infeasible, the updated SUSMP or hydromodification requirement need not apply to the project. Where feasible, the Copermittees shall utilize the SUSMP and hydromodification update periods to ensure that projects undergoing approval processes include application of the updated SUSMP and hydromodification requirements in their plans.

beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force. The HMP, once approved by the Regional Board, shall be incorporated into the local SUSMP and implemented by each Copermittee so that post-project runoff discharge rates and durations shall not exceed estimated pre-project discharge rates and durations where the increased discharge rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses, attributable to changes in the discharge rates and durations.

(1) The HMP shall:

(a) Identify a standard for channel segments which receive urban runoff discharges from Priority Development Projects. The channel standard shall maintain the pre-project erosion and deposition characteristics of channel segments receiving urban runoff discharges from Priority Development Projects as necessary to maintain or improve the channel segments' stability conditions.

(b) Utilize continuous simulation of the entire rainfall record to identify a range of runoff flows[8] for which Priority Development Project post-project runoff flow rates and durations shall not exceed pre-project runoff flow rates and durations, where the increased flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses, attributable to changes in the flow rates and durations. The lower boundary of the range of runoff flows identified shall correspond with the critical channel flow that produces the critical shear stress that initiates channel bed movement or that erodes the toe of channel banks. The identified range of runoff flows may be different for specific watersheds, channels, or channel reaches.

(c) Require Priority Development Projects to implement hydrologic control measures so that Priority Development Projects' post-project runoff flow rates and durations (1) do not exceed pre-project runoff flow rates and durations for the range of runoff flows identified under section D.1.g.(1)(b), where the increased flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses, attributable to changes in the flow rates and durations, and (2) do not result in channel conditions which do not meet the channel standard developed under section D.1.g.(1)(a) for channel segments downstream of Priority Development Project discharge points.

(d) Include other performance criteria (numeric or otherwise) for Priority Development Projects as necessary to prevent urban runoff from the projects from increasing erosion of channel beds and banks, silt pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

(e) Include a review of pertinent literature.

(f) Include a protocol to evaluate potential hydrograph change impacts to downstream watercourses from Priority Development Projects.

(g) Include a description of how the Copermittees will incorporate the HMP requirements into their local approval processes.

[8] The identified range of runoff flows to be controlled should be expressed in terms of peak flow rates of rainfall events, such as "10% of the pre-project 2-year peak flow up to the pre-project 10-year peak flow."

(h) Include criteria on selection and design of management practices and measures (such as detention, retention, and infiltration) to control flow rates and durations and address potential hydromodification impacts.
(i) Include technical information supporting any standards and criteria proposed.
(j) Include a description of inspections and maintenance to be conducted for management practices and measures to control flow rates and durations and address potential hydromodification impacts.
(k) Include a description of pre- and post-project monitoring and other program evaluations to be conducted to assess the effectiveness of implementation of the HMP.
(l) Include mechanisms for addressing cumulative impacts within a watershed on channel morphology.
(m) Include information on evaluation of channel form and condition, including slope, discharge, vegetation, underlying geology, and other information, as appropriate.

(2) The HMP may include implementation of planning measures (e.g., buffers and restoration activities, including revegetation, use of less-impacting facilities at the point(s) of discharge, etc.) to allow expected changes in stream channel cross sections, vegetation, and discharge rates, velocities, and/or durations without adverse impacts to channel beneficial uses. Such measures shall not include utilization of non-naturally occurring hardscape materials such as concrete, riprap, gabions, etc.

(3) Section D.1.g.(1)(c) does not apply to Development Projects where the project discharges stormwater runoff into channels or storm drains where the pre-existing channel or storm drain conditions result in minimal potential for erosion or other impacts to beneficial uses. Such situations may include discharges into channels that are concrete-lined or significantly hardened (e.g., with rip-rap, sackrete, etc.) downstream to their outfall in bays or the ocean; underground storm drains discharging to bays or the ocean; and construction of projects where the sub-watersheds below the projects' discharge points are highly impervious (e.g., >70%) and the potential for single-project and/or cumulative impacts is minimal. Specific criteria for identification of such situations shall be included as a part of the HMP. However, plans to restore a channel reach may re-introduce the applicability of HMP controls, and would need to be addressed in the HMP.

(4) HMP Reporting

The Copermittees shall collaborate to report on HMP development as required in section J.2.a of this Order.

(5) HMP Implementation

180 days after approval of the HMP by the Regional Board, each Copermittee shall incorporate into its local SUSMP and implement the HMP for all applicable Priority Development Projects. Prior to approval of the HMP by the Regional Board, the early implementation of measures likely to be included in the HMP shall be encouraged by the Copermittees.

(6) Interim Hydromodification Criteria for Projects Disturbing 50 Acres or More

Within 365 days of adoption of this Order, the Copermittees shall collectively identify an interim range of runoff flow rates for which Priority Development Project post-project runoff flow rates and durations shall not exceed pre-project runoff flow rates and durations (Interim Hydromodification Criteria), where the increased discharge flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses, attributable to changes in flow rates and durations. Development of the Interim Hydromodification Criteria shall include identification of methods to be used by Priority Development Projects to exhibit compliance with the criteria, including continuous simulation of the entire rainfall record. Starting 365 days after adoption of this Order and until the final Hydromodification Management Plan standard and criteria are implemented, each Copermittee shall require Priority Development Projects disturbing 50 acres or more to implement hydrologic controls to manage post-project runoff flow rates and durations as required by the Interim Hydromodification Criteria. Development Projects disturbing 50 acres or more are exempt from this requirement when:

(a) The project would discharge into channels that are concrete-lined or significantly hardened (e.g., with rip-rap, sackcrete, etc.) downstream to their outfall in bays or the ocean;
(b) The project would discharge into underground storm drains discharging directly to bays or the ocean; or
(c) The project would discharge to a channel where the watershed areas below the project's discharge points are highly impervious (e.g. >70%).

h. ENFORCEMENT OF DEVELOPMENT SITES

Each Copermittee shall enforce its storm water ordinance for all Development Projects and at all development sites as necessary to maintain compliance with this Order. Copermittee ordinances or other regulatory mechanisms shall include appropriate sanctions to achieve compliance. Sanctions shall include the following or their equivalent: Non-monetary penalties, fines, bonding requirements, and/or permit or occupancy denials for non-compliance.

2. Construction Component

Each Copermittee shall implement a construction program which meets the requirements of this section, reduces construction site discharges of pollutants from the MS4 to the MEP, and prevents construction site discharges from the MS4 from causing or contributing to a violation of water quality standards.

a. ORDINANCE UPDATE AND APPROVAL PROCESS

(1) Within 365 days of adoption of this Order, each Copermittee shall review and update its grading ordinances and other ordinances as necessary to achieve full compliance with this Order, including requirements for the implementation of all designated BMPs and other measures.

(2) Prior to approval and issuance of local construction and grading permits, each Copermittee shall:

(a) Require all individual proposed construction sites to implement designated BMPs and other measures so that pollutants discharged from the site will be reduced to the maximum extent practicable and will not cause or contribute to a violation of water quality standards.
(b) Prior to permit issuance, require and review the project proponent's storm water management plan to verify compliance with their grading ordinance, other ordinances, and this Order.
(c) Verify that project proponents subject to California's statewide General NPDES Permit for Storm Water Discharges Associated With Construction Activities, (hereinafter General Construction Permit), have existing coverage under the General Construction Permit.

b. SOURCE IDENTIFICATION

Each Copermittee shall maintain and update monthly a watershed based inventory of all construction sites within its jurisdiction. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended.

c. BMP IMPLEMENTATION

(1) Each Copermittee shall designate a minimum set of BMPs and other measures to be implemented at construction sites. The designated minimum set of BMPs shall include, at a minimum:

(a) General Site Management

i. Pollution prevention, where appropriate.
ii. Development and implementation of a storm water management plan.
iii. Minimization of areas that are cleared and graded to only the portion of the site that is necessary for construction;
iv. Minimization of exposure time of disturbed soil areas;
v. Minimization of grading during the wet season and correlation of grading with seasonal dry weather periods to the extent feasible.
vi. Limitation of grading to a maximum disturbed area as determined by each Copermittee before either temporary or permanent erosion controls are implemented to prevent storm water pollution. The Copermittee has the option of temporarily increasing the size of disturbed soil areas by a set amount beyond the maximum, if the individual site is in compliance with applicable storm water regulations and the site has adequate control practices implemented to prevent storm water pollution.
vii. Temporary stabilization and reseeding of disturbed soil areas as rapidly as feasible;
viii. Preservation of natural hydrologic features where feasible;
ix. Preservation of riparian buffers and corridors where feasible;
x. Maintenance of all BMPs, until removed; and
xi. Retention, reduction, and proper management of all pollutant discharges on site to the MEP standard.

(b) Erosion and Sediment Controls

i. Erosion prevention, to be used as the most important measure for keeping sediment on site during construction, but never as the single method;
ii. Sediment controls, to be used as a supplement to erosion prevention for keeping sediment on-site during construction;
iii. Slope stabilization on all inactive slopes during the rainy season and during rain events in the dry season;
iv. Slope stabilization on all active slopes during rain events regardless of the season; and
v. Permanent revegetation or landscaping as early as feasible.

(2) Each Copermittee shall require implementation of advanced treatment for sediment at construction sites that are determined by the Copermittee to be an exceptional threat to water quality. In evaluating the threat to water quality, the following factors shall be considered by the Copermittee:

(a) Soil erosion potential or soil type;
(b) The site's slopes;
(c) Project size and type;
(d) Sensitivity of receiving water bodies;
(e) Proximity to receiving water bodies;
(f) Non-storm water discharges;
(g) Ineffectiveness of other BMPs; and
(h) Any other relevant factors.

(3) Each Copermittee shall implement, or require the implementation of, the designated minimum BMPs and any additional measures necessary to comply with this Order at each construction site within its jurisdiction year round. However, BMP implementation requirements can vary based on wet and dry seasons. Dry season BMP implementation must plan for and address rain events that may occur during the dry season.

(4) Each Copermittee shall implement, or require implementation of, additional controls for construction sites tributary to CWA section 303(d) water body segments impaired for sediment as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for construction sites within or adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in section Attachment C of this Order) as necessary to comply with this Order.

d. INSPECTION OF CONSTRUCTION SITES

Each Copermittee shall conduct construction site inspections for compliance with its local ordinances (grading, storm water, etc.), permits (construction, grading, etc.), and this Order.

(1) During the wet season, each Copermittee shall inspect at least biweekly (every two weeks), all construction sites within its jurisdiction meeting the following

criteria:

(a) All sites 50 acres or more in size and grading will occur during the wet season;
(b) All sites 1 acre or more, and tributary to a CWA section 303(d) water body segment impaired for sediment or within or directly adjacent to or discharging directly to a receiving water within an ESA; and
(c) Other sites determined by the Copermittees or the Regional Board as a significant threat to water quality. In evaluating threat to water quality, the following factors shall be considered:

i. soil erosion potential;
ii. site slope;
iii. project size and type;
iv. sensitivity of receiving water bodies;
v. proximity to receiving water bodies;
vi. non-storm water discharges;
vii. past record of non-compliance by the operators of the construction site; and
viii. any other relevant factors.

(2) During the wet season, each Copermittee shall inspect at least monthly, all construction sites with one acre or more of soil disturbance not meeting the criteria specified above in section D.2.c.(1).

(3) During the wet season, each Copermittee shall inspect as needed, construction sites less than 1 acre in size.

(4) Each Copermittee shall inspect all construction sites as needed during the dry season.

(5) Based upon site inspection findings, each Copermittee shall implement all follow-up actions (i.e., reinspection, enforcement) necessary to comply with this Order.

(6) Inspections of construction sites shall include, but not be limited to:

(a) Check for coverage under the General Construction Permit (Notice of Intent (NOI) and/or Waste Discharge Identification No.) during initial inspections;
(b) Assessment of compliance with Permittee ordinances and permits related to urban runoff, including the implementation and maintenance of designated minimum BMPs;
(c) Assessment of BMP effectiveness;
(d) Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff;
(e) Education and outreach on storm water pollution prevention, as needed; and
(f) Creation of a written or electronic inspection report.

(7) The Copermittees shall track the number of inspections for the inventoried construction sites throughout the reporting period to verify that the sites are inspected at the minimum frequencies required.

e. ENFORCEMENT OF CONSTRUCTION SITES

Each Copermittee shall develop and implement an escalating enforcement process that achieves prompt corrective actions at construction sites for violations of the Copermittee's water quality protection permit requirements and ordinances. This enforcement process shall include authorizing the Copermittee's construction site inspectors to take immediate enforcement actions when appropriate and necessary. The enforcement process shall include appropriate sanctions such as stop work orders, non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.

f. REPORTING OF NON-COMPLIANT SITES

In addition to the notification requirements in section 5(e) of Attachment B, each Copermittee shall notify the Regional Board when the Copermittee issues a stop work order or other high level enforcement to a construction site in their jurisdiction as a result of storm water violations.

3. Existing Development Component

a. MUNICIPAL

Each Copermittee shall implement a municipal program which meets the requirements of this section, reduces municipal discharges of pollutants from the MS4 to the MEP, and prevents municipal discharges from the MS4 from causing or contributing to a violation of water quality standards.

(1) Source Identification

Each Copermittee shall annually update a watershed based inventory of municipal areas and activities. The inventory shall include the name, address (if applicable), and a description of the area/activity, which pollutants are potentially generated by the area/activity, and identification of whether the area/activity is tributary to a CWA section 303(d) water body segment and generates pollutants for which the water body segment is impaired. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended when applicable, but not required.

(2) BMP Implementation

(a) Each Copermittee shall implement pollution prevention methods in its municipal program and shall require their use by appropriate municipal departments and personnel, where appropriate.

(b) Each Copermittee shall designate a minimum set of BMPs for all municipal areas and activities. The designated minimum BMPs for municipal areas and activities shall be area or activity specific as appropriate.

(c) Each Copermittee shall implement, or require the implementation of, the designated minimum BMPs and any additional measures necessary to comply with this Order for each municipal area or activity within its

jurisdiction.

(d) Each Copermittee shall evaluate existing flood control devices to determine if retrofitting the device to provide additional pollutant removal from urban runoff is feasible. When conducting flood control device retrofit projects, each Copermittee shall incorporate permanent pollutant removal measures into the projects, where feasible.

(e) Each Copermittee shall implement, or require implementation of, any additional controls for municipal areas and activities tributary to CWA section 303(d) impaired water body segments (where an area or activity generates pollutants for which the water body segment is impaired) as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for municipal areas and activities within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order) as necessary to comply with this Order.

(f) Each Copermittee shall implement, or require implementation of, additional controls for special events within their jurisdiction that are expected to generate significant trash and litter. Controls to consider shall include:

i. Temporary screens on catch basins and storm drain inlets;
ii. Temporary fencing to prevent windblown trash from entering adjacent water bodies and MS4 channels;
iii. Proper management of trash and litter;
iv. Catch basin cleaning following the special event and prior to an anticipated rain event;
v. Street sweeping of roads, streets, highways and parking facilities following the special event; and
vi. Other equivalent controls.

(3) <u>Operation and Maintenance of Municipal Separate Storm Sewer System and Structural Controls</u>

(a) Each Copermittee shall implement a schedule of inspection and maintenance activities to verify proper operation of all municipal structural treatment controls designed to reduce pollutant discharges to or from its MS4s and related drainage structures.

(b) Each Copermittee shall implement a schedule of maintenance activities for the MS4 and MS4 facilities (catch basins, storm drain inlets, open channels, etc). The maintenance activities shall, at a minimum, include:

i. Inspection at least once a year between May 1 and September 30 of each year for all MS4 facilities that receive or collect high volumes of trash and debris. All other MS4 facilities shall be inspected at least annually throughout the year.
ii. Following two years of inspections, any MS4 facility that requires inspection and cleaning less than annually may be inspected as needed, but not less that every other year.

iii. Any catch basin or storm drain inlet that has accumulated trash and debris greater than 33% of design capacity shall be cleaned in a timely manner. Any MS4 facility that is designed to be self cleaning shall be cleaned of any accumulated trash and debris immediately. Open channels shall be cleaned of observed anthropogenic litter in a timely manner.

iv. Record keeping of the maintenance and cleaning activities including the overall quantity of waste removed.

v. Proper disposal of waste removed pursuant to applicable laws.

vi. Measures to eliminate waste discharges during MS4 maintenance and cleaning activities.

(4) Management of Pesticides, Herbicides, and Fertilizers

The Copermittees shall implement BMPs to reduce the contribution of pollutants associated with the application, storage, and disposal of pesticides, herbicides and fertilizers from municipal areas and activities to MS4s. Important municipal areas and activities include municipal facilities, public rights-of-way, parks, recreational facilities, golf courses, cemeteries, botanical or zoological gardens and exhibits, landscaped areas, etc.

Such BMPs shall include, at a minimum: (1) educational activities, permits, certifications and other measures for municipal applicators and distributors; (2) integrated pest management measures that rely on non-chemical solutions; (3) the use of native vegetation; (4) schedules for irrigation and chemical application; and (5) the collection and proper disposal of unused pesticides, herbicides, and fertilizers.

(5) Sweeping of Municipal Areas

Each Copermittee shall implement a program to sweep improved (possessing a curb and gutter) municipal roads, streets, highways, and parking facilities. The program shall include the following measures:

(a) Roads, streets, highways, and parking facilities identified as consistently generating the highest volumes of trash and/or debris shall be swept at least two times per month.

(b) Roads, streets, highways, and parking facilities identified as consistently generating moderate volumes of trash and/or debris shall be swept at least monthly.

(c) Roads, streets, highways, and parking facilities identified as generating low volumes of trash and/or debris shall be swept as necessary, but no less than once per year.

(6) Infiltration From Sanitary Sewer to MS4/Provide Preventive Maintenance of Both

Each Copermittee shall implement controls and measures to prevent and eliminate infiltration of seepage from municipal sanitary sewers to MS4s through thorough, routine preventive maintenance of the MS4. Each Copermittee that

operates both a municipal sanitary sewer system and a MS4 shall implement controls and measures to prevent and eliminate infiltration of seepage from the municipal sanitary sewers to the MS4s that shall include overall sanitary sewer and MS4 surveys and thorough, routine preventive maintenance of both.

(7) Inspection of Municipal Areas and Activities

(a) At a minimum, each Copermittee shall inspect the following high priority municipal areas and activities annually:

i. Roads, Streets, Highways, and Parking Facilities.
ii. Flood Management Projects and Flood Control Devices.
iii. Areas and activities tributary to a C WA section 303(d) impaired water body segment, where an area or activity generates pollutants for which the water body segment is impaired. Areas and activities within or adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order).
iv. Municipal Facilities.
[1] Active or closed municipal landfills;
[2] Publicly owned treatment works (including water and wastewater treatment plants) and sanitary sewage collection systems;
[3] Solid waste transfer facilities;
[4] Land application sites;
[5] Corporate yards including maintenance and storage yards for materials, waste, equipment and vehicles; and
[6] Household hazardous waste collection facilities.
v. Municipal airfields.
vi. Parks and recreation facilities.
vii. Special event venues following special events (festivals, sporting events, etc.)
viii. Power washing.
ix. Other municipal areas and activities that the Copermittee determines may contribute a significant pollutant load to the MS4.

(b) Other municipal areas and activities shall be inspected as needed.

(c) Based upon site inspection findings, each Copermittee shall implement all follow-up actions necessary to comply with this Order.

(8) Enforcement of Municipal Areas and Activities

Each Copermittee shall enforce its storm water ordinance for all municipal areas and activities as necessary to maintain compliance with this Order.

b. INDUSTRIAL AND COMMERCIAL

Each Copermittee shall implement an industrial and commercial program which meets the requirements of this section, reduces industrial and commercial discharges of pollutants from the MS4 to the MEP, and prevents industrial and commercial discharges from the MS4 from causing or contributing to a violation of water quality standards.

(1) Source Identification

Each Copermittee shall annually update a watershed-based inventory of all industrial and commercial sites/sources within its jurisdiction (regardless of ownership) that could contribute a significant pollutant load to the MS4. The inventory shall include the following minimum information for each industrial and commercial site/source: name; address; pollutants potentially generated by the site/source (and identification of whether the site/source is tributary to a Clean Water Act section 303(d) water body segment and generates pollutants for which the water body segment is impaired); and a narrative description including SIC codes which best reflects the principal products or services provided by each facility. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended.

At a minimum, the following sites/sources shall be included in the inventory:

(a) Commercial Sites/Sources:

i. Automobile repair, maintenance, fueling, or cleaning;
ii. Airplane repair, maintenance, fueling, or cleaning;
iii. Boat repair, maintenance, fueling, or cleaning;
iv. Equipment repair, maintenance, fueling, or cleaning;
v. Automobile and other vehicle body repair or painting;
vi. Mobile automobile or other vehicle washing;
vii. Automobile (or other vehicle) parking lots and storage facilities;
viii. Retail or wholesale fueling;
ix. Pest control services;
x. Eating or drinking establishments, including food markets;
xi. Mobile carpet, drape or furniture cleaning;
xii. Cement mixing or cutting;
xiii. Masonry;
xiv. Painting and coating;
xv. Botanical or zoological gardens and exhibits;
xvi. Landscaping;
xvii. Nurseries and greenhouses;
xviii. Golf courses, parks and other recreational areas/facilities;
xix. Cemeteries;
xx. Pool and fountain cleaning;
xxi. Marinas;
xxii. Portable sanitary services;
xxiii. Building material retailers and storage;
xxiv. Animal facilities; and
xxv. Power washing services.

(b) Industrial Sites/Sources:

i. Industrial Facilities, as defined at 40 CFR § 122.26(b)(14), including those subject to the General Industrial Permit or other individual NPDES permit;
ii. Operating and closed landfills;
iii. Facilities subject to SARA Title III; and

iv. Hazardous waste treatment, disposal, storage and recovery facilities.

(c) All other commercial or industrial sites/sources tributary to a CWA Section 303(d) impaired water body segment, where the site/source generates pollutants for which the water body segment is impaired. All other commercial or industrial sites/sources within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order).

(d) All other commercial or industrial sites/sources that the Copermittee determines may contribute a significant pollutant load to the MS4.

(2) BMP Implementation

(a) Each Copermittee shall require the use of pollution prevention methods by industrial and commercial sites/sources, where appropriate.

(b) Each Copermittee shall designate a minimum set of BMPs for all industrial and commercial sites/sources. The designated minimum BMPs shall be specific to facility types and pollutant generating activities, as appropriate.

(c) Within the first three years of implementation of the updated Jurisdictional Urban Runoff Management Program, each Copermittee shall notify the owner/operator of each inventoried industrial and commercial site/source of the BMP requirements applicable to the site/source.

(d) Each Copermittee shall implement, or require the implementation of, the designated minimum BMPs and any additional measures necessary to comply with this Order at each industrial and commercial site/source within its jurisdiction.

(e) Each Copermittee shall implement, or require implementation of, additional controls for industrial and commercial sites/sources tributary to CWA section 303(d) impaired water body segments (where a site/source generates pollutants for which the water body segment is impaired) as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for industrial and commercial sites/sources within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order) as necessary to comply with this Order.

(3) Inspection of Industrial and Commercial Sites/Sources

(a) Each Copermittee shall conduct industrial and commercial site inspections for compliance with its ordinances, permits, and this Order. Inspections shall include but not be limited to:

i. Review of BMP implementation plans, if the site uses or is required to use such a plan;
ii. Review of facility monitoring data, if the site monitors its runoff;

iii. Check for coverage under the General Industrial Permit (Notice of Intent (NOI) and/or Waste Discharge Identification No.), if applicable;
iv. Assessment of compliance with Copermittee ordinances and permits related to urban runoff;
v. Assessment of BMP implementation, maintenance and effectiveness;
vi. Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff; and
vii. Education and training on storm water pollution prevention, as conditions warrant.

(b) At a minimum, 50% of all sites (excluding mobile sources) determined to pose a high threat to water quality shall be inspected in the first year of implementation of the updated Jurisdictional Urban Runoff Management Program, regardless of whether this exceeds the number of inspections required in section D.3.b.(3)(c). This requirement shall increase to 100% of the sites in the second year, and 100% annually thereafter. In any year that the total number of required inspection per section D.3.b.(3)(c) exceeds the number of high threat to water quality sites, all high threat to water quality sites shall be inspected. In evaluating threat to water quality, each Copermittee shall address, at a minimum, the following:

i. Type of activity (SIC code);
ii. Materials used at the facility;
iii. Wastes generated;
iv. Pollutant discharge potential;
v. Non-storm water discharges;
vi. Size of facility;
vii. Proximity to receiving water bodies;
viii. Sensitivity of receiving water bodies;
ix. Whether the facility is subject to the General Industrial Permit or an individual NPDES permit;
x. Whether the facility has filed a No Exposure Certification/Notice of Non-Applicability;
xi. Facility design;
xii. Total area of the site, area of the site where industrial or commercial activities occur, and area of the site exposed to rainfall and runoff;
xiii. The facility's compliance history; and
xiv. Any other relevant factors.

(c) At a minimum, 20% of the sites inventoried as required in section D.3.b.(1) above (excluding mobile sources) shall be inspected in the first year of implementation of the updated Jurisdictional Urban Runoff Management Program. This requirement shall increase to 25% of the sites in the second year, and 25% annually thereafter.

(d) Each Copermittee may develop and implement a third party inspection program for verifying industrial and commercial site/source compliance with its ordinances, permits, and this Order. The third party inspections can satisfy up to 30% of the inspection requirements in section D.3.b(3)(c), with the Copermittee having to fulfill the remaining required inspections. To the extent that third party inspections are conducted to fulfill the requirements of

section D.3.b(3)(c), the Copermittee will be responsible for the inspection of an additional site for every three sites inspected by a third party. The additional inspections may be conducted by the Copermittee or a third party inspector. The Copermittees third party inspection program must include the following:

i. A description of facility types proposed to be inspected by third parties, including SIC codes;
ii. A third party inspector certification program;
iii. The inspection requirements described in section D.3.b.(3)(a);
iv. Inspection form templates for third party inspector use;
v. Photo documentation of potential storm water violations identified during the third party inspection;
vi. An annual Copermittee audit of random, representative sites that were inspected by a third party;
vii. An annual Copermittee audit of random, representative third party inspectors;
viii. Reporting to the Copermittee of identified significant potential violations within 24 hours of the third party inspection;
ix. Reporting to the Copermittee of all inspection findings within one week of the inspection being conducted; and
x. Copermittee follow-up and/or enforcement actions for identified potential storm water violations within 2 business days of the inspection or potential violation report receipt.

(e) Based upon site inspection findings, each Copermittee shall implement all follow-up actions and enforcement necessary to comply with this Order.

(f) To the extent that the Regional Board has conducted an inspection of an industrial site during a particular year, the requirement for the responsible Copermittee to inspect this facility during the same year will be satisfied.

(g) The Copermittees shall track the number of inspections for the inventoried industrial and commercial sites/sources throughout the reporting period to verify that the sites/sources are inspected at the minimum frequencies listed in sections D.3.b.(3)(b) and D.3.b.(3)(c).

(4) Regulation of Mobile Businesses

(a) Each Copermittee shall develop and implement a program to reduce the discharge of pollutants from mobile businesses to the MEP. Each Copermittee shall keep as part of their inventory (section D.3.b.(1) above), a listing of mobile businesses known to operate within its jurisdiction. The program shall include:

i. Development and implementation of minimum standards and BMPs to be required for each of the various types of mobile businesses.
ii. Development and implementation of an enforcement strategy which specifically addresses the unique characteristics of mobile businesses.
iii. Notification of those mobile businesses known to operate within the Copermittee's jurisdiction of the minimum standards and BMP requirements and local ordinances.

iv. Development and implementation of an outreach and education strategy.
v. Inspection of mobile businesses as needed.

(b) If they choose to, the Copermittees may cooperate in developing and implementing their programs for mobile businesses, including sharing of mobile business inventories, BMP requirements, enforcement action information, and education.

(5) Enforcement of Industrial and Commercial Sites/Sources

Each Copermittee shall enforce its storm water ordinance for all industrial and commercial sites/sources as necessary to maintain compliance with this Order. Copermittee ordinances or other regulatory mechanisms shall include appropriate sanctions to achieve compliance. Sanctions shall include the following or their equivalent: Non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.

(6) Reporting of Industrial Non-Filers

As part of each Annual Report, each Copermittee shall report a list of industrial sites, including the name, address, and SIC code, that may require coverage under the General Industrial Permit for which a NOI has not been filed.

c. RESIDENTIAL

Each Copermittee shall implement a residential program which meets the requirements of this section, reduces residential discharges of pollutants from the MS4 to the MEP, and prevents residential discharges from the MS4 from causing or contributing to a violation of water quality standards.

(1) Threat to Water Quality Prioritization

Each Copermittee shall identify high threat to water quality residential areas and activities. At a minimum, these shall include:

(a) Automobile repair, maintenance, washing, and parking;
(b) Home and garden care activities and product use (pesticides, herbicides, and fertilizers);
(c) Disposal of trash, pet waste, green waste, and household hazardous waste (e.g., paints, cleaning products);
(d) Any other residential source that the Copermittee determines may contribute a significant pollutant load to the MS4;
(e) Any residential areas tributary to a CWA section 303(d) impaired water body, where the residence generates pollutants for which the water body is impaired; and
(f) Any residential areas within or directly adjacent to or discharging directly to a coastal lagoon or other receiving waters within an environmentally sensitive area (as defined in Attachment C of this Order).

(2) BMP Implementation

(a) Each Copermittee shall designate minimum BMPs for high threat to water quality residential areas and activities. The designated minimum BMPs for high threat to water quality municipal areas and activities shall be area or activity specific.
(b) Each Copermittee shall encourage the use of pollution prevention methods by residents, where appropriate.
(c) Each Copermittee shall facilitate the proper management and disposal of used oil, toxic materials, and other household hazardous wastes. Such facilitation shall include educational activities, public information activities, and establishment of collection sites operated by the Copermittee or a private entity. Curbside collection of household hazardous wastes is encouraged.
(d) Each Copermittee shall implement, or require implementation of, the designated minimum BMPs and any additional measures necessary to comply with this Order for high threat to water quality residential areas and activities.
(e) Each Copermittee shall implement, or require implementation of, BMPs for residential areas and activities that have not been designated a high threat to water quality, as necessary.
(f) Each Copermittee shall implement, or require implementation of, any additional controls for residential areas and activities tributary to CWA section 303(d) impaired water body segments (where a residential area or activity generates pollutants for which the water body segment is impaired) as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for residential areas within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in section Attachment C of this Order) as necessary to comply with this Order.

(3) Enforcement of Residential Areas and Activities

Each Copermittee shall enforce its storm water ordinance for all residential areas and activities as necessary to maintain compliance with this Order.

(4) Evaluation of Oversight of Residential Areas and Activities

The Copermittees are encouraged to individually or collectively evaluate their methods used for oversight of residential areas and activities, including assessment of inspections of residential areas and activities. The evaluation should consider various oversight and inspection approaches to identify an effective and appropriate oversight and inspection approach for residential areas and activities.

(5) Regional Residential Education Program

Each Copermittee shall collaborate with the other Copermittees to develop and implement the Regional Residential Education Program required in section F.1 of this Order.

4. Illicit Discharge Detection and Elimination Component

Each Copermittee shall implement an Illicit Discharge Detection and Elimination program which meets the requirements of this section and actively seeks and eliminates illicit discharges and connections.

a. ILLICIT DISCHARGES AND CONNECTIONS

Each Copermittee shall implement a program to actively seek and eliminate illicit discharges and connections into its MS4. The program shall include utilization of appropriate municipal personnel to assist in identifying illicit discharges and connections during their daily activities. The program shall address all types of illicit discharges and connections excluding those non-storm water discharges not prohibited by the Copermittee in accordance with section B of this Order.

b. DEVELOP/MAINTAIN MS4 MAP

Each Copermittee shall develop and/or update its labeled map of its entire MS4 and the corresponding drainage areas within its jurisdiction. The use of a GIS is highly recommended. The accuracy of the MS4 map shall be confirmed during dry weather field screening and analytical monitoring and shall be updated at least annually.

c. DRY WEATHER FIELD SCREENING AND ANALYTICAL MONITORING

Each Copermittee shall conduct dry weather field screening and analytical monitoring of MS4 outfalls and other portions of its MS4 within its jurisdiction to detect illicit discharges and connections in accordance with Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001.

d. INVESTIGATION/INSPECTION AND FOLLOW-UP

(1) Each Copermittee shall investigate and inspect any portion of the MS4 that, based on visual observations, dry weather field screening and analytical monitoring results, or other appropriate information, indicates a reasonable potential for illicit discharges, illicit connections, or other sources of non-storm water (including non-prohibited discharge(s) identified in section B of this Order). Each Copermittee shall develop/update and utilize numeric criteria action levels (or other actions level criteria where appropriate) to determine when follow-up investigations will be performed.

(2) Within two business days of receiving dry weather field screening results that exceed action levels, the Copermittees shall either conduct an investigation to identify the source of the discharge or provide the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. Within two business days, where applicable, of receiving analytical laboratory results that exceed action levels, the Copermittees shall either conduct an investigation to identify the source of the discharge or provide the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. Obvious illicit discharges (i.e. color, odor, or significant exceedances of action levels) shall be investigated immediately.

e. ELIMINATION OF ILLICIT DISCHARGES AND CONNECTIONS

Each Copermittee shall take immediate action to eliminate all detected illicit discharges, illicit discharge sources, and illicit connections as soon as possible after detection. Elimination measures may include an escalating series of enforcement actions for those illicit discharges that are not a serious threat to public health or the environment. Illicit discharges that pose a serious threat to the public's health or the environment must be eliminated immediately.

f. ENFORCE ORDINANCES

Each Copermittee shall implement and enforce its ordinances, orders, or other legal authority to prevent illicit discharges and connections to its MS4. Each Copermittee shall also implement and enforce its ordinance, orders, or other legal authority to eliminate detected illicit discharges and connections to it MS4.

g. PREVENT AND RESPOND TO SEWAGE SPILLS (INCLUDING FROM PRIVATE LATERALS AND FAILING SEPTIC SYSTEMS) AND OTHER SPILLS

Each Copermittee shall prevent, respond to, contain and clean up all sewage and other spills that may discharge into its MS4 from any source (including private laterals and failing septic systems). Spill response teams shall prevent entry of spills into the MS4 and contamination of surface water, ground water and soil to the maximum extent practicable. Each Copermittee shall coordinate spill prevention, containment and response activities throughout all appropriate departments, programs and agencies so that maximum water quality protection is available at all times.

Each Copermittee shall develop and implement a mechanism whereby it is notified of all sewage spills from private laterals and failing septic systems into its MS4. Each Copermittee shall prevent, respond to, contain and clean up sewage from any such notification.

h. FACILITATE PUBLIC REPORTING OF ILLICIT DISCHARGES AND CONNECTIONS - PUBLIC HOTLINE

Each Copermittee shall promote, publicize and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s. Each Copermittee shall facilitate public reporting through development and operation of a public hotline. Public hotlines can be Copermittee-specific or shared by Copermittees. All storm water hotlines shall be capable of receiving reports in both English and Spanish 24 hours per day / seven days per week. Copermittees shall respond to and resolve each reported incident in a timely manner. All reported incidents, and how each was resolved, shall be summarized in each Copermittee's individual JURMP Annual Report.

5. Education Component

Each Copermittee shall implement an education program using all media as appropriate to (1) measurably increase the knowledge of the target communities regarding MS4s, impacts of urban runoff on receiving waters, and potential BMP solutions for the target audience; and (2) to measurably change the behavior of target communities and thereby reduce pollutant releases to MS4s and the environment. At a minimum, the education

program shall meet the requirements of this section and address the following target communities:

- Municipal Departments and Personnel
- Construction Site Owners and Developers
- Industrial Owners and Operators
- Commercial Owners and Operators
- Residential Community, General Public, and School Children

a. GENERAL REQUIREMENTS

(1) Each Copermittee shall educate each target community on the following topics where appropriate:

Table 3. Education

Laws, Regulations, Permits, & Requirements	**Best Management Practices**
• Federal, state, and local water quality laws and regulations • Statewide General NPDES Permit for Storm Water Discharges Associated with Industrial Activities (Except Construction). • Statewide General NPDES Permit for Storm Water Discharges Associated with Construction Activities • Regional Board's General NPDES Permit for Ground Water Dewatering • Regional Board's 401 Water Quality Certification Program • Statewide General NPDES Utility Vault Permit • Requirements of local municipal permits and ordinances (e.g., storm water and grading ordinances and permits)	• Pollution prevention and safe alternatives • Good housekeeping (e.g., sweeping impervious surfaces instead of hosing) • Proper waste disposal (e.g., garbage, pet/animal waste, green waste, household hazardous materials, appliances, tires, furniture, vehicles, boat/recreational vehicle waste, catch basin/ MS4 cleanout waste) • Non-storm water disposal alternatives (e.g., all wash waters) • Methods to minimized the impact of land development and construction • Erosion prevention • Methods to reduce the impact of residential and charity car-washing • Preventive Maintenance • Equipment/vehicle maintenance and repair • Spill response, containment, and recovery • Recycling • BMP maintenance
General Urban Runoff Concepts	**Other Topics**
• Impacts of urban runoff on receiving waters • Distinction between MS4s and sanitary sewers • BMP types: facility or activity specific, LID, source control, and treatment control • Short- and long-term water quality impacts associated with urbanization (e.g., land-use decisions, development, construction) • Non-storm water discharge prohibitions • How to conduct a storm water inspections	• Public reporting mechanisms • Water quality awareness for Emergency/ First Responders • Illicit Discharge Detection and Elimination observations and follow-up during daily work activities • Potable water discharges to the MS4 • Dechlorination techniques • Hydrostatic testing • Integrated pest management • Benefits of native vegetation • Water conservation

	• Alternative materials and designs to maintain peak runoff values • Traffic reduction, alternative fuel use

(2) Copermittee educational programs shall emphasize underserved target audiences, high-risk behaviors, and "allowable" behaviors and discharges, including various ethnic and socioeconomic groups and mobile sources.

b. SPECIFIC REQUIREMENTS

(1) Municipal Departments and Personnel Education

(a) Municipal Development Planning – Each Copermittee shall implement an education program so that its planning and development review staffs (and Planning Boards and Elected Officials, if applicable) have an understanding of:

i. Federal, state, and local water quality laws and regulations applicable to Development Projects;
ii. The connection between land use decisions and short and long-term water quality impacts (i.e., impacts from land development and urbanization);
iii. How to integrate LID BMP requirements into the local regulatory program(s) and requirements; and
iv. Methods of minimizing impacts to receiving water quality resulting from development, including:
[1] Storm water management plan development and review;
[2] Methods to control downstream erosion impacts;
[3] Identification of pollutants of concern;
[4] LID BMP techniques;
[5] Source control BMPs; and
[6] Selection of the most effective treatment control BMPs for the pollutants of concern.

(b) Municipal Construction Activities – Each Copermittee shall implement an education program that includes annual training prior to the rainy season so that its construction, building, code enforcement, and grading review staffs, inspectors, and other responsible construction staff have, at a minimum, an understanding of the following topics, as appropriate for the target audience:

i. Federal, state, and local water quality laws and regulations applicable to construction and grading activities.
ii. The connection between construction activities and water quality impacts (i.e., impacts from land development and urbanization and impacts from construction material such as sediment).
iii. Proper implementation of erosion and sediment control and other BMPs to minimize the impacts to receiving water quality resulting from construction activities.
iv. The Copermittee's inspection, plan review, and enforcement policies and procedures to verify consistent application.
v. Current advancements in BMP technologies.

vi. SUSMP Requirements including treatment options, LID BMPs, source control, and applicable tracking mechanisms.

(c) Municipal Industrial/Commercial Activities - Each Copermittee shall train staff responsible for conducting storm water compliance inspections and enforcement of industrial and commercial facilities at least once a year. Training shall cover inspection and enforcement procedures, BMP implementation, and reviewing monitoring data.

(d) Municipal Other Activities – Each Copermittee shall implement an education program so that municipal personnel and contractors performing activities which generate pollutants have an understanding of the activity specific BMPs for each activity to be performed.

(2) New Development and Construction Education

As early in the planning and development process as possible and all through the permitting and construction process, each Copermittee shall implement a program to educate project applicants, developers, contractors, property owners, community planning groups, and other responsible parties. The education program shall provide an understanding of the topics listed in Sections D.5.b.(1)(a) and D.5.b.(1)(b) above, as appropriate for the audience being educated. The education program shall also educate project applicants, developers, contractors, property owners, and other responsible parties on the importance of educating all construction workers in the field about stormwater issues and BMPs though formal or informal training.

(3) Residential, General Public, and School Children Education

Each Copermittee shall collaboratively conduct or participate in development and implementation of a plan to educate residential, general public, and school children target communities. The plan shall evaluate use of mass media, mailers, door hangers, booths at public events, classroom education, field trips, hands-on experiences, or other educational methods.

6. Public Participation Component

Each Copermittee shall incorporate a mechanism for public participation in the updating, development, and implementation of the Jurisdictional Urban Runoff Management Program.

E. WATERSHED URBAN RUNOFF MANAGEMENT PROGRAM

1. Each Copermittee shall implement all requirements of section E of this Order no later than 365 days after adoption of this Order, unless otherwise specified in this Order. Prior to 365 days after adoption of this Order, each Copermittee shall collaborate with the other Copermittees within its Watershed Management Area(s) (WMA) to at a minimum implement its Watershed URMP document, as the document was developed and amended to comply with the requirements of Order No. 2001-01.

2. Each Copermittee shall collaborate with other Copermittees within its WMA(s) as shown in Table 4 below to develop and implement an updated Watershed Urban Runoff

Management Program for each watershed. Each updated Watershed Urban Runoff Management Program shall meet the requirements of section E of this Order, reduce the discharge of pollutants from the MS4 to the MEP, and prevent urban runoff discharges from the MS4 from causing or contributing to a violation of water quality standards. At a minimum, each Watershed Urban Runoff Management Program shall include the elements described below:

a. Lead Watershed Permittee Identification

Watershed Copermittees shall identify the Lead Watershed Permittee for their WMA. In the event that a Lead Watershed Permittee is not selected and identified by the Watershed Copermittees, by default the Copermittee identified in Table 4 as the Lead Watershed Permittee for that WMA shall be responsible for implementing the requirements of the Lead Watershed Permittee in that WMA. The Lead Watershed Copermittees shall serve as liaisons between the Copermittees and Regional Board, where appropriate.

b. Watershed Map

Watershed Copermittees shall develop and periodically update a map of the WMA to facilitate planning, assessment, and collaborative decision-making. As determined appropriate, the map shall include features such as receiving waters (including the Pacific Ocean); Clean Water Act section 303(d) impaired receiving waters; land uses, MS4s; major highways; jurisdictional boundaries; and inventoried commercial, industrial, and municipal sites.

c. Watershed Water Quality Assessment

Watershed Copermittees shall annually assess the water quality of receiving waters in their WMA. This assessment shall use applicable water quality data, reports, and analysis generated in accordance with the requirements of the Receiving Waters Monitoring and Reporting Program, as well as applicable information available from other public and private organizations.

The assessment and analysis shall annually identify the WMA's water quality problems that are partially or fully attributable to MS4 discharges. Identified water quality problems shall include CWA section 303(d) listings, persistent violations of water quality standards, toxicity, impacts to beneficial uses, and other pertinent conditions. From the list of water quality problems, the high priority water quality problems of the WMA shall be identified, which shall include those water quality problems which most significantly exceed or impact water quality standards (water quality objectives and beneficial uses).

The assessment shall include annual identification of the likely sources of the WMA's high priority water quality problems.

d. Watershed-based Land Use Planning

The Watershed Copermittees shall develop, implement, and modify, as necessary, a program for encouraging collaborative, watershed-based, land use planning in their jurisdictional planning departments.

e. Watershed Strategy

Watershed Copermittees shall develop and implement a collective watershed strategy to abate the sources and reduce the discharge of pollutants causing the high priority water quality problems of the WMA. The strategy shall guide Watershed Copermittee selection and implementation of Watershed Activities, so that the Watershed Activities selected and implemented are appropriate for each Watershed Copermittee's contribution to the WMA's high priority water quality problems.

f. Watershed Activities

(1) The Watershed Copermittees shall identify and implement Watershed Activities that address the high priority water quality problems in the WMA. Watershed Activities shall include both Watershed Water Quality Activities and Watershed Education Activities. These activities may be implemented individually or collectively, and may be implemented at the regional, watershed, or jurisdictional level.

(a) Watershed Water Quality Activities are activities other than education that address the high priority water quality problems in the WMA. A Watershed Water Quality Activity implemented on a jurisdictional basis must be organized and implemented to target a watershed's high priority water quality problems or must exceed the baseline jurisdictional requirements of section D of this Order.
(b) Watershed Education Activities are outreach and training activities that address high priority water quality problems in the WMA.

(2) A Watershed Activities List shall be submitted with each updated WURMP and updated annually thereafter. The Watershed Activities List shall include both Watershed Water Quality Activities and Watershed Education Activities, along with a description of how each activity was selected, and how all of the activities on the list will collectively abate sources and reduce pollutant discharges causing the identified high priority water quality problems in the WMA.

(3) Each activity on the Watershed Activities List shall include the following information:

(a) A description of the activity;
(b) A time schedule for implementation of the activity, including key milestones;
(c) An identification of the specific responsibilities of Watershed Copermittees in completing the activity;
(d) A description of how the activity will address the identified high priority water quality problem(s) of the watershed;
(e) A description of how the activity is consistent with the collective watershed strategy;
(f) A description of the expected benefits of implementing the activity; and
(g) A description of how implementation effectiveness will be measured.

(4) Each Watershed Copermittee shall implement identified Watershed Activities pursuant to established schedules. For each Permit year, no less than two Watershed Water Quality Activities and two Watershed Education Activities shall be in an active implementation phase. A Watershed Water Quality Activity

is in an active implementation phase when significant pollutant load reductions, source abatement, or other quantifiable benefits to discharge or receiving water quality can reasonably be established in relation to the watershed's high priority water quality problem(s). Watershed Water Quality Activities that are capital projects are in active implementation for the first year of implementation only. A Watershed Education Activity is in an active implementation phase when changes in attitudes, knowledge, awareness, or behavior can reasonably be established in target audiences.

g. Copermittee Collaboration

Watershed Copermittees shall collaborate to develop and implement the Watershed Urban Runoff Management Programs. Watershed Copermittee collaboration shall include frequent regularly scheduled meetings.

h. Public Participation

Watershed Copermittees shall implement a watershed-specific public participation mechanism within each watershed. The mechanism shall encourage participation from other organizations within the watershed (such as the Department of Defense, Caltrans, lagoon foundations, etc.)

i. WURMP Review and Updates

Each WURMP shall be reviewed annually to identify needed modifications and improvements. Pursuant to the requirements of Section I.2.b of this Order the Watershed Copermittees shall develop and implement a plan and schedule to address the identified modifications and improvements. All updates to the WURMP shall be documented in the Watershed Urban Runoff Management Program Annual Reports. Individual Watershed Copermittees shall also review and modify their jurisdictional activities and JURMPs as necessary so that they are consistent with the requirements of the WURMP.

Table 4. Watershed Management Areas and Watershed Copermittees

RESPONSIBLE WATERSHED COPERMITTEE(S)	WATERSHED MANAGEMENT AREA	HYDROLOGIC UNIT OR AREA	MAJOR RECEIVING WATER BODIES
1. County of San Diego	Santa Margarita River	Santa Margarita HU (902.00)	Santa Margarita River and Estuary, Pacific Ocean
2. City of Oceanside 3. City of Vista 4. County of San Diego	San Luis Rey River	San Luis Rey HU (903.00)	San Luis Rey River and Estuary, Pacific Ocean
1. City of Carlsbad **2. City of Encinitas** 3. City of Escondido 4. City of Oceanside 5. City of San Marcos 6. City of Solana Beach 7. City of Vista 8. County of San Diego	Carlsbad	Carlsbad HU (904.00)	Batiquitos Lagoon San Elijo Lagoon Agua Hedionda Lagoon Buena Vista Lagoon and Tributary Streams Pacific Ocean
1. City of Del Mar **2. City of Escondido** 3. City of Poway 4. City of San Diego 5. City of Solana Beach 6. County of San Diego	San Dieguito River	San Dieguito HU (905.00)	San Dieguito River and Estuary Pacific Ocean

RESPONSIBLE WATERSHED COPERMITTEE(S)	WATERSHED MANAGEMENT AREA	HYDROLOGIC UNIT OR AREA	MAJOR RECEIVING WATER BODIES
1. City of Del Mar **2. City of Poway** 3. City of San Diego 4. County of San Diego	Peñasquitos	Miramar Reservoir HA (906.10) Poway HA (906.20)	Los Peñasquitos Creek Los Peñasquitos Lagoon Pacific Ocean
1. City of San Diego	Mission Bay	Scripps HA (906.30) Miramar HA(906.40) Tecolote HA (906.50)	Mission Bay Pacific Ocean
1. City of El Cajon 2. City of La Mesa 3. City of San Diego 4. City of Santee 5. County of San Diego	San Diego River	San Diego HU (907.00)	San Diego River Pacific Ocean
1. City of Chula Vista 2. City of Coronado 3. City of Imperial Beach 4. City of La Mesa 5. City of Lemon Grove 6. City of National City 7. City of San Diego 8. County of San Diego **9. San Diego Unified Port District** 10. San Diego County Regional Airport Authority	San Diego Bay	Pueblo San Diego HU (908.00) Sweetwater HU (909.00) Otay HU (910.00)	San Diego Bay Sweetwater River Otay River Pacific Ocean
1. City of Imperial Beach 2. City of San Diego **3. County of San Diego**	Tijuana River	Tijuana (911.00)	Tijuana River and Estuary Pacific Ocean

- The Lead Watershed Permittee for each watershed is highlighted

F. REGIONAL URBAN RUNOFF MANAGEMENT PROGRAM

The Copermittees shall implement all requirements of section F of this Order no later than 365 days after adoption of this Order, unless otherwise specified in this Order.

Each Copermittee shall collaborate with the other Copermittees to develop, implement, and update as necessary a Regional Urban Runoff Management Program. The Regional Urban Runoff Management Program shall meet the requirements of section F of this Order, reduce the discharge of pollutants from the MS4 to the MEP, and prevent urban runoff discharges from the MS4 from causing or contributing to a violation of water quality standards. The Regional Urban Runoff Management Program shall, at a minimum:

1. Develop and implement a Regional Residential Education Program. The program shall include:
   a. Pollutant specific education which focuses educational efforts on bacteria, nutrients, sediment, pesticides, and trash. If a different pollutant is determined to be more critical for the education program, the pollutant can be substituted for one of these pollutants.
   b. Education efforts focused on the specific residential sources of the pollutants listed in section F.1.a.
2. Develop the standardized fiscal analysis method required in section G of this Order.
3. Facilitate the assessment of the effectiveness of jurisdictional, watershed, and regional programs.

As options, the Regional Urban Runoff Management Program may:

1. Develop and implement urban runoff management activities on a regional level, as determined to be necessary by the Copermittees.

2. Develop and implement a strategy to integrate management, implementation, and reporting of jurisdictional, watershed, and regional activities, as determined to be necessary by the Copermittees. Any such integration shall assure compliance with the jurisdictional requirements of section D and the watershed requirements of section E.
3. Facilitate TMDL management and implementation, as determined to be necessary by the Copermittees.
4. Facilitate development of strategies for implementation of activities on a watershed level, as determined to be necessary by the Copermittees.

G. FISCAL ANALYSIS

1. Each Copermittee shall secure the resources necessary to meet all requirements of this Order.

2. As part of the Regional Urban Runoff Management Program, the Copermittees shall collectively develop a standardized method and format for annually conducting and reporting fiscal analyses of their urban runoff management programs in their entirety (including jurisdictional, watershed, and regional activities). This standardized method shall:

   a. Identify the various categories of expenditures attributable to the urban runoff management programs, including a description of the specific items to be accounted for in each category of expenditures.
   b. Identify expenditures that contribute to multiple programs or were in existence prior to implementation of the urban runoff management program.
   c. Identify a metric or metrics to be used to report program component and total program expenditures.

3. Each Copermittee shall conduct an annual fiscal analysis. Starting January 31, 2010, the annual fiscal analysis shall be conducted consistent with the standardized fiscal analysis method included in the January 31, 2009 Regional Urban Runoff Management Program Annual Report. The annual fiscal analysis shall be conducted and reported on as part of each Copermittee's Jurisdictional Urban Runoff Management Program Annual Reports. For convenience, the fiscal analysis included in the Jurisdictional Urban Runoff Management Program Annual Reports shall address the Copermittee's urban runoff management programs in their entirety, including jurisdictional, watershed, and regional activities. The fiscal analysis shall provide the Copermittee's urban runoff management program budget for the current reporting period. The fiscal analysis shall include a description of the source(s) of the funds that are proposed to be used to meet the necessary expenditures, including legal restrictions on the use of such funds.

H. TOTAL MAXIMUM DAILY LOADS

1. Chollas Creek Diazinon TMDL Water Quality Based Effluent Limits (WQBELs)

   a. The Copermittees in the Chollas Creek watershed shall implement BMPs capable of achieving the interim and final diazinon Waste Load Allocation (WLA) concentration in the storm water discharge in Chollas Creek listed in Table 5.

Table 5. Chollas Creek Diazinon Schedule

Calendar Year	Year	Waste Load Allocation	Interim TMDL Numeric Target	% Reduction
2004	1	0.460 µg/L	0.5 µg/L	0
2005	2	0.460 µg/L	0.5 µg/L	0
2006	3	0.460 µg/L	0.5 µg/L	0
2007	4	0.414 µg/L	0.45 µg/L	10
2008	5	0.322 µg/L	0.35 µg/L	20
2009	6	0.184 µg/L	0.20 µg/L	30
2010	7	0.045 µg/L	0.05 µg/L	30

b. The Copermittees in the Chollas Creek watershed shall not cause or contribute to the violation of the Interim TMDL Numeric Targets in Chollas Creek as listed in Table 5. If the Interim TMDL Numeric Target is violated in Chollas Creek in more than one sample in any three consecutive years, the Copermittees shall submit a report that either 1) documents compliance with the WLA through additional sampling of the urban runoff discharge or 2) demonstrates, using modeling or other technical or scientific basis, the effectiveness of additional BMPs that will be implemented to achieve the WLA. The report may be incorporated into the Watershed Urban Runoff Management Program Annual Report unless the Regional Board directs an earlier submittal. The report shall include an implementation schedule.

c. The Copermittees in the Chollas Creek watershed shall implement the Diazinon Toxicity Control Plan and Diazinon Public Outreach/Education Program as described in the report titled, "Technical Report for Total Maximum Daily Load for Diazinon in Chollas Creek Watershed, San Diego County, August 14, 2002," including subsequent modifications, in order to achieve the WLA listed in Table 5.

2. Shelter Island Yacht Basin WQBELs

a. The Copermittees in the Shelter Island Yacht Basin watershed shall implement BMPs to maintain a total annual copper discharge load of less than or equal to 30 kg copper / year.

b. The Copermittees in the Shelter Island Yacht Basin watershed shall implement, at a minimum, the BMPs included in the Copermittees' Jurisdictional Urban Runoff Management Plan, including subsequent modifications, which address the discharge of copper to achieve the annual copper load in Section H.2.a above.

I. PROGRAM EFFECTIVENESS ASSESSMENT

1. Jurisdictional

a. As part of its Jurisdictional Urban Runoff Management Program, each Copermittee shall annually assess the effectiveness of its Jurisdictional Urban Runoff Management Program implementation. At a minimum, the annual effectiveness assessment shall:

(1) Specifically assess the effectiveness of each of the following:

(a) Each significant jurisdictional activity/BMP or type of jurisdictional activity/BMP implemented;
(b) Implementation of each major component of the Jurisdictional Urban Runoff Management Program (Development Planning, Construction, Municipal, Industrial/Commercial, Residential, Illicit Discharge Detection and Elimination, and Education); and
(c) Implementation of the Jurisdictional Urban Runoff Management Program as a whole.

(2) Identify and utilize measurable targeted outcomes, assessment measures, and assessment methods for each of the items listed in section I.1.a.(1) above.

(3) Utilize outcome levels 1-6[9] to assess the effectiveness of each of the items listed in section I.1.a.(1) above, where applicable and feasible.

(4) Utilize monitoring data and analysis from the Receiving Waters Monitoring Program to assess the effectiveness each of the items listed in section I.1.a.(1) above, where applicable and feasible.

(5) Utilize Implementation Assessment, Water Quality Assessment, and Integrated Assessment, where applicable and feasible.[10]

b. Based on the results of the effectiveness assessment, each Copermittee shall annually review its jurisdictional activities or BMPs to identify modifications and improvements needed to maximize Jurisdictional Urban Runoff Management Program effectiveness, as necessary to achieve compliance with section A of this Order. The Copermittees shall develop and implement a plan and schedule to address the identified modifications and improvements. Jurisdictional activities/BMPs that are ineffective or less effective than other comparable jurisdictional activities/BMPs shall be replaced or improved upon by implementation of more effective jurisdictional activities/BMPs. Where monitoring data exhibits persistent water quality problems that are caused or contributed to by MS4 discharges, jurisdictional activities or BMPs applicable to the water quality problems shall be modified and improved to correct the water quality problems.

c. As part of its Jurisdictional Urban Runoff Management Program Annual Reports, each Copermittee shall report on its Jurisdictional Urban Runoff Management Program effectiveness assessment as implemented under each of the requirements of sections I.1.a and I.1.b above.

2. Watershed

a. As part of its Watershed Urban Runoff Management Program, each watershed group of Copermittees (as identified in Table 4) shall annually assess the effectiveness of its Watershed Urban Runoff Management Program implementation. At a minimum, the annual effectiveness assessment shall:

(1) Specifically assess the effectiveness of each of the following:

[9] Effectiveness assessment outcome levels are defined in Attachment C of this Order.
[10] Implementation Assessment, Water Quality Assessment, and Integrated Assessment are defined in Attachment C of this Order.

(a) Each Watershed Water Quality Activity implemented;
(b) Each Watershed Education Activity implemented; and
(c) Implementation of the Watershed Urban Runoff Management Program as a whole.

(2) Identify and utilize measurable targeted outcomes, assessment measures, and assessment methods for each of the items listed in section I.2.a.(1) above.

(3) Utilize outcome levels 1-6 to assess the effectiveness of each of the items listed in sections I.2.a.(1)(a) and I.2.a.(1)(b) above, where applicable and feasible.

(4) Utilize outcome levels 1-4 to assess the effectiveness of implementation of the Watershed Urban Runoff Management Program as a whole, where applicable and feasible.

(5) Utilize outcome levels 5 and 6 to qualitatively assess the effectiveness of implementation of the Watershed Urban Runoff Management Program as a whole, focusing on the high priority water quality problem(s) of the watershed. These assessments shall attempt to exhibit the impact of Watershed Urban Runoff Management Program implementation on the high priority water quality problem(s) within the watershed.

(6) Utilize monitoring data and analysis from the Receiving Waters Monitoring Program to assess the effectiveness each of the items listed in section I.2.a.(1) above, where applicable and feasible.

(7) Utilize Implementation Assessment, Water Quality Assessment, and Integrated Assessment, where applicable and feasible.

b. Based on the results of the effectiveness assessment, the watershed Copermittees shall annually review their Watershed Water Quality Activities, Watershed Education Activities, and other aspects of the Watershed Urban Runoff Management Program to identify modifications and improvements needed to maximize Watershed Urban Runoff Management Program effectiveness, as necessary to achieve compliance with section A of this Order. The Copermittees shall develop and implement a plan and schedule to address the identified modifications and improvements. Watershed Water Quality Activities/Watershed Education Activities that are ineffective or less effective than other comparable Watershed Water Quality Activities/Watershed Education Activities shall be replaced or improved upon by implementation of more effective Watershed Water Quality Activities/Watershed Education Activities. Where monitoring data exhibits persistent water quality problems that are caused or contributed to by MS4 discharges, Watershed Water Quality Activities and Watershed Education Activities applicable to the water quality problems shall be modified and improved to correct the water quality problems.

c. As part of its Watershed Urban Runoff Management Program Annual Reports, each watershed group of Copermittees (as identified in Table 4) shall report on its Watershed Urban Runoff Management Program effectiveness assessment as implemented under each of the requirements of section I.2.a and I.2.b above.

3. **Regional**

a. As part of the Regional Urban Runoff Management Program, the Copermittees shall annually assess the effectiveness of Regional Urban Runoff Management Program implementation. At a minimum, the annual effectiveness assessment shall:

(1) Specifically assess the effectiveness of each of the following:

(a) Each regional activity/BMP or type of regional activity/BMP implemented, including regional residential education activities; and
(b) The Regional Urban Runoff Management Program as a whole.

(2) Identify and utilize measurable targeted outcomes, assessment measures, and assessment methods for each of the items listed in section I.3.a.(1) above.

(3) Utilize outcome levels 1-6 to assess the effectiveness of each of the items listed in sections I.3.a.(1) above, where applicable and feasible.

(4) Utilize monitoring data and analysis from the Receiving Waters Monitoring Program to assess the effectiveness each of the items listed in section I.3.a.(1) above, where applicable and feasible.

(5) Utilize Implementation Assessment, Water Quality Assessment, and Integrated Assessment, where applicable and feasible.

(6) Include evaluation of whether the Copermittees' jurisdictional, watershed, and regional effectiveness assessments are meeting the following objectives:

(a) Assessment of watershed health and identification of water quality issues and concerns.
(b) Evaluation of the degree to which existing source management priorities are properly targeted to, and effective in addressing, water quality issues and concerns.
(c) Evaluation of the need to address additional pollutant sources not already included in Copermittee programs.
(d) Assessment of progress in implementing Copermittee programs and activities.
(e) Assessment of the effectiveness of Copermittee activities in addressing priority constituents and sources.
(f) Assessment of changes in discharge and receiving water quality.
(g) Assessment of the relationship of program implementation to changes in pollutant loading, discharge quality, and receiving water quality.
(h) Identification of changes necessary to improve Copermittee programs, activities, and effectiveness assessment methods and strategies.

b. Based on the results of the effectiveness assessment, the Copermittees shall annually review their regional activities and other aspects of the Regional Urban Runoff Management Program to identify modifications and improvements needed maximize Regional Urban Runoff Management Program effectiveness, as necessary to achieve compliance with section A of this Order. The Copermittees shall develop and implement a plan and schedule to address the identified modifications and improvements. Regional activities that are ineffective or less effective than other

comparable regional activities shall be replaced or improved upon by implementation of more effective regional activities. Where monitoring data exhibits persistent water quality problems that are caused or contributed to by MS4 discharges, regional activities applicable to the water quality problems shall be modified and improved to correct the water quality problems.

c. Based on the results of the Copermittees' evaluation of their effectiveness assessments, the Copermittees shall modify their effectiveness assessment methods to improve their ability to accurately assess the effectiveness of their urban runoff management programs.

d. As part of its Regional Urban Runoff Management Program Annual Reports, the Copermittees shall report on its Regional Urban Runoff Management Program effectiveness assessment as implemented under each of the requirements of sections I.3.a, I.3.b, and I.3.c above.

4. TMDL BMP Implementation Plan

a. For each TMDL in a watershed, the Copermittees subject to the TMDL within the watershed shall annually assess the effectiveness of its TMDL BMP Implementation Plan or equivalent plan.[11] At a minimum, the annual effectiveness assessment shall:

(1) Specifically assess the effectiveness of each of the following:

(a) Each activity/BMP or type of activity/BMP implemented; and
(b) Implementation of the TMDL BMP Implementation Plan or equivalent plan as a whole.

(2) Identify and utilize measurable targeted outcomes, assessment measures, and assessment methods for each of the items listed in sections I.4.a.(1) above.

(3) Utilize outcome levels 1-6 to assess the effectiveness of each of the items listed in section I.4.a.(1)(a) above, where applicable and feasible.

(4) Utilize outcome levels 1-4 to assess the effectiveness of implementation of the TMDL BMP Implementation Plan or equivalent plan as a whole, where applicable and feasible.

(5) Utilize outcome levels 5 and 6 to qualitatively assess the effectiveness of the TMDL BMP Implementation Plan or equivalent plan as a whole. These assessments shall attempt to exhibit the effects of the TMDL BMP Implementation Plan or equivalent plan on the impairment that is targeted.

b. Based on the results of the effectiveness assessment, the Copermittees subject to the TMDL shall modify their BMPs and other aspects of the TMDL BMP Implementation Plan or equivalent plan in order to maximize TMDL BMP Implementation Plan or equivalent plan effectiveness. BMPs that are ineffective or less effective than other comparable BMPs shall be replaced or improved upon by implementation of more effective BMPs. Where monitoring data exhibits persistent

[11] This requirement applies to those TMDLs where a TMDL BMP Implementation Plan or equivalent plan has been developed and submitted to the Regional Board.

water quality problems that are caused or contributed to by MS4 discharges, BMPs applicable to the water quality problems shall be modified and improved to correct the water quality problems.

c. As part of its Watershed Urban Runoff Management Program Annual Reports, each group of Copermittees subject to a TMDL shall report on any TMDL BMP Implementation Plan or equivalent plan effectiveness assessments as implemented under each of the requirements of sections I.4.a and I.4.b above.

5. Long-term Effectiveness Assessment

a. Each Copermittee shall collaborate with the other Copermittees to develop a Long-term Effectiveness Assessment (LTEA), which shall build on the results of the Copermittees' August 2005 Baseline LTEA. The LTEA shall be submitted by the Principal Permittee to the Regional Board no later than 210 days in advance of the expiration of this Order.

b. The LTEA shall be designed to address each of the objectives listed in section I.3.a.(6) of this Order, and to serve as a basis for the Copermittees' Report of Waste Discharge for the next permit cycle.

c. The LTEA shall address outcome levels 1-6, and shall specifically include an evaluation of program implementation to changes in water quality (outcome levels 5 and 6).

d. The LTEA shall assess the effectiveness of the Receiving Waters Monitoring Program in meeting its objectives and its ability to answer the five core management questions. This shall include assessment of the frequency of monitoring conducted through the use of power analysis and other pertinent statistical methods. The power analysis shall identify the frequency and intensity of sampling needed to identify a 10% reduction in the concentration of constituents causing the high priority water quality problems within each watershed over the next permit term with 80% confidence.

e. The LTEA shall address the jurisdictional, watershed, and regional programs, with an emphasis on watershed assessment.

J. REPORTING

1. Urban Runoff Management Plans

a. JURISDICTIONAL URBAN RUNOFF MANAGEMENT PLANS

(1) Copermittees - The written account of the overall program to be conducted by each Copermittee to meet the jurisdictional requirements of section D of this Order is referred to as the Jurisdictional Urban Runoff Management Plan (JURMP). Each Copermittee shall revise and update its JURMP so that it describes all activities the Copermittee will undertake to implement the requirements of each component of Jurisdictional Urban Runoff Management Program section D of this Order. Each Copermittee shall submit its updated and revised JURMP to the Principal Permittee by the date specified by the Principal

Permittee.

(2) Principal Permittee –The Principal Permittee shall be responsible for collecting and assembling the individual JURMPs which cover the activities conducted by each individual Copermittee. The Principal Permittee shall submit the JURMPs to the Regional Board 365 days after adoption of this Order.

(3) At a minimum, each Copermittee's JURMP shall be updated and revised to contain the following information:

(a) Non-Storm Water Discharges
   i. Identification of non-storm water discharge categories identified as a source of pollutants to waters of the U.S.
   ii. A description of whether non-storm water discharge categories identified under section (a)i above will be prohibited or required to implement appropriate control measures to reduce the discharge of pollutants to the MEP.
   iii. Identification of any control measures to be required and implemented for non-storm water discharge categories identified under section (a)i above.
   iv. A description of a program to reduce pollutants from non-emergency fire fighting flows identified by the Copermittee to be significant sources of pollutants.

(b) Administrative and Legal Procedures
   i. Certified statement by the chief legal counsel that the Copermittee has adequate legal authority to implement and enforce each of the requirements contained in 40 CFR 122.26(d)(2)(i)(A-F) and this Order.
   ii. Identification of all departments within the jurisdiction that conduct urban runoff related activities, and their roles and responsibilities under the Order. Include an up-to-date organizational chart specifying these departments and key personnel.
   iii. Updated urban runoff related ordinances, with explanations of how they are enforceable.
   iv. Identification of the local administrative and legal procedures available to mandate compliance with urban runoff related ordinances and therefore with the conditions of the Order.
   v. Description of how urban runoff related ordinances are implemented and appealed.
   vi. Description of whether the municipality can issue administrative orders and injunctions or if it must go through the court system for enforcement actions.

(c) Development Planning
   i. A description of the water quality and watershed protection principles that have been or will be included in the Copermittee's General Plan, and a time schedule for when modifications are planned, if applicable.
   ii. A description of the Copermittee's current environmental review process and how it addresses impacts to water quality and appropriate mitigation measures. If the Copermittee plans to modify the process during the permit term, a time schedule for modifications shall be included.

iii. A description of the development project approval process and requirements.
iv. An updated SUSMP document that meets the applicable requirements specified in sections D.1.d and D.1.g(6), including a description of LID BMP requirements to be used prior to the Model SUSMP update. The updated SUSMP may be submitted under separate cover as an attachment to the JURMP.
v. A description of the database to be used to track and inventory approved treatment control BMPs and treatment control BMP maintenance.
vi. A completed watershed-based inventory of approved treatment control BMPs.
vii. A description of the program to be implemented to verify approved treatment control BMPs are operating effectively and have been adequately maintained, including information on treatment control BMP inventory, prioritization, inspection, and annual verification.
viii. A description of inspections that will be conducted to verify BMPs have been constructed according to requirements.
ix. A description of collaboration efforts to be conducted to develop the HMP.
x. A description of enforcement mechanisms and how they will be used.

(d) Construction
i. Updated grading and other applicable ordinances.
ii. A description of the construction and grading approval processes.
iii. Updated construction and grading project requirements.
iv. A completed watershed-based inventory of all construction sites.
v. A description of steps that will be taken to maintain and update monthly a watershed-based inventory of all construction sites.
vi. A list and description of the minimum BMPs that will be implemented, or required to be implemented, including pollution prevention.
vii. A description of the maximum disturbed area allowed for grading before either temporary or permanent erosion controls are implemented.
viii. A description of construction site conditions where advanced treatment will be required.
ix. A description of the steps that will be taken to require and verify the implementation of the designated BMPs at all construction sites.
x. A description of planned inspection frequencies.
xi. A description of inspection procedures.
xii. A description of steps that will be taken to track construction site inspections to verify that all construction sites are inspected at the minimum frequencies required.
xiii. A description of available enforcement mechanisms, under what conditions each will be used, and how they will escalate.
xiv. A description of notification procedures for non-compliant sites.

(e) Municipal
i. A completed inventory of all municipal facilities and activities.
ii. A description of which BMPs will be implemented, or required to be implemented, for municipal facilities and activities, including pollution prevention.
iii. A description of which BMPs will be implemented, or required to be implemented, for special events.

iv. A description of steps that will be taken to require and verify the implementation of designated BMPs at municipal facilities and activities.
v. A description of MS4 and MS4 facility inspection and maintenance activities and schedules.
vi. A description of the management strategy and BMPs to be implemented for pesticides, herbicides, and fertilizer use.
vii. A description of street and parking facility sweeping activities and schedules.
viii. A description of controls and measures to be implemented to prevent and eliminate infiltration of seepage from sanitary sewers to MS4s.
ix. A description of inspection frequencies and procedures.
x. A description of enforcement mechanisms and how they will be used.

(f) Industrial and Commercial
i. A completed and prioritized inventory of all industrial and commercial sites/sources that could contribute a significant pollutant load to the MS4.
ii. A list of minimum BMPs that will be implemented, or required to be implemented, for each facility type or pollutant-generating activity, including pollution prevention.
iii. A description of the steps that will be taken to require and verify the implementation of designated BMPs, including notification efforts.
iv. Identification of high priority sites/sources and sites/sources to be inspected during the first year of implementation.
v. A description of the steps taken to identify sites/sources to be inspected during the first year of implementation, including rationale for their selection.
vi. A description of steps that will be taken to identify sites/sources to be inspected in subsequent years.
vii. A description of inspection procedures.
viii. A description of any third party inspection program to be implemented.
ix. A description of the program to be implemented to regulate mobile businesses, including notification of BMP requirements and local ordinances.
x. A description of enforcement mechanisms and how they will be used.
xi. A description of steps that will be taken to identify non-filers and notify the Regional Board of non-filers.

(g) Residential
i. A list of residential areas and activities that have been identified as high priority.
ii. A list of minimum BMPs that will be implemented, or required to be implemented, for high priority residential activities.
iii. A description of which pollution prevention methods will be encouraged for implementation, and the steps that will be taken to encourage implementation.
iv. A description of the steps that will be taken to require and verify the implementation of prescribed BMPs for high priority residential activities.
v. A description of efforts to facilitate proper disposal of used oil and other toxic materials.

vi. A description of efforts to evaluate methods used for oversight of residential areas and activities.
vii. A description of enforcement mechanisms and how they will be used.

(h) Illicit Discharge Detection and Elimination
i. A description of the program to actively seek and eliminate illicit discharges and illicit connections.
ii. An updated MS4 map, including locations of the MS4, dry weather field screening and analytical monitoring sites, and watersheds.
iii. A description of dry weather field screening and analytical monitoring to be conducted (including procedures) which addresses all requirements included in sections B.1-4 of Receiving Waters Monitoring and Reporting Program No. R9-2006-0011.
iv. A description of investigation and inspection procedures to follow up on dry weather monitoring results or other information which indicate potential for illicit discharges and illicit connections.
v. A description of procedures to eliminate detected illicit discharges and illicit connections.
vi. A description of enforcement mechanisms and how they will be used.
vii. A description of the mechanism to receive notification of spills.
viii. A description of measures to prevent, respond to, contain, and clean up all sewage and other spills.
ix. A description of efforts to facilitate public reporting of illicit discharges and connections, including a public hotline.

(i) Education
i. A description of the content, form, and frequency of education efforts for each target community.
ii. A description of steps to be taken to educate underserved target audiences, high-risk behaviors, and "allowable" behaviors and discharges, including various ethnic and socioeconomic groups and mobile sources.
iii. A description of the content, form, and frequency of education efforts targeting municipal staff working on development planning, construction, municipal, industrial/commercial, and other aspects of the Jurisdictional Urban Runoff Management Program.
iv. A description of the content, form, and frequency of education efforts targeting new development and construction target communities.
v. A description of the content, form, and frequency of jurisdictional education efforts for the residential, general public, and school children target communities.

(j) Public Participation
i. A description of the steps that will be taken to include public participation in the development and implementation of each Copermittee's Jurisdictional Urban Runoff Management Program.

(k) Fiscal Analysis
i. A description of the fiscal analysis to be conducted annually, as required by section G of this Order.

(l) Program Effectiveness Assessment

i. A description of steps that will be taken to annually conduct program effectiveness assessments in compliance with section I.1 of the Order.

ii. Identify measurable targeted outcomes, assessment measures, and assessment methods to be used to assess the effectiveness of: (1) Each significant jurisdictional activity or BMP to be implemented; (2) Implementation of each major component of the Jurisdictional Urban Runoff Management Program; and (3) Implementation of the Jurisdictional Urban Runoff Management Program as a whole.

iii. Identify which of the outcome levels 1-6 will be utilized to assess the effectiveness of each of the items listed in sections J.1.a.(3)(l)ii(1-3). Where an outcome level is determined to not be applicable or feasible for an item listed in sections J.1.a.(3)(l)ii(1-3), the Copermittee shall provide a discussion exhibiting inapplicability or infeasibility.

iv. A description of the steps that will be taken to utilize monitoring data to assess the effectiveness of each of the items listed in sections J.1.a.(3)(l)ii(1-3).

v. A description of the steps that will be taken to improve the Copermittee's ability to assess program effectiveness using measurable targeted outcomes, assessment measures, assessment methods, and outcome levels 1-6. Include a time schedule for when improvement will occur.

vi. A description of the steps that will be taken to identify aspects of the Copermittee's Jurisdictional Urban Runoff Management Program that will be changed, based on the results of the effectiveness assessment.

(m) JURMP Modification

i. Identification of the location in the JURMP of any changes made to the JURMP in order to meet the requirements of Order No. R9-2007-0001.

b. WATERSHED URBAN RUNOFF MANAGEMENT PLANS

(1) Copermittees - The written account of the program conducted by each watershed group of Copermittees is referred to as the Watershed Urban Runoff Management Plan (WURMP). The Copermittees within each watershed shall be responsible for updating and revising each WURMP, as specified in Table 4 above. Each WURMP shall be updated and revised to describe all activities the watershed Copermittees will undertake to implement the Watershed Urban Runoff Management Program requirements of section E of this Order.

(2) Lead Watershed Permittee - Each Lead Watershed Permittee shall be responsible for producing its respective WURMP, as well as for coordination and meetings amongst all member watershed Copermittees. Each Lead Watershed Permittee is further responsible for the submittal of the WURMP to the Principal Permittee by the date specified by the Principal Permittee.

(3) Principal Permittee – The Principal Permittee shall assemble and submit the WURMPs to the Regional Board 365 days after adoption of this Order.

(4) Each WURMP shall include:

(a) Identification of the Lead Watershed Permittee for the watershed.
(b) An updated watershed map.

(c) Identification and description of all applicable water quality data, reports, analyses, and other information to be used to assess receiving water quality.
(d) Assessment and analysis of the watershed's water quality data, reports, analyses, and other information, including identification and prioritization of the watershed's water quality problems. Water quality problems and high priority water quality problems shall be identified.
(e) Identification of the likely sources, pollutant discharges, and/or other factors causing the high priority water quality problems within the watershed.
(f) A description of the program to be implemented to encourage collaborative, watershed-based, land-use planning.
(g) A description of the strategy to be used to guide Copermittee implementation of Watershed Water Quality Activities and Watershed Education Activities, including criteria for evaluating and identifying effective activities.
(h) A list of potential Watershed Water Quality Activities, including a description of each activity and its location(s).
(i) Identification and description of the Watershed Water Quality Activities to be implemented by each Copermittee for the first year of implementation, including justification for why the activities were chosen and a description of how the activities are expected to reduce discharged pollutant loads, abate pollutant sources, or result in other quantifiable benefits to discharge or receiving water quality, in relation to the watershed's high priority water quality problem(s). Plans for activity implementation beyond the first year of implementation should also be provided.
(j) A list of potential Watershed Education Activities.
(k) Identification and description of the Watershed Education Activities to be implemented by each Copermittee for the first year of implementation, including justification for why the activities were chosen and a description of how the activities are expected to directly target the sources and discharges of pollutants causing the watershed's high priority water quality problems. Plans for activity implementation beyond the first year of implementation should also be provided.
(l) A description of the public participation mechanisms to be used and the parties anticipated to be involved.
(m) A description of Copermittee collaboration to occur, including a schedule for WURMP meetings.
(n) A description of any TMDL BMP Implementation Plan or equivalent plan to be implemented under section H of this Order.[12]
(o) A detailed description of the effectiveness assessment to be conducted for the WURMP, including a description how each of the requirements in section I.2 of this Order will be met.

c. REGIONAL URBAN RUNOFF MANAGEMENT PLAN

(1) Copermittees - The written account of the regional program to be conducted is referred to as the Regional Urban Runoff Management Plan (RURMP). Each Copermittee shall collaborate with the other Copermittees to develop the RURMP. The RURMP shall describe all activities the Copermittees will undertake to implement the requirements of each component of Regional Urban

[12] For TMDLs not yet approved by the Office of Administrative Law at the time of adoption of this Order, TMDL BMP Implementation Plans shall be submitted separately 365 days following approval of the TMDL.

Runoff Management Program section F of this Order. At a minimum, the RURMP shall contain the following information:

(a) A common activities section that describes the urban runoff management activities to be implemented on a regional level. For regional activities which are to be implemented in compliance with any jurisdictional requirements of section D or watershed requirements of section E, it shall be described how the regional activities achieve compliance with the subject jurisdictional and/or watershed requirements.
(b) A description of steps that will be taken to facilitate assessment of the effectiveness of jurisdictional, watershed, and regional programs.
(c) A description of the regional residential education program to be implemented.
(d) A description of the strategy for development of the standardized fiscal analysis method required by section G of this Order.
(e) A detailed description of the effectiveness assessment to be conducted for the Regional Urban Runoff Management Program, including a description how each of the requirements in section I.3 of this Order will be met.

(2) The Principal Permittee shall be responsible for creating and submitting the RURMP. The Principal Permittee shall submit the RURMP to the Regional Board 365 days after adoption of this Order.

2. Other Required Reports and Plans

a. HYDROMODIFICATION MANAGEMENT PLAN

(1) Copermittees - Each Copermittee shall collaborate with the other Copermittees to develop the HMP. The HMP shall be submitted for approval by the Regional Board.

(2) Principal Permittee - The Principal Permittee shall be responsible for producing and submitting each document according to the schedule below.

(a) Within 180 days of adoption of the Order: Submit a detailed workplan and schedule for completion of the literature review, development of a protocol to identify an appropriate channel standard and limiting range of flow rates, development of guidance materials, and other required information;
(b) Within 18 months of adoption of the Order: Submit progress report on completion of requirements of the HMP;
(c) Within 2 years of adoption of the Order: Submit a draft HMP, including the analysis that identifies the appropriate limiting range of flow rates;
(d) Within 180 days of receiving comments from the Regional Board: Submit the HMP for Regional Board approval.

b. SUSMP UPDATES

Each Copermittee shall collaborate with the other Copermittees to update the Model SUSMP. The Principal Permittee shall be responsible for producing and submitting the updated Model SUSMP in accordance with the requirements of section D.1.d.(8)(b). Each Copermittee shall submit its updated local SUSMP, consistent

with the updated Model SUSMP, in accordance with the requirements of section D.1.d.(8)(c).

c. LONG-TERM EFFECTIVENESS ASSESSMENT

In accordance with section I.5 of this Order, the Principal Permittee shall submit the LTEA to the Regional Board no later than 210 days in advance of the expiration of this Order.

d. REPORT OF WASTE DISCHARGE

The Principal Permittee shall submit to the Regional Board, no later than 210 days in advance of the expiration date of this Order, a Report of Waste Discharge (ROWD) as an application for issuance of new waste discharge requirements. At a minimum, the ROWD shall include the following: (1) Proposed changes to the Copermittees' urban runoff management programs; (2) Proposed changes to monitoring programs; (3) Justification for proposed changes; (4) Name and mailing addresses of the Copermittees; (5) Names and titles of primary contacts of the Copermittees; and (6) Any other information necessary for the reissuance of this Order.

3. Annual Reports

a. JURISDICTIONAL URBAN RUNOFF MANAGEMENT PROGRAM ANNUAL REPORTS

Each Jurisdictional Urban Runoff Management Program Annual Report shall contain a comprehensive description of all activities conducted by the Copermittee to meet all requirements of section D. The reporting period for these annual reports shall be the previous fiscal year. For example, the report submitted September 30, 2008 shall cover the reporting period July 1, 2007 to June 30, 2008.

(1) Copermittees – Each Copermittee shall generate individual Jurisdictional Urban Runoff Management Program Annual Reports which cover implementation of its jurisdictional activities during the past annual reporting period. Each Copermittee shall submit to the Principal Permittee its individual Jurisdictional Urban Runoff Management Program Annual Report by the date specified by the Principal Permittee. Each individual Jurisdictional Urban Runoff Management Program Annual Report shall be a comprehensive description of all activities conducted by the Copermittees to meet all requirements of each component of section D of this Order.

(2) Principal Permittee – The Principal Permittee shall submit Unified Jurisdictional Urban Runoff Management Program Annual Reports to the Regional Board by September 30 of each year, beginning on September 30, 2008. The Unified Jurisdictional Urban Runoff Management Program Annual Report shall contain the twenty-one individual Jurisdictional Urban Runoff Management Program Annual Reports.

The Principal Permittee shall also be responsible for collecting and assembling each Copermittees' individual Jurisdictional Urban Runoff Management Program Annual Report.

(3) At a minimum, each Jurisdictional Urban Runoff Management Program Annual Report shall contain the following information:

(a) Development Planning

i. A description of any amendments to the General Plan, the environmental review process, development project approval processes, or development project requirements.

ii. Confirmation that all development projects were required to undergo the Copermittee's urban runoff approval process and meet the applicable project requirements, including a description of how this information was tracked.

iii. A listing of the development projects to which SUSMP requirements were applied.

iv. Confirmation that all applicable SUSMP BMP requirements were applied to all priority development projects, including a description of how this information was tracked.

v. At least one example of a priority development project that was conditioned to meet SUSMP requirements and a description of the required BMPs.

vi. A listing of the priority development projects which were allowed to implement treatment control BMPs with low removal efficiency rankings, including the feasibility analyses which were conducted to exhibit that more effective BMPs were infeasible.

vii. An updated treatment control BMP inventory.

viii. The number of treatment control BMPs inspected, including a summary of inspection results and findings.

ix. A description of the annual verification of operation and maintenance of treatment control BMPs, including a summary of verification results and findings.

x. Confirmation that BMP verification was conducted for all priority development projects prior to occupancy, including a description of how this information was tracked.

xi. A listing of any projects which received a SUSMP waiver.

xii. A description of implementation of any SUSMP waiver mitigation program.

xiii. A description of Hydromodification Management Plan (HMP) development collaboration and participation.

xiv. A listing of development projects required to meet HMP requirements, including a description of hydrologic control measures implemented.

xv. A listing of priority development projects not required to meet HMP requirements, including a description of why the projects were found to be exempt from the requirements.

xvi. A listing of development projects disturbing 50 acres or more, including information on whether Interim Hydromodification Criteria were met by each of the projects, together with a description of hydrologic control measures implemented for each applicable project.

xvii. The number of violations and enforcement actions (including types) taken for development projects, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.

xviii. A description of notable activities conducted to manage urban runoff from development projects.

(b) Construction

i. Confirmation that all construction sites were required to undergo the Copermittee's construction urban runoff approval process and meet the applicable construction requirements, including a description of how this information was tracked.
ii. Confirmation that a regularly updated construction site inventory was maintained, including a description of how the inventory was managed.
iii. A description of modifications made to the construction and grading ordinances and approval processes.
iv. Confirmation that the designated BMPs were implemented, or required to be implemented, for all construction sites.
v. Confirmation that a maximum disturbed area for grading was applied to all applicable construction sites.
vi. A listing of all construction sites with conditions requiring advanced treatment, together with confirmation that advanced treatment was required at such construction sites.
vii. For each construction site within each priority category (high, medium, and low), identification of the period of time (weeks) the site was active within the rainy season, the number of inspections conducted during the rainy season, and the number of inspections conducted during the dry season, and the total number of inspections conducted for all sites.
viii. A description of the general results of the inspections.
ix. Confirmation that the inspections conducted addressed all the required inspection steps to determine full compliance.
x. The number of violations and enforcement actions (including types) taken for construction sites, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.
xi. A description of notable activities conducted to manage urban runoff from construction sites.

(c) Municipal

i. Any updates to the municipal inventory and prioritization.
ii. Confirmation that the designated BMPs were implemented, or required to be implemented, for municipal areas and activities, as well as special events.
iii. A description of inspections and maintenance conducted for municipal treatment controls.
iv. Identification of the total number of catch basins and inlets, the number of catch basins and inlets inspected, the number of catch basins and inlets found with accumulated waste exceeding cleaning criteria, and the number of catch basins and inlets cleaned.
v. Identification of the total distance (miles) of the MS4, the distance of the MS4 inspected, the distance of the MS4 found with accumulated waste exceeding cleaning criteria, and the distance of the MS4 cleaned.
vi. Identification of the total distance (miles) of open channels, the distance of open channels inspected, the distance of open channels found with anthropogenic litter, and the distance of open channels cleaned.

vii. Amount of waste and litter (tons) removed from catch basins, inlets, the MS4, and open channels, by category.
viii. Identification of any MS4 facility found to require inspection less than annually following two years of inspection, including justification for the finding.
ix. Confirmation that the designated BMPs for pesticides, herbicides, and fertilizers were implemented, or required to be implemented, for municipal areas and activities.
x. Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating the highest volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.
xi. Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating moderate volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.
xii. Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating low volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.
xiii. Identification of the total distance of curb-miles swept.
xiv. Identification of the number of municipal parking lots, the number of municipal parking lots swept, and the frequency of sweeping.
xv. Amount of material (tons) collected from street and parking lot sweeping.
xvi. A description of efforts implemented to prevent and eliminate infiltration from the sanitary sewer to the MS4
xvii. Identification of the number of sites requiring inspections, the number of sites inspected, and the frequency of the inspections.
xviii. A description of the general results of the inspections.
xix. Confirmation that the inspections conducted addressed all the required inspection steps to determine full compliance.
xx. The number of violations and enforcement actions (including types) taken for municipal areas and activities, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.
xxi. A description of notable activities conducted to manage urban runoff from municipal areas and activities.

(d) Industrial and Commercial
i. Any updates to the industrial and commercial inventory.
ii. Confirmation that the designated BMPs were implemented, or required to be implemented, for industrial and commercial sites/sources.
iii. A description of efforts taken to notify owners/operators of industrial and commercial sites/sources of BMP requirements, including mobile businesses.
iv. Identification of the total number of industrial and commercial sites/sources inventoried and the total number inspected.
v. Justification and rationale for why the industrial and commercial sites/sources inspected were chosen for inspection.

vi. Confirmation that all inspections conducted addressed all the required inspection steps to determine full compliance.
vii. Identification of the number of third party inspections conducted.
viii. Identification of efforts conducted to verify third party inspection effectiveness.
ix. A description of efforts implemented to address mobile businesses.
x. The number of violations and enforcement actions (including types) taken for industrial and commercial sites/sources, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.
xi. A description of steps taken to identify non-filers and a list of non-filers (under the General Industrial Permit) identified by the Copermittees.
xii. A description of notable activities conducted to manage urban runoff from industrial and commercial sites/sources.

(e) Residential
i. Identification of the high threat to water quality residential areas and activities that were focused on.
ii. Confirmation that the designated BMPs were implemented, or required to be implemented, for residential areas and activities.
iii. A description of efforts implemented to facilitate proper management and disposal of used oil and other household hazardous materials.
iv. Types and amounts of household hazardous wastes collected, if applicable.
v. A description of any evaluation of methods used for oversight of residential areas and activities, as well as any findings of the evaluation.
vi. The number of violations and enforcement actions (including types) taken for residential areas and activities, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.
vii. A description of collaboration efforts taken to develop and implement the Regional Residential Education Program.
viii. A description of notable activities conducted to manage urban runoff from residential areas and activities.

(f) Illicit Discharge Detection and Elimination
i. Correction of any inaccuracies in either the MS4 map or the Dry Weather Field Screening and Analytical Stations Map.
ii. Reporting of all dry weather field screening and analytical monitoring results. The data should be presented in tabular and graphical form. The reporting shall include station locations, all dry weather field screening and analytical monitoring results, identification of sites where results exceeded action levels, follow-up and elimination activities for potential illicit discharges and connections, the rationale for why follow-up investigations were not conducted at sites where action levels were exceeded, any Copermittee or consultant program recommendations/changes resulting from the monitoring, and documentation that these recommendations/changes have been implemented. Dry weather field screening and analytical monitoring reporting shall comply with all monitoring and standard reporting

requirements in Attachment B of Order No. R9-2007-0001 and Receiving Waters Monitoring and Reporting Program No. R9-2007-0001.

iii. Any dry weather field screening and analytical monitoring consultant reports generated, to be provided as an attachment to the annual report.
iv. A brief description of any other investigations and follow-up activities for illicit discharges and connections.
v. The number and brief description of illicit discharges and connections identified.
vi. The number of illicit discharges and connections eliminated.
vii. Identification and description of all spills to the MS4 and response to the spills.
viii. A description of activities implemented to prevent sewage and other spills from entering the MS4.
ix. A description of the mechanism whereby notification of sewage spills from private laterals and septic systems is received.
x. Number of times the hotline was called, as compared to previous reporting periods, and a summary of the calls.
xi. A description of efforts to publicize and facilitate public reporting of illicit discharges.
xii. The number of violations and enforcement actions (including types) taken for illicit discharges and connections, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.
xiii. A description of notable activities conducted to manage illicit discharges and connections.

(g) Education
i. A description of education efforts conducted for each target community.
ii. A description of how education efforts targeted underserved target audiences, high-risk behaviors, and "allowable" behaviors and discharges.
iii. A description of education efforts conducted for municipal departments and personnel.
iv. A description of education efforts conducted for the new development and construction communities.
v. A description of jurisdictional education efforts conducted for residents, the general public, and school children.

(h) Public Participation
i. A description of public participation efforts conducted.

(i) Program Effectiveness Assessment
i. An assessment of the effectiveness of the Jurisdictional Urban Runoff Management Program which meets all requirements of section I.1 of this Order.

(j) Fiscal Analysis
i. A fiscal analysis of the Copermittee's urban runoff management programs which meets all requirements of section G of this Order.

(k) Special Investigations
i. A description of any special investigations conducted.

(l) Non-Emergency Fire Fighting
i. A description of any efforts conducted to reduce pollutant discharges from non-emergency fire fighting flows.

(m) JURMP Revisions
i. A description of any proposed revisions to the JURMP.

b. WATERSHED URBAN RUNOFF MANAGEMENT PROGRAM ANNUAL REPORTS

(1) Lead Watershed Permittee - Each Lead Watershed Permittee shall generate watershed specific Watershed Urban Runoff Management Program Annual Reports for their respective watershed(s), as they are outlined in Table 4 of Order No. R9-2007-0001. Copermittees within each watershed shall collaborate with the Lead Watershed Permittee to generate the Watershed Urban Runoff Management Program Annual Reports.

(2) Each Watershed Urban Runoff Management Program Annual Report shall be a comprehensive documentation of all activities conducted by the watershed Copermittees during the previous annual reporting period to meet all requirements of section E of Order No. R9-2007-0001. Each Watershed Urban Runoff Management Program Annual Report shall also serve as an update to the WURMP.[13] Each Watershed Urban Runoff Management Program Annual Report shall, at a minimum, contain the following for its reporting period:

(a) A comprehensive description of all activities conducted by the watershed Copermittees to meet all requirements of section E of Order No. R9-2007-0001.

(b) Any updates to the watershed map.

(c) An updated assessment and analysis of the watershed's current and past applicable water quality data, reports, analyses, and other information, including identification of the watershed's water quality problems and high priority water quality problem(s) during the reporting period. The annual report shall clearly state if the watershed's high priority water quality problem(s) changed from the previous reporting period, and provide justification for the change(s).

(d) Identification of the likely sources, pollutant discharges, and/or other factors causing the high priority water quality problems within the watershed. The annual report shall clearly describe any changes to the identified sources, pollutant discharges, and/or other factors that have occurred since the previous reporting period, and provide justification for the changes.

[13] The first annual report to be submitted is not anticipated to be an update to the WURMP, since it will cover the reporting period which begins immediately after WURMP submittal.

(e) An updated list of potential Watershed Water Quality Activities. The annual report shall clearly describe any changes to the list of Watershed Water Quality Activities that have occurred since the previous reporting period, and provide justification for the changes.

(f) Identification and description of the Watershed Water Quality Activities implemented by each Copermittee during the reporting period, including information on the activities' location(s), as well as information exhibiting that the activities in active implementation phase reduced discharged pollutant loads, abated pollutant sources, or resulted in other quantifiable benefits to discharge or receiving water quality, in relation to the watershed's high priority water quality problem(s). The annual report shall clearly describe any changes to Watershed Water Quality Activities implementation that have occurred since the previous reporting period, and provide justification for the changes.

(g) An updated list of potential Watershed Education Activities. The annual report shall clearly describe any changes to the list of Watershed Education Activities that have occurred since the previous reporting period, and provide justification for the changes.

(h) Identification and description of the Watershed Education Activities implemented by each Copermittee for the reporting period, including information exhibiting that the activities directly targeted the sources and discharges of pollutants causing the watershed's high priority water quality problems, and that activities in active implementation phase changed target audience attitudes, knowledge, awareness, or behavior. The annual report shall clearly describe any changes to Watershed Education Activities implementation that have occurred since the previous reporting period, and provide justification for the changes.

(i) A description of the public participation mechanisms used during the reporting period and the parties that were involved.

(j) A description of Copermittee collaboration efforts.

(k) A description of efforts implemented to encourage collaborative, watershed-based, land-use planning.

(l) A description of all TMDL activities implemented (including BMP Implementation Plan or equivalent plan activities) for each approved TMDL in the watershed. The description shall include:

i. Any additional source identification information;
ii. The number, type, location, and other relevant information about BMP implementation, including any expanded or better tailored BMPs necessary to meet the WLAs;
iii. Updates in the BMP implementation prioritization and schedule;
iv. An assessment of the effectiveness of the BMP Implementation Plan, which meets the requirements of section I.4 Order No. R9-2007-0001; and

v. A discussion of the progress to date in meeting the TMDL Numeric Targets and WLAs, which incorporates the results of the effectiveness assessment, compliance monitoring, and an evaluation of additional efforts needed to date.

(m) An assessment of the effectiveness of the WURMP, which meets the requirements of section I.2 of Order No. R9-2007-0001. The effectiveness assessment shall attempt to qualitatively or quantitatively exhibit the impact that implementation of the Watershed Water Quality Activities and the Watershed Education Activities had on the high priority water quality problem(s) within the watershed. This information shall document changes in pollutant load discharges, urban runoff and discharge quality, and receiving water quality, where applicable and feasible.

(3) Principal Permittee – The Unified Watershed Urban Runoff Management Program Annual Report shall contain the nine separate Watershed Urban Runoff Management Program Annual Reports. Each Lead Watershed Copermittee shall submit to the Principal Permittee a Watershed Urban Runoff Management Program Annual Report by the date specified by the Principal Permittee. The Principal Permittee shall assemble and submit the Unified Watershed Urban Runoff Management Program Annual Report to the Regional Board by January 31, 2009 and every January 31 thereafter. The reporting period for these annual reports shall be the previous fiscal year. For example, the report submitted January 31, 2009 shall cover the reporting period July 1, 2007 to June 30, 2008.

c. REGIONAL URBAN RUNOFF MANAGEMENT PROGRAM ANNUAL REPORTS

The Principal Permittee shall generate the Regional Urban Runoff Management Program Annual Reports. All Copermittees shall collaborate with the Principal Permittee to generate the Regional Urban Runoff Management Program Annual Reports. Each Regional Urban Runoff Management Program Annual Report shall be a comprehensive documentation of all regional activities conducted by the Copermittees during the previous annual reporting period to meet all requirements of section F of Order No. R9-2007-0001.

The Principal Permittee shall submit the Regional Urban Runoff Management Program Annual Report to the Regional Board by January 31, 2009 and every January 31 thereafter. The reporting period for these annual reports shall be the previous fiscal year. For example, the report submitted January 31, 2009 shall cover the reporting period July 1, 2007 to June 30, 2008.

Each Regional Urban Runoff Management Program Annual Report shall, at a minimum, contain the following:

(1) A common activities section that describes the urban runoff management activities or BMPs implemented on a regional level, including information on how the activities complied with jurisdictional or watershed requirements, if applicable.
(2) A description of steps taken to facilitate assessment of the effectiveness of jurisdictional, watershed, and regional programs.

(3) A description of the regional residential education activities implemented as part of the regional residential education program.
(4) A description of steps taken to develop and implement the standardized fiscal analysis method.
(5) An assessment of the effectiveness of the Regional Urban Runoff Management Program which meets the requirements of section I.3 of Order No. R9-2007-0001.

4. **Interim Reporting Requirements** - For the July 2006–June 2007 reporting period, Jurisdictional URMP and Watershed URMP Annual Reports shall be submitted on January 31, 2008. Each Jurisdictional URMP and Watershed URMP Annual Report submitted for this reporting period shall at a minimum be comprehensive descriptions of all activities conducted to fully implement the Copermittees' Jurisdictional URMP and Watershed URMP documents, as those documents were developed to comply with the requirements of Order No. 2001-01. The Principal Permittee shall be responsible for submitting these documents in a unified manner, consistent with the unified reporting requirements of Order No. 2001-01.

5. **Annual Report Integration**

a. The Copermittees are encouraged to submit, for Regional Board review and approval, an annual reporting format which integrates the information submitted in the JURMP, WURMP, and RURMP Annual Reports and Monitoring Reports. This document shall be called the "Integrated Annual Report Format." The Integrated Annual Report Format should:

(1) Exhibit compliance with all requirements of JURMP, WURMP, and RURMP sections D, E, and F of Order No. R9-2007-0001.
(2) Report all information required in section J.3 of Order No. R9-2007-0001.
(3) Report all information required in the Monitoring and Reporting program.
(4) Provide consistent and comparable reporting of jurisdictional and watershed information by all Copermittees and watershed groups.
(5) Specifically identify all types of information that will be reported (e.g., amount of debris collected during street sweeping), including reporting criteria for each type of information (e.g., reported in tons).
(6) Describe quality assurance/quality control methods to be used to assess accuracy of jurisdictional and watershed information conveyed.
(7) Describe each Copermittee's reporting responsibilities under the format.
(8) Improve the Copermittees' ability to assess JURMP and WURMP effectiveness in terms of water quality.
(9) Include a separate section for reporting on each Copermittee's activities.
(10) Include a separate section for reporting on each watershed's activities.

b. Upon approval of the Integrated Annual Report Format by the Regional Board, an Integrated Annual Report shall be submitted annually, which may substitute for the JURMP Annual Reports, WURMP Annual Reports, RURMP Annual Report, and/or Monitoring Reports, as approved by the Regional Board. The Principal Permittee shall be responsible for the generation and submittal of the Integrated Annual Reports. Each Copermittee shall be responsible for the information in the Integrated Annual Report pertaining to its jurisdictional, watershed, regional, and monitoring responsibilities. The Integrated Annual Report shall be submitted the first January 31 following approval of the reporting format by the Regional Board, and every January

31 thereafter. The reporting period for Integrated Annual Reports shall be the previous fiscal year. For example, a report submitted January 31, 2010 shall cover the reporting period July 1, 2008 to June 30, 2009.

c. The format and information provided in Integrated Annual Reports shall match and be consistent with the format and information described in the Integrated Annual Report Format.

6. Universal Reporting Requirements

All submittals shall include an executive summary, introduction, conclusion, recommendations, and signed certified statement. Each Copermittee shall submit a signed certified statement covering its responsibilities for each applicable submittal. The Principal Permittee shall submit a signed certified statement covering its responsibilities for each applicable submittal and the sections of the submittals for which it is responsible.

K. MODIFICATION OF PROGRAMS

Modifications of Jurisdictional Urban Runoff Management Programs, Watershed Urban Runoff Management Programs, and/or the Regional Urban Runoff Management Program may be initiated by the Executive Officer or by the Copermittees. Requests by Copermittees shall be made to the Executive Officer, and shall be submitted during the annual review process. Requests for modifications should be incorporated, as appropriate, into the Annual Reports or other deliverables required or allowed under this Order.

1. Minor Modifications – Minor modifications to Jurisdictional Urban Runoff Management Programs, Watershed Urban Runoff Management Programs, and/or the Regional Urban Runoff Management Program may be accepted by the Executive Officer where the Executive Officer finds the proposed modification complies with all discharge prohibitions, receiving water limitations, and other requirements of this Order.

2. Modifications Requiring an Amendment to this Order – Proposed modifications that are not minor shall require amendment of this Order in accordance with this Order's rules, policies, and procedures.

L. ALL COPERMITTEE COLLABORATION

1. Each Copermittee collaborate with all other Copermittees regulated under this Order to address common issues, promote consistency among Jurisdictional Urban Runoff Management Programs and Watershed Urban Runoff Management Programs, and to plan and coordinate activities required under this Order.

   a. Management Structure - All Copermittees shall jointly execute and submit to the Regional Board no later than 180 days after adoption of this Order, a Memorandum of Understanding, Joint Powers Authority, or other instrument of formal agreement which at a minimum:

      (1) Identifies and defines the responsibilities of the Principal Permittee and Lead Watershed Permittees;
      (2) Identifies Copermittees and defines their individual and joint responsibilities, including watershed responsibilities;

(3) Establishes a management structure to promote consistency and develop and implement regional activities;
(4) Establishes standards for conducting meetings, decision-making, and cost-sharing;
(5) Provides guidelines for committee and workgroup structure and responsibilities;
(6) Lays out a process for addressing Copermittee non-compliance with the formal agreement; and
(7) Includes any and all other collaborative arrangements for compliance with this Order.

M. PRINCIPAL PERMITTEE RESPONSIBILITIES

Within 180 days of adoption of this Order, the Copermittees shall designate the Principal Permittee and notify the Regional Board of the name of the Principal Permittee. The Principal Permittee shall, at a minimum:

1. Serve as liaison between the Copermittees and the Regional Board on general permit issues, and when necessary and appropriate, represent the Copermittees before the Regional Board.

2. Coordinate permit activities among the Copermittees and facilitate collaboration on the development and implementation of programs required under this Order.

3. Integrate individual Copermittee documents and reports into single unified documents and reports for submittal to the Regional Board as required under this Order.

4. Produce and submit documents and reports as required by section J of this Order and Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001.

5. Submit to the Regional Board, within 180 days of adoption of this Order, a formal agreement between the Copermittees which provides a management structure for meeting the requirements of this Order (as described in section L).

6. Coordinate joint development by all of the Copermittees of standardized format(s) for all documents and reports required under this Order (e.g., JURMPs, WURMPs, annual reports, monitoring reports, etc.). The standardized reporting format(s) shall be used by all Copermittees. The Principal Permittee shall submit the standardized format(s) to the Regional Board for review no later than 180 days after adoption of this Order.

N. RECEIVING WATERS MONITORING AND REPORTING PROGRAM

Pursuant to CWC section 13267, the Copermittees shall comply with all the requirements contained in Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001.

O. STANDARD PROVISIONS, REPORTING REQUIREMENTS, AND NOTIFICATIONS

1. Each Copermittee shall comply with Standard Provisions, Reporting Requirements, and Notifications contained in Attachment B of this Order. This includes 24 hour/5day reporting requirements for any instance of non-compliance with this Order as described

in section 5.e of Attachment B.

2. All plans, reports and subsequent amendments submitted in compliance with this Order shall be implemented immediately (or as otherwise specified). All submittals by Copermittees must be adequate to implement the requirements of this Order.

I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on January 24, 2007.

John H. Robertus
Executive Officer

EXHIBIT 15

Shelter Morgan Discharge TSO

Kris McFadden
City of San Diego
Transportation & Storm Water Department
September 14, 2

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Groundwater Permit Issues

- **Specific findings required to justify planned degradation – none offered**
  - Resolution 68-16 includes anti-degradation requirements – must maintain **existing** water quality
- **Insufficient demonstration of technical or economic infeasibility of TDS treatment**
- **Lack of authorization from MS4 operator violates Groundwater Permit**
  - None obtained or planned under TSO

Water Quality Objectives

- **…limited, if any, assimilative capacity for additional TDS loading" in the creek**
  - Thus, no findings possible for justifying degradation
- **Cannot cause or *contribute* to an exceedance in-stream.**
  - No mixing point makes effluent concentration equal to receiving waters concentration
  - As written, TSO places future burden on City for meeting planned TMDL for TDS requirements
  - Despite citation of other TDS sources, responses offer no justification for adding significantly more

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Murphy Canyon Creek Channel

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- Channel composition includes rip-rap and concrete segments
- Flows impeded by vegetation growing because of discharges
- Increasing TDS will degrade conditions in the creek – not permitted under law

Flooding Responsibility

- Kinder Morgan's unauthorized discharges accelerate growth and maintenance of vegetation, increasing flooding risk
- City forced to accommodate additional maintenance effort as a result of discharges

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