ITEM No. 7

September 5, 2008

ERRATA SHEET

CHANGE TO ORDER NO. R8-2008-0008

Waste Discharge and Producer/User Reclamation Requirements
for
Eastern Municipal Water District
Regional Water Reclamation Facilities
Discharge to Groundwater Management Zones
Within San Jacinto River Basin

(Language deleted is ~~strike through~~)
(Language added is **bold and shaded)**

1. Order No. R8-2008-0008, page 13 of 31, Section IV.A.1.a., modify the last row of Table 6 as follows:

Table 6. Land Discharge Effluent Limitations at DPs 001 through 005

Parameter	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Maximum Daily
~~Phenolic Compounds~~ **Phenols**	µg/L	--	--	40

2. Order No. R8-2008-0008, Attachment E, page E-4, modify Section I.A.8.h. as follows:

   h. Quarterly samples: A representative sample shall be taken on any representative day of January, April, July, and October and test results shall be reported in either micrograms/liter (ug/L) or milligrams/liter (mg/L), as appropriate, by **the first day of the second month following the reporting period**. ~~the last day of the month following the month that the sample was taken~~.

3. Order No. R8-2008-0008, Attachment E, page E-15, modify Section VII.D. as follows:

   D. TDS/TIN Offset Program (Mitigation Plan) Monitoring and Reporting

   Every quarter, the Discharger shall report the total salt removal accomplished ~~for the month~~ pursuant to the Mitigation Plan, or approved alternative, for each groundwater management zone affected by discharges of recycled water to demonstrate whether offset requirements are being met. For each affected

groundwater management zone, the Discharger shall report quarterly a running balance of salt discharges compared to TDS/TIN removal. If offset is not occurring during the quarterly monitoring period, the quarterly report shall so state and identify when the offset will be achieved.

4. Order No. R8-2008-0008, Attachment E, page E-19, modify Section D. as follows:

C~~D~~. Other Reports – Not Applicable

5. Order No. R8-2008-0008, Attachment F, page F-12, modify first paragraph of Section II.A.5. as follows:

5. TIN/TDS Mitigation Plan

In May 2005, in anticipation of the permit renewal, the Discharger developed a draft system-wide Mitigation Plan for TDS/TIN discharges in excess of expected effluent limits based on the groundwater management zone objectives. The Mitigation Plan was revised and became final in June 2008 ("Mitigation Plan for Eastern Municipal Water District's Recycled Water Activities in the San Jacinto River Watershed", Final, June 2008). The Plan includes a detailed analysis of the existing and expected future recycled water use in each groundwater management zone and the determination of which water quality objectives for TDS and/or TIN for the affected groundwater management zones would be exceeded by the discharges. The Mitigation Plan then details the manner by which TDS and TIN offsets are proposed to be accomplished, monitored and reported. In order to refine the analysis of needed mitigation for TIN discharges, in 2007, the Discharger received grant funding to determine the nitrogen removal rates beneath two sets of recycled water storage ponds within the EMWD service area. These included the on-site storage ponds at the Moreno Valley RWRF, which overlies the Perris North Management Zone, and the Alessandro ponds, which store the recycled water generated from the San Jacinto Valley RWRF. The Alessandro ponds overlie the San Jacinto Upper Pressure Management Zone. The Discharger submitted to Regional Board staff for review the study report, titled '*Quantification of Nitrogen Removal Under Recycled Water Ponds*' **on May 29, 2007** ~~[date]~~. The report recommended that the nitrogen removal percentage at the Moreno Valley RWRF be set at 73.5 %, and that the nitrogen removal percentage at the Alessandro ponds be set at 64.0 %. On October 16, 2007, EMWD requested that the study results be used to define the nitrogen loss coefficient to be applied in setting total inorganic nitrogen limitations, instead of the default value of 25% that is specified in the Basin Plan. Regional Board staff requested additional monitoring data at the ponds, and that water quality data from the downgradient wells be collected. The Discharger provided the requested additional data. After evaluating the additional data, both Regional Board staff and the Discharger agreed that the nitrogen removal percentage rates are consistent over time. Consequently, the Discharger requested a nitrogen loss coefficient of 60% in calculating the effluent limits for TIN

discharges into on-site storage ponds at Moreno Valley RWRF and into the Alessandro ponds. The Mitigation Plan is based on the assumption that a 60% nitrogen loss coefficient would be applied in setting TIN limits for discharges to the San Jacinto Upper Pressure GMZ and Perris North GMZ. Regional Board staff believes that this is a reasonable and conservative request.

State of California
California Regional Water Quality Control Board
Santa Ana Region

September 5, 2008

ITEM: ***7**

SUBJECT: Issuance of Waste Discharge and Producer/User Reclamation Requirements for, Eastern Municipal Water District, Order No. R8-2008-0008, Riverside County

DISCUSSION:

See attached Fact Sheet

RECOMMENDATIONS:

Adopt Order No. R8-2008-0008 as presented.

COMMENT SOLICITATION:

Comments were solicited from the discharger and the following agencies:

U.S. Fish and Wildlife Service, Carlsbad – Christine Medak
State Water Resources Control Board, Office of the Chief Counsel – David Rice
State Water Resources Control Board, Division of Water Quality – Phil Isorena
State Department of Fish and Game, Los Alamitos - Ms. Latonio
State Department of Water Resources, Glendale
California Department of Public Health, San Diego – Steve William
California Department of Public Health, Carpinteria – Jeff Stone
State Department of Water Resources, Glendale – Charles Keene
Regional Water Quality Control Board, San Diego Region – Charles Cheng
Riverside County Flood Control and Water Conservation District – Jason Uhley
Riverside County Department of Environmental Health Services – Sandy Bunchek
Santa Ana River Discharger's Association - Ed Filadelfia
Santa Ana Watershed Project Authority – Celeste Cantu
Inland Empire Waterkeeper – Lee Reeder
Orange County Coastkeeper - Garry Brown
Lawyers for Clean Water C/c San Francisco Baykeeper
Natural Resources Defense Council – David Beckman
Eastern Municipal Water District – Jayne Joy

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

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ORDER NO. R8-2008-0008

WASTE DISCHARGE AND PRODUCER/USER RECLAMATION REQUIREMENTS FOR EASTERN MUNICIPAL WATER DISTRICT REGIONAL WATER RECLAMATION FACILITIES DISCHARGE TO GROUNDWATER MANAGEMENT ZONES WITHIN SAN JACINTO RIVER BASIN

The following Discharger is subject to waste discharge and producer/user reclamation requirements as set forth in this Order:

Table 1. Discharger Information

Discharger/ Operator	**Eastern Municipal Water District**				
Name of Facility (RWRF)[1]	**San Jacinto Valley**	**Moreno Valley**	**Perris Valley**	**Sun City**	**Temecula Valley[2]**
Address	**770 North Sanderson Avenue**	**17140 Kitching Street**	**1301 Case Road**	**29285 Valley Blvd.**	**42565 Avenida Alvarado**
	San Jacinto, CA 92583	**Moreno Valley, CA 92553**	**Perris, CA 92583**	**Sun City, CA 92586**	**Temecula, CA 92590**
	Riverside County				

The discharge by Eastern Municipal Water District from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

TENTATIVE

1 *RWRF means Regional Water Reclamation Facility.*

2 *Temecula Valley RWRF is also regulated by the San Diego Regional Water Quality Control Board.*

Table 2. Discharge Locations and Recycled Water Use Areas

Discharge Point	Effluent Description	Discharge Point (Latitude)	Discharge Point (Longitude)	Receiving Water	
				Land Discharge	Recycled Use
DP-001	Tertiary treated and disinfected	33º47'59"N	117º00'55"W	To ponds at SJRWRF(Hemet North GMZ) To MWD[3] and Alessandro ponds (San Jacinto Upper GMZ)	Lakeview-Hemet North GMZ; San Jacinto Lower GMZ; San Jacinto Upper GMZ
DP-002	Tertiary treated and disinfected	33º52'19"N	117º12'52"W	To ponds at MVRWRF & Landmark (Perris North GMZ) and to ponds at Skiland & Trumble (Perris South GMZ)	San Jacinto Lower GMZ; Lakeview-Hemet North GMZ Perris North GMZ; Perris South GMZ
DP-003A	Tertiary treated and disinfected	33º45'10"N	117º11'45"W	To ponds at PVRWRF, Skiland, Trumble and Winchester (Perris South GMZ)	Hemet South GMZ; Lakeview-Hemet-North GMZ; Perris South GMZ; San Jacinto Lower GMZ
DP-003B	Tertiary treated and disinfected	33º45'18"N	117º11'43"W	To ponds at PVRWRF, Skiland, Trumble and Winchester (Perris South GMZ)	Hemet South GMZ; Lakeview-Hemet-North GMZ; Perris South GMZ; San Jacinto Lower GMZ
DP-004	Tertiary treated and disinfected	33º41'45"N	117º12'38"W	To ponds at SCRWRF (Perris South GMZ)	Perris South GMZ
DP-005	Tertiary treated and disinfected	33º30'22"N	117º10'03"W	To ponds at Winchester and SCRWRF (Perris South GMZ)	Hemet South GMZ; Menifee GMZ; Perris South GMZ

Table 3. Administrative Information

This Order was adopted by the Regional Water Board on:	September 5, 2008
This Order shall become effective on:	September 5, 2008

IT IS HEREBY ORDERED, that Order Nos. 88-94, 90-135, 90-140, and 90-151, and amendment Order Nos. 93-033 and R8-2006-0007, are rescinded upon the effective date of this Order, except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, the Discharger shall comply with the requirements in this Order.

[3] *MWD is Metropolitan Water District.*

TENTATIVE

I, Gerard J. Thibeault, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on September 5, 2008.

_____

Gerard J. Thibeault, Executive Officer

TENTATIVE

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Attachment I – Mitigation Model I-1

I. FACILITY INFORMATION

The following Discharger is subject to waste discharge and producer/user reclamation requirements as set forth in this Order:

Table 4. Facility Information

Discharger/ Operator	Eastern Municipal Water District				
Name of Facility	San Jacinto Valley (SJVRWRF)	Moreno Valley (MVRWRF)	Perris Valley (PVRWRF)	Sun City (SCRWRF) Out of service; used as lift station	Temecula Valley (TVRWRF)[4]
Address	770 North Sanderson Avenue	17140 Kitching Street	1301 Case Road	29285 Valley Blvd.	42565 Avenida Alvarado
	San Jacinto, CA 92583	Moreno Valley, CA 92553	Perris, CA 92570	Sun City, CA 92586	Temecula, CA 92590
	Riverside County				
Facility Contact, Title and Phone	Jayne Joy, Dir. Env. & Reg. Compliance, (951) 928-3777 ext. 6241				
Address	2270 Trumble Road, Perris, CA 92570				
Mailing/Billing Address	EMWD, PO BOX 8300, Perris, CA 92572-8300				
Type of Facility	POTW				
Name of Facility	SJVRWRF	MVRWRF	PVRWRF	SCRWRF Out of service; used as lift station	TVRWRF
Facility Design Flow as secondary treatment	Current: 11 mgd	Current: 16 mgd	Current: 11 mgd	Current: 3 mgd	Current: 18 mgd
	14 mgd expansion project to be completed in Jan. 2014:	15.8 mgd expansion project to be completed in Oct. 2012:	17.2 mgd, & 24.2 mgd expansion projects to be completed in Sept. 2010, & June 2011, respectively.	NA	NA
Facility Design Flow as tertiary treatment	Current: 12.4 mgd	Current: 16 mgd	Current: 11 mgd	NA	Current: 22.4 mgd
	14.9 mgd expansion project to be completed in September 2011	20.8 mgd expansion project to be completed in Sept. 2011	30 mgd expansion project to be completed in Dec. 2008	NA	NA

[4] *This Facility is located within the jurisdiction of the San Diego Regional Water Quality Control Board and is regulated under separate waste discharge requirements issued by the San Diego Board. Recycled water produced at this Facility is also discharged within the Santa Ana Regional Board's jurisdiction.*

II. FINDINGS

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Water Board), finds:

A. Background. Eastern Municipal Water District (hereinafter Discharger, or EMWD) owns and operates five regional water reclamation facilities (RWRF, or Facilities), a series of storage ponds, pump stations, and distribution systems in its service area. Four of the RWRFs, including the San Jacinto Valley (SJVRWRF), Moreno Valley (MVRWRF), Perris Valley (PVRWRF), and Sun City (SCRWRF), are located in the San Jacinto River Basin. The Temecula Valley RWRF is located within the jurisdiction of the San Diego Regional Board and, accordingly, is regulated by that Regional Water Quality Control Board. Recycled water produced at the Temecula Valley RWRF can be discharged into the Discharger's recycled water system and distributed to users within the Santa Ana Region. The Discharger is currently authorized to discharge from the four RWRFs in the San Jacinto River Basin pursuant to the following Santa Ana Regional Water Board Orders: Order No. 88-94, as amended by Order No. R8-2006-0007 (San Jacinto Valley RWRF); Order No. 90-151 (Moreno Valley RWRF): Order No. 90-135 (Perris Valley RWRF), and Order No. 90-140 (Sun City RWRF). Order No. 92-063 regulates discharges from the Temecula Valley RWRF to the Winchester Ponds. The Temecula Valley RWRF is regulated under San Diego Regional Water Board Order No. 2000-165. The Discharger submitted a Report of Waste Discharge, dated January 24, 2006, and applied for new Waste Discharge Requirements (WDRs) and Producer/User Reclamation Requirements to discharge up to 59 million gallons per day (mgd) of tertiary treated wastewater from the five RWRFs. The application was deemed complete on June 30, 2007.

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

B. Facility Description. The treatment systems employed at each RWRF consist of primary, secondary, and tertiary wastewater treatment processes. Wastewater from these Facilities is discharged at Discharge Points 001 through DP 005 to various storage ponds overlying groundwater management zones in the San Jacinto River Basin. Recycled water is delivered from these Discharge Points for irrigation and industrial uses within the San Jacinto River Basin (see Table 2 on cover page). Attachment B provides vicinity maps of this project. Attachment C provides flow schematics of the treatment system at each Facility.

C. Legal Authorities. This Order serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4, Division 7 of the Water Code (commencing with section 13260).

D. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. Attachment F, which contains background information and rationale for Order requirements, is hereby incorporated into this Order and, thus constitutes part of the Findings for this Order. Attachments A through E, and G through H are also incorporated into this Order.

E. California Environmental Quality Act (CEQA). This action involves the re-issuance of waste discharge requirements for existing facilities that discharge treated wastewater to land and as such, is exempt from the provisions of California Environmental Quality Act (commencing with Section 21100) in that the activity is exempt pursuant to Title 14 of the California Code of Regulations Section 15301. In compliance with the California Environmental Quality Act (CEQA), the Discharger completed the CEQA study for the expansion of Perris Valley Regional Water Reclamation Facility Plant 3 and San Jacinto Valley Regional Water Reclamation Facility Plant 2. Negative Declarations were certified and the Notices of Determination filed in January 2005 and November 2005, respectively. The Moreno Valley Regional Water Reclamation Facility expansion CEQA study was completed and a Negative Declaration was certified on June 2007.

F. Water Quality Control Plans. The Regional Water Board adopted a revised Water Quality Control Plan for the Santa Ana Region (hereinafter Basin Plan) that became effective on January 24, 1995. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters in the Santa Ana Region addressed through the plan. More recently, the Basin Plan was amended significantly to incorporate revised boundaries for groundwater subbasins, now termed “management zones”, new nitrate-nitrogen and TDS objectives for the new management zones, and new nitrogen and TDS management strategies applicable to both surface and ground waters. This Basin Plan Amendment was adopted by the Regional Water Board on January 22, 2004. The State Water Resources Control Board (State Water Board) and Office of Administrative Law (OAL) approved the Amendment on September 30, 2004 and December 23, 2004, respectively. EPA approved the surface water standards components of the N/TDS Amendment on June 20, 2007. This Order implements applicable provisions of the N/TDS Basin Plan amendment, which, for the Discharger, results in effluent limitations that are at least as stringent as those in the current waste discharge requirements.

In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established State Policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Based on the criteria specified in the State Water Board Resolution, the Basin Plan designated groundwater management zones, lakes and reservoirs (see Basin Plan Table 3-1 and Table 4-1) within the San Jacinto River Basin for municipal and domestic supply beneficial use. As shown in the Fact Sheet (Attachment F), beneficial uses applicable to groundwater management zones within the San Jacinto River Basin are as follows:

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water: Groundwater Management Zone	Beneficial Uses
001	San Jacinto Upper	Present or Potential: Municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
	Lakeview & Hemet North	Present or Potential: Municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
	San Jacinto Lower	Present or Potential: Municipal and domestic supply, agricultural supply, industrial service supply.
	Hemet South	Present or Potential: Municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
002	San Jacinto Lower	Present or Potential: Municipal and domestic supply, agricultural supply, industrial service supply.
	Lakeview & Hemet North	Present or Potential: Municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
	Perris North	Present or Potential: Municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
	Perris South	Present or Potential: Municipal and domestic supply, agricultural supply
003A & 003B	San Jacinto Lower	Present or Potential: Municipal and domestic supply, agricultural supply, and industrial service supply.
	Perris South	Present or Potential: Municipal and domestic supply, agricultural supply
	Hemet South	Present or Potential: Municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
	Lakeview & Hemet North	Present or Potential: Municipal and domestic supply, agricultural supply, industrial service supply, and industrial process

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water: Groundwater Management Zone	Beneficial Uses
		supply.
004	Perris South	Present or Potential: Municipal and domestic supply, agricultural supply
005	Perris South	Present or Potential: Municipal and domestic supply, agricultural supply
	Hemet South	Present or Potential: Municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
	Menifee	Present or Potential: Municipal and domestic supply, agricultural supply, and industrial process supply.

The requirements of this Order implement the Basin Plan.

G. Total Dissolved Solids/Total Inorganic Nitrogen Offset: The amended Basin Plan includes groundwater water quality objectives for total dissolved solids (TDS) and total inorganic nitrogen (TIN). The Basin Plan recognizes that strict compliance with TDS/TIN limits may be difficult to achieve and it describes the regulatory approach the Regional Board uses to address such situations. The Board incorporates offset provisions in waste discharge requirements whereby Dischargers can implement an approved program to offset TDS/TIN discharges in excess of specified TDS/TIN limits, provided that the Discharger makes all reasonable efforts to improve the TDS/TIN quality of the water supply (and thereby, the wastewater). The Discharger may not be able to meet effluent limits for TDS and TIN for the Lakeview/Hemet North Management Zone, Perris South Management Zone, San Jacinto Lower Pressure Management Zone and San Jacinto Upper Pressure Management Zone. On June 25, 2008, the Discharger submitted for approval by the Executive Officer the final mitigation plan for recycled water reuse in the San Jacinto River Watershed for Total Dissolved Solids (TDS) and Total Inorganic Nitrogen (TIN) ("Mitigation Plan for Eastern Municipal Water District's Recycled Water Activities in the San Jacinto River Watershed", Final, June 2008). The Mitigation Plan evaluates the need for TDS and/or TIN offsets and details the manner by which those offsets will be accomplished, monitored and reported. This Order requires the Discharger to implement the final mitigation plan. (See Provision VI.C.2.b.) If modification of the mitigation plan is found necessary to assure adequate offsets, the Discharger is required to propose an alternative mitigation plan for approval by the Executive Officer and to implement that plan upon approval.

H. State General Waste Discharge Requirements for Sanitary Sewer Systems. The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003 on May 2, 2006, requiring public agencies that own sanitary sewer systems comprised of more than one mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans (SSMPs) and report all sanitary sewer overflows (SSOs). The Discharger is currently enrolled under the General Order.

I. Antidegradation Policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. As discussed in the staff report (Attachment F), the permitted discharge is consistent with the antidegradation provisions of State Water Board Resolution No. 68-16.

J. Pretreatment: The Discharger has established an approved regional pretreatment program. The approved pretreatment program and its components, such as Ordinance No. 59.5 (adopted by the Discharger on July 21, 1999) and local limits, and control mechanisms, among others, are hereby made an enforceable condition of this Order. (See also Section VI.C.5.c., below)

The Discharger plans to submit a revision of the Ordinance and local limits to the Regional Board for approval.

K. Biosolids Requirements. On February 19, 1993, the USEPA issued a final rule for the use and disposal of sewage sludge, 40 CFR, Part 503. This rule requires that producers of sewage sludge meet certain reporting, handling, and disposal requirements. The State of California has not been delegated the authority to implement this program, therefore, the U.S. Environmental Protection Agency is the implementing agency. However, this Order includes Regional Board biosolids requirements.

L. Monitoring and Reporting. Water Code section 13267 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

M. Notification of Interested Parties. The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet (Attachment F) of this Order.

N. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet (Attachment F) of this Order.

III. DISCHARGE PROHIBITIONS

A. Wastewater discharged shall be limited to treated effluent that meets the conditions and requirements specified in Section IV.A.

B. The discharge of wastewater at a location or in a manner different from those described in this Order is prohibited.

C. The discharge to any pond having less than one foot of freeboard is prohibited.

D. The bypass or overflow of untreated wastewater or wastes to surface waters or surface water drainage courses is prohibited.

E. The discharge of any substances in concentrations toxic to animal or plant life in the affected receiving water is prohibited.

F. The discharge of any radiological, chemical, or biological warfare agent or high level radiological waste is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Land Discharge Specifications – Discharge Points 001 through 005

1. Final Effluent Limitations – Discharge Point 001 through 005

Unless otherwise specifically specified hereinafter, compliance with the following effluent limitations is measured at monitoring locations L-001 through L-005 as described in the attached MRP (Attachment E)

a. The Discharge shall maintain compliance with the following effluent limitations at DP 001 through DP 005:

Table 6. Land Discharge Effluent Limitations at DPs 001 through 005

Parameter	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Maximum Daily
BOD_5	mg/L	20	30	--
Total Suspended Solids	mg/L	20	30	--
Arsenic	µg/L	--	--	50
Total Cadmium	µg/L	--	--	5
Total Chromium	µg/L	--	--	50
Total Copper	µg/L	--	--	20
Cyanide	µg/L	--	--	150

Table 6. Land Discharge Effluent Limitations at DPs 001 through 005

Parameter	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Maximum Daily
Total Lead	µg/L	--	--	15
Total Mercury	µg/L	--	--	2
Total Selenium	µg/L	--	--	10
Silver	µg/L	--	--	50
Total Zinc	µg/L	--	--	100
Phenolic Compounds	µg/L	--	--	40

b. **Percent Removal:** The average monthly percent removal of BOD 5-day 20°C and total suspended solids shall not be less than 85 percent.

c. **TDS Limitations:** The discharge shall not contain constituent concentrations of total dissolved solids that exceed the limits specified in (1) and (2), below.

(1) The 12-month flow weighted running average total dissolved solids concentration of the discharge at each Discharge Point shall not exceed the concentration listed in Table 7, below for discharges overlying the specific groundwater management zone unless:

(a) The Discharger demonstrates to the satisfaction of the Regional Board's Executive Officer that:

i Discharges in excess of the TDS limits are due to the quality of water supply sources utilized in the Discharger's service area, and that all reasonable steps, as agreed upon by the Executive Officer, have been taken to ensure that the best quality supplies are obtained and utilized in the Discharger's service area; or

ii Discharges in excess of the TDS limits are due solely to chemical additions in the treatment process needed to meet waste discharge requirements, and the Discharger has taken all steps to optimize chemical additions so as to minimize the increases; and

(b) The Discharger implements an acceptable plan to offset discharges in excess of the TDS limits. See Provision VI.C.2.b.

Table 7. TDS Limitations for DP 001 through 005

Discharge Point	Groundwater Management Zone	Facility	TDS, mg/L
001	San Jacinto Upper Pressure Zone GMZ	SJVRWRF	320
	Lakeview & Hemet North GMZ	SJVRWRF	520
002	Perris North GMZ	MVRWRF	570
	Perris South GMZ	MVRWRF	1260
003A & 003B	Perris South GMZ	PVRWRF	1260
004	Perris South GMZ	SCRWRF	1260
005	Perris South GMZ	TVRWRF	1260

(2) The 12-month flow weighted running average total dissolved solids concentration of the discharge shall not exceed the 12-month flow weighted average total dissolved solids concentration in the water supply by more than 250 mg/L[5] unless:

(a) The Discharger demonstrates to the satisfaction of the Regional Board's Executive Officer that TDS discharges in excess of the 250 mg/L mineral increment are due solely to chemical additions in the treatment process needed to meet waste discharge requirements, and the Discharger has taken all steps to optimize chemical additions so as to minimize the TDS increases; and

(b) The Discharger implements an acceptable plan to offset TDS discharges in excess of the 250 mg/L mineral increment. See Provision VI.C.2.b.

[5] *An exceedance of this limit shall not be considered a violation, provided it is due solely to chemical additions in the treatment process needed to meet waste discharge requirements or other valid regulatory requirements.*

d. **Total Inorganic Nitrogen (TIN) Limitations:** The 12-month flow weighted running average TIN concentration of the discharge shall not exceed the concentration listed in Table 8, below for discharges overlying the specific groundwater management zone unless the Discharger implements an acceptable plan to offset discharges in excess of the TIN limits. See Provision VI.C.2.b., below:

Table 8. TIN Limitations for DP 001 through 005

Discharge Point	Groundwater Management Zone	Facility	TIN, mg/L
001	San Jacinto Upper Pressure Zone GMZ	SJVRWRF	3.5
	Lakeview & Hemet North GMZ	SJVRWRF	2.4
002	Perris North GMZ	MVRWRF	11.8
	Perris South GMZ	MVRWRF	3.3
003A & 003B	Perris South GMZ	PVRWRF	3.3
004	Perris South GMZ	SCRWRF	3.3
005	Perris South GMZ	TVRWRF	3.3

e. There shall be no visible oil and grease in the discharge.

f. The pH of the discharge shall at all times be within the range of 6.0 to 9.0 pH units.

B. Reclamation Specifications - DP 001 through 005

1. The use of recycled water for landscape irrigation or other similar uses shall maintain compliance with the following limitations. Compliance is to be measured at representative monitoring location REC-001 to REC-005 or other approved monitoring locations where representative samples of recycled water can be obtained for laboratory testing and analysis, as described in the attached MRP (Attachment E). The Discharger shall submit for approval by the Executive Officer other monitoring location(s) not specified herein where representative samples of recycled water could be obtained for laboratory testing and analysis.

   a. Physical/Biological Limitations with compliance measured at monitoring location:

Table 9. Recycled Water Effluent Limitations

Parameter	Units	Effluent Limitations	
		Average Monthly	Average Weekly
Biochemical Oxygen Demand 5-day @ 20°C	mg/L	20	30
Total Suspended Solids	mg/L	20	30

b. TDS Limitations: The 12-month flow weighted running average TDS concentration of the recycled water used on sites overlying the specific groundwater management zone shown in Table 10, below, shall not exceed the TDS concentration listed in Table 10., below, unless the Discharger implements an acceptable plan to offset discharges in excess of the TDS limits. See Provision VI.C.2.b., below.

Table 10. Recycled Water TDS Limitations

Groundwater Management Zone	TDS mg/L
Perris North	570
Perris South	1260
Menifee	1020
Lakeview & Hemet North	520
San Jacinto Lower Pressure Zone	520
San Jacinto Upper Pressure Zone	320
Canyon	220
Hemet South	730

c. Recycled water described in Section 60307(a) of Division 4, Chapter 3, Title 22, California Code of Regulations and for irrigation of food crops, parks and playground, school yards, residential landscaping and other irrigation uses not specified in Section 60304(a) of Division 4, Chapter 3, Title 22, California Code of Regulations or not prohibited in other Sections of the California Code of Regulations shall at all times be adequately oxidized, filtered, and disinfected tertiary treated wastewater and shall meet the following limitations:

(1) Turbidity of the filter effluent shall not exceed any of the following:

When filtration[6] is through natural undisturbed soils, or a bed of filter media:

(a) Average of 2 Nephelometric Turbidity Units (NTU) within any calendar day;
(b) 5 NTU more than 5 percent of the time in any calendar day; and
(c) 10 NTU at any time.

(2) Disinfected wastewater shall meet the following:

(a) The median concentration of total coliform bacteria[7] in the disinfected effluent shall not exceed a Most Probable Number (MPN) of 2.2 per 100 milliliters (ml) utilizing the bacteriological results of the last seven days for which analysis has been completed.
(b) The number of total coliform organism shall not exceed an MPN of 23 total coliform bacteria per 100 ml in more than one sample in any calendar month.
(c) No total coliform sample shall exceed an MPN of 240 total coliform bacteria per 100 ml.
(d) When chlorine disinfection process is utilized followed by filtration, a CT (the product of total chlorine residual and modal contact time[8] measured at the same point) value of not less than 450 milligram-minutes per liter at all times with a modal contact time of at least 90 minutes, based on peak dry weather design flow shall be provided.
(e) When a disinfection process combined with the filtration process is utilized, the combined process shall demonstrate inactivation and/or removal of 99.999 percent of the plaque-forming units of F-specific bacteriophage MS2, or polio virus in the wastewater. A virus that is at least as resistant to disinfection as polio virus may be used for purposes of the demonstration.

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6 *For recycled water use, other acceptable filtration technology that complies with Title 22 of the California Code of Regulations and approved by the California Department of Public Health may be used. Compliance determination will be based on CDPH guidance.*

7 *See Compliance Determination Section VII.H.1.*

8 *Modal contact time shall be calculated daily based on the minimum one-hour average value in a 24-hour period.*

d. Recycled water used for irrigation of food crops where the edible portion is produced above ground and not contacted by the recycled water shall at all times be adequately oxidized and disinfected so that average weekly total coliform bacteria in the disinfected effluent does not exceed a most probable number (MPN) of 2.2 per 100 milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed, and the number of total coliform bacteria does not exceed an MPN of 23 per 100 milliliters in more than one sample.

e. Recycled water used for the uses listed below shall be an oxidized and disinfected water so that average weekly total coliform bacteria[9] in the disinfected effluent does not exceed a most probable number (MPN) of 23 per 100 milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed, and the number of total coliform bacteria does not exceed an MPN of 240 per 100 milliliters in more than one sample in any 30 day period.

(1) Industrial boiler feed, nonstructural fire fighting, backfill consolidation around nonpotable piping, soil compaction, mixing concrete, dust control on roads and streets, cleaning roads, sidewalks and outdoor work areas and industrial process water that will not come into contact with workers.

(2) Irrigation of cemeteries, freeway landscaping, restricted access golf courses, ornamental nursery stock and sod farms where access by the general public is not restricted, pasture for animals producing milk for human consumption, and any nonedible vegetation where access is controlled so that irrigated area cannot be used as if it were part of a park, playground or school yard.

f. For recycled water uses specified in Sections 60304 and 60307 of Title 22 where filtration is provided pursuant Section 60301.320(a) and coagulation is not used as part of the treatment process, the Discharger shall comply with the following:

(1) The turbidity of the influent to the filters is continuously measured and the influent turbidity does not exceed 5 NTU for more than 15 minutes and never exceeds 10 NTU;

(2) The filter effluent turbidity shall not exceed 2 NTU; and;

(3) Should the filter influent turbidity exceed 5 NTU for more than 15 minutes, chemical addition shall be automatically activated if available, if not, the wastewater shall be diverted.

g. The pH of the discharge shall at all times be within the range of 6.0 to 9.0 pH units.

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[9] *See Compliance Determination Section VII.H.2.*

2. Prior to delivering recycled water to any schools, hospitals, or other unique use sites[10], the Discharger shall submit to the California Department of Public Health and the County Environmental Health Department for review and approval a report containing the information listed in paragraph IV.B.7., below.

3. The Discharger shall be responsible for assuring that recycled water is delivered and utilized in conformance with this Order, the recycling criteria contained in Title 22, Division 4, Chapter 3, Sections 60301 through 60355, California Code of Regulations. The Discharger shall conduct periodic inspections of the facilities of the recycled water users to monitor compliance by the users with this Order.

4. The Discharger shall establish and enforce Rules and Regulations for Recycled Water users, governing the design and construction of recycled water use facilities and the use of recycled water in accordance with the uniform statewide recycling criteria established pursuant to the California Water Code Section 13521.

    a. Use of recycled water by the Discharger shall be consistent with its Rules and Regulations for Recycled Water Use.

    b. Any revisions made to the Rules and Regulations shall be subject to the review of the Regional Water Board, the California Department of Public Health, and the County Environmental Health Department. The revised Rules and Regulations or a letter certifying that the Discharger's Rules and Regulations contain the updated provisions in this Order, shall be submitted to the Regional Water Board within 60 days of adoption of this Order by the Regional Water Board.

5. The Discharger shall, within 60 days of the adoption of this Order, review and update as necessary its program to conduct compliance inspections of recycled water reuse sites. Inspections shall determine the status of compliance with the Discharger's Rules and Regulations for Recycled Water Use.

6. The storage, delivery, or use of recycled water shall not individually or collectively, directly or indirectly, result in a pollution or nuisance, or adversely affect water quality, as defined in the California Water Code.

7. The Discharger shall maintain and make available upon request by the Regional Water Board the following information for any recycled water users:

    a. The average number of persons estimated to be served at each use site area on a daily basis.

    b. The specific boundaries of the proposed use site area including a map showing the location of each facility, drinking water fountain, and impoundment to be used.

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[10] *Unique use sites are those sites where conditions are not routine and may involve controversy and raise public concerns.*

c. The person or persons responsible for operation of the recycled water system at each use area.

d. The specific use to be made of the recycled water at each use area.

e. The methods to be used to assure that the installation and operation of the recycled system will not result in cross connections between the recycled water and potable water piping systems. This shall include a description of the pressure, dye or other test methods to be used to test the system.

f. Plans and specifications which include following:

(1) Proposed piping system to be used.

(2) Pipe locations of both the recycled and potable systems.

(3) Type and location of the outlets and plumbing fixtures that will be accessible to the public.

(4) The methods and devices to be used to prevent backflow of recycled water into the potable water system.

(5) Plan notes relating to specific installation and use requirements.

8. The Discharger shall require the user(s) to designate an on-site supervisor responsible for the operation of the recycled water distribution system within the recycled water use area. The supervisor shall be responsible for enforcing this Order, prevention of potential hazards, the installation, operation and maintenance of the distribution system, maintenance of the distribution and irrigation system plans in "as-built" form, and for the distribution of the recycled wastewater in accordance with this Order.

9. Recycled water shall at all times be maintained within the property lines of any user. There shall be no direct or indirect discharge of recycled water into surface waters.

V. RECEIVING WATER LIMITATIONS AND SPECIFICATIONS

A. Surface Water Limitations – Not Applicable

B. Groundwater Limitations

1. The use of recycled water shall not cause the underlying groundwater to be degraded, to exceed water quality objectives, unreasonably affect beneficial uses, or cause a condition of pollution or nuisance.

VI. PROVISIONS

A. Standard Provisions

1. The Discharger shall comply with the following provisions:

a. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

b. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, discharge limitations (e.g., maximum daily effluent limitation), or receiving water limitation of this Order, the Discharger shall notify the Regional Water Board by telephone (951) 782-4130 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in the monthly Self-Monitoring Report, unless the Regional Water Board waives confirmation or requires, orally or in writing, a written notification within five business days. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.

c. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by Section 13050 of the CWC.

d. The Discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncomplying discharge.

e. This Order may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following.

   (1) Violation of any terms or conditions of this Order;
   (2) Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts.

f. The Discharger shall file with the Regional Water Board a Report of Waste Discharge at least 140 days before making any material change in the character, location, or volume of the discharge. A material change includes, but is not limited to, the following:

   (1) Adding a major industrial waste discharge to a discharge of essentially domestic sewage, or adding a new process or product by an industrial facility resulting in a change in the character of the waste.
   (2) Significantly changing the disposal method or location, such as changing the disposal to another drainage area or water body.
   (3) Significantly changing the method of treatment.

(4) Increasing the treatment plant design capacity beyond that specified in this Order.

g. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.

h. The Discharger shall maintain a copy of this Order at the site so that it is available to site operating personnel at all times. Key operating personnel shall be familiar with its content.

i. The Discharger shall optimize chemical additions needed in the treatment process to meet waste discharge requirements so as to minimize total dissolved solid increases in the treated wastewater.

j. Collected screenings, sludge, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Regional Water Board's Executive Officer.

k. If the Discharger demonstrates a correlation between the biochemical oxygen demand (BOD5) and total organic carbon (TOC) concentrations in the effluent to the satisfaction of the Executive Officer, compliance with the BOD5 limits contained in this Order may be determined based on analyses of the TOC of the effluent.

l. In the event of any change in control or ownership of land or waste discharge facility presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Regional Water Board.

m. The treatment facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

n. The Regional Board and other authorized representatives shall be allowed:

(1) Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order;
(2) Access to copy any records that are kept under the conditions of the Order;
(3) To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
(4) To photograph, sample and monitor for the purpose of assuring compliance with this Order, or as otherwise authorized by the Water Code.

B. Monitoring and Reporting Program Requirements (MRP)

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order. This monitoring and reporting program may be modified by the Executive Officer at any time during the term of this Order, and may include a reduction or an increase in the number of parameters to be monitored, the frequency of the monitoring or the number and size of samples to be collected. Any increase in the number of parameters to be monitored, the frequency of the monitoring or the number and size of samples to be collected may be reduced back to the levels specified in the original monitoring and reporting program at the discretion of the Executive Officer.

C. Special Provisions

1. Reopener Provisions – Not applicable

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. By November 1, 2008, the Discharger shall submit for approval by the Executive Officer, a report that details the manner in which sampling, monitoring and reporting will be performed as required in the Order.

b. TDS/TIN Offset Program

Where TDS and/or TIN offsets are necessary to comply with the TDS and/or TIN limitations of this Order, the Discharger shall implement the offset program identified in the Discharger's "Mitigation Plan for Eastern Municipal Water District's Recycled Water Activities in the San Jacinto River Watershed", Final, June 2008, submitted by letter dated June 25, 2008 to the Executive Officer (see also Section II.G., above). Should any of the proposed offset mechanisms be discontinued or prove to be inadequate to provide requisite offset(s), the Discharger shall, no later than 30 days of discontinuance of any of the proposed offset program or finding of its inadequacy, propose an alternative offset program for approval by the Executive Officer. The Discharger shall implement the alternative offset program upon approval by the Executive Officer.

c. San Jacinto Lower Pressure Management Zone Regulatory Compliance

The Discharger shall submit a quarterly regulatory compliance status report for the San Jacinto Lower Pressure Management Zone to address the reuse activities within this GMZ.

3. Best Management Practices and Pollution Prevention

a. Pollutant Minimization Program

(1) The Discharger shall develop and conduct a Pollutant Minimization Program (PMP) as further described below when there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either:

(a) A sample result is reported as DNQ and the effluent limitation is less than the RL; or
(b) A sample result is reported as ND and the effluent limitation is less than the MDL.

(2) The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

(a) An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;
(b) Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;
(c) Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;
(d) Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and
(e) An annual status report that shall be sent to the Regional Water Board including:

i. All PMP monitoring results for the previous year;
ii. A list of potential sources of the reportable priority pollutant(s);
iii. A summary of all actions undertaken pursuant to the control strategy; and
iv. A description of actions to be taken in the following year.

4. Construction, Operation and Maintenance Specifications

a. The Discharger's wastewater treatment plant shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Title 23, Division 3, Chapter 14, California Code of Regulations.

b. The Discharger shall provide safeguards to assure that should there be reduction, loss, or failure of electric power, the Discharger will comply with the requirements of this Order.

c. The Discharger shall update as necessary, the "Operation and Maintenance Manual (O&M Manual)" which it has developed for the treatment facility to conform to latest plant changes and requirements. The O&M Manual shall be readily available to operating personnel onsite. The O&M Manual shall include the following:

(1) Description of the treatment plant table of organization showing the number of employees, duties and qualifications and plant attendance schedules (daily, weekends and holidays, part-time, etc). The description should include documentation that the personnel are knowledgeable and qualified to operate the treatment facility so as to achieve the required level of treatment at all times.
(2) Detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation and equipment.
(3) Description of laboratory and quality assurance procedures.
(4) Process and equipment inspection and maintenance schedules.
(5) Description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the Discharger will be able to comply with requirements of this Order.
(6) Description of preventive (fail-safe) and contingency (response and cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. These plans shall identify the possible sources (such as loading and storage areas, power outage, waste treatment unit failure, process equipment failure, tank and piping failure) of accidental discharges, untreated or partially treated waste bypass, and polluted drainage.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. Sewer Collection System Requirements: The Discharger’s collection system is part of the system that is subject to this Order. As such, the Discharger must properly operate and maintain its collection system (40 C.F.R. § 122.41(e)). The Discharger must report any non-compliance (40 C.F.R. § 122.41(l)(6) and (7)) and mitigate any discharge from the Discharger’s collection system in violation of this Order (40 C.F.R. § 122.41(d)).

Furthermore, the General Waste Discharge Requirements for Collection System Agencies (Order No. 2006-0003 DWQ) contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. While the Discharger must comply with both Order No. 2006-0003 DWQ and this Order, the General Collection System WDR more clearly and specifically stipulates requirements for operation and maintenance and for reporting and mitigating sanitary sewer overflows. The Discharger and other governmental agencies that are discharging wastewater into the facility are required to obtain enrollment for regulation under Order No. 2006-0003-DWQ.

b. Sludge Disposal Requirements

(1) Collected screenings, sludge, and other solids removed from liquid wastes shall be disposed of in a manner that is consistent with State Water Board and Integrated Waste Management Board's joint regulations (Title 27) of the California Code of Regulations and approved by the Regional Water Board's Executive Officer.
(2) The use and disposal of biosolids shall comply with existing Federal and State laws and regulations, including permitting requirements and technical standards included in 40 CFR 503.
(3) Any proposed change in biosolids use or disposal practice from a previously approved practice should be reported to the Executive Officer and EPA Regional Administrator at least 90 days in advance of the change.
(4) The Discharger shall take all reasonable steps to minimize or prevent any discharge or biosolids use or disposal that has the potential of adversely affecting human health or the environment.

c. Pretreatment Program Requirements

(1) The Discharger[11] shall update as necessary and implement the approved pretreatment program and its components as described in Section II.I., above.

[11] *For purposes of the pretreatment program, Discharger is synonymous to Control Authority as defined in 40 CFR 403.12*

(2) The Discharger shall update as necessary the appropriate contractual agreements with all governmental agencies[12]. The contractual agreements shall give the Discharger the authority to implement and enforce the approved pretreatment program within the sewer service areas of the treatment facility. The Discharger shall assure that any other steps necessary to provide this implementation and enforcement authority (e.g. adoption of ordinances, etc.) are taken by all governmental agencies. If a governmental agency has an EPA approved pretreatment program for any portion of the service area of the treatment facility, the Discharger's pretreatment program shall contain provisions ensuring that that governmental agency's program is implemented. In the event that any agency discharging to Discharger's facility fails to effectively implement its individual EPA approved pretreatment program, the Discharger shall implement and enforce its approved program within that agency's service area.

(3) The Discharger shall ensure that the POTW[13] pretreatment program for all contributory agencies discharging to the Discharger's treatment facility are implemented and enforced. The Discharger shall be responsible and liable for the performance of all Control Authority pretreatment requirements contained in 40 CFR 403, including any subsequent regulatory revisions to Part 403. Where Part 403 or subsequent revisions place mandatory actions upon the Discharger as Control Authority but does not specify a timetable for completion of the actions, the Discharger shall submit for approval of the Regional Water Board's Executive Officer, a schedule for implementation of the required actions and shall implement the approved schedule. The schedule for implementation shall be submitted within six months from the date that such mandatory actions are established. For violations of pretreatment requirements, the Discharger shall be subject to enforcement actions, penalties, fines and other remedies by the EPA, or other appropriate parties, as provided in the CWA, as amended (33 USC 1351 et seq.). The EPA or the Regional Water Board may also initiate enforcement action against an industrial user (IU) for non-compliance with applicable standards and requirements as provided in the CWA.

(4) The Discharger shall perform the pretreatment functions as required in 40 CFR Part 403 including, but not limited to:

(a) Enforce the pretreatment requirements under 40 CFR 403.5 and 403.6;

(b) Implement the necessary legal authorities as provided in 40 CFR 403.8(f)(1);

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[12] *Member agencies and sewering agencies discharging wastewater into the Facility.*

[13] *Publicly owned treatment works.*

(c) Implement the programmatic functions as provided in 40 CFR 403.8(f)(2);

(d) Publish a list of significant non-compliance as required by 40 CFR 403.8(f)(2)(vii); and

(e) Provide the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR 403.8(f)(3).

(5) The following wastes shall not be introduced into the treatment works:

(a) Wastes which create a fire or explosion hazard in the treatment works;

(b) Wastes which will cause corrosive structural damage to treatment works, but, in no case, wastes with a pH lower than 5.0 unless the works are designed to accommodate such wastes;

(c) Wastes at a flow rate and/or pollutant discharge rate which is excessive over relatively short time periods so that there is a treatment process upset and subsequent loss of treatment efficiency;

(d) Solid or viscous wastes in amounts that would cause obstruction to the flow in sewers or otherwise interfere with the proper operation of the treatment works.

(6) The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by EPA under Section 307 of the CWA or amendments thereto for any discharge to the municipal system.

(7) The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement.

(8) The Discharger shall require each user not in compliance with any pretreatment standard to submit periodic notice (over intervals not to exceed nine months) of progress toward compliance with applicable toxic and pretreatment standards developed pursuant to the CWA or amendments thereto. The Discharger shall forward a copy of such notice to the Regional Water Board and to the EPA Regional Administrator.

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in Section IV of this Order will be determined as specified below:

A. General.

Compliance with effluent limitations for pollutants shall be determined using sample reporting protocols defined in the MRP and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the minimum level (ML) as shown in Attachment H.

B. Multiple Sample Data.

When determining compliance with an AMEL for toxic pollutants and more than one sample result is available in a month, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of “Detected, but Not Quantified” (DNQ) or “Not Detected” (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

C. Average Monthly Effluent Limitation (AMEL).

If the average (or when applicable, the median for multiple sample data, see Attachment E Section X.B.5.) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Discharger may be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger may be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

D. Average Weekly Effluent Limitation (AWEL).

If the average (or when applicable, the median for multiple sample data, see Attachment E Section X.B.5.) of daily discharges over a calendar week exceeds the AWEL for a given parameter, this will represent a single violation, though the Discharger may be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Discharger may be considered out of compliance for that calendar week. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week.

E. Maximum Daily Effluent Limitation (MDEL).

If a daily discharge (or when applicable, the median for multiple sample data of a daily discharge, see Attachment E Section X.B.5.) exceeds the MDEL for a given parameter, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

F. 12-Month Running Average Effluent Limitation (12-MRAEL).

Compliance with the 12-month flow weighted running average limitations under Discharge Specification IV.A.1.c., IV.A.1.d., and IV.B.1.b. shall be determined by the arithmetic mean of the last twelve monthly averages.

G. Turbidity Limitations.

The Discharger shall be considered in compliance with Discharge Specifications IV.B.1.c if the following conditions are met. If the Discharger is using a properly operating backup turbidimeter, the reading of the backup turbidimeter shall be considered in determining whether there has been an actual noncompliance:

1. There are no excursions above the limits specified in Discharge Specifications IV.B.1.c.(1)(a) and (b);
2. Exceedances of the “10 NTU at any time” turbidity requirement do not exceed a duration of one minute.
3. The apparent exceedance was caused by interference with, or malfunction of, the monitoring instrument.

H. Coliform Organism Effluent Limitations.

1. Compliance with the average weekly total coliform limit expressed in Discharge Specification IV.B.1.c.(2)(a) and IV.B.1.d. shall be based on a median of test results from the previous 7 days. To comply with the limit, the 7-day median MPN must not exceed 2.2 per 100 milliliters on any day during the week. However, only one violation is recorded for each calendar week, even if the 7-day median MPN value is greater than 2.2 for more than one day in the week.

2. Compliance with the average weekly total coliform limit expressed in Discharge Specification IV.B.1.e. shall be based on a median of test results from the previous 7 days. To comply with the limit, the 7-day median MPN must not exceed 23 per 100 milliliters on any day during the week. However, only one violation is recorded for each calendar week, even if the 7-day median MPN value is greater than 23 for more than one day in the week.

I. TDS Increment Limit.

Compliance with Discharge Specifications IV.A.1.c.2) shall be based on flow weighted TDS water supply quality. The Discharger shall provide the necessary calculations showing the overall TDS water supply quality.

J. Compliance Determination.

Compliance determinations shall be based on available analyses for the time interval associated with the effluent limitation. Where only one sample analysis is available in a specified time interval (e. g., monthly or weekly average), that sample shall serve to characterize the discharge for the entire interval. If quarterly sample results show noncompliance with the average monthly limit and that sample result is used for compliance determinations for each month of the quarter, then three separate violations of the average monthly limit shall be deemed to have occurred.

Compliance with a single effluent limitation which applies to a group of chemicals (e.g., PCBs), based on a single sample shall be determined by considering the concentrations of individual members of the group to be zero if the analytical response for the individual chemical falls below the method detection limit (MDL) for that chemical.

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ), also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$

where: Σx is the sum of the measured ambient water concentrations, and
n is the number of samples.

Average Monthly Effluent Limitation (AMEL): the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL): the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Management Practices (BMPs) are methods, measures, or practices designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and nonpoint source discharges including storm water. BMPs include structural and non-structural controls, and operation and maintenance procedures, which can be applied before, during, and/or after pollution producing activities.

Bioaccumulative pollutants are those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic pollutants are substances that are known to cause cancer in living organisms.

Daily Discharge: Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

Detected, but Not Quantified (DNQ) are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

Estimated Chemical Concentration is the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Existing Discharger means any discharger that is not a new discharger. An existing discharger includes an "increasing discharger" (i.e., an existing facility with treatment systems in place for its current discharge that is or will be expanding, upgrading, or modifying its existing permitted discharge after the effective date of this Policy).

Infeasible means not capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

Inland Surface Waters are all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation: the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation: the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Flow is the maximum flow sample of all samples collected in a calendar day.

Maximum Daily Effluent Limitation (MDEL) means the highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

MEC: Maximum Effluent Concentration.

Median is the middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

Method Detection Limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 CFR 136, Appendix B, revised as of May 14, 1999.

Minimum Level (ML) is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Not Detected (ND) are those sample results less than the laboratory's MDL.

Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP) means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost-effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to CWC Section 13263.3(d), shall be considered to fulfill the PMP requirements. The following reporting protocols and definitions are used in determining the need to conduct a Pollution Minimization Program (PMP). Reporting protocols in the Monitoring and Reporting Program, Attachment E, Section X.B.4 describe sample results that are to be reported as Detected but Not Quantified (DNQ) or Not Detected (ND). Definitions for a Minimum Level (ML) and Method Detection Limit (MDL) are provided in Attachment A. A Reporting Level (RL) is the ML associated with an analytical method selected by the Discharger that is authorized for monitoring effluent limitations under this Order.

Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code Section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the SWRCB or RWQCB.

Process Optimization means minor changes to the existing facility and treatment plant operations that optimize the effectiveness of the existing treatment processes.

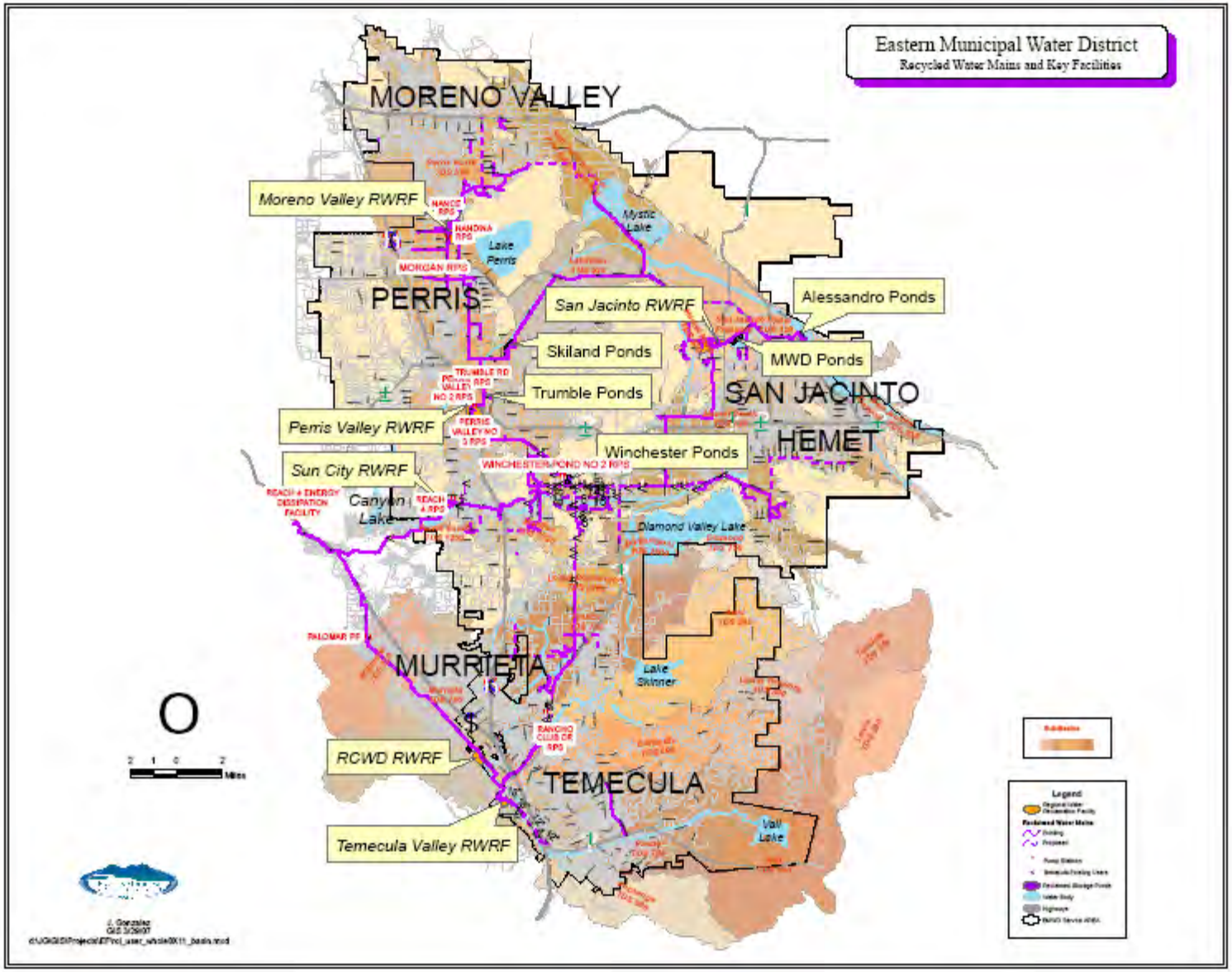
Public Entity includes the federal government or a state, county, city and county, city, district, public authority, or public agency.

Reporting Level (RL) is the ML corresponding to an approved analytical method for reporting a sample result that is selected either from Appendix 4 of the SIP by the Regional Water Board in accordance with Section 2.4.2 of the SIP or established in accordance with Section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

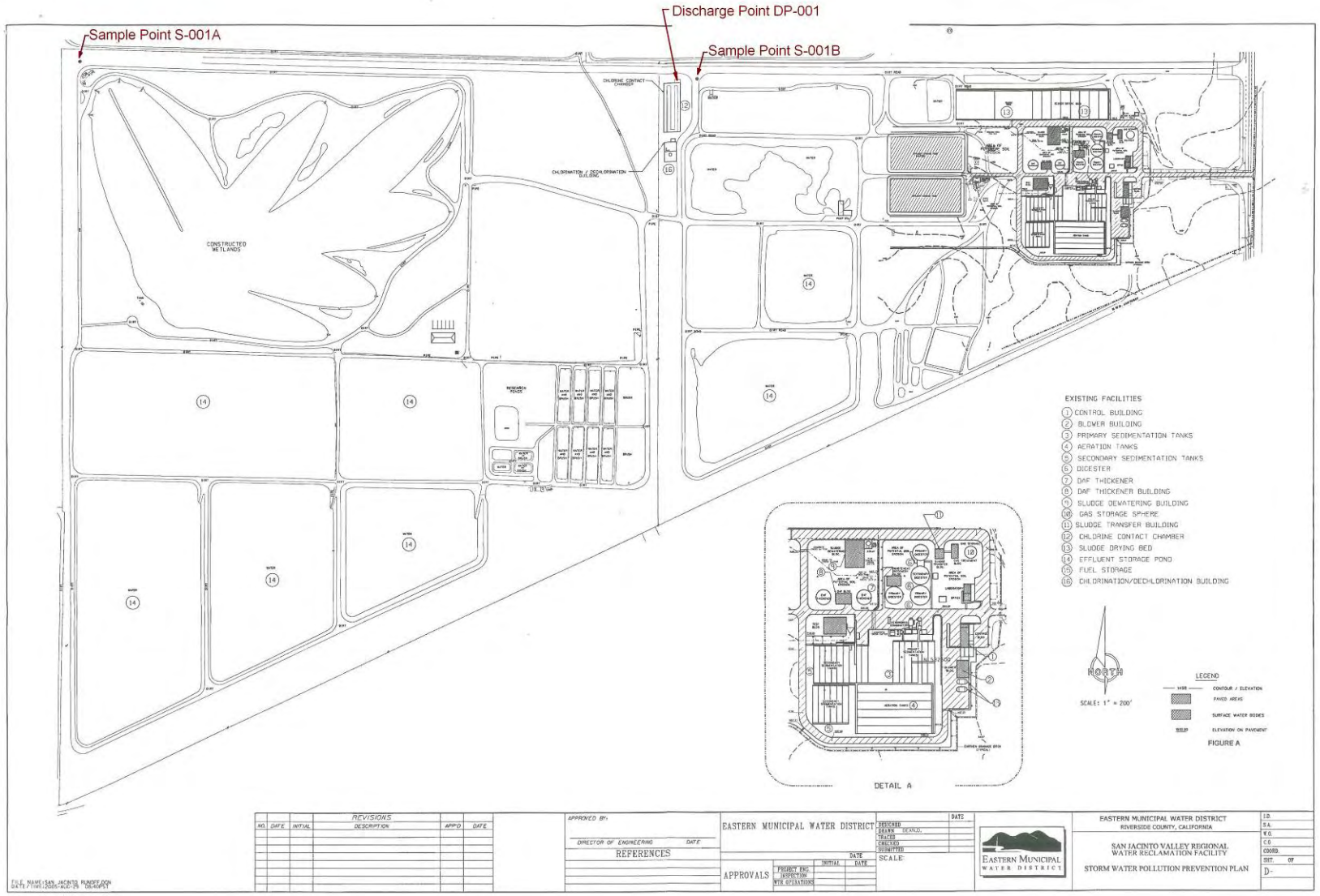
Source of Drinking Water is any water designated as municipal or domestic supply (MUN) in a RWQCB basin plan.

12-Month Running Average Effluent Limitation (12-MRAEL): the highest allowable average of monthly discharges over last twelve months, calculated as the sum of all monthly discharges measured during last twelve months divided by the number of monthly discharges measured during that time period.

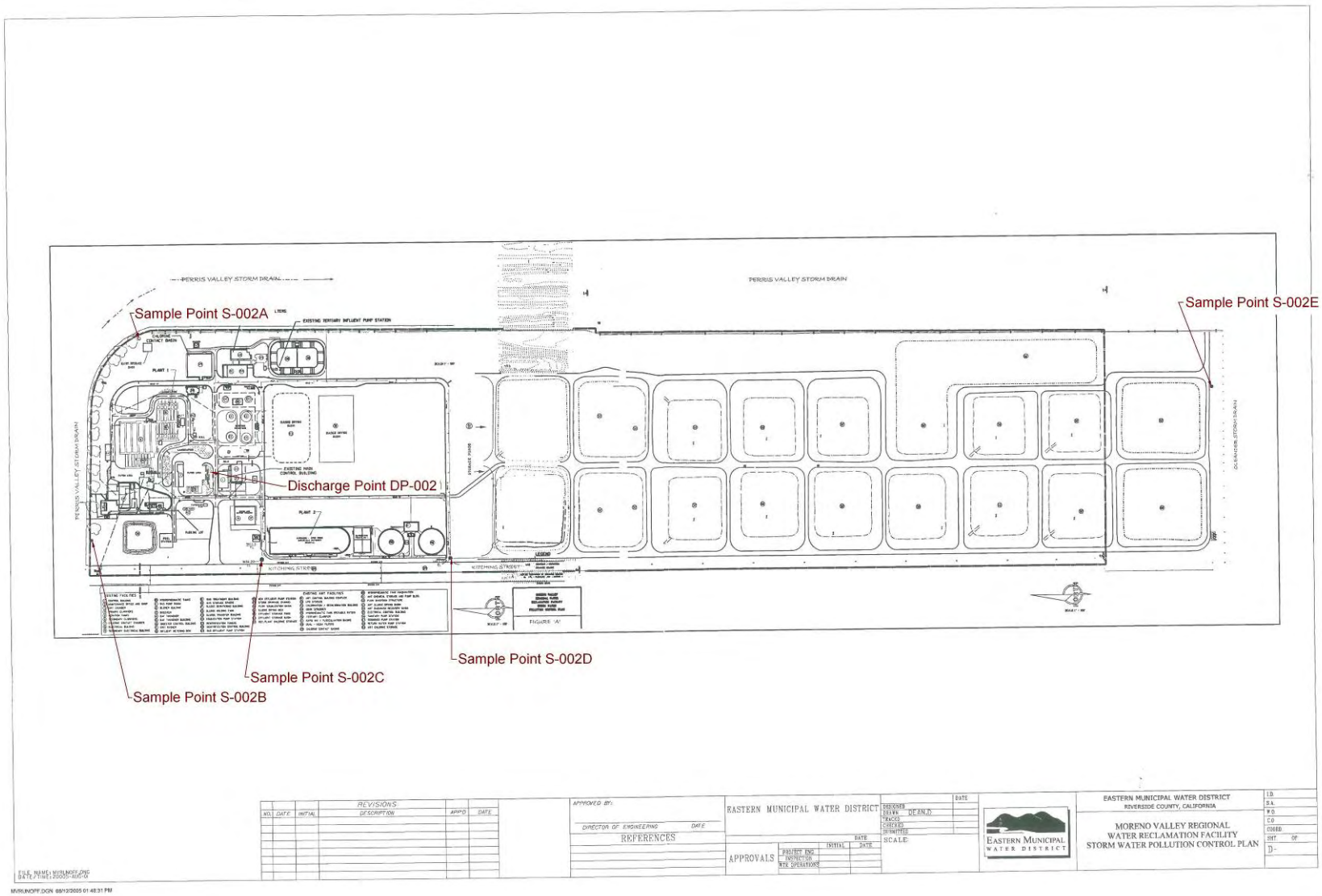
ATTACHMENT B – MASTER LOCATION MAP



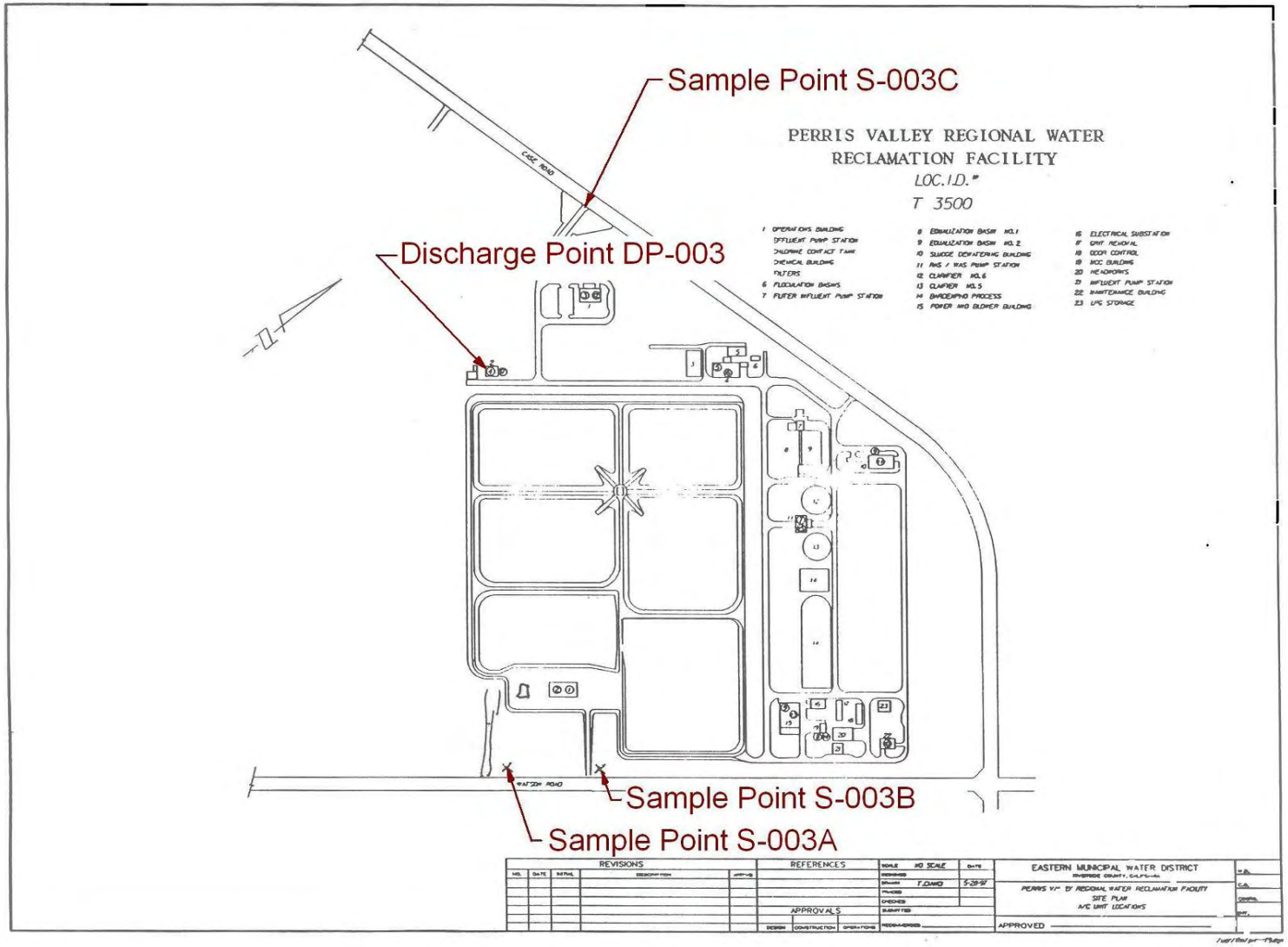
SJVRWRF Location Map



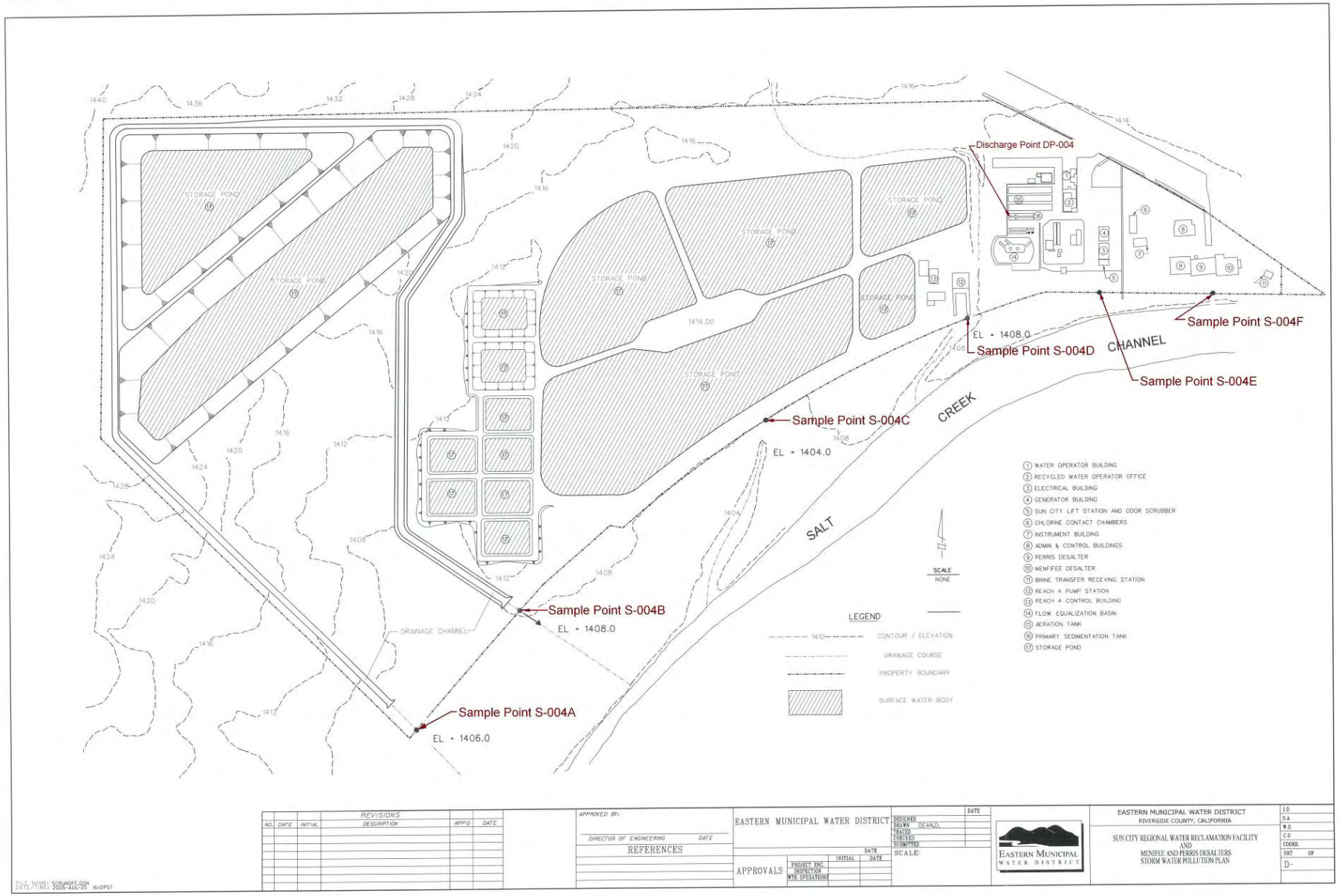
MVRWRF Location Map



PVRWRF Location Map



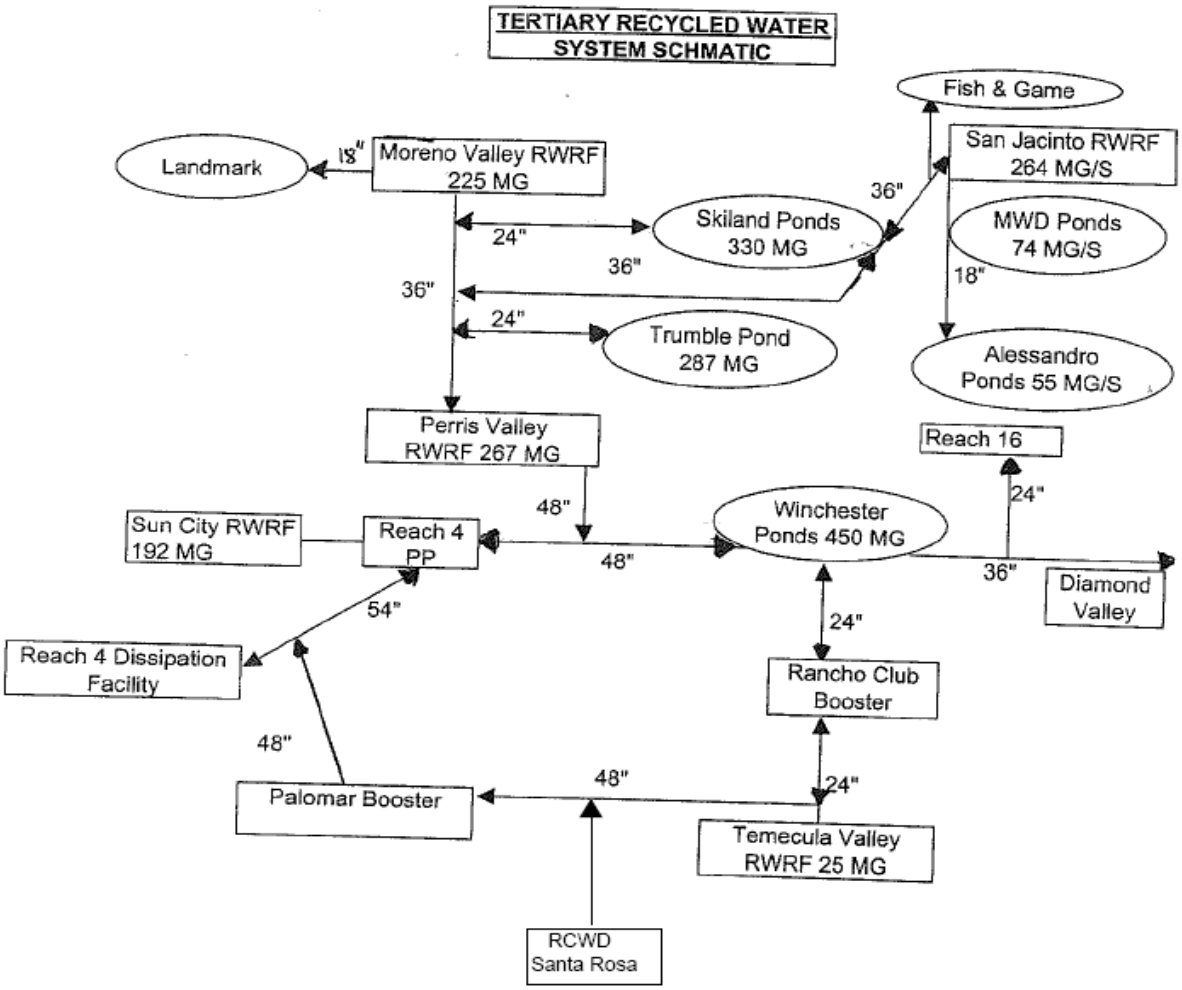
SCRWRF Location Map



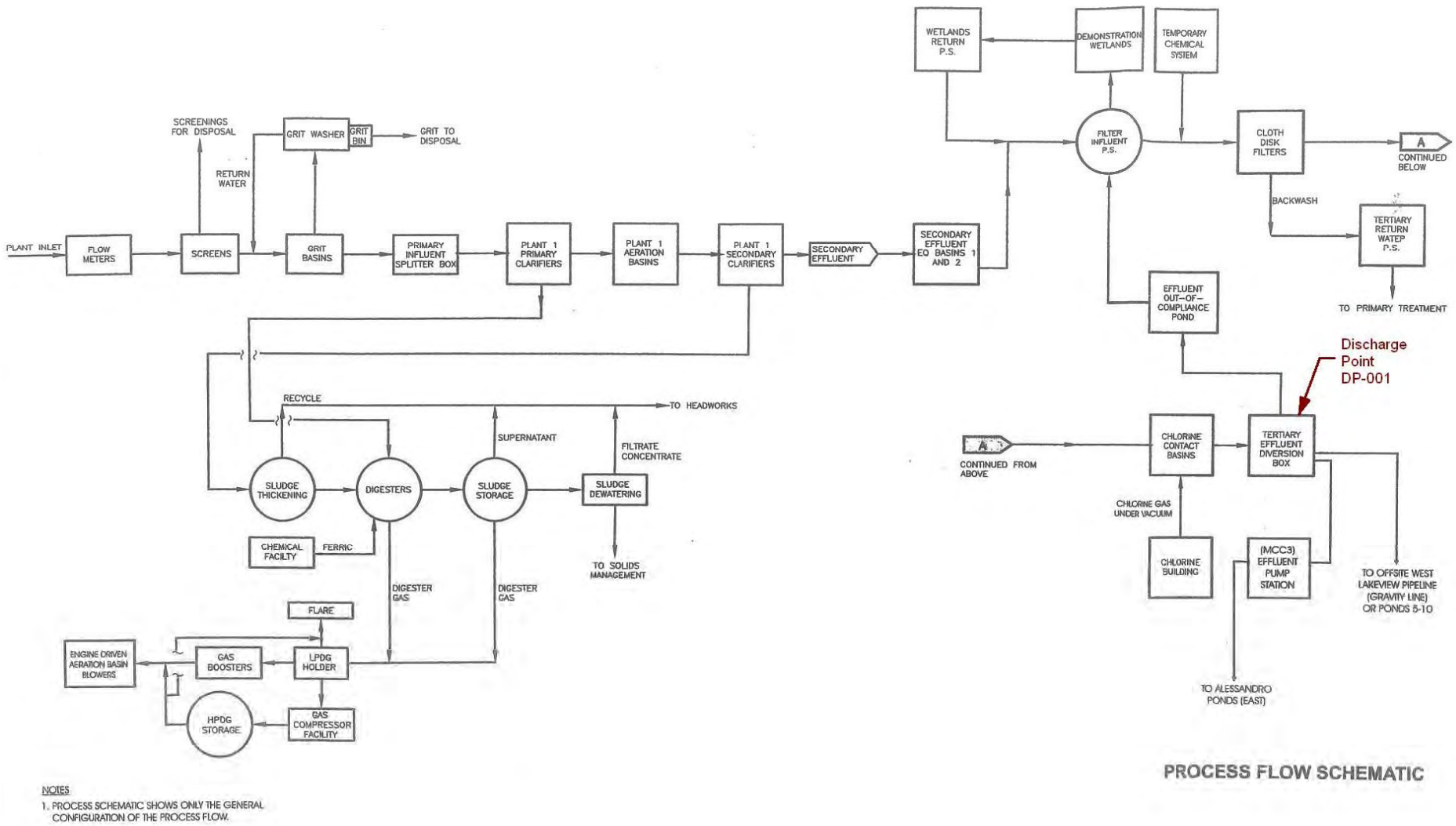
Winchester Ponds Location Map

ATTACHMENT C – FLOW SCHEMATIC

Tertiary Recycled Water System Schematic

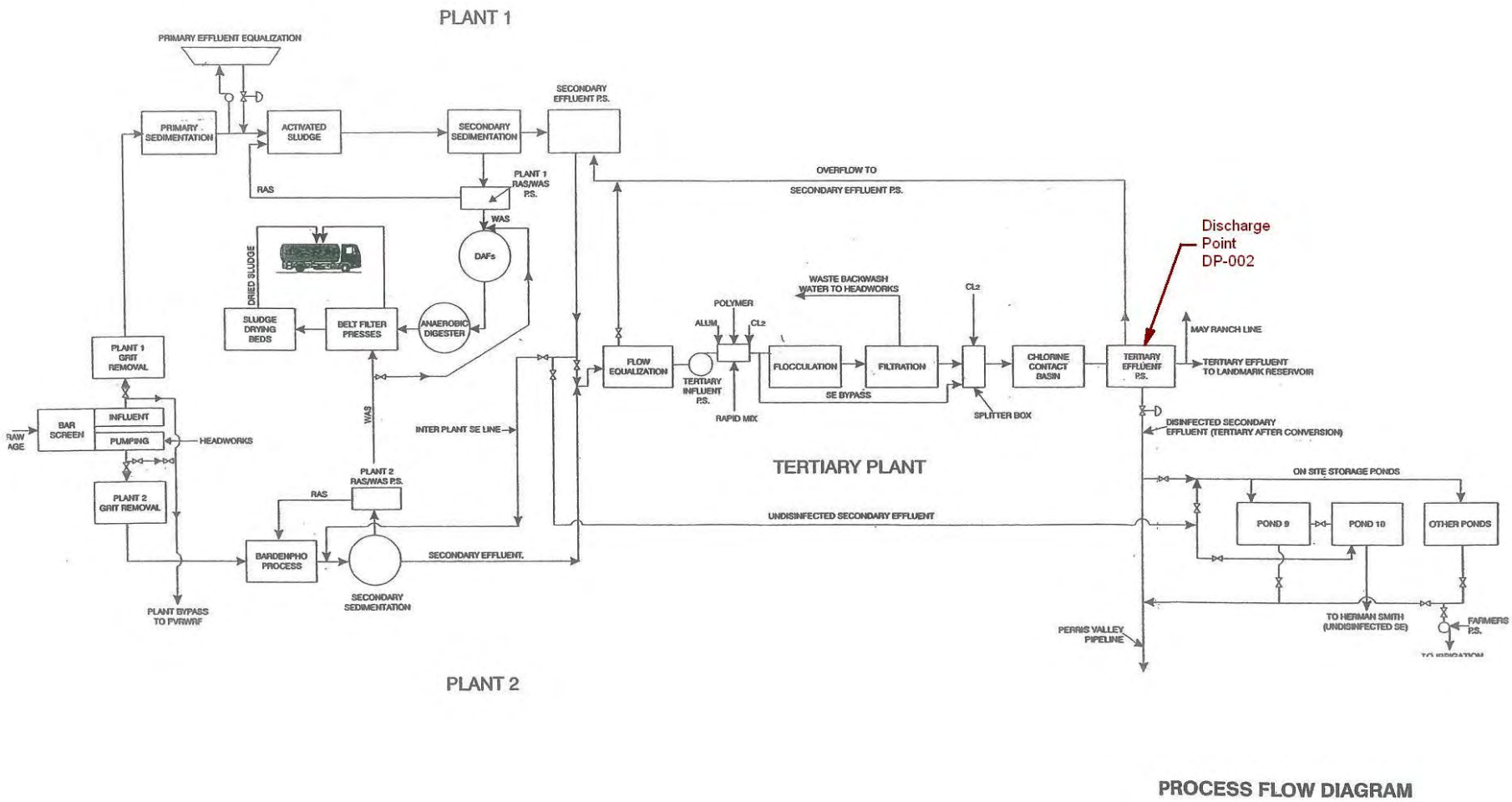


SJVRWRF Flow Schematic



NOTES
1. PROCESS SCHEMATIC SHOWS ONLY THE GENERAL CONFIGURATION OF THE PROCESS FLOW.

MVRWRF Flow Schematic

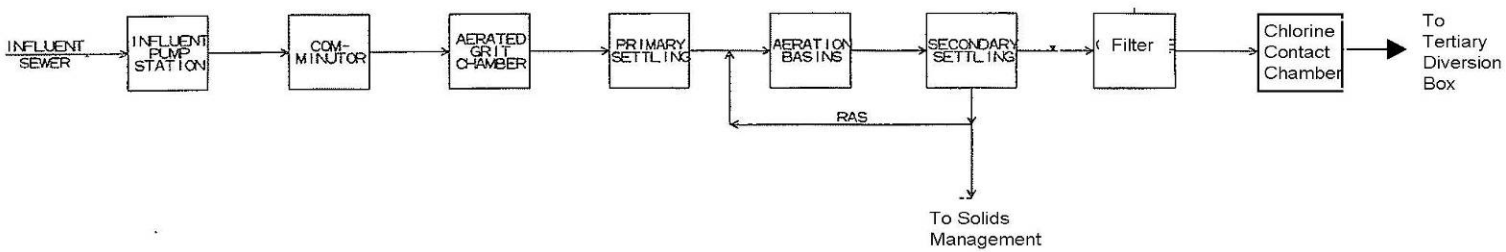


PROCESS FLOW DIAGRAM

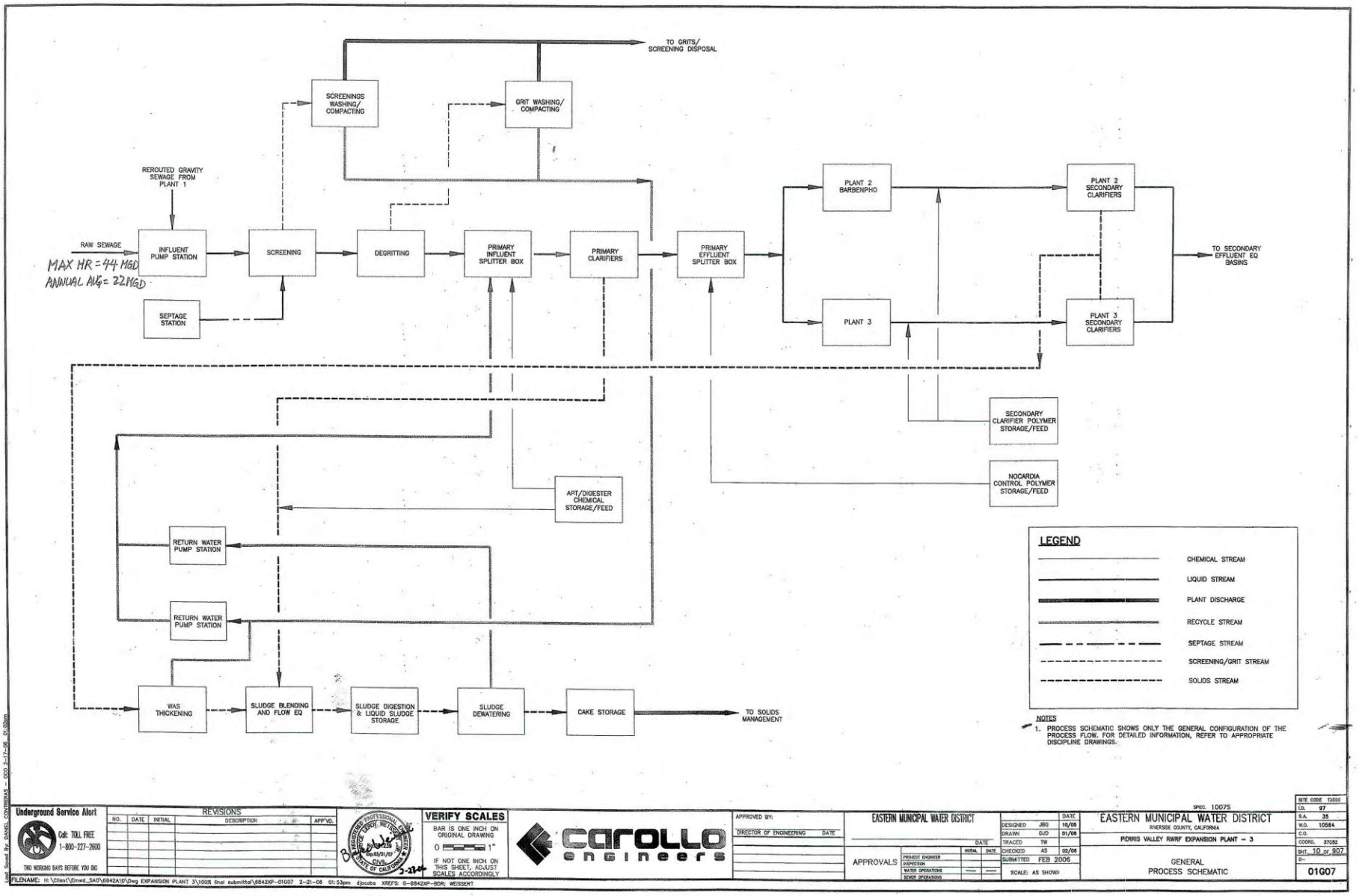
PVRWRF Plant 1 Flow Schematic

PERRIS VALLEY
REGIONAL WATER RECLAMATION FACILITY
PROCESS SCHEMATIC
3.0 MGD FACILITIES

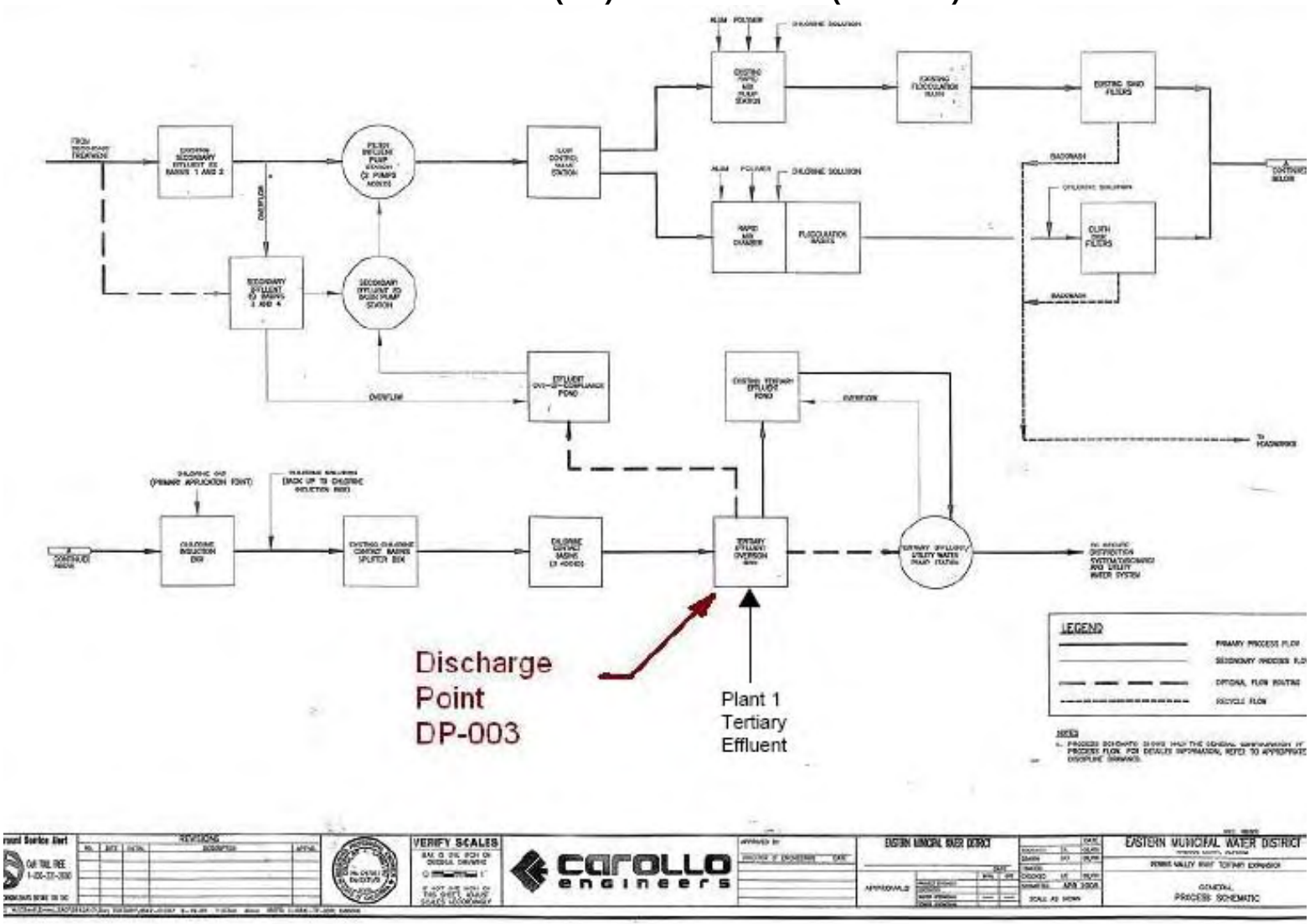
Plant 1



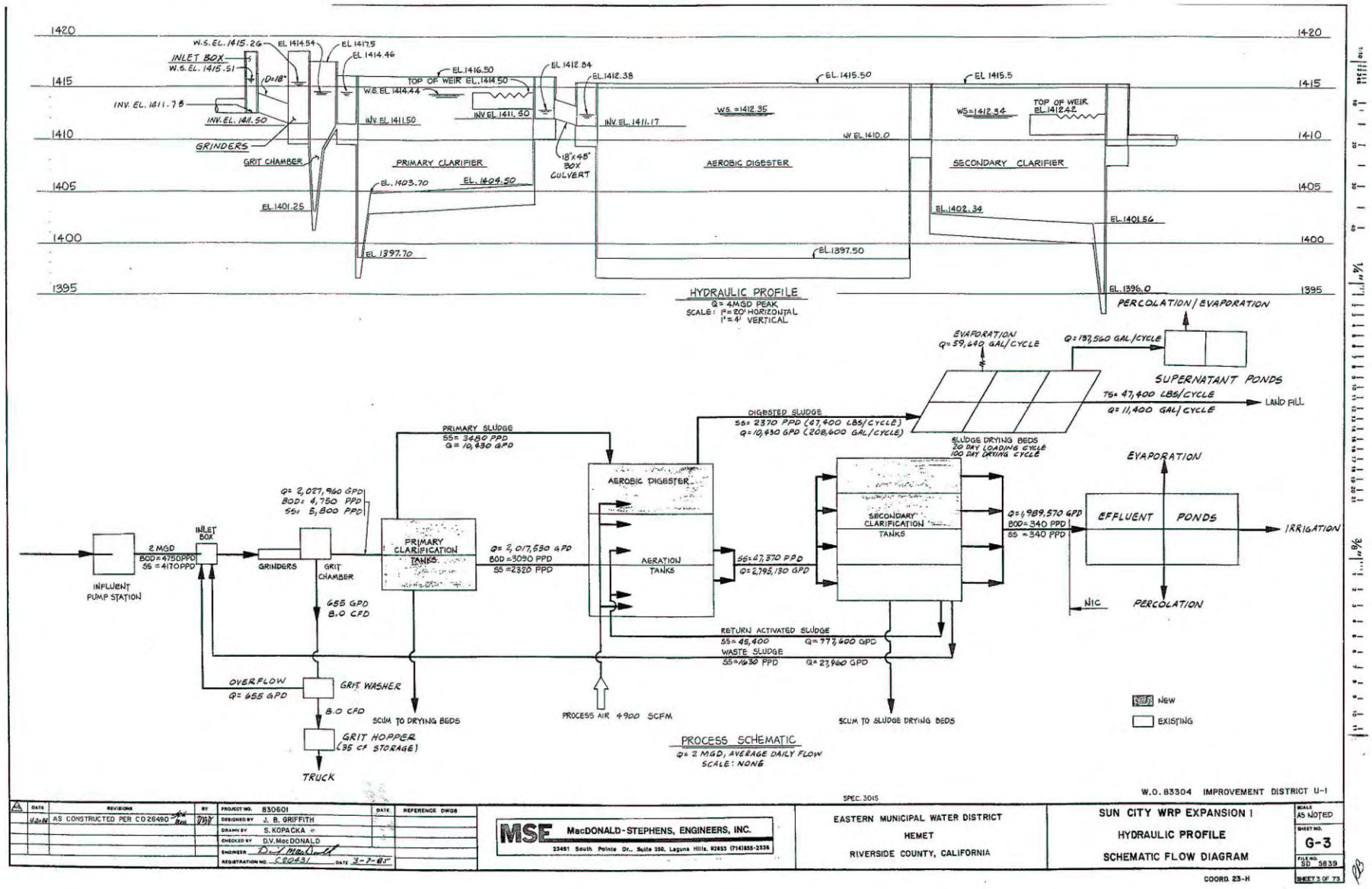
PVRWRF Plant 2 (& 3) Flow Schematic



PVRWRF Plant 2 (& 3) Flow Schematic (continue)



SCRWRF Flow Schematic



Attachment E – Monitoring and Reporting Program

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

CWC Section 13267 authorizes the Regional Water Quality Control Board (RWQCB) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

A. General Monitoring Provision

1. All sampling and sample preservation shall be in accordance with the current approved edition of "*Standard Methods for the Examination of Water and Wastewater*" (American Public Health Association) and 40 CFR Part 136 approved methods.

2. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the California Department of Public Health in accordance with the provision of Water Code Section 13176, and must include quality assurance/quality control data with their reports, or at laboratories approved by the Regional Water Board's Executive Officer.

3. Whenever the Discharger monitors any pollutant more frequently than is required by this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the discharge monitoring report specified by the Executive Officer.

4. For every item of monitoring data where the requirements are not met, the monitoring report shall include a statement discussing the reasons for noncompliance, the actions undertaken or proposed that will bring the discharge into full compliance with requirements at the earliest time, and an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when compliance with the time schedule has been achieved.

5. The Discharger shall assure that records of all monitoring information are maintained and accessible for a period of at least five years from the date of the sample, report, or application. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or by the request of the Regional Water Board at any time. Records of monitoring information shall include:

    a. The laboratory which performed the analyses;
    b. The date(s) analyses were performed;
    c. The individual(s) who performed the analyses;
    d. The modification(s) to analytical techniques or methods used;
    e. All sampling and analytical results, including

(1) Units of measurement used;
(2) Minimum reporting level (RL) for the analysis or the minimum level (ML) as determined in Attachment H;
(3) Results less than the reporting level (RL) or the minimum level (ML) but above the method detection limit (MDL);
(4) Data qualifiers and a description of the qualifiers;
(5) Quality control test results (and a written copy of the laboratory quality assurance plan);
(6) Dilution factors, if used; and
(7) Sample matrix type.

f. All monitoring equipment calibration and maintenance records;
g. All original strip charts from continuous monitoring devices;
h. All data used to complete the application for this Order; and,
i. Copies of all reports required by this Order.
j. Electronic data and information generated by the Supervisory Control and Data Acquisition (SCADA) System.

6. The flow measurement system shall be calibrated at least once per year or more frequently, to ensure continued accuracy.

7. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. In the event that continuous monitoring equipment is out of service for greater than a 24-hour period, the Discharger shall obtain a representative grab sample each day the equipment is out of service. The Discharger shall correct the cause(s) of failure of the continuous monitoring equipment as soon as practicable. In its monitoring report, the Discharger shall specify the period(s) during which the equipment was out of service and if the problem has not been corrected, shall identify the steps which the Discharger is taking or proposes to take to bring the equipment back into service and the schedule for these actions.

8. Monitoring and reporting shall be in accordance with the following:

   a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

   b. The monitoring and reporting of influent, effluent, and sludge shall be done more frequently as necessary to maintain compliance with this Order and or as specified in this order.

   c. A "grab" sample is defined as any individual sample collected in less than 15 minutes.

d. A composite sample is defined as a combination of no fewer than eight individual grab samples obtained over the specified sampling period. The volume of each individual grab sample shall be proportional to the discharge flow rate at the time of sampling. The compositing period shall equal the specific sampling period, or 24 hours, if no period is specified.

e. Daily samples shall be collected on each day of the week.

f. Weekly samples shall be collected on any representative day during a week.

g. Monthly samples shall be collected on any representative day of each month.

h. Quarterly samples: A representative sample shall be taken on any representative day of January, April, July, and October and test results shall be reported in either micrograms/liter (ug/L) or milligrams/liter (mg/L), as appropriate, by the last day of the month following the month that the sample was taken.

i. Semi-annual samples shall be collected in January and July.

j. Annual samples shall be collected in accordance with the following schedule:

Table 1. Annual Sampling Schedule

Year	Annual Samples
2009	July
2010	October
2011	January
2012	April
2013	July
2014	October
2015	January
2016	April
2017	July
2018	October
2019	January

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order.

Table 2. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description	Latitude	Longitude
Influent Monitoring Locations				
--	M-INF1	San Jacinto Valley RWRF Influent	33°47'55"N	117°00'33"W
--	M-INF2	Moreno Valley RWRF Influent	33°52'23"N	117°12'59"W
--	M-INF3A	Perris Valley RWRF Plant 1 Influent	33°45'06"N	117°11'48"W
--	M-INF3B	Perris Valley RWRF Plant 2 Influent	33°45'04"N	117°11'31"W
--	M-INF4	Sun City RWRF Plant Influent	33°41'43"N	117°12'36"W
--	M-INF5	Temecula Valley RWRF Plant Influent	33°30'27"N	117°10'14"W
Land Discharge Monitoring Locations				
001	L-001	San Jacinto RWRF Plant Effluent	33°47'59"N	117°00'55"W
002	L-002	Moreno Valley RWRF Plant Effluent (Tertiary Pump Station)	33°52'19"N	117°12'52"W
003A	L-003A	Perris Valley RWRF Plant 1 Effluent	33°45'10"N	117°11'45"W
003B	L-003B	Perris Valley RWRF Plant 2 Effluent	33°45'18"N	117°11'43"W
004	L-004	Sun City RWRF Plant Effluent	33°41'45"N	117°12'38"W
005	L-005	Temecula Valley RWRF Plant Effluent	33°30'22"N	117°10'03"W
001	L-006	San Jacinto Upper GMZ (Alessandro & MWD Ponds)	33°47'59"N	117°00'55"W
	L-007	Lakeview & Hemet North GMZ (SJVRWRF On-Site Ponds)		
002	L-008	Perris North GMZ (MVRWRF On-Site and Landmark Ponds	33°52'19"N	117°12'52"W
	L-009	Perris South GMZ (Skiland & Trumble Ponds)		
003A & 003B	L-010	Perris South GMZ (PVRWRF On-Site, Skiland, Trumble & Winchester Ponds)	33°45'10"N 33°45'18"N	117°11'45"W 117°11'43"W
004	L-011	Perris South GMZ (SCRWRF On-Site Ponds)	33°41'45"N	117°12'38"W
005	L-012	Perris South GMZ (SCRWRF On-Site & Winchester Ponds)	33°30'22"N	117°10'03"W
Reclamation Monitoring Locations				
001	REC-001	San Jacinto Valley RWRF Recycled Water Chlorinated Effluent	33°47'59"N	117°00'55"W
002	REC-002	Moreno Valley RWRF Recycled	33°52'19"N	117°12'51"W

Table 2. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description	Latitude	Longitude
		Water Combined Chlorinated Effluent		
003A	REC-003A	Perris Valley RWRF Plant 1 Recycled Water Chlorinated Effluent	33°45'07"N	117°11'44"W
003B	REC-003B	Perris Valley RWRF Plant 2 Recycled Water Chlorinated Effluent	33°45'19"N	117°11'39"W
004	REC-004	Sun City RWRF Recycled Water Chlorinated Effluent	33°41'45"N	117°12'38"W
005	REC-005	Temecula Valley Recycled Water Combined Chlorinated Effluent	33°30'19"N	117°10'05"W
001 002 003A 003B	REC-006	San Jacinto Lower GMZ	33°47'59"N 33°52'19"N 33°45'07"N 33°45'19"N	117°00'55"W 117°12'51"W 117°11'44"W 117°11'39"W
001	REC-007	San Jacinto Upper GMZ	33°47'59"N	117°00'55"W
001 002 003A 003B	REC-008	Lakeview & Hemet North GMZ	33°47'59"N 33°52'19"N 33°45'07"N 33°45'19"N	117°00'55"W 117°12'52"W 117°11'44"W 117°11'39"W
003A 003B 005	REC-09	Hemet South GMZ	33°45'07"N 33°45'19"N 33°30'19"N	117°11'44"W 117°11'39"W 117°10'05"W
002	REC-010	Perris North GMZ	33°52'19"N	117°12'51"W
002 003A 003B 004 005	REC-011	Perris South GMZ	33°52'19"N 33°45'07"N 33°45'19"N 33°41'45"N 33°30'19"N	117°12'51"W 117°11'44"W 117°11'39"W 117°12'38"W 117°10'05"W
003A 003B 005	REC-012	Menifee GMZ	33°45'07"N 33°45'19"N 33°30'19"N	117°11'44"W 117°11'39"W 117°10'05"W

III. INFLUENT MONITORING REQUIREMENTS

A. Influent Monitoring

1. The Discharger shall monitor the influent to each RWRF at the influent monitoring station locations specified in Table 2, above, for the following constituents.

Table 3. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Recorder/Totalizer	Continuous	--
pH	pH Units	Recorder	Continuous	--
Specific Conductance	μmhos/cm	Recorder	Continuous	--
BOD_5	mg/L	Composite	Daily	See Section I.A.3, above, of this MRP
Total Suspended Solids	mg/L	Composite	Daily	"
Total Dissolved Solids	mg/L	Composite	Monthly	"
Total Inorganic Nitrogen	mg/L	Composite	Monthly	"
Ammonia-Nitrogen	mg/L	Composite	Monthly	"
Total Hardness	mg/L	Composite	Quarterly	See Section I.A.2. above, of this MRP
Arsenic	μg/L	Composite	Quarterly	"
Total Cadmium	μg/L	Composite	Quarterly	"
Total Chromium	μg/L	Composite	Quarterly	"
Total Copper	μg/L	Composite	Quarterly	"
Total Lead	μg/L	Composite	Quarterly	"
Total Mercury	μg/L	Composite	Quarterly	"
Total Nickel	μg/L	Composite	Quarterly	"
Total Selenium	μg/L	Composite	Quarterly	"
Total Silver	μg/L	Composite	Quarterly	"
Total Zinc	μg/L	Composite	Quarterly	"
Cyanide	μg/L	Grab	Quarterly	"
Boron	mg/L	Composite	Annually	See Section I.A.3. above, of this MRP
Chloride	mg/L	Composite	Annually	"
Fluoride	mg/L	Composite	Annually	"
Sulfate	mg/L	Composite	Annually	"

IV. LAND DISCHARGE MONITORING REQUIREMENTS

A. Effluent Monitoring Locations L-001 through L-005

1. The Discharger shall monitor the treated effluent discharged at DP 001 through DP 005 at monitoring station locations L-001 through L-005 as specified for Land Discharge Monitoring Locations in Table 2, above, for the following constituents.

Table 4. Effluent Monitoring at L-001 through L-005

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Test Method And Reporting Level
Flow	mgd	Recorder/ Totalizer	Continuous	--
Specific Conductance	µmhos/cm	Recorder	Continuous	--
pH	pH units	"	Continuous	--
Coliform	MPN/100mL	grab	Daily	See Section I.A.3. above, of this MRP
BOD_5	mg/L	Composite	Daily	"
Suspended Solids	mg/L	Composite	Daily	"
Total Dissolved Solids	mg/L	Composite	Monthly	"
Total Hardness	mg/L	Composite	Monthly	"
Total Inorganic Nitrogen	mg/L	Composite	Monthly	"
Total Organic Nitrogen	mg/L	Composite	Monthly	"
Bicarbonate	mg/L	Composite	Quarterly	See Section I.A.3. above, of this MRP
Boron	mg/L	Composite	Quarterly	"
Calcium	mg/L	Composite	Quarterly	"
Carbonate	mg/L	Composite	Quarterly	"
Chloride	mg/L	Composite	Quarterly	"
Fluoride	mg/L	Composite	Quarterly	See Section I.A.3. above, of this MRP
Magnesium	mg/L	Composite	Quarterly	"
Sodium	mg/L	Composite	Quarterly	"
Sulfate	mg/L	Composite	Quarterly	"
Aluminum	µg/L	Composite	Quarterly	"
Antimony	µg/L	Composite	Quarterly	See Sections I.A.2., I.A.3., above of this MRP

Table 4. Effluent Monitoring at L-001 through L-005

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Test Method And Reporting Level
Arsenic	µg/L	Composite	Quarterly	"
Barium	µg/L	Composite	Quarterly	"
Total Cadmium	µg/L	Composite	Quarterly	See Sections I.A.2., I.A.3., above of this MRP and RL 0.5 µg/L
Total Chromium	µg/L	Composite	Quarterly	See Sections I.A.2., I.A.3. above of this MRP and RL 5 µg/L, Total Cr, RL 2 µg/L
Total Cobalt	µg/L	Composite	Quarterly	"
Total Copper	µg/L	Composite	Quarterly	See Sections I.A.2., I.A.3., above of this MRP and RL 5 µg/L
Cyanide	µg/L	Grab	Quarterly	See Sections I.A.2., I.A.3., above of this MRP and RL 5 µg/L
Total Lead	µg/L	Composite	Quarterly	See Sections I.A.2., I.A.3. above of this MRP and RL 5 µg/L
Total Mercury	µg/L	Composite	Quarterly	See Sections I.A.2., I.A.3. above of this MRP and RL 0.5 µg/L
Total Nickel	µg/L	Composite	Quarterly	"
Total Selenium	µg/L	Composite	Quarterly	See Sections I.A.2., I.A.3., above of this MRP and RL 2 µg/L
Total Silver	µg/L	Composite	Quarterly	See Sections I.A.2., I.A.3., above of this MRP and RL 1 µg/L
Total Zinc	µg/L	Composite	Quarterly	See Sections I.A.2., I.A.3., above of this MRP
Perchlorate	µg/L	Composite	Quarterly	See Sections I.A.2., I.A.3., above of this MRP
Volatile organic portion of MCLs List for Drinking Water Contaminations (See Attachment "G")	µg/L	Grab	Annually (see paragraph IV.A.2., below)	See Sections I.A.2., I.A.3., above of this MRP
Remaining pollutants on MCLs List (See Attachment "G")	µg/L	Composite	Annually (see paragraph IV.A.2., below)	See Sections I.A.2., I.A.3., above of this MRP

2. The monitoring frequency for those pollutants that are detected during the required monitoring at a concentration equal to or greater than the concentration specified for that pollutant in Table 1 of Attachment G shall be accelerated to quarterly for one year. To return to the monitoring frequency specified, the Discharger shall request and receive approval from the Regional Water Board's Executive Officer or designee.

B. Effluent Monitoring Locations L-006 through L-012

1. Monthly, the Discharger shall monitor and record the flow, total dissolved solids and total inorganic nitrogen concentration of the treated effluent discharged at DP 001 through DP 005 at monitoring station locations L-006 through L-012 as specified in Table 2, above.

2. The Discharger shall calculate the total monthly flow weighted running average TDS and TIN concentrations discharged at each groundwater management zone.

3. The Discharger shall calculate the total 12-month flow weighted running average TIN concentrations discharged at each groundwater management zone.

4. The monitoring information and calculations required in this section shall be submitted quarterly together with the required monthly monitoring report.

V. RECLAMATION MONITORING REQUIREMENTS

A. Recycled Water Monitoring Locations REC-001 through REC-005

1. The Discharger shall monitor the recycled effluent discharged at DP 001 through DP 005 at monitoring station locations REC-001 through REC-005, as specified for Reclamation Monitoring Locations in Table 2., above, for the following constituents.

Table 5. Reclamation Monitoring at REC-001 through REC-005

Parameter	Units	Sample Type	Minimum Sampling & Testing Frequency	Required Analytical Test Method
Flow	mgd	Recorder/Totalizer	Continuous	---
pH	Standard units	Recorder/Totalizer	Continuous	--
CT[1]	mg/L-min	Calculation	Continuous	See Section I.A.3., above, of this MRP

[1] *CT is the product of total chlorine residual and modal contact time measured at the same point.*

Table 5. Reclamation Monitoring at REC-001 through REC-005

Parameter	Units	Sample Type	Minimum Sampling & Testing Frequency	Required Analytical Test Method
Turbidity[2]	NTU	Recorder	Continuous	"
Coliform Organisms	MPN per 100 mL	Grab	Daily	"
BOD_5	mg/L	composite	Daily	See Section I.A.3., above, of this MRP
Total Suspended Solids	mg/L	composite	Daily	See Section I.A.3., above, of this MRP
TDS	mg/L	composite	monthly	See Section I.A.3., above, of this MRP

B. Recycled Water Monitoring Locations REC-006 to REC-012

1. Monthly, the Discharger shall monitor and record the recycled water flow and total dissolved solids concentration of the recycled water discharged at DP 001 through DP 005 at monitoring station locations REC-006 to REC-012 as specified in Table 2., above.

2. The Discharger shall calculate the monthly flow weighted running average TDS concentration of recycled water at REC-006 through REC-012.

3. The Discharger shall calculate the total 12-month flow weighted running average TDS concentrations discharged at each groundwater management zone. The calculation shall be submitted annually together with the flow and TDS monitoring data that were used in the calculations for each groundwater management zone.

C. Monitoring Users

Whenever recycled water is supplied to a user, the Discharger shall record on a permanent log: the volume of recycled water supplied; the user of recycled water; the locations of those sites including the names of the groundwater management zones underlying the recycled water use sites; type of use (e.g. irrigation, industrial, etc); and the dates at which water is supplied. The Discharger shall submit annually a summary report of the recorded information by groundwater management zone to Regional Water Board.

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[2] *Turbidity analysis shall be continuous, performed by a continuous recording turbidimeter. Compliance with the daily average operating filter effluent turbidity shall be determined by averaging the levels of recorded turbidity taken at a minimum of four-hour intervals over a 24-hour period. The results of the daily average turbidity determinations shall be reported monthly. Turbidity samples shall be collected after filtration units but before chlorination.*

VI. RECEIVING GROUNDWATER MONITORING REQUIREMENTS – NOT APPLICABLE

VII. OTHER MONITORING REQUIREMENTS

A. Biosolids Monitoring at B-001 through B-003

1. Biosolids monitoring shall be conducted as follows:

Table 6. Biosolids Monitoring at B-001 through B-003

Biosolids Monitoring	Units	Type of Sample	Minimum Frequency of Sampling & Testing
Priority Pollutants	mg/kg, Dry	Grab	Semi-annually
Moisture Content (% solid)	% or mg/kg	Grab	Quarterly

2. The Discharger shall maintain a permanent log of solids hauled away from the treatment facilities for use/disposal elsewhere, including the date hauled, the volume or weight (in dry tons), type (screening, grit, raw sludge, biosolids), application (agricultural, composting, etc), and destination. This information shall be reported quarterly.

B. Water Supply Monitoring

1. In August of each year, a sample of each source of the water supplied to the sewered area shall be obtained and analyzed for total dissolved solids concentration expressed in "mg/L".

2. Monthly reports shall be submitted stating the amount (in percentage or acre-feet) supplied to the sewered area from each source of water and the resulting flow-weighted water supply quality for total dissolved solids.

C. Pretreatment Monitoring and Reporting

1. The Discharger shall submit to the Regional Water Board and the EPA Region 9, a quarterly compliance status report. The quarterly compliance status reports shall cover the periods January 1 - March 31, April 1 - June 30, July 1 - September 30, and October 1 -December 31. Each report shall be submitted by the end of the month following the quarter, except that the report for October 1 - December 31 may be included in the annual report. This quarterly reporting requirement shall commence for the first full quarter following issuance of this Order. The reports shall identify:

   a. All significant industrial users (SIUs) which violated any standards or reporting requirements during that quarter;

b. The violations committed (distinguish between categorical and local limits);

c. The enforcement actions undertaken; and

d. The status of active enforcement actions from previous periods, including closeouts (facilities under previous enforcement actions which attained compliance during the quarter).

2. Annually, the Discharger shall submit a report to the Regional Water Board, the State Water Resources Control Board and the EPA Region 9 describing the pretreatment activities within the service area during the previous year. In the event that any control authority within the service area is not in compliance with any conditions or requirements of this Order or their approved pretreatment program (such as due to industrial user discharges, interjurisdictional agency agreement implementation issues, or other causes,) then the Discharger shall also include the reasons for non-compliance and state how and when the Discharger and the control authority shall comply with such conditions and requirements. This annual report shall cover operations from January 1 to December 31 of each fiscal year and is due on April 1 of each year. The report shall contain, but not be limited to, the following information:

a. A summary of analytical results from representative, flow-proportioned, 24-hour composite sampling of the POTW's influent and effluent wastewaters for those pollutants which are known or suspected to be discharged by industrial users (IUs) as identified by EPA under Section 307(a) of the CWA. The summary will include the result of annual full priority pollutant scan, with quarterly samples analyzed only for those pollutants[3] detected in the full scan. The Discharger shall also provide any influent or effluent monitoring data for non-priority pollutants which the Discharger believes may be causing or contributing to Interference, Pass Through or adversely impacting sludge quality. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto.

b. A discussion of any upset, interference, or pass-through incidents at the treatment plant (if any), which the Discharger knows or suspects were caused by IUs of the POTW system. The discussion shall include the following:

(1) The reasons why the incidents occurred, the corrective actions taken, and, if known, the name and address of the IU(s) responsible.
(2) A review of the applicable pollutant limitations to determine whether any additional limitations, or changes to existing requirements, may be necessary to prevent pass through, interference or noncompliance with sludge disposal requirements.

[3] *The Discharger is not required to analyze for asbestos.*

c. A complete and updated list of the Discharger's significant industrial users (SIUs), including names, Standard Industrial Classification (SIC) code(s) and addresses, and a list of any SIU deletions and/or additions. The Discharger shall provide a brief explanation for each deletion. The SIU list shall identify the SIUs subject to Federal Categorical Standards by specifying which set(s) of standards are applicable to each SIU. The list shall also indicate which SIUs are subject to local limitations more stringent than Federal Categorical Standards and those, which are not subject to local limits.

d. A list or table characterizing the industrial compliance status of each SIU, including:

(1) SIU name;
(2) Industrial category;
(3) The type (processes) of wastewater treatment in place;
(4) Number of samples taken by the POTW during the year;
(5) Number of samples taken by the SIU during the year;
(6) Whether all needed certifications (if allowed) were provided by SIUs which have limits for total toxic organics;
(7) Federal and Regional Standards violated during the year, reported separately;
(8) Whether the SIU at any time in the year was in Significant Noncompliance (SNC)[4], as defined by 40 CFR 403.12 (f)(2)(vii); and
(9) A summary of enforcement actions against the SIU taken during the year, including the type of action, final compliance date, and amount of fines assessed/collected (if any). Proposed actions, if known, should be included.
(10) Number of inspections conducted at each SIU during the year.

e. A compliance summary table which includes:

(1) SIU's which were in SNC at any time during the year;
(2) The total number of SIUs which are in SNC with pretreatment compliance schedules during the year;
(3) The total number of notices of violation and administrative orders issued against SIUs during the year;
(4) The total number of civil and criminal judicial actions filed against SIUs during the year;
(5) The number of SIUs which were published as being in SNC during the year; and
(6) The number of IUs from which penalties were collected during the year.

f. A short description of any significant changes in operating the pretreatment program which differ from the previous year including, but not limited to changes concerning:

(1) The program's administrative structure;

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4 *SNC is determined at the beginning of each quarter based on data of the previous six months.*

(2) Local industrial discharge limitations;
(3) Monitoring program or monitoring frequencies;
(4) Legal authority or enforcement policy;
(5) Funding mechanisms; and
(6) Resource requirements and/or staffing levels.

g. A summary of the annual pretreatment budget, including the cost of pretreatment program functions and equipment purchases.

h. A summary of public participation activities to involve and inform the public.

i. A description of any changes in sludge disposal methods and a discussion of any concerns not described elsewhere in the report.

3. The cumulative number of industrial users that the Discharger has notified regarding Baseline Monitoring Reports and the cumulative number of industrial user responses.

4. The Discharger shall submit the quarterly compliance status reports and the annual pretreatment report to EPA Region 9, the State Board and the Regional Water Board.

D. TDS/TIN Offset Program (Mitigation Plan) Monitoring and Reporting

Every quarter, the Discharger shall report the total salt removal accomplished for the month pursuant to the Mitigation Plan, or approved alternative, for each groundwater management zone affected by discharges of recycled water to demonstrate whether offset requirements are being met. For each affected groundwater management zone, the Discharger shall report quarterly a running balance of salt discharges compared to TDS/TIN removal. If offset is not occurring during the quarterly monitoring period, the quarterly report shall so state and identify when the offset will be achieved.

VIII. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. All analytical data shall be reported with method detection limit[5] (MDLs) and with identification of either reporting level (RL), minimum level (ML), or limits of quantitation (LOQs).

2. Laboratory data for effluent samples must quantify each constituent down to the approved reporting levels (RL) or minimum level (ML) for specific constituents. Any internal quality control data associated with the sample must be reported when requested by the Executive Officer. The Regional Water Board will reject the quantified laboratory data if quality control data is unavailable or unacceptable.

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[5] *The standardized test procedure to be used to determine the method detection limit (MDL) is given at Appendix B, 'Definition and Procedure for the Determination of the Method Detection Limit' of 40 CFR 136.*

3. Discharge monitoring data shall be submitted in a format acceptable by the Regional Water Board. Specific reporting format may include preprinted forms and/or electronic media. The results of all monitoring required by this Order shall be reported to the Regional Water Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this order.

4. The Discharger shall tabulate the monitoring data to clearly illustrate compliance and/or noncompliance with the requirements of the Order.

5. For every item of monitoring data where the requirements are not met, the monitoring report shall include a statement discussing the reasons for noncompliance, and of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when compliance with the time schedule has been achieved.

6. The monthly reports for June and December shall include a roster of plant personnel, including job titles, duties, and level of State certification for each individual.

7. The Discharger shall report monitoring results for specific parameters in accordance with the following table:

Table 7. Reporting Requirements

Parameter	Measurement
Flow	Daily total flow
pH	Daily High and daily low
Turbidity	Daily maximum and daily average

8. The Discharger shall file a written report with the Regional Board within ninety (90) days after the average dry-weather waste flow for any month equals or exceeds 75 percent of the design capacity of the waste treatment and/or disposal facilities. The Discharger's senior administrative officer shall sign a letter which transmits that report and certifies that the policy making body is adequately informed about it. The report shall include:

   a. Average daily flow for the month, the date on which the instantaneous peak flow occurred, the rate of that peak flow, and the total flow for the day.

   b. The Discharger's best estimate of when the average daily dry-weather flow rate will equal or exceed the design capacity of the treatment facilities.

   c. The Discharger's intended schedule for studies, design, and other steps needed to provide additional capacity for the waste treatment and/or disposal facilities before the waste flow rate equals the capacity of present units.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, the Discharger shall submit hard copy. SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under Sections III through V. Additionally, the Discharger shall report in the SMR the results of any special studies by Special Provisions – VI.C. of this Order. The Discharger shall submit monthly, quarterly and annual SMRs including the results of all required monitoring using CDPH-ELAP-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table 8. Monitoring and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Continuous	The effective day of this Order	All	Submit with monthly SMR
Daily	"	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with monthly SMR
Weekly	"	Sunday through Saturday	Submit with monthly SMR
Monthly	"	1st day of calendar month through last day of calendar month	First day of the second month following the reporting period, submit as monthly SMR
Quarterly	The effective day of this Order	January 1 through March 31; April 1 through June 30; July 1 through September 30; October 1 through December 31	First day of the second month following the reporting period, submit with monthly SMR
Semiannually	"	January 1 through June 30 July 1 through December 31	First day of the second month following the reporting period, submit with monthly SMR
Annually	"	January 1 through December 31	April 1 each year

4. Reporting Protocols. The Discharger shall report with each sample result the applicable Reporting Level (RL), or Minimum Level (ML), and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136.

   The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

   a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

   b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The *estimated chemical concentration of the sample shall also be reported.

      For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

   c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

   d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.

5. The Discharger shall submit hard copy SMRs (with an original signature) when required by subsection B.1 above in accordance with the following requirements:

   a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations.

   b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

c. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

   California Regional Water Quality Control Board
   Santa Ana Region
   3737 Main Street, Suite 500
   Riverside, CA 92501-3348

6. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

7. By April 1 of each year, the Discharger shall submit an annual report to the Regional Water Board. The annual report shall include the following:

   a. Tabular and graphical summaries of the monitoring data obtained during the previous year;

   b. A discussion of the compliance record and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the waste discharge requirements;

   c. A summary of the quality assurance (QA) activities for the previous year; and

   d. For pollutant constituents that do not have effluent limitations but are required to be monitored, the Discharger shall evaluate the monitoring data obtained during the previous year and determine whether detected constituents are at levels that would warrant reopening the permit to include effluent limitations for such constituent(s). To conduct this evaluation, the concentration of detected constituents shall be compared to the values specified in Table 1 of Attachment G and determine whether monitoring results for the specific constituent show persistent exceedance above the value specified in Attachment G. This evaluation shall be reported annually together with the required annual report. The Discharger shall include a discussion of the corrective actions taken or planned to address values above those specified in Attachment G.

D. Other Reports – Not Applicable

Attachment F – STAFF REPORT

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ATTACHMENT F – STAFF REPORT

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table 1. Facility Information 1

WDID	8 332783001				
Discharger/ Operator	Eastern Municipal Water District				
Name of Facility (RWRF)[1]	San Jacinto Valley	Moreno Valley	Perris Valley	Sun City	Temecula Valley[2]
Address	770 North Sanderson Avenue	17140 Kitching Street	1301 Case Road	29285 Valley Blvd.	42565 Avenida Alvarado
	San Jacinto, CA 92583	Moreno Valley, CA 92553	Perris, CA 92570	Sun City, CA 92586	Temecula, CA 92590
	Riverside County				
Facility Contact, Title and Phone	Jayne Joy, Dir. Env. & Reg. Compliance, (951) 928-3777 ext. 6241				
Authorized Person to Sign and Submit Reports	Anthony Pack, General Manager, (951) 928-3777 ext. 6109 Jayne Joy, (951) 928-3777 ext. 6241				
Address	2270 Trumble Road, Perris, CA 92570				
Mailing/Billing Address	EMWD, PO BOX 8300, Perris, CA 92572-8300				
Type of Facility	POTW				
Threat to Water Quality	2				
Complexity	B				
Pretreatment Program	Y				
Reclamation Requirements	Y				

1 *RWRF means Regional Water Reclamation Facility*

2 *Temecula Valley RWRF is regulated by the San Diego Regional Water Quality Control Board.*

Table 2. Facility Information 2

Name of Facility	San Jacinto Valley	Moreno Valley	Perris Valley	Sun City (Out of Service; Used as Lift Station)	Temecula Valley*
Facility Design Flow - secondary treatment	Current: 11 mgd	Current: 16 mgd	Current: 11 mgd	Current: 3 mgd	Current: 18 mgd
	14 mgd AAF/15.4 mgd M30DAF expansion Target Completion -Jan 2014	15.8 mgd AAF/17.3 mgd M30DAF expansion Target Completion - Oct. 2012	17.2 mgd AAF/18.9 mgd M30DAF expansion Target Completion - Sept. 2010: 24.2 mgd AAF/26.6 M30DAF[1] expansion Target Completion - June 2011:	NA	NA
Facility Design Flow - tertiary treatment	Current: 12.4 mgd	Current: 16 mgd	Current: 11 mgd	Current: NA	Current: 22.4
	14.9 mgd expansion Target Completion - September 2011	20.8 mgd expansion Target Completion - Sept 2011	30 mgd expansion Target Completion - Dec 2008	NA	NA
Receiving Water	GMZ[3]s: Canyon, Hemet North, San Jacinto Lower, San Jacinto Upper, Hemet South	GMZs: Perris North, Perris South	GMZs: Hemet South, Lakeview, Perris South, San Jacinto Lower	GMZ: Perris South	GMZ: Hemet South, Perris South, Menifee
Receiving Water Type	Groundwater				
Watershed	San Jacinto River Basin				

*Temecula Valley RWRF treated wastewater can be discharged into the Discharger's recycled water system and be distributed to users within the San Jacinto Basin in areas overlying the GMZ's identified.

[3] *GMZ is the acronym for Groundwater Management Zone*

A. Eastern Municipal Water District (hereinafter Discharger, or EMWD) is the owner and operator of five regional water reclamation facilities (hereinafter RWRFs or Facility). Four of these RWRFs are within the Santa Ana Region and one is within the San Diego Regional Water Quality Control Board's jurisdiction. All of the RWRFs can discharge recycled water into the Discharger's recycled water system for distribution to users within EMWD's service area.

B. The Discharger produces tertiary treated wastewater and discharges to various storage ponds. The Discharger also delivers recycled water, when needed, to various recycled water users. The use areas and storage ponds overlie the following Groundwater Management Zones (GMZ): Perris North, Perris South, San Jacinto Lower and Upper Pressure, Lakeview & Hemet North, Menifee, and Hemet South. The discharge and use of treated municipal wastewater from the five regional water reclamation facilities are currently regulated under Orders adopted by the Santa Ana and San Diego Regional Water Quality Control Boards, as follows:

Table 3. Summary of Plants and Facilities

RWRF	Order No.	Order Adoption Date	Design Capacity (MGD)	WDR Regulatory Scope
San Jacinto Valley	88-94	Sept. 9, 1988	11.0	Regulates discharges to onsite evaporation-percolation ponds. Treated recycled water is used for irrigation of animal fodder, fiber, and seed crops within the area, or used in restricted recreational impoundments (duck ponds)
Moreno Valley	90-151	Dec. 7, 1990	16.0	Regulates discharges to onsite evaporation-percolation ponds, and use of treated recycled water for agricultural irrigation sites (animal, fodder, fiber, and seed crops)
Perris Valley	90-135	Oct. 19, 1990	11.0	Regulates discharges to onsite evaporation-percolation ponds, and use of treated recycled water for agricultural irrigation sites (animal, fodder, fiber, and seed crops)
Sun City	90-140	Dec. 7, 1990	3.0	Regulates discharges to onsite evaporation-percolation ponds, and use of treated recycled water for golf course irrigation.
Winchester Regional Recycled Water Storage Ponds	92-63	Oct. 23, 1992	450	Regulates discharges from the Temecula Valley RWRF to the Winchester ponds for storage and use in areas within the Santa Ana and San Diego Regional Board jurisdictions

Table 3. Summary of Plants and Facilities

RWRF	Order No.	Order Adoption Date	Design Capacity (MGD)	WDR Regulatory Scope
Temecula Valley[4]	00-165[5]	Sept. 13, 2000	18.0	Regulates discharges and reuse of treated recycled water to various locations within the Santa Margarita Hydrologic Area, which is within the jurisdiction of the San Diego Regional Board.

C. The Discharger filed a report of waste discharge and submitted an application for new Waste Discharge Requirements (WDRs) and Producer/User Reclamation Requirements on January 24, 2006 for four treatment plants and for discharges to the Winchester ponds. Supplemental information was requested starting October 3, 2006. The latest supplemental information was received on June 30, 2007. A site visit was conducted on May 2, 2007, to observe operations and collect additional data to develop permit limitations and conditions. The application was deemed complete on June 30, 2007.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment or Controls

1. Facility Background

EMWD encompasses approximately 555 square miles in western Riverside County. The District is divided into five wastewater service areas: Temecula Valley, Moreno Valley, Perris Valley, San Jacinto Valley, and Winchester/Sun City. EMWD owns and operates a RWRF in each service area. This Order regulates all RWRFs, except Temecula Valley RWRF since it is located in the San Diego watershed and is regulated by the San Diego Regional Water Board. The four RWRFs within the Santa Ana Region are located in the San Jacinto River Basin Watershed and service a total population of 393,000 in the Cities of Moreno Valley, Sun City, Hemet, San Jacinto, Perris, and unincorporated portions of western Riverside County.

EMWD's regional recycled water system consists of a series of storage ponds, pump stations, and distribution systems. Attachment C contains a schematic of the Discharger's recycled water system. All five RWRFs, including the Temecula Valley RWRF, can discharge into the recycled water system. With the recent completion of upgrades from secondary to tertiary treatment at the San Jacinto Valley and Perris Valley RWRFs, all of EMWD's RWRFs are capable of providing tertiary treatment of wastewater, enhancing flexibility in distribution and use of recycled water. EMWD provides recycled water to customers throughout the District's service area for

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4 *This facility is located within the jurisdiction of the San Diego Regional Water Board (Region 9).*

5 *Order adopted by San Diego Regional Water Board (Region 9).*

irrigation of agricultural lands and landscape irrigation at golf courses, schools, and commercial businesses. This Order specifies Producer/User Reclamation requirements for recycled water use within the Santa Ana Region, including recycled water produced at the Temecula Valley RWRF. During the wet season or at other times when the volume of recycled water exceeds the demand, EMWD periodically has surplus recycled water that cannot be reused or stored. EMWD discharges surplus tertiary treated effluent into Temescal Creek under Order No. R8-2004-0065, National Pollutant Discharge Elimination System (NPDES) Permit No. CA 8000188. Order No. R8-2004-0065 includes authorization for discharges of recycled water from the Temecula Valley RWRF to Temescal Creek.

EMWD is currently in the design and construction process to expand its facilities in an expeditious manner to handle the current and projected future growth within its service area. To date, increases in sewage flows have been handled by transferring flows between RWRFs, such as from the San Jacinto Valley, Moreno Valley and Sun City RWRFs to the Perris Valley RWRF.

2. Design Characteristics and Biosolids Treatment

The treatment processes at each RWRF are tabulated as follows:

Table 4. Treatment Processes and Treatment Trains

RWRF	San Jacinto Valley	Moreno Valley	Perris Valley		Sun City (Out of service; used as lift station)	Temecula Valley
Plant #	**1**	**1 & 2**	**1**	**2**	**1**	**1 & 2**
Preliminary Treatment	Screens and Grit removal	Screens and Grit removal (Plant 1 Influent EQ Basin)	Screens and Grit removal			Screens and Grit with Influent EQ Basin
Primary Treatment	Primary Clarifiers	Primary Clarifiers (Plant 2 Selectors)	Primary Clarifiers	Selectors	Primary Clarifiers w/ Primary EQ Basin	Primary Clarifiers w/ Primary EQ Basin
Secondary Treatment	Diffused activated sludge modified for biological nitrification/ denitrification (NDN), secondary clarifiers	Diffused activated sludge modified for biological NDN, secondary clarifiers	Diffused activated sludge, secondary clarifiers	Modified Bardenpho with additional aeration	Diffused activated sludge, secondary clarifiers	Diffused activated sludge w/ biological NDN, secondary clarifiers
Secondary EQ Basin[6]	Yes	Yes	No	Yes	No	Yes
Tertiary Train #	**1**	**1**	**1**	**2**	**N/A**	**1**
Tertiary Treatment	Coagulant, Filtration (cloth), Chlorination	Coagulant, Filtration (sand), Chlorination	Coagulant, Filtration (cloth), Chlorination	Coagulant, Filtration (sand & cloth), Chlorination	N/A	Coagulant, Filtration (sand & cloth), Chlorination
Solids Handling	Sludge thickening, Anaerobic digestion, belt press & centrifuge, sludge drying beds and co-generation (future)	Sludge thickening, Anaerobic digestion, belt press & centrifuge, sludge drying beds and Fuel Cell (future)	Aqua belt thickener, Aerobic digestion	Straight Waste, Future: Sludge thickener & Anaerobic digestion	Aqua belt thickener, Aerobic digestion, Belt Press	Sludge thickening, Anaerobic digestion, belt press & centrifuge, sludge drying beds and co-generation (future)
			Belt Press & Centrifuge			

6 *Secondary EQ Basin provides for Equalized Tertiary Flow.*

3. Treatment Capacity and Facility Expansion Schedule

The Winchester Storage Ponds and all of the RWRFs, with the exception of Sun City RWRF, are either in the process of or planned for expansion within the next 10-year period. The following table provides a list of the RWRFs, their current and expanded capacities, and the estimated dates when the expansion(s) is scheduled to be completed. The Perris Valley RWRF expansion will be accomplished in two phases within the 10-year time period.

Table 5. Treatment Capacity and Expansion Schedule

Facility	Current Capacity [a]		Secondary Expansion		Tertiary Expansion	
	Secondary MGD	**Tertiary** MGD	**Capacity, MGD**	**Completion Date**	**Capacity, MGD**	**Completion Date**
SJVRWRF	11 AAF[7]	12.45 [b]	14.9 AAF (15.4 Monthly Max.)	Jan. 2014	14.9 AAF (15.4 Monthly Max.)	Sept. 2011
MVRWRF	16	15.8 [c]	15.8 AAF (17.3 Monthly Max.)	Oct. 2012	20.8 AAF (22.9 Monthly Max.)	Sept. 2011
PVRWRF	11 (14.2)[d]	13.41[e]	17.2 AAF (18.9 Monthly Max.)[g]	Sept. 2010	30 Daily Max.[g]	Dec. 2008
			24.2 AAF (26.6 Monthly Max.)[g]	June 2011		
SCRWRF	3 (Out-of-Service)	NA	NA	NA	NA	NA
TVRWRF	18	22.4[f]	NA	NA	NA	NA

a. *Permit capacity*
b. *CDPH approved for 12.45 MGD (6.32 & 6.13 MGD per Chlorine Contact Basin 1 & 2, respectively).*
c. *CDPH approved for 15.8 MGD.*
d. *3 MGD Secondary from Plant 1, and 8 MGD Secondary from Plant 2; However, as of November 2007 Plant 2 installed additional aeration for added capacity, totaling 14.2 MGD AAF (15.6 MGD M30DAF) capacity at Plant 2.*
e. *8 MGD Tertiary from Plant 2, 3 MGD Tertiary from Temporary Pool Contact Chamber, and 2.41 MGD Tertiary from Plant 1(CDPH approved Nov. 2007).*
f. *CDPH approved for 22.4 MGD.*
g. *Plant expansion includes all Plant flows*

Attachment B provides a map of the area around each Facility.
Attachment C provides a flow schematic for each Facility.

7 *AAF is the acronym for annual average flow.*

4. Storage Pond Capacity

The Discharger produces tertiary treated wastewater and discharges to on-site storage ponds at each of the RWRFs and various off-site storage ponds. The intended use of the on-site storage ponds at each RWRF is for seasonal storage during wet weather and non-compliant water that is retreated. The recycled water that is stored on-site will be used eventually in the recycled water system to supplement flows during warm weather peak demand periods. All other storage facilities have the ability to supplement daily flows in the recycled water system. None of the storage ponds is lined and percolation naturally occurs when the recycled water is stored in significant amounts. The storage ponds' capacity, use, and the affected Groundwater Management Zones (GMZ) are shown in Table 5, below. Surplus recycled water that cannot be stored/used is discharged to Temescal Creek pursuant to requirements specified in Order No. 2004-0065, NPDES No. CA 8000188.

Table 6. Storage Capacity[8]

Storage Pond Location	Capacity, MG	Storage Use	GMZ
San Jacinto Valley RWRF	264	Seasonal Recycle Storage	Hemet North
MWD	74	Seasonal Recycle Storage	San Jacinto Upper
Alessandro	55	Recycle Storage	San Jacinto Upper
Moreno Valley RWRF	225	Seasonal Recycle Storage	Perris North
Landmark	4	Recycle Storage	Perris North
Perris Valley RWRF	275	Seasonal Recycle Storage	Perris South
Skiland	330	Recycle Storage	Perris South
Trumble Road	287	Seasonal Recycle Storage	Perris South
Winchester	450	Seasonal Recycle Storage	Perris South
Sun City RWRF	192	Seasonal Recycle Storage	Perris South

[8] *These storage ponds are currently addressed in the individual Orders issued to each of the RWRFs.*

5. TIN/TDS Mitigation Plan

In May 2005, in anticipation of the permit renewal, the Discharger developed a draft system-wide Mitigation Plan for TDS/TIN discharges in excess of expected effluent limits based on the groundwater management zone objectives. The Mitigation Plan was revised and became final in June 2008 ("Mitigation Plan for Eastern Municipal Water District's Recycled Water Activities in the San Jacinto River Watershed", Final, June 2008). The Plan includes a detailed analysis of the existing and expected future recycled water use in each groundwater management zone and the determination of which water quality objectives for TDS and/or TIN for the affected groundwater management zones would be exceeded by the discharges. The Mitigation Plan then details the manner by which TDS and TIN offsets are proposed to be accomplished, monitored and reported. In order to refine the analysis of needed mitigation for TIN discharges, in 2007, the Discharger received grant funding to determine the nitrogen removal rates beneath two sets of recycled water storage ponds within the EMWD service area. These included the on-site storage ponds at the Moreno Valley RWRF, which overlies the Perris North Management Zone, and the Alessandro ponds, which store the recycled water generated from the San Jacinto Valley RWRF. The Alessandro ponds overlie the San Jacinto Upper Pressure Management Zone. The Discharger submitted to Regional Board staff for review the study report, titled '*Quantification of Nitrogen Removal Under Recycled Water Ponds*' [date]. The report recommended that the nitrogen removal percentage at the Moreno Valley RWRF be set at 73.5 %, and that the nitrogen removal percentage at the Alessandro ponds be set at 64.0 %. On October 16, 2007, EMWD requested that the study results be used to define the nitrogen loss coefficient to be applied in setting total inorganic nitrogen limitations, instead of the default value of 25% that is specified in the Basin Plan. Regional Board staff requested additional monitoring data at the ponds, and that water quality data from the downgradient wells be collected. The Discharger provided the requested additional data. After evaluating the additional data, both Regional Board staff and the Discharger agreed that the nitrogen removal percentage rates are consistent over time. Consequently, the Discharger requested a nitrogen loss coefficient of 60% in calculating the effluent limits for TIN discharges into on-site storage ponds at Moreno Valley RWRF and into the Alessandro ponds. The Mitigation Plan is based on the assumption that a 60% nitrogen loss coefficient would be applied in setting TIN limits for discharges to the San Jacinto Upper Pressure GMZ and Perris North GMZ. Regional Board staff believes that this is a reasonable and conservative request.

The mitigation activities identified include: desalination facilities, including twelve desalter wells, two desalter treatment plants and a program to continue to increase production of this desalter system; implementation of constructed wetlands adjacent to the San Jacinto Valley RWRF for TIN removal, and implementation of salt management plans to minimize TDS concentrations in source and recycled waters. Facility upgrades at the RWRFs will result in improved recycled water quality, thereby reducing the requisite TDS and TIN offsets.

The final Mitigation Plan provided mitigation model results for the affected GMZs (Figures 4d1 to 4d6 of Attachment I). The current and proposed mitigation activities will adequately offset TDS and TIN discharges resulting from recycled water activities into the Lakeview/Hemet North, Perris North, and Perris South GMZs, based on an offset ratio of 1:1.

No method of providing adequate mitigation of TDS discharges into the San Jacinto Upper Pressure and San Jacinto Lower Pressure GMZs was identified. The Discharger proposes that the Regional Board consider revising the TDS and TIN water quality objectives for the Upper Pressure GMZ to be less stringent and thereby accommodate increased recycled water use. The Discharger has conducted an analysis to demonstrate that such revisions would satisfy the requirements of the State antidegradation policy (Resolution No. 68-16). The antidegradation policy stipulates that the lowering of water quality, such as would be allowed by less stringent water quality objectives, is permissible provided that it is demonstrated that beneficial uses would be protected and that water quality consistent with maximum benefit to the people of the state would be maintained. While the Discharger's analysis makes these demonstrations, a change in water quality objectives requires a Basin Plan amendment. Until such time as such an amendment is approved, permit limitations and requirements must be based on the objectives established in the Basin Plan. This Order implements the established Basin Plan objectives. For the San Jacinto Lower Pressure GMZ, the Discharger proposes to develop a regulatory compliance strategy. This Order requires compliance with effluent limitations based on established objectives for this GMZ unless and until a compliance strategy, including schedule, acceptable to the Regional Board's Executive Officer is developed.

This Order requires the Discharger to implement the final Mitigation Plan. If modification of the Mitigation Plan is necessary to assure that requisite offsets are accomplished, then the Discharger is required to submit a proposed alternative plan. The Discharger is required to implement that modified plan upon approval by the Executive Officer.

The TDS/TIN proposed mitigation plans for each affected GMZ are summarized below:

Table 7. Proposed Mitigation for TDS/TIN Discharges Exceeding Effluent Limitations

Affected Groundwater Management Zone	Mitigate For	Mitigation Measures
Lakeview/Hemet North	TIN	Desalter Wells: One well exists and another well is proposed in this area in the next two to five years. Total flow from each well of 750 gpm and each well operating 75% of the time
San Jacinto Lower Pressure	TDS	A regulatory compliance strategy will be developed.
San Jacinto Upper Pressure	TDS & TIN	Interim recharge of 10,000 acre-feet per year of State Water Project Water in the San Jacinto Riverbed. Pursue Basin Plan amendment for Maximum Benefit Objectives for TDS/TIN.
Perris South	TIN	Desalter Wells: Eleven desalter wells are located within this basin and produce about 12,000 acre-feet per year.

6. Effluent Flow from Each RWRF with Discharge and Reuse

Treated wastewater is delivered to ponds for storage/land disposal, to recycled water users for irrigation and industrial uses, and to Temescal Creek for surface water discharge. The storage/land disposal and reuse of recycled water are regulated by this Order. During winter periods when recycled water demand is low and storage/percolation ponds cannot accommodate flows, excess recycled water is discharged to Temescal Creek under Order No. R8-2004-0065, NPDES No. CA8000188.

The following Table shows the volume of secondary/tertiary treated wastewater produced from each RWRF.

Table 8. Effluent Flow From Each RWRF

Facility	2005, MGD				2006, MGD			
	Produced	Land Disposal	Reused for Irrigation & Industrial Sales	Lake Elsinore Sale & Surface water Discharge	Produced	Land Disposal	Reused for Irrigation & Industrial Sales	Surface Water Discharge
SJVRWRF	7.89	3.05	4.84	-	8.57	2.88	5.69	-
MVRWRF	9.94	2.78	2.63	4.53	10.70	2.46	2.90	5.34
PVRWRF	11.23	1.53	5.87	3.83	10.62	1.30	4.84	4.48
SCRWRF	Out of Service	-	-	-	-	-	-	-
TVRWRF	12.06	1.80	3.00[1]	7.26	11.67	1.14	4.92[1]	5.61
Total Flow	41.12	9.16	16.34	15.62	41.56	7.78	18.35	15.43

[1] Santa Margarita Basin recycled water use is included.

B. Discharge Points and Receiving Waters

1. Discharge Points for Land Disposal

The Discharger discharges treated wastewater to various storage ponds located at each RWRF site and off-site storage ponds such as Alessandro, Landmark, MWD, Skiland, Trumble and Winchester. Wastewater stored at the ponds percolates into groundwater and affects groundwater quality. However, with the exception of the Alessandro Ponds, the storage ponds are used primarily during periods of low demand for recycled water. The Alessandro Ponds are percolation ponds. Discharges to all ponds are classified as disposal to land.

Table 9 shows the discharge points, longitude and latitude, affected receiving waters, and estimated volume of discharge:

Table 9. Land Discharge Points

Discharge Serials No.	Latitude	Longitude	Description and Receiving Water	Flow & Frequency
001	33°47'59"N	117°00'55"W	To ponds at SJRWRF (Hemet North GMZ)	Up to 11 mgd, continuously
			To ponds at MWD and Alessandro (San Jacinto Upper GMZ)	
002	33°52'19"N	117°12'52"W	To ponds at MVRWRF and Landmark (Perris North GMZ)	Up to 16 mgd, continuously
			To ponds at Skiland and Trumble Road (Perris South GMZ)	
003A 003B	33°47'10"N 33°47'19"N	117°11'45"W 117°11'43"W	To ponds at PVRWRF, Skiland, Trumble & Winchester (Perris South GMZ)	Up to 11 mgd, continuously
004	33°41'45"N	117°12'38"W	To ponds at SCRWRF (Perris South GMZ)	Up to 3 mgd, currently out of service
005	33°30'22"N	117°10'03"W	To ponds at SCRWRF & Winchester (Perris South GMZ)	Various

2. Discharge Points for Recycling Water Reuse:

The Discharger distributes treated wastewater to recycled water users throughout the various groundwater management zones. Table 10 shows the locations of discharge points for recycled water use, affected management zones and estimated recycled water use. Discharge points may not be limited to those shown in Table 10. The major discharge points shown are listed. Representative samples will be collected at these locations for compliance monitoring purposes.

Table 10. Recycled Water Supply Points

Discharge Serials No.	Latitude	Longitude	Description and Receiving Water	Flow (MGD) & Frequency
001	33°47'59"N	117°00'45"W	Lakeview-Hemet North GMZ	Up to 11, continuously
			San Jacinto Lower GMZ	
			San Jacinto Upper GMZ	
			Hemet South GMZ	
002	33°52'19"N	117°12'51"W	San Jacinto Lower GMZ	Up to 16, continuously
			Lakeview-Hemet North GMZ	
			Perris North GMZ	
			Perris South GMZ	
003A 003B	33°45'10"N 33°45'19"N	117°11'44"W 117°11'39"W	Hemet South GMZ	Up to 11, continuously
			Lakeview-Hemet North GMZ	
			Perris South GMZ	
			San Jacinto Lower GMZ	
004	33°41'45"N	117°12'38"W	Perris South GMZ	Up to 3, currently out of service
005	33°30'19"N	117°10'05"W	Hemet South GMZ	Up to 18, continuously
			Menifee GMZ	
			Perris South GMZ	

3. Stormwater

Stormwater runoff from each RWRF is regulated by Order No. R8-2004-0065, NPDES No. CA8000188 for discharges from the RWRFs to Temescal Creek.

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

1. Effluent limitations/Discharge Specifications contained in the previous Order No. 88-094 for discharges from the San Jacinto Valley RWRF at Discharge Point 001 (Monitoring Location No. M-001) and representative monitoring data from the term of the previous Order are as follows:

Table 11. Historic Effluent Limitations and Monitoring Data for SJV RWRF

Parameter (units)	Effluent Limitation			Monitoring Data (Secondary From 2004 to February 2006; Tertiary from March 2006 to December 2006)			
	Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge	Highest 12-Month Average
pH Daily Average (SU)			6.5-8.5			11.8 (Min 6.4)	
BOD_5 (mg/L)	30			10.8		18	
Suspended Solids (mg/L)	30			14.6		29	
Coliform Organisms (MPN/100 mL)	23 (1/mo.)					900	
	2.2 (7-day median)					2	
Ammonia-Nitrogen (mg/L)				29.6		32	
TDS (mg/L)	575 (4-mo. avg)			668		747	623
Total Hardness (mg/L)	200 (4-mo. avg)			220		220	215
TIN (mg/L)				31		31	29
Boron (mg/L)	0.75 (4-mo. avg)			0.9		0.9	0.8
Chloride (mg/L)	100 (4-mo. avg)			174		174	163
Fluoride (mg/L)	1.0 (4-mo. avg)			0.8		0.8	0.7
Sodium (mg/L)	100 (4-mo. avg)			140		140	123
Sulfate (mg/L)	100 (4-mo. avg)			110		110	103
Antimony(µg/L)						<10	
Arsenic(µg/L)			50			3.3	
Barium(µg/L)			1000			47	
Beryllium(µg/L)						<10	
Cadmium(µg/L)			10			<1	
Chromium(µg/L)			50			<10	
Cobalt(µg/L)			200			<10	
Copper(µg/L)						15	
Cyanide(mg/L)			0.2			0.025	
Iron(µg/L)			300			380	

Table 11. Historic Effluent Limitations and Monitoring Data for SJV RWRF

Parameter (units)	Effluent Limitation			Monitoring Data (Secondary From 2004 to February 2006; Tertiary from March 2006 to December 2006)			
	Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge	Highest 12-Month Average
Lead(µg/L)			50			<5	
Manganese(µg/L)			50			52	
Mercury(µg/L)			2			<1	
Nickel(µg/L)						8	
Selenium(µg/L)			10			10	
Silver(µg/L)			50			<10	
Thallium(µg/L)						<200	
Zinc(µg/L)						90	
1,4-Dichlorobenzene (µg/L)						0.68	
Bis(2-Ethylhexyl) Phthalate(µg/L)						65	
Bromodichloro Methane(µg/L)						5.2	
Chlorodibromo Methane(µg/L)						1.6	
Chloroform(µg/L)						17	
Diethyl Phthalate(µg/L)						13	
Toluene(µg/L)						20	
Phenol						11	

Only detected organics are shown. All other organics tested were non-detect.

2. Effluent limitations/Discharge Specifications contained in the previous Order No. 90-151 for discharges from the Moreno Valley RWRF at Discharge Point 002 (Monitoring Location No. M-002) and representative monitoring data from the term of the previous Order are as follows:

Table 12. Historic Effluent Limitations and Monitoring Data for MV RWRF

Parameter (units)	Effluent Limitation			Monitoring Data (From 2004 – To 2006)			
	Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge	Highest 12-Month Average
pH Daily Average (SU)			6.5-8.5			7.8 (Min 6.4)	
BOD_5 (mg/L)	30 (12-mo. avg)			4.3		9	3.1
Suspended Solids (mg/L)	30 (12-mo. avg)			5		30	3.5
Coliform Organisms (MPN/100 mL)	23 (1/mo.)					1600	
	2.2 (7-day median)					170	
Ammonia-Nitrogen (mg/L)				16		25	9.6
TDS (mg/L)	550 (12-mo. avg)			640		640	528
Total Hardness (mg/L)	130 (12-mo. avg)			200		200	131
TIN (mg/L)	10 (12-mo. avg)			58		58	19
Boron (mg/L)	0.75 (12-mo. avg)			0.5		0.5	0.4
Chloride (mg/L)	155 (12-mo. avg)			193		207	164
Fluoride (mg/L)	1.0 (12-mo. avg)			0.3		0.3	0.2
Sodium (mg/L)	140 (12-mo. avg)			140		140	121
Sulfate (mg/L)	80 (12-mo. avg)			128		128	94
Antimony(µg/L)						0.58	
Arsenic(µg/L)			50			3.5	
Barium(µg/L)			1000			14	
Beryllium(µg/L)						<10	
Cadmium(µg/L)			10			<1	
Chromium(µg/L)			50			2.8	
Cobalt(µg/L)			200			<10	
Copper(µg/L)			20			5.7	
Cyanide(mg/L)			0.2			0.012	

Table 12. Historic Effluent Limitations and Monitoring Data for MV RWRF

Parameter (units)	Effluent Limitation			Monitoring Data (From 2004 – To 2006)			
	Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge	Highest 12-Month Average
Iron(µg/L)			300			200	
Lead(µg/L)			50			<5	
Manganese(µg/L)			50			23	
Mercury(µg/L)			2			0.34	
Nickel(µg/L)						24	
Selenium(µg/L)			10			10	
Silver(µg/L)			50			<10	
Thallium(µg/L)						<200	
Zinc(µg/L)			100			46	
1,4-Dichlorobenzene (µg/L)						<5	
Bis(2-Ethylhexyl) Phthalate(µg/L)						42	
Bromodichloro Methane(µg/L)						31	
Chlorodibromo Methane(µg/L)						7.6	
Chloroform(µg/L)						63	
Diethyl Phthalate(µg/L)						98	
Phenol (µg/L)			40			<10	

Only detected organics are shown. All other organics tested were non-detect.

3. Effluent limitations/Discharge Specifications contained in the previous Order No. 90-135 for discharges from the Perris Valley RWRF at Discharge Point 003 (Monitoring Location No. M-003) and representative monitoring data from the term of the previous Order are as follows:

Table 13. Historic Effluent Limitations and Monitoring Data for PV RWRF-Plants 1&2

Parameter (units)	Effluent Limitation			Monitoring Data (From 2004 – To 2006)			
	Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge	Highest 12-Month Average
pH Daily Average (SU)			6.5-8.5			8.5 (Min 6.4)	
BOD_5 (mg/L)	30			15.4		62	6
Suspended Solids (mg/L)	30			60		230	18
Coliform Organisms (MPN/100 mL)	23 (1/mo.)					17	
	2.2 (7-day median)					2	
Ammonia-Nitrogen (mg/L)				17		24	7
TDS (mg/L)	825 (12-mo. avg)			840		840	759
Total Hardness (mg/L)	330(12-mo. avg)			360		360	291
TIN (mg/L)				29		29	21
Boron (mg/L)	0.75 (12-mo. avg)			0.6		0.6	0.5
Chloride (mg/L)	160 (12-mo. avg)			265		265	235
Fluoride (mg/L)	1.0 (12-mo. avg)			0.5		0.5	0.3
Sodium (mg/L)	180 (12-mo. avg)			160		160	147
Sulfate (mg/L)	300 (12-mo. avg)			212		212	170
Antimony(µg/L)						0.64	
Arsenic(µg/L)			50			3.5	
Barium(µg/L)			1000			68	
Beryllium(µg/L)						<10	
Cadmium(µg/L)			10			<1	
Chromium(µg/L)			50			86	
Cobalt(µg/L)			200			<10	
Copper(µg/L)			20			47	

Table 13. Historic Effluent Limitations and Monitoring Data for PV RWRF-Plants 1&2

Parameter (units)	Effluent Limitation			Monitoring Data (From 2004 – To 2006)			
	Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge	Highest 12-Month Average
Cyanide(mg/L)			0.2			0.019	
Iron(µg/L)			300			460	
Lead(µg/L)			50			<5	
Manganese(µg/L)			50			50	
Mercury(µg/L)			2			<1	
Nickel(µg/L)						71	
Selenium(µg/L)			10			11	
Silver(µg/L)			50			<10	
Thallium(µg/L)						<200	
Zinc(µg/L)			100			220	
1,4-Dichloro benzene (µg/L)						<5	
Bis(2-Ethylhexyl) Phthalate(µg/L)						23	
Bromodichloro Methane(µg/L)						34	
Bromoform (ug/L)						0.64	
Chlorodibromo Methane(µg/L)						21	
Chloroform(µg/L)						52	
Dimethyl Phthalate (ug/L)						11	
Diethyl Phthalate(µg/L)						<10	
Phenol (µg/L)			40			17	

Only detected organics are shown. All other organics tested were non-detect.

Perris Valley RWRF Plant 1 produces secondary effluent and the recycled water is discharged either directly to designated secondary recycled water users or to on-site ponds for storage. Plant 2 produces tertiary effluent and will, at times, draw from on-site ponds to the secondary equalization basin for tertiary treatment to supplement tertiary demands for recycled water.

4. Effluent limitations/Discharge Specifications contained in the previous San Diego Regional Water Quality Control Board Order No. 2000-165 for discharges from the Temecula Valley RWRF at Discharge Point 005 and representative monitoring data from the term of the previous Order are as follows:

Table 14. Historic Effluent Limitations and Monitoring Data for TV RWRF

Parameter (units)	Effluent Limitation			Monitoring Data (From 2004 – To 2006)			
	Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge	Highest 12-Month Average
pH Daily Average (SU)			6.0-9.0			6.0 – 9.0	
BOD_5 (mg/L)	30		45	3.5		9	2.9
Suspended Solids (mg/L)	30		45	5.1		15	3.7
Coliform Organisms (MPN/100 mL)	23 (1/mo.)		240			110	
	2.2 (7-day median)					2	
Ammonia-Nitrogen (mg/L)				5.2		65	1.5
TDS (mg/L)	750 (12-mo. avg)		825	850		850	713
Total Hardness (mg/L)				270		270	230
TIN (mg/L)				18		18	10.4
Boron (mg/L)	0.75 (12-mo avg)		0.8	0.6		0.6	0.5
Chloride (mg/L)	200 (12-mo. avg)		250	218		210	193
Fluoride (mg/L)				0.8		0.8	0.6
Sodium (mg/L)				170		170	150
Sulfate (mg/L)	200 (12-mo. avg)		250	188		188	161
Antimony(µg/L)						<0.10	
Arsenic(µg/L)						5.0	
Barium(µg/L)						60	
Beryllium(µg/L)						<10	
Cadmium(µg/L)						<1.0	
Chromium(µg/L)						46	
Cobalt(µg/L)						<10	
Copper(µg/L)						5.0	
Cyanide(mg/L)						0.034	
Iron(µg/L)			300			580	
Lead(µg/L)						5.1	
Manganese(µg/L)			50			130	

Table 14. Historic Effluent Limitations and Monitoring Data for TV RWRF

Parameter (units)	Effluent Limitation			Monitoring Data (From 2004 – To 2006)			
	Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge	Highest 12-Month Average
Mercury(µg/L)						<1	
Nickel(µg/L)						31	
Selenium(µg/L)						12	
Silver(µg/L)						<10	
Thallium(µg/L)						<200	
Zinc(µg/L)						140	
Bis(2-Ethylhexyl) Phthalate(µg/L)						31	
Bromodichloro Methane(µg/L)						34	
Bromoform (ug/L)						1.2	
Bromomethane						21	
Chlorodibromo Methane(µg/L)						14	
Chloroform(µg/L)						55	
Toluene						5.4	
Phenol (µg/L)						<11	

D. Compliance Summary

Based on a review of effluent monitoring data submitted by the Discharger for the period from 2004 through 2006, the following Tables show the compliance summary for each RWRF:

Table 15. Compliance Status for San Jacinto Valley RWRF

Month	Type of Incident	Explanation/Reason	Corrective Action
Jan-Dec., 2004	High Chloride levels	Source water and additions at the plant	The Discharger submitted a report to the Regional Board regarding the amounts and effects of ferric chloride and chlorine addition at the treatment plant. The addition of these chemicals can have a significant effect on effluent chloride.*
Jan-Dec., 2004	High Sodium levels	Source water	No action taken
May-Nov.,	High TDS	Source water	No action taken

Table 15. Compliance Status for San Jacinto Valley RWRF

Month	Type of Incident	Explanation/Reason	Corrective Action
2004			
Apr.-Nov., 2004	High Total Hardness	Source water	No action taken
Apr.-July, 2004	Sulfate	Source water	No action taken
Jan-Dec., 2005	High Chloride levels	Source water and additions at the plant	The Discharger, through the Source Control Division, has actively sought out, and demanded compliance from businesses discharging chloride, sodium and TDS containing wastewater at levels higher than established local limits. This includes businesses with any size water softening system which discharges regenerates to the sewer system.*
Jan-Dec., 2005	High Sodium levels	Source water	
May-Jul., Oct.-Nov., 2005	High TDS	Source water	
Apr., Oct., 2005	Iron	Ferric Chloride addition	Corrected dosage level
Jan.-Aug., 2006	High Chloride levels	Source water and additions at the plant	No action taken.
Jan.-Aug., 2006	High Sodium levels	Source water	No action taken.
Jan.-Aug., 2006	High TDS	Source water	No action taken.
Mar., -July, 2006	Boron	Source water	No action taken.

*: *EMWD's Source Control Division investigated in-plant chemical sources of chloride and determined that the ferric chloride and chlorine added to maintain good quality effluent and for odor control contributed significantly to chloride in the effluent*.

Table 16. Compliance Status for Moreno Valley RWRF

Month	Type of Incident	Explanation/Reason	Corrective Action
Nov.-Dec., 2004	Chloride	Source water	The District submitted a report to the Regional Board regarding the amounts and effects of ferric chloride, and chlorine addition at the treatment plant. The addition of these chemicals can have a significant effect on effluent chloride.*
Apr.-Dec., 2004	Sulfate	Source water	No action taken
May-Nov., 2004	Freeboard	Farmer not taking water	The District installed automatic pressure relief valves.
Jan.-Jul., 2005	Chloride	Source Water, chemical addition	No action taken.*
Jan.-Dec., 2005	Sulfate	Source water	No action taken.

Table 16. Compliance Status for Moreno Valley RWRF

Month	Type of Incident	Explanation/Reason	Corrective Action
Jan., 2005	Freeboard	Due to heavy rains	The District closed several rainwater intrusion points.
Jul., 2005	Total Coliform	Contaminated sample site The plant was achieving breakpoint chlorination, and was having trouble maintaining adequate chlorine residual.	Staff moved the sampling point to the end of chlorine contact basin. Adjusted the plant operation to allow increase chlorine residual.
Jan.-May, 2006	Sulfate	Source water	No action taken.
Mar., Aug., 2006	Total Coliform	High Turbidity; Sedimentation build-up in Chlorine Contact Basins.	Cleaned Secondary EQ Basin & Chlorine Contact Basins

Table 17. Compliance Status for PV RWRF (Plant 1 and Plant 2)

Month	Type of Incident	Explanation/Reason	Corrective Action
Jan.-Dec., 2004	Chloride, mostly at Plant #2	Source water, and disinfection	The Discharger submitted a report to the Regional Board regarding the amounts and effects of ferric chloride and chlorine addition at the treatment plant. The addition of these chemicals can have a significant effect on effluent chloride.*
Sept., 2004	Flow at Plant #1	Improper treatment allocation	No action taken
Dec., 2004	Iron at Plant #2	Unknown	Extra sampling looking for the cause. No source or cause was identified.
Dec., 2004	Zinc at Plant #2	Unknown	Extra sampling looking for the cause. No source or cause was identified.
Jan.-Dec., 2005	Chloride, mostly at Plant #2	Source water, and disinfection	No action taken.*
Mar., 2005	Copper at Plant #2	Unknown	Part of the Local Limits Study[9]
Mar., Jun., 2005	Iron	Unknown	Part of the Local Limits Study
Jun., 2005	Chromium at Plant #2	Unknown	Part of the Local Limits Study
Jan., 2005	Freeboard	Heavy rains	The Discharger closed several rainwater intrusion points.

[9] *Local Limits are specific prohibitions or limits on pollutants that pass through or cause interference in the operation of a publicly owned treatment works. The limits are developed in accordance with 40 CFR 403 – General Pretreatment Regulations for Existing and New Sources of Pollution*

Table 17. Compliance Status for PV RWRF (Plant 1 and Plant 2)

Month	Type of Incident	Explanation/Reason	Corrective Action
Jan.-Dec., 2005	Flow at Plant #2	Heavy rains, groundwater intrusion, growth	The Discharger closed several rainwater intrusion points. Plant designed to expand to 17 MGD by July 2009.
Mar., 2005	TSS at Plant #1	Influent wet well pump down	During the heavy rains, the influent wet well filled with solids. Staff cleaned the influent wet well, and sent the solids to Plant #1 for treatment. The plant could not handle the high solids loading.
Jul.-Dec., 2005	TDS	Faulty calculation of the Source Water TDS	Staff has corrected the source water TDS calculation.
Sept., 2005	Selenium	Unknown Source	Part of the Local Limits Study
Jan.-Aug., 2006	Chloride	Source water, and disinfection.	No action taken.*
Jan.-Aug., 2006	TDS	Source water	No action taken.
Jan.-Aug., 2006	Flow	Increase growth within the area.	Plant is currently under expansion to 17 MGD.

Table 18. Compliance Status for Temecula Valley RWRF

Month	Type of Incident	Explanation/Reason	Corrective Action
Jan.-June, Nov.-Dec., 2004	Excess flow	Community growth outpaced the plant expansion schedule.	The plant expansion to 12 MGD was completed in March 2003. The permitted flow was increased in February 2005 to 13.2 dry weather average flow to reflect the actual design capacity of the plant. Design is underway to increase the plant to 18 MGD.
Jan.-Feb., 2004	High Manganese levels	Unknown source	The source of manganese was investigated and one source was believed to be from construction dewatering wells in the area, as shallow groundwater has high levels of the manganese. EMWD continues to control these types of sources.
June, 2004	TDS	Source water	No action taken
Jan., 2005	Excess flow	Community growth outpaced the plant expansion schedule.	The plant expansion to 12 MGD was completed in March 2003. The permitted flow was corrected in February 2005 to 13.2 dry weather average flow to reflect the actual design capacity of the plant, per Title 22 report. Design is underway to increase the plant to 18 MGD.
Feb.-April, Jun.-Dec., 2005	High Manganese levels	1. Routing of groundwater pumping for the plant expansion through the treatment process. 2. Groundwater	1. The Discharger has stopped pumping groundwater into the treatment plant as part of the plant expansion. 2. The Discharger is in the process of closing known groundwater intrusion points.

Table 18. Compliance Status for Temecula Valley RWRF

Month	Type of Incident	Explanation/Reason	Corrective Action
		intrusion into the collection system	
Jul., Oct., 2005	Iron	Ferric Chloride addition	Reducing the dosage of Ferric Chloride.
Jan. 2006	Average effluent flow exceeded discharge order	Growth	Discharger was in the process of getting approval for higher discharge limits.
Jan.-Jun., 2006	High Manganese level	1. Routing of groundwater pumping for the plant expansion through the treatment process. 2. Groundwater intrusion into the collection system	1. The Discharger has stopped pumping groundwater into the treatment plant as part of the plant expansion. 2. The Discharger is in the process of closing known groundwater intrusion points.

E. Planned Changes

1. San Jacinto Valley RWRF

By Sept. 2011:
Title 22 Tertiary Plant Upgrade Project - Additional tertiary treatment facilities for a capacity of 14.9 MGD annual average (15.4 MGD maximum month), including:

- New pump at the existing filter influent pump station
- Two new flocculation basins with rapid mixing chamber
- New Tertiary Filters
- A new tertiary chemical building with alum and polymer systems (replaces the temporary chemical facility installed on the Emergency Filter project).
- One chlorine contact basin
- A new utility water pump station
- A new tertiary effluent pump station
- A new effluent pump station electrical building
- Tertiary effluent reservoir (ponds)

By Jan 2014:
Plant 2 Facilities Project – Primary and secondary treatment and solids handling units expansion to 14.0 MGD annual average (15.4 maximum month), including:

- Headworks to 18 MGD annual average (existing headworks will be demolished)
- Primary and secondary clarifiers
- Aeration basins (Nitrification/denitrification- NDN)

- Aeration blowers
- WAS thickening
- Sludge digestion
- WAS pumps
- Sludge truck loading hopper
- Odor control
- Chemical Facilities
- Return water pump stations
- Electrical Buildings
- O & M building
- Main Power Bldg.

2. Moreno Valley RWRF:

By 2008 (In-process):
- Deepen 4 of the existing 18 ponds to increase storage capacity by 30 MG. Current capacity is 225 MG.

By 2008 (In-process):
- Sludge thickening, Rotary Drum Thickener (RDT) expansion to 20 MGD
- Replacement of influent screens with 3 new bar screens
- One new screenings washer/compactor

By Dec 2008:
- Fuel Cells

By Sept 2011:
- Secondary clarifier expansion
- Tertiary filter expansion to 22.0 MGD annual average (24.2 maximum month)
- Two new chlorine contact basins

By Oct 2012:
- One new Plant 2 vortex grit basin
- RAS/WAS pumping capacity expansion
- Filter Influent Pumping expansion
- Additional alum and polymer pump facility
- Sludge digestion expansion
- Digested Sludge Storage

3. Perris Valley RWRF:

By Dec 2008:
Tertiary Expansion to 30 MGD annual average, including:
- Secondary effluent equalization basins and pump station
- Two new pumps at the existing filter influent pump station
- Two new flocculation basins with a rapid mixing chamber

- New cloth media filters
- Chemical system modification for alum, polymer, and chlorination
- Chlorine scrubber
- Three new chlorine contact basins
- Tertiary effluent diversion box
- Out-of-compliance pond
- Tertiary effluent pond modifications
- Expansion of the existing utility water pump station and effluent pump station
- A new effluent pump station electrical building

By June 2011:
Plant 3 Expansion to 18 MGD annual average (19.8 maximum month) for Primary, Secondary & Solid Handling Facilities, including:

- Headworks
- Influent Lift station
- Grit chambers
- Primary Clarifier
- Primary Effluent Splitter Box
- APT Chemical/Ferric Chloride Facility
- Plant 2 RAS/WAS Pump Station
- Plant 3 Aeration Basins
- Plant 2A and 3 Blower Building
- Secondary Polymer Treatment Facility
- Secondary Clarifiers
- Plant 2A Aeration Basins
- Tertiary/Dewatering Return Water Pump Station
- Plant 3 RAW/WAS Pump Station
- Scum Decant Pump Station
- Primary scum pit
- Secondary Scum Pit No 1 & 2
- Sludge Dewatering Building
- WAS Thickening Building
- Digesters
- Sludge Storage Tank
- Low Pressure Digester Gas Holder
- Septage Receiving Station
- Boiler Facility, Standby Generator
- WAS Thicken Return Water Pump Station
- Digester Gas Flaring Facility
- Digester Gas Compression Facility
- Biofilters
- Cogeneration facility
- Sludge Transfer Pump Station
- Electrical Buildings

- Plant 2 Upgrades included above to secondary capacity of 25.0 MGD annual average (27.5 maximum month)

By Dec 2013:
- Upgrade Plant 1

4. Sun City RWRF: (Out of Service)

5. Temecula Valley RWRF:
   By Dec 2010:
   - Secondary and Tertiary Ponds

   By July 2012
   - 18 MGD Solids handling upgrade

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in the proposed Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order serves as Waste Discharge Requirements (WDRs) pursuant to article 4, Chapter 4, Division 7 of the Water Code (commencing with Section 13260).

B. California Environmental Quality Act (CEQA)

In compliance with the California Environmental Quality Act (CEQA), the Discharger completed the CEQA study for the expansion of Perris Valley Regional Water Reclamation Facility Plant 3 and San Jacinto Valley Regional Water Reclamation Facility Plant 2. Negative Declarations were certified and the Notices of Determination filed in January 2005 and November 2005, respectively. The Moreno Valley Regional Water Reclamation Facility expansion CEQA study was completed on June 20, 2007.

C. State Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Board adopted a Water Quality Control Plan for the Santa Ana Basin (hereinafter Basin Plan) that became effective on January 24, 1995. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 (Sources of Drinking Water Policy) requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic water supply use to water bodies.

   On January 22, 2004, the Regional Water Board adopted Resolution No. R8-2004-0001, amending the Basin Plan to incorporate revised boundaries for groundwater subbasins, now termed “management zones”, new nitrate-nitrogen and TDS objectives for the new management zones, and new nitrogen and TDS management strategies applicable to both surface and ground waters. The State Water Board and Office of Administrative Law (OAL) approved the N/TDS Amendment on September 30, 2004 and December 23, 2004, respectively. Accordingly, these waste discharge requirements implement relevant, groundwater-related components of the N/TDS Amendment. Specifically, the total dissolved solids (TDS) and total inorganic nitrogen (TIN) limitations established in this Order are based on the amended Basin Plan.

   As previously discussed, the Facility discharges wastewater from five discharge points located at different groundwater management zones. The designated beneficial uses of receiving waters affected by the discharge from the Facility are as follows:

Table 19. Basin Plan Beneficial Uses

Discharge Point	Receiving Water: Groundwater Management Zone	Beneficial Uses
001	San Jacinto Upper	Present or Potential: Municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
	Lakeview & Hemet North	Present or Potential: Municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
	San Jacinto Lower	Present or Potential: Municipal and domestic supply, agricultural supply, industrial service supply.
	Hemet South	Present or Potential: Municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.

Table 19. Basin Plan Beneficial Uses

Discharge Point	Receiving Water: Groundwater Management Zone	Beneficial Uses
002	San Jacinto Lower	Present or Potential: Municipal and domestic supply, agricultural supply, industrial service supply.
	Lakeview & Hemet North	Present or Potential: Municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
	Perris North	Present or Potential: Municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
	Perris South	Present or Potential: Municipal and domestic supply, agricultural supply
003A & 003B	San Jacinto Lower	Present or Potential: Municipal and domestic supply, agricultural supply, and industrial service supply.
	Perris South	Present or Potential: Municipal and domestic supply, agricultural supply
	Hemet South	Present or Potential: Municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
	Lakeview & Hemet North	Present or Potential: Municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
004	Perris South	Present or Potential: Municipal and domestic supply, agricultural supply.
005	Perris South	Present or Potential: Municipal and domestic supply, agricultural supply
	Hemet South	Present or Potential: Municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
	Menifee	Present or Potential: Municipal and domestic supply, agricultural supply, and industrial process supply.

Requirements of this Order implement the Basin Plan.

2. **Antidegradation Policy.** The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference the State antidegradation policies. The permitted discharge must be consistent with the antidegradation provisions of State Water Board Resolution No. 68-16.

   In light of the planned expansions of its RWRFs, the Discharger conducted an extensive analysis to evaluate the water quality effects of those expansions and determine conformance with antidegradation requirements. On December 15, 2007, the Discharger submitted a report titled 'Draft Antidegradation Analysis for Eastern Municipal Water District's Master Permit' (Antidegradation Analysis Report). This report was revised and finalized in June 2008 ("Antidegradation Analysis for Eastern Municipal Water District's Master Permit", Final, June 2008). The report relies on the analyses in the Mitigation Plan report (see II.A.5., above). This analysis entailed calculation of the expected system-wide TDS and TIN loading to groundwater from recycled water use/storage, and comparison of the calculated loads to allowable loading based on established objectives for the GMZs. (Based on an updated recalculation of GMZ ambient quality (Recomputation of Ambient Water Quality for the Period 1984-2003, Draft Technical Memorandum, August 2005, Wildermuth Environmental, Inc., for SAWPA Technical Advisory Committee), it was found that all the GMZs affected by the Discharger's recycled water activities lack both TDS and TIN assimilative capacity. Therefore, the water quality objectives, rather than ambient quality (which exceeds the objectives), is the appropriate basis for assessment of water quality impacts and the need for mitigation.) Where the analysis found that a lowering of water quality could occur as the result of TDS and/or TIN discharges in excess of applicable groundwater management zone objectives, the discharger identified a proposed plan (Mitigation Plan; see II.A.5., above) to offset those TDS and TIN discharges. This Order requires the Discharger to implement that Plan. If modification of the Mitigation Plan is found necessary to assure requisite TDS and/or TIN offsets, the Discharger is required to submit a proposed alternative plan, and to implement that Plan upon approval by the Executive Officer. The net effect of implementation of the Mitigation Plan or approved alternatives will be to prevent the lowering of water quality. Therefore, the proposed discharges conform to antidegradation requirements.

3. **Monitoring and Reporting Requirements.** Section 13267 of the CWC authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement state requirements. This MRP is provided in Attachment E.

E. Other Plans, Polices and Regulations-Not Applicable

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Discharge Prohibitions

The discharge prohibitions are based on the Basin Plan, State Water Resources Control Board's plans and policies, previous permit Order No. 88-094 for San Jacinto Valley RWRF, Order No. 90-151 for Moreno Valley RWRF, Order No. 90-135 for Perris Valley RWRF, Order No. 90-140 for Sun City RWRF, and Order No. 92-063 for Winchester Ponds, respectively. These prohibitions are consistent with the requirements set for other discharges regulated by WDRs adopted by the Regional Water Board.

B. Technology-Based Effluent Limitations - Not Applicable

C. Water Quality-Based Effluent Limitations (WQBELs) For Land Disposal

1. Applicable Beneficial Uses and Water Quality Criteria for DPs 001-005

a. The Basin Plan specifies narrative and numeric water quality objectives applicable to groundwater as follows.

<u>TDS and TIN</u>: The TDS and TIN limitations are specified in the Order for discharges to groundwater management zones and are based on Table 5-3 and Table 5-4 of the amended Basin Plan. The limitations are shown in Table 20.

This Order also includes a TDS limit based on the quality of the water supplied to the service area plus a reasonable use increment for TDS of 250 mg/L. This reasonable use increment is discussed and authorized in the Basin Plan.

Salt offset program: The Basin Plan recognizes that strict compliance with TDS/TIN limits may be difficult to achieve and it describes the regulatory approach the Regional Board uses to address such situations. The Board incorporates offset provisions in waste discharge requirements whereby Dischargers can implement an approved program to offset TDS/TIN discharges in excess of specified TDS/TIN limits, provided that the Discharger makes all reasonable efforts to improve the TDS/TIN quality of the water supply (and thereby, the wastewater). This Order includes these offset provisions.

Table 20. Proposed TDS/TIN Limits for Land Disposal

Groundwater Management Zone	TDS Limit (mg/L) Proposed 12-Mo Ave. Flow weighted	TIN* Limit (mg/L) Proposed 12-Mo Ave. Flow weighted
San Jacinto Upper Pressure Zone	320	3.5*
Lakeview & Hemet North	520	2.4
Perris North	570	11.8*
Perris South	1260	3.3

* TIN Limits are based on the ambient nitrate nitrogen water quality or objective and application of approved 60% nitrogen loss coefficient. The other TIN limits are based on use of a 25% nitrogen loss coefficient.

The Regional Water Board has determined that it is not practicable to express TDS and TIN effluent limitations as average weekly and average monthly effluent limitations because the TDS and TIN objectives in the Basin Plan were established primarily to protect the underlying groundwater. Consequently, a 12-month flow weighted average concentration is more appropriate.

b. Metals Limitations
Metal constituents limits are based on the California Department of Public Health's (CDPH) Maximum Contaminant Levels (MCLs) and previous waste discharge requirements.

c. Requirement to meet total coliform bacteria limits in the effluent. For discharges to the ponds there are no coliform bacteria limits. The ponds are not accessible to the public. Coliform limitations are specified in the Order for recycled water use, in accordance with Title 22 regulations.

D. Best Professional Judgment-Based Effluent Limitations

For tertiary treated wastewater, the BOD_5 and TSS concentration limits shown in Table 21 are based on Best Professional Judgment. The technology-based secondary treatment standards concentration limits for BOD_5 and TSS that are specified in the federal regulations are less stringent and do not apply.

Table 21. Effluent BOD_5 and TSS Limits for Land Disposal

Constituent	Average Weekly	Average Monthly
Biochemical Oxygen Demand	30 mg/L	20 mg/L
Suspended Solids	30 mg/L	20 mg/L

E. Summary of Land Disposal Limitations

Table 22. Summary of Effluent Limitations at DP 001 through 005 for Land Disposal

Parameter	Units	Effluent Limitations					Basis
		Average Monthly or as noted herein	Ave. Weekly	Max. Daily	Range		
BOD_5	mg/L	20	30	--	--	--	BPJ
Total Suspended Solids	mg/L	20	30	--	--	--	BPJ
Coliform	MPN/100 mL	--	23				Title 22
TDS for DP 001	mg/L	320 (12-M avg) for SJ-Upper GMZ	--	--	--	--	BP
TDS for DP 001	mg/L	520 (12-M avg) for Lakeview Hemet-N GMZ					BP
TDS For DP-002	mg/L	570 (12-M avg) for Perris-N GMZ	--	--	--	--	BP
TDS For DP-002 & DP 003	mg/L	1260 (12-M avg) for Perris-S GMZ	--	--	--	--	BP
TDS For DP 004	mg/L	1260 (12-M avg) for Perris-S GMZ	--	--	--	--	BP
TDS For DP 005	mg/L	1260 (12-M avg) for Perris S GMZ	--	--	--	--	BP
TIN For DP 001	mg/L	3.5 (12-M avg) for SJ-Upper GMZ	--	--	--	--	BP
TIN For DP 001	mg/L	2.4 (12-M avg) for Lakeview Hemet-N GMZ	--	--	--	--	BP
TIN For DP-002	mg/L	11.8 (12-M avg) for Perris-N GMZ	--	--	--	--	BP
TIN For DP-002 & DP-003	mg/L	3.3 (12-M avg) for Perris-S GMZ	--	--	--	--	BP
TIN For DP 004	mg/L	3.3 (12-M avg) for Perris-S GMZ	--	--	--	--	BP
TIN For DP 005	mg/L	3.3 (12-M avg) for Perris-S GMZ	--	--	--	--	BP
pH	Std. unit	--	--	--	6-9		BP

Table 22. Summary of Effluent Limitations at DP 001 through 005 for Land Disposal

Parameter	Units	Effluent Limitations					Basis
		Average Monthly or as noted herein	Ave. Weekly	Max. Daily	Range		
Arsenic	mg/L	--	--	0.05	--	--	MCL
Total Cadmium	mg/L	--	--	0.005	--	--	MCL
Total Chromium	mg/L	--	--	0.05	--	--	MCL
Total Copper	mg/L	--	--	0.02	--	--	BP
Cyanide	mg/L	--	--	0.15	--	--	MCL
Total Lead	mg/L	--	--	0.015	--	--	MCL
Total Mercury	mg/L	--	--	0.002	--	--	MCL
Selenium	mg/L	--	--	0.01	--	--	MCL
Total Silver	mg/L	--	--	0.05	--	--	BP
Total Zinc	mg/L	--	--	0.1	--	--	MCL
Phenolic Compounds	mg/L	--	--	0.04	--	--	MCL

Notes: PO = Previous Orders, 90-135, 90-140, 90-151, 88-94, 92-63, MCL=CDPH's drinking water criteria; BP= Basin Plan.

H. Reclamation Specifications - DP 001 to DP-005

1. Section 13523 of the California Water Code provides that a Regional Water Board, after consulting with and receiving the recommendations from the CDPH and any party who has requested in writing to be consulted, and after any necessary hearing, shall prescribe water reclamation requirements for water which is used or proposed to be used as recycled water, if, in the judgment of the Board, such requirements are necessary to protect the public health, safety, or welfare. Section 13523 further provides that such requirements shall include, or be in conformance with, the statewide uniform water recycling criteria established by the CDPH pursuant to California Water Code Section 13521.

2. Reclamation specifications in the proposed Order are based upon the recycling criteria contained in Title 22, Division 4, Chapter 3, Sections 60301 through 60355, California Code of Regulations, and the California Water Code Section 13521.

3. Summary of Reclamation Effluent Limitations:

Table 23. Summary of Reclamation Effluent Limitations at DP 001 to DP-005

Parameter	Units	Effluent Limitations					Basis
		Average Monthly or as noted herein	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
BOD_5	mg/L	20	30	--	--	--	BPJ
Total Suspended Solids	mg/L	20	30	--	--	--	BPJ
CT	milligram-minutes per liter	--	--	--	450	--	Title 22
Coliform	MPN/100 mL	--	2.2 median in 7 days	--	--	--	Title 22
Turbidity	NTU	--	--	2 avg.		--	Title 22

4. TDS limitations for recycled water use are based on the TDS water quality objectives in Table 4-1 of the amended Basin Plan:

Table 24. TDS Limits for Irrigation Use

Groundwater Management Zone	TDS, mg/L
Perris North	570
Perris South	1260
Menifee	1020
Lakeview & Hemet North	520
San Jacinto Lower Pressure Zone	520
San Jacinto Upper Pressure Zone	320
Hemet South	730

5. The Basin Plan water quality objectives for TIN do not apply to recycled water use for agricultural and landscape irrigation because of plant uptake of nitrogen.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water – Not Applicable

B. Groundwater

1. The receiving groundwater limitations in the proposed Order are based upon the water quality objectives contained in the amended Basin Plan.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Sections 13267 of the CWC authorize the Water Boards to require technical and monitoring reports. The MRP, Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and State requirements. The following provides the rationale for monitoring and reporting requirements contained in the MRP for this Facility.

A. Influent Monitoring

This Order carries forward each of the RWRFs influent monitoring requirements without change. Influent monitoring is required to determine the effectiveness of the treatment program and assess treatment plant performance.

B. Effluent Monitoring

The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are given in the proposed monitoring and reporting program (Attachment E). This provision requires compliance with the monitoring and reporting program. The SMP is a standard requirement in almost all waste discharge requirements (including the proposed Order) issued by the Regional Water Board. In addition to containing definitions of terms, it specifies general sampling/analytical protocols and the requirements of reporting of spills, violations, and routine monitoring data in accordance with WDR regulations, the California Water Code, and Regional Water Board's policies. The monitoring and reporting program also contains sampling program specific for the Discharger's wastewater treatment plant. It defines the sampling stations and frequency, pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all pollutants for which effluent limitations are specified.

This Order modifies the monitoring requirements specified in previous Orders and adds monitoring requirements. This Order also requires the Discharger to conduct accelerated monitoring for those constituents that are detected in the quarterly and annual pollutant scan.

C. Receiving Water Monitoring

1. Groundwater – Not Applicable

D. Other Monitoring Requirements

1. Water Supply Monitoring

The Discharger is required to collect a sample of each source of water supplied and analyze for total dissolved solids. The result of this monitoring will enable the Discharger to show compliance with TDS limitations in the Order.

2. Biosolids Monitoring

This Order continues the monitoring requirements specified in previous Orders, with minor modification. The Discharger is now required to submit monitoring data annually instead of quarterly.

3. Pretreatment Monitoring

These monitoring and reporting requirements are established pursuant EPA 40 CFR 403 regulations.

VII. RATIONALE FOR PROVISIONS

A. Provisions

1. Reopener Provisions – Not Applicable

2. Special Studies and Additional Monitoring Requirements

a. This Order requires the discharger to submit a report that details the manner in which sampling, monitoring and reporting will be performed as required in the Order. This is a standard requirement for all POTW dischargers within the Region.

b. TDS/TIN Offsets
The Discharger may not be able to meet effluent limits for TDS and TIN for the Lakeview/Hemet North Management Zone, Perris South Management Zone, San Jacinto Lower Pressure Management Zone and San Jacinto Upper Pressure Management Zone. Consequently, the Order requires the Discharger to implement the approved offset program for mitigating discharges of TDS and TIN in excess of effluent limitations specified in the Order.

c. San Jacinto Lower Pressure Management Zone Regulatory Compliance
On August 4, 2008, the Discharger submitted a regulatory compliance strategy plan for the San Jacinto Upper and Lower Pressure Management Zone to address the reuse activities within this GMZ. The plan included tasks, assignments and schedule to revise the water quality objectives for nitrogen and total dissolved solids for San Jacinto Upper Pressure and San Jacinto Lower Pressure groundwater management zones. The Order requires the Discharger to submit a quarterly compliance status report on the progress of the plan.

3. Best Management Practices and Pollution Prevention

The requirements are based on the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, Section 2.4.5.1. and are applicable to POTW facilities including the Discharger.

4. Construction, Operation, and Maintenance Specifications

The requirements are based on requirements that were specified in the prior Order.

5. Special Provisions for Municipal Facility - POTWs Only

a. Biosolids: On February 19, 1993, the USEPA issued a final rule for the use and disposal of sewage sludge, 40 CFR, Part 503. This rule requires that producers of sewage sludge meet certain reporting, handling, and disposal requirements. The State of California has not been delegated the authority to implement this program, therefore, the U.S. Environmental Protection Agency is the implementing agency.

b. Oxidized, filtered, and disinfected by chlorine: These requirements are based on Title 22 requirements for the use of recycled water.

c. Pretreatment: The treatment plants capacity is 36 mgd and there are significant industrial users within the service areas. Consequently, this Order contains requirements for the implementation of an effective pretreatment program pursuant to Section 307 of the Federal Clean Water Act; Parts 35 and 403 of Title 40, Code of Federal Regulations (40 CFR 35 and 40 CFR 403); and/or Section 2233, Title 23, California Code of Regulations.

6. Other Special Provisions – Not Applicable

7. Compliance Schedules – Not Applicable

VIII. PUBLIC PARTICIPATION

The Regional Water Board is considering the issuance of waste discharge requirements (WDRs) for Eastern Municipal Water District's Regional Water Reclamation Facilities. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharges and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the posting of Notice of Public Hearing at local city halls; and at the Regional Water Board website: http://www.waterboards.ca.gov/santaana on August 6, 2008.

B. Written Comments

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

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on August 15, 2008.

Jane Qiu
California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501-3348

C. Public Hearing

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

Date:	September 5, 2008
Time:	9:00 A.M.
Location:	City Council Chambers of Loma Linda 25541 Barton Road Loma Linda, CA

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our web address http://www.waterboards.ca.gov/santaana where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

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

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 9:00 a.m. and 3:00 p.m. Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (951) 320-2008.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this Order should be directed to (951) 320-2008.

Attachment G – Pollutant Monitoring Trigger List

Table 1 ***Chemical***	***Maximum Contaminant Level***	***Unit***
Inorganic Chemicals		
Aluminum	1	mg/L
Antimony	0.006	mg/L
Arsenic	0.010	mg/L
Asbestos (MFL = million fibers per liter; for fibers >10 microns long)	7 MFL	MFL
Barium	1	mg/L
Beryllium	0.004	mg/L
Cadmium	0.005	mg/L
Chromium, Total	0.05	mg/L
Cyanide	0.15	mg/L
Fluoride	2	mg/L
Mercury (inorganic)	0.002	mg/L
Nickel	0.1	mg/L
Nitrate (as NO3)	45	mg/L
Nitrite (as N)	1 as N	mg/L
Nitrate + Nitrite	10 as N	mg/L
Perchlorate	0.006	mg/L
Selenium	0.05	mg/L
Thallium	0.002	mg/L
Copper	1.3	mg/L
Lead	0.015	mg/L
Organic Chemicals		
(a) Volatile Organic Chemicals (VOCs)		
Benzene	0.001	mg/L
Carbon tetrachloride	0.0005	mg/L
1,2-Dichlorobenzene	0.6	mg/L
1,4-Dichlorobenzene (p-DCB)	0.005	mg/L
1,1-Dichloroethane (1,1-DCA)	0.005	mg/L
1,2-Dichloroethane (1,2-DCA)	0.0005	mg/L
1,1-Dichloroethylene (1,1-DCE)	0.006	mg/L
cis-1,2-Dichloroethylene	0.006	mg/L

Table 1

Chemical	***Maximum Contaminant Level***	***Unit***
trans-1,2-Dichloroethylene	0.01	mg/L
Dichloromethane (Methylene chloride)	0.005	mg/L
1,2-Dichloropropane	0.005	mg/L
1,3-Dichloropropene	0.0005	mg/L
Ethylbenzene	0.3	mg/L
Methyl tertiary butyl ether (MTBE)	0.013	mg/L
Monochlorobenzene	0.07	mg/L
Styrene	0.1	mg/L
1,1,2,2-Tetrachloroethane	0.001	mg/L
Tetrachloroethylene (PCE)	0.005	mg/L
Toluene	0.15	mg/L
1,2,4-Trichlorobenzene	0.005	mg/L
1,1,1-Trichloroethane (1,1,1-TCA)	0.2	mg/L
1,1,2-Trichloroethane (1,1,2-TCA)	0.005	mg/L
Trichloroethylene (TCE)	0.005	mg/L
Trichlorofluoromethane (Freon 11)	0.15	mg/L
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	1.2	mg/L
Vinyl chloride	0.0005	mg/L
Xylenes	1.75	mg/L
(b) Non-Volatile Synthetic Chemicals (SOCs)		
Alachlor	0.002	mg/L
Atrazine	0.001	mg/L
Bentazon	0.018	mg/L
Benzo(a)pyrene	0.0002	mg/L
Carbofuran	0.018	mg/L
Chlordane	0.0001	mg/L
2,4-Dichlorophenoxyacetic acid (2,4-D)	0.07	mg/L
Dalapon	0.2	mg/L
1,2-Dibromo-3-chloropropane (DBCP)	0.0002	mg/L
Di(2-ethylhexyl)adipate	0.4	mg/L
Di(2-ethylhexyl)phthalate (DEHP)	0.004	mg/L
Dinoseb	0.007	mg/L
Diquat	0.02	mg/L
Endrin	0.002	mg/L

Table 1

Chemical	***Maximum Contaminant Level***	***Unit***
Endothal	0.1	mg/L
Ethylene dibromide (EDB)	0.00005	mg/L
Glyphosate	0.7	mg/L
Heptachlor	0.00001	mg/L
Heptachlor epoxide	0.00001	mg/L
Hexachlorobenzene	0.001	mg/L
Hexachlorocyclopentadiene	0.05	mg/L
Lindane	0.0002	mg/L
Methoxychlor	0.03	mg/L
Molinate	0.02	mg/L
Oxamyl	0.05	mg/L
Pentachlorophenol	0.001	mg/L
Picloram	0.5	mg/L
Polychlorinated biphenyls (PCBs)	0.0005	mg/L
Simazine	0.004	mg/L
2,4,5-TP (Silvex)	0.05	mg/L
2,3,7,8-TCDD (dioxin)	$3x10^{-8}$	mg/L
Thiobencarb	0.07	mg/L
Toxaphene	0.003	mg/L
Disinfectant Byproducts		
Total trihalomethanes (TTHM)	0.080	mg/L
Bromodichloromethane		mg/L
Bromoform		mg/L
Chloroform		mg/L
Dibromochloromethane		mg/L
Haloacetic acids (five) (HAA5)	0.060	mg/L
Monochloroacetic Acid		mg/L
Dichloroacetic Acid		mg/L
Trichloroacetic Acid		mg/L
Monobromoacetic Acid		mg/L
Dibromoacetic Acid		mg/L
Bromate	0.010	mg/L
Chlorite	1.0	mg/L

Table 2

ITEM	CHEMICAL CONSTITUENT	Concentration (mg/L)
1	Boron	1
2	n-Butylbenzene	0.26
3	sec-Butylbenzene	0.26
4	tert-Butyl benzene	0.26
5	Carbon disulfide	0.16
6	Chlorate	0.8
7	2-Chlorotoluene	0.14
8	4-Chlorotoluene	0.14
9	Dichlorodifluoromethane (Freon 12)	1
10	1,4-Dioxane	0.003
11	Ethylene glycol	14
12	Formaldehyde	0.1
13	HMX	0.35
14	Isopropylbenzene	0.77
15	Manganese	0.5
16	Methyl isobutyl ketone (MIBK)	0.12
17	Naphthalene	0.017
18	N-Nitrosodiethyamine (NDEA)	0.00001
19	N-Nitrosodimethylamine (NDMA)	0.00001
20	N-Nitrosodi-n-propylamine (NDPA)	0.00001
21	Propachlor	0.09
22	n-Propylbenzene	0.26
23	RDX	0.0003
24	Tertiary butyl alcohol (TBA)	0.012
25	1,2,3-Trichloropropane (1,2,3-TCP)	0.000005
26	1,2,4-Trimethylbenzene	0.33
27	1,3,5-Trimethylbenzene	0.33
28	2,4,6-Trinitrotoluene (TNT)	0.001
29	Vanadium	0.05

ATTACHMENT H – MINIMUM LEVELS

MINIMUM LEVELS IN PPB (μg/l)

Table 1- VOLATILE SUBSTANCES[1]	GC	GCMS
Acrolein	2.0	5
Acrylonitrile	2.0	2
Benzene	0.5	2
Bromoform	0.5	2
Carbon Tetrachloride	0.5	2
Chlorobenzene	0.5	2
Chlorodibromomethane	0.5	2
Chloroethane	0.5	2
Chloroform	0.5	2
Dichlorobromomethane	0.5	2
1,1 Dichloroethane	0.5	1
1,2 Dichloroethane	0.5	2
1,1 Dichloroethylene	0.5	2
1,2 Dichloropropane	0.5	1
1,3 Dichloropropylene (volatile)	0.5	2
Ethylbenzene	0.5	2
Methyl Bromide (*Bromomethane*)	1.0	2
Methyl Chloride (*Chloromethane*)	0.5	2
Methylene Chloride (*Dichloromethane*)	0.5	2
1,1,2,2 Tetrachloroethane	0.5	1
Tetrachloroethylene	0.5	2
Toluene	0.5	2
trans-1,2 Dichloroethylene	0.5	1
1,1,1 Trichloroethane	0.5	2
1,1,2 Trichloroethane	0.5	2
Trichloroethylene	0.5	2
Vinyl Chloride	0.5	2
1,2 Dichlorobenzene (volatile)	0.5	2
1,3 Dichlorobenzene (volatile)	0.5	2
1,4 Dichlorobenzene (volatile)	0.5	2

Selection and Use of Appropriate ML Value:

ML Selection: When there is more than one ML value for a given substance, the discharger may select any one of those ML values, and their associated analytical methods, listed in this Attachment that are below the calculated effluent limitation for compliance determination. If no ML value is below the effluent limitation, then the discharger shall select the lowest ML value, and its associated analytical method, listed in the PQL Table.

ML Usage: The ML value in this Attachment represents the lowest quantifiable concentration in a sample based on the proper application of all method-based analytical procedures and the absence of any matrix interferences. Assuming that all method-specific analytical steps are followed, the ML value will also represent, after the appropriate application of method-specific factors, the lowest standard in the calibration curve for that specific analytical technique. Common analytical practices sometimes require different treatment of the sample relative to calibration standards.
Note: chemical names in parenthesis and italicized is another name for the constituent.

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1 *The normal method-specific factor for these substances is 1, therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.*

MINIMUM LEVELS IN PPB (μg/l)

Table 2 – Semi-Volatile Substances[2]	GC	GCMS	LC
2-Chloroethyl vinyl ether	1	1	
2 Chlorophenol	2	5	
2,4 Dichlorophenol	1	5	
2,4 Dimethylphenol	1	2	
4,6 Dinitro-2-methylphenol	10	5	
2,4 Dinitrophenol	5	5	
2- Nitrophenol		10	
4- Nitrophenol	5	10	
4 Chloro-3-methylphenol	5	1	
2,4,6 Trichlorophenol	10	10	
Acenaphthene	1	1	0.5
Acenaphthylene		10	0.2
Anthracene		10	2
Benzidine		5	
Benzo (a) Anthracene (*1,2 Benzanthracene*)	10	5	
Benzo(a) pyrene (*3,4 Benzopyrene*)		10	2
Benzo (b) Flouranthene (*3,4 Benzofluoranthene*)		10	10
Benzo(g,h,i)perylene		5	0.1
Benzo(k)fluoranthene		10	2
bis 2-(1-Chloroethoxyl) methane		5	
bis(2-chloroethyl) ether	10	1	
bis(2-Chloroisopropyl) ether	10	2	
bis(2-Ethylhexyl) phthalate	10	5	
4-Bromophenyl phenyl ether	10	5	
Butyl benzyl phthalate	10	10	
2-Chloronaphthalene		10	
4-Chlorophenyl phenyl ether		5	
Chrysene		10	5
Dibenzo(a,h)-anthracene		10	0.1
1,2 Dichlorobenzene (semivolatile)	2	2	
1,3 Dichlorobenzene (semivolatile)	2	1	
1,4 Dichlorobenzene (semivolatile)	2	1	
3,3' Dichlorobenzidine		5	
Diethyl phthalate	10	2	
Dimethyl phthalate	10	2	
di-n-Butyl phthalate		10	
2,4 Dinitrotoluene	10	5	
2,6 Dinitrotoluene		5	
di-n-Octyl phthalate		10	
1,2 Diphenylhydrazine		1	
Fluoranthene	10	1	0.05
Fluorene		10	0.1
Hexachloro-cyclopentadiene	5	5	
1,2,4 Trichlorobenzene	1	5	

MINIMUM LEVELS IN PPB (μg/l)

Table 2 - SEMI-VOLATILE SUBSTANCES[2]	GC	GCMS	LC	COLOR
Pentachlorophenol	1	5		
Phenol [3]	1	1		50
Hexachlorobenzene	5	1		
Hexachlorobutadiene	5	1		
Hexachloroethane	5	1		
Indeno(1,2,3,cd)-pyrene		10	0.05	
Isophorone	10	1		
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
N-Nitroso-dimethyl amine	10	5		
N-Nitroso -di n-propyl amine	10	5		
N-Nitroso diphenyl amine	10	1		
Phenanthrene		5	0.05	
Pyrene		10	0.05	

Table 3– INORGANICS[4]	FAA	GFAA	ICP	ICPMS	SPGFAA	HYDRIDE	CVAA	COLOR	DCP
Antimony	10	5	50	0.5	5	0.5			1000
Arsenic		2	10	2	2	1		20	1000
Beryllium	20	0.5	2	0.5	1				1000
Cadmium	10	0.5	10	0.25	0.5				1000
Chromium (total)	50	2	10	0.5	1				1000
Chromium VI	5							10	
Copper	25	5	10	0.5	2				1000
Lead	20	5	5	0.5	2				10000
Mercury				0.5			0.2		
Nickel	50	5	20	1	5				1000
Selenium		5	10	2	5	1			1000
Silver	10	1	10	0.25	2				1000
Thallium	10	2	10	1	5				1000
Zinc	20		20	1	10				1000
Cyanide								5	

2 *With the exception of phenol by colorimetric technique, the normal method-specific factor for these substances is 1000, therefore, the lowest standards concentration in the calibration curve is equal to the above ML value for each substance multiplied by 1000.*

3 *Phenol by colorimetric technique has a factor of 1.*

4 *The normal method-specific factor for these substances is 1, therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.*

MINIMUM LEVELS IN PPB (μg/l)

Table 4- PESTICIDES – PCBs[5]	GC
Aldrin	0.005
alpha–BHC (*a-Hexachloro-cyclohexane*)	0.01
beta–BHC (*b-Hexachloro-cyclohexane*)	0.005
Gamma–BHC (*Lindane; g-Hexachloro-cyclohexane*)	0.02
Delta-BHC (*d-Hexachloro-cyclohexane*)	0.005
Chlordane	0.1
4,4'-DDT	0.01
4,4'-DDE	0.05
4,4'-DDD	0.05
Dieldrin	0.01
Alpha-Endosulfan	0.02
Beta-Endosulfan	0.01
Endosulfan Sulfate	0.05
Endrin	0.01
Endrin Aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
PCB 1016	0.5
PCB 1221	0.5
PCB 1232	0.5
PCB 1242	0.5
PCB 1248	0.5
PCB 1254	0.5
PCB 1260	0.5
Toxaphene	0.5

Techniques:
GC - Gas Chromatography
GCMS - Gas Chromatography/Mass Spectrometry
HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)
LC - High Pressure Liquid Chromatography
FAA - Flame Atomic Absorption
GFAA - Graphite Furnace Atomic Absorption
HYDRIDE - Gaseous Hydride Atomic Absorption
CVAA - Cold Vapor Atomic Absorption
ICP - Inductively Coupled Plasma
ICPMS - Inductively Coupled Plasma/Mass Spectrometry
SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)
DCP - Direct Current Plasma
COLOR – Colorimetri

5 *The normal method-specific factor for these substances is 100, therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 100.*

Attachment I – Mitigation Model

4d1. Lakeview/Hemet North Management Zone (TDS and TIN)

The San Jacinto Valley, Moreno Valley, and Perris Valley RWRFs supply recycled water to the Lakeview/Hemet North Management Zone. An estimated 54% comes from the San Jacinto Valley RWRF, 23% comes from the Moreno Valley RWRF, and 23% comes from the Perris Valley RWRF resulting in an average TDS water quality of 577 mg/L and an average TIN of 10.0 mg/L. The resultant TDS from the three RWRFs is greater than the water quality objective for TDS of 520 mg/L and for TIN of 1.8 mg/L. There are storage ponds that have incidental recharge into this management zone and they are included in that calculation for mitigation activities needed. Therefore, further analysis is required.

Figure 4d1 shows the results of the mitigation activities in the Lakeview/Hemet North Management Zone. By 2012, EMWD is estimated to serve about 7,341 acre-ft/year of recycled water in the Lakeview/Hemet North Management Zone, where approximately 218 acre-ft/year is incidentally recharged at the EMWD San Jacinto Valley RWRF on-site storage ponds. The mitigation activities used in this management zone include:

- Wetlands: Reduces the TIN level of the recycled water by 0.5 mg/L, results is partial mitigation.
- Desalter Wells: One well exists and the other well is proposed in this area in the next two to five years. With a total flow from each well of 750 gpm and operating 75% of the time, the TDS and remaining TIN will be effectively mitigated.

Figure 4d1. Mitigation Model Results for the Lakeview/Hemet North Management Zone

EASTERN MUNICIPAL WATER DISTRICT MITIGATION MODEL

Point Sources	Recycle Usage & Recharge			Recharge		
EMWD	Flow (AF/Year)	TDS Avg (mg/L)	TDS (tons/yr)	Flow (AF/Year)	TIN Avg (mg/L)	TIN (tons/yr)
SJVRWRF	1,941	600	1,582	218	9.5	2.1
MVRWRF	1,950	500	1,324	0	10.0	0.0
PVRWRF	3,450	650	3,046	0	10.0	0.0
SubTotal	7,341		5,952	218		2.1
Outside Source	**Flow (AF/Year)**	**TDS Avg (mg/L)**	**TDS (tons/yr)**	**Flow (AF/Year)**	**TIN Avg (mg/L)**	**TIN (tons/yr)**
			0			0.0
SubTotal	0		0	0		0.0
EMWD + Outside Sources)	**Flow (AF/Year)**		**TDS (tons/yr)**	**Flow (AF/Year)**		**TIN (tons/yr)**
Total Basin Load (BL)	7341		5,952	218		2.1

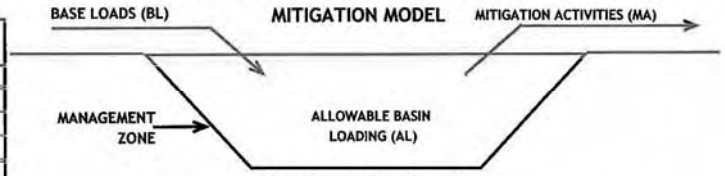
Basin Objective						
	Flow (AF/Year)	TDS Avg (mg/L)	TDS (tons/yr)	Flow (AF/Year)	TIN Avg (mg/L)	TIN (tons/yr)
Allowable Basin Load (AL)	7341	520	5,185	218	1.8	0.5

Excess Basin Load						
			TDS (tons/yr)			TIN (tons/yr)
Excess Load Calculation (EL)		BL - AL =	767		BL - AL =	1.6

Mitigation Activities (MA)						
	Flow (AF/Year)	TDS Avg (mg/L)	TDS (tons/yr)	Flow (AF/Year)	TIN Avg (mg/L)	TIN (tons/yr)
Desalter Well Production (WP)	2,415	2,000	6,561	2,415	7.5	24.6
Desalter Removal Efficiency (EF): TDS 0.85, TIN 0.87						
Mitigation Activity (MA)		WP x EF =	5,577		WP x EF =	21.4

EASTERN MUNICIPAL WATER DISTRICT

MITIGATION MODEL



MA ≥ EL, and EL = B L – AL

BL = EMWD Recycled Water and Outside Sources, and

EL = Excess Base Load to be Mitigated

	TDS (tons/year)		TIN (tons/year)
Basin Load (BL):	5,952	Basin Load (BL):	2.1
Allowable Basin Load (AL):	5,185	Allowable Basin Load (AL):	0.5
Excess Basin Load (EL):	767	Excess Basin Load (EL):	1.6
Mitigation Activities (MA):	5,577	Mitigation Activities (MA):	21.4
Excess TDS removed	4,809	Excess TIN removed	19.8
Is the mitigation acceptable where MA ≥ EL?	YES		YES

Notes: TIN from Point Sources only includes RW recharged, not irrigated.
Lakeview Desalter Well Production = 2.5 x 750 gpm wells operating 80% of the time.
SJVRWRF includes wetland TIN mitigation.

4d2. Perris North Management Zone (TIN)

There are no anticipated compliance issues with respect to the proposed TDS objective (570 mg/L) in this management zone. The projected TDS in the recycled water at the Moreno Valley RWRF is expected to be about 500 mg/L (2012). Yet, the recycled water does not meet the revised TIN objective (5.2 mg/L) for recharge into the on-site Moreno Valley RWRF storage ponds in this management zone.

Figure 4d2 shows that by using the nitrogen removal percentage of 60% as recommended in the '*Quantification of Nitrogen Removal under Recycled Water Ponds*', dated May 25, 2007, sufficient TIN removal occurs to mitigate the incidental recharge of the recycled water. By 2012, EMWD is estimated to serve about 2,886 acre-ft/year of recycled water in the Perris North Management Zone, where approximately 610 acre-ft/year is incidentally recharged at the EMWD Moreno Valley RWRF on-site storage ponds.

Figure 4d2. Mitigation Model Results for the Perris North Management Zone

EASTERN MUNICIPAL WATER DISTRICT MITIGATION MODEL

Point Sources		Recycle Usage & Recharge			Recharge		
EMWD		Flow (AF/Year)	TDS Avg (mg/L)	TDS (tons/yr)	Flow (AF/Year)	TIN Avg (mg/L)	TIN (tons/yr)
MVRWRF	Vadose: 60.0%	2,886	500	1,960	610	10.0	3.3
		0	0	0	0	0.0	0.0
		0	0	0	0	0.0	0.0
SubTotal		2,886		1,960	610		3.3
Outside Sources		Flow (AF)/Year	TDS Avg (mg/L)	TDS (tons/yr)	Flow (AF/Year)	TIN Avg (mg/L)	TIN (tons/yr)
None		0	0	0.0	0.0	0	0.0
SubTotal		0		0.0	0.0		0.0
(EMWD + Outside Sources)		Flow (AF/Year)		TDS (tons/yr)	Flow (AF/Year)		TIN (tons/yr)
Total Basin Load (BL)		2,886		1,960	610		3.3

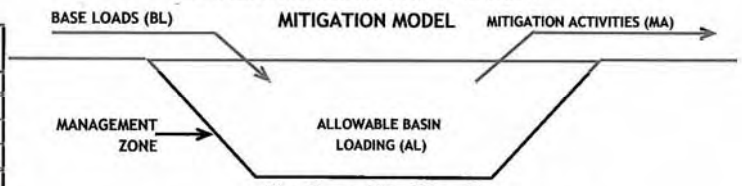
Basin Objective						
	Flow (AF/Year)	TDS (mg/L Avg)	TDS (tons/yr)	Flow (AF/Year)	TIN Avg (mg/L)	TIN (tons/yr)
Allowable Basin Load (AL)	2,886	570	2,234	610	5.2	4.3

Excess Basin Load					
			TDS (tons/yr)		TIN (tons/yr)
Excess Load Calculation (EL)		BL - AL =	-274	BL - AL =	-1.0

Mitigation Activities (MA)						
		Flow (AF/Year)	TDS (mg/L Avg)	TDS (tons/yr)	Flow (AF/Year)	TIN Avg (mg/L)	TIN (tons/yr)
No Mitigation Required		0	0	0	0	0	0.0
Desalter Removal Efficiency (EF):	TDS 0.85 / TIN 0.87						
Mitigation Activity (MA)			WP x EF =	0		WP x EF =	0.0

Notes: TIN from Point Sources only includes RW recharged, not irrigated.
Activities comply with Water Quality Objectives with site specifc 60% Nitrogen Removal Rate for MVRWRF Ponds.

EASTERN MUNICIPAL WATER DISTRICT
MITIGATION MODEL



MA ≥ EL, and EL = B L – AL
BL = EMWD Recycled Water and Outside Sources, and
EL = Excess Base Load to be Mitigated

	TDS (tons/year)		TIN (tons/year)
Basin Load (BL):	1,960	Basin Load (BL):	3.3
Allowable Basin Load (AL):	2,234	Allowable Basin Load (AL):	4.3
Excess Basin Load (EL):	-274	Excess Basin Load (EL):	-1.0
Mitigation Activities (MA):	0	Mitigation Activities (MA):	0.0
Acceptable TDS Condition	274	Acceptable TIN Condition	1.0
Is mitigation acceptable, where MA ≥ EL?	YES		YES

4d3. Perris South Management Zone (TIN)

The Temecula Valley RWRF, Moreno Valley RWRF, and Perris Valley RWRFs supply recycled water to the Perris South Management Zone. An estimated 29% comes from the Temecula Valley RWRF, 30% comes from the Moreno Valley RWRF, and 41% comes from the Perris Valley RWRF, resulting in an average TDS water quality of 619 mg/L. The resultant TDS from the three RWRFs is below the water quality objective of 1,260 mg/L. Therefore, no further analysis is required for TDS. Yet, there are storage ponds located at the Perris Valley RWRF and the recycled water has an average TIN of 10 mg/L and that exceeds the water quality objective of 2.5 mg/L for the Perris South Management Zone. Therefore, further analysis is needed for TIN in this management zone.

Figure 4d3 shows the results of the mitigation activities in the Perris South Management Zone. By 2012, EMWD is estimated to serve about 12,591 acre-ft/year of recycled water in the Perris South Management Zone, where approximately 3,981 acre-ft/year is incidentally recharged at the Trumble Road, Winchester, and Skiland ponds. The mitigation activities that occur in this management zone are desalter wells. There are currently eleven desalter wells in this management zone and it is estimated that 6,695 acre-feet will be produced from the management zone in 2012. These wells effectively mitigate the recycled water activities.

Figure 4d3. Mitigation Model Results for the Perris South Management Zone

EASTERN MUNICIPAL WATER DISTRICT MITIGATION MODEL

Point Sources	Recycle Usage & Recharge			Recharge		
EMWD	Flow (AF/Year)	TDS Avg (mg/L)	TDS (tons/yr)	Flow (AF/Year)	TIN Avg (mg/L)	TIN (tons/yr)
TVRWRF	1,730	700	1,645	824	10.0	8.4
MVRWRF	3,064	500	2,081	1,420	10.0	14.5
PVRWRF	3,816	650	3,369	1,737	10.0	17.7
SubTotal	8,610		7,095	3,981		40.6
Outside Sources	**Flow (AF)/Year**	**TDS Avg (mg/L)**	**TDS (tons/yr)**	**Flow (AF/Year)**	**TIN Avg (mg/L)**	**TIN (tons/yr)**
None	0	0	0.0	0.0	0	0.0
SubTotal	0		0.0	0.0		0.0
EMWD + Outside Sources)	**Flow (AF/Year)**		**TDS (tons/yr)**	**Flow (AF/Year)**		**TIN (tons/yr)**
Total Basin Load (BL)	8,610		7,095	3,981		40.6

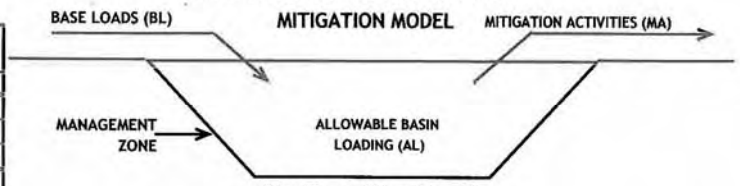
Basin Objective						
	Flow (AF/Year)	TDS Avg (mg/L)	TDS (tons/yr)	Flow (AF/Year)	TIN Avg (mg/L)	TIN (tons/yr)
Allowable Basin Load (AL)	8,610	1,260	14,736	3,981	2.5	13.5

Excess Basin Load						
			TDS (tons/yr)			TIN (tons/yr)
Excess Load Calculation (EL)		BL - AL =	-7,641		BL - AL =	27.0

Mitigation Activities (MA)						
	Flow (AF/Year)	TDS Avg (mg/L)	TDS (tons/yr)	Flow (AF/Year)	TIN Avg (mg/L)	TIN (tons/yr)
Desalter Well Production (WP)	6,695	1,900	17,278	6,695	5.7	51.8
Desalter Removal Efficiency (EF): TDS 0.85, TIN 0.87						
Mitigation Activity (MA)		WP x EF =	14,687		WP x EF =	45.1

Notes: TIN from Point Sources only includes RW recharged, not irrigated.
Perris South Desalter Well Production come from a series of eleven wells in the Management Zone.

EASTERN MUNICIPAL WATER DISTRICT



MA ≥ EL, and EL = B L – AL

BL = EMWD Recycled Water and Outside Sources, and
EL = Excess Base Load to be Mitigated

	TDS (tons/year)		TIN (tons/year)
Basin Load (BL):	7,095	Basin Load (BL):	40.6
Allowable Basin Load (AL):	14,736	Allowable Basin Load (AL):	13.5
Excess Basin Load (EL):	-7,641	Excess Basin Load (EL):	27.0
Mitigation Activities (MA):	14,687	Mitigation Activities (MA):	45.1
Excess TDS removed	22,327	Excess TIN removed	18.1
Is mitigation acceptable, where MA ≥ EL?	YES		YES

4d4. San Jacinto Lower Pressure Management Zone (TDS)

The Moreno Valley and Perris Valley RWRFs supply recycled water to the San Jacinto Lower Pressure Management Zone. An estimated 50% comes from the Moreno Valley RWRF and 50% comes from the Perris Valley RWRF resulting in an average TDS water quality of 575 mg/L. The resultant TDS from the two RWRFs is above the water quality objective of 520 mg/L. Since there are no storage/recharge ponds located in this management zone further analysis is not required for TIN but is required TDS.

The TIN/TDS Study – Phase 2A of the Santa Ana Watershed, Final Technical Memorandum, prepared for the TIN/TDS Task Force states the following:

> *'The area between the San Jacinto and Casa Loma faults is a deep, alluvial-filled graben of tectonic origin, and is referred to herein as the San Jacinto Graben. The effective base of the freshwater is known to be deep but has not been accurately determined and, hence, is left unmapped. The San Jacinto Graben consists of a forebay area in the southeast (where surface water recharge primarily occurs) and a pressure area in the northwest (where deep aquifers exist under confined conditions). Well logs indicate that the pressure area is underlain by a thick, alternating series of fine-grained sediments (clays and silts) and coarse-grained sediments (sands and gravels). The fine-grained sediments commonly act as confining layers.'*

This basin is recognized as a confined aquifer. The shallow, clay-dominated surface sediments are completely isolated from the deeper water-bearing portions of the basin. The recycled water in this management zone is used for irrigation and habitat creation. Therefore, the physical barriers will prevent the surface loading of TIN and TDS will not impact groundwater quality as the incidentally recharged water is physically separated from the groundwater basin and implementation of any mitigation plans for this management zone will not be required. This has been the experience of the water that has ponded in and around Mystic Lake.

Figure 4d4. Mitigation Model Results for the San Jacinto Lower Pressure Management Zone

EASTERN MUNICIPAL WATER DISTRICT MITIGATION MODEL

Point Sources	Recycle Usage & Recharge			Recharge		
EMWD	Flow (AF/Year)	TDS Avg (mg/L)	TDS (tons/yr)	Flow (AF/Year)	TIN Avg (mg/L)	TIN (tons/yr)
MVRWRF	1,705	500	1,158	0	0.0	0.0
PVRWRF	1,706	650	1,506	0	0.0	0.0
	0	0	0	0	0.0	0.0
SubTotal	3,411		2,664	0		0.0
Outside Sources	Flow (AF)/Year	TDS Avg (mg/L)	TDS (tons/yr)	Flow (AF/Year)	TIN Avg (mg/L)	TIN (tons/yr)
None	0	0	0.0	0.0	0	0.0
SubTotal	0		0.0	0.0		0.0
Total (EMWD + Outside Sources)	Flow (AF/Year)		TDS (tons/yr)	Flow (AF/Year)		TIN (tons/yr)
Total Basin Load (BL)	3,411		2,664	0		0.0

Basin Objective						
	Flow (AF/Year)	TDS Avg (mg/L)	TDS (tons/yr)	Flow (AF/Year)	TIN Avg (mg/L)	TIN (tons/yr)
Allowable Basin Load (AL)	3,411	520	2,409	0	1	0.0

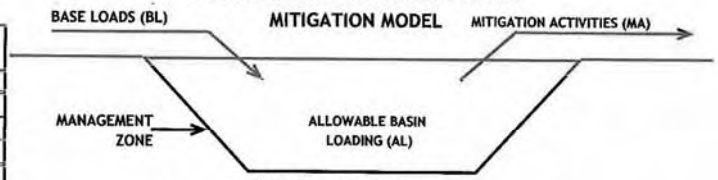
Excess Basin Load						
			TDS (tons/yr)			TIN (tons/yr)
Excess Load Calculation (EL)		BL - AL =	255		BL - AL =	0.0

Mitigation Activities (MA)							
		Flow (AF/Year)	TDS Avg (mg/L)	TDS (tons/yr)	Flow (AF/Year)	TIN Avg (mg/L)	TIN (tons/yr)
	No Mitigation	0	0	0	0	0.0	0.0
Values are the difference of the CUP and Basin Data	TDS 250 / TIN 0.6						
Mitigation Activity (MA)			MA =	0		MA =	0.0

Notes: TIN from Point Sources only includes RW recharged, not irrigated.
Regulatory studies of geologic and beneficial use are underway.

EASTERN MUNICIPAL WATER DISTRICT

MITIGATION MODEL



MA ≥ EL, and EL = B L – AL

BL = EMWD Recycled Water and Outside Sources, and

EL = Excess Base Load to be Mitigated

	TDS (tons/year)		TIN (tons/year)
Basin Load (BL):	2,664	Basin Load (BL):	0.0
Allowable Basin Load (AL):	2,409	Allowable Basin Load (AL):	0.0
Excess Basin Load (EL):	255	Excess Basin Load (EL):	0.0
Mitigation Activities (MA):	0	Mitigation Activities (MA):	0.0
TDS requires more mitigation	255	Acceptable TIN Condition	0.0
Is mitigation acceptable, where MA ≥ EL?	NO		YES

4d5. San Jacinto Upper Pressure Management Zone (TDS and TIN)

There are anticipated compliance issues with respect to the proposed TDS and TIN objectives in this management zone. The projected TDS and TIN in the recycled water at the San Jacinto Valley RWRF is expected to be about 600 mg/L and 10.0 mg/L, respectively. The recycled water quality exceeds both the water quality objective for TDS (320 mg/L) and TIN (1.4 mg/L). Therefore, further analysis is required for the San Jacinto Upper Pressure Management Zone.

To meet the proposed TIN objective (1.4 mg/L) in this management zone, EMWD is planning to mitigate the excess nitrogen recharged at the recycled water storage ponds. The SJVRWRF effluent has a TIN of 10.0 mg/L (2012).

Figure 4d5 shows the results of the mitigation activities in the San Jacinto Upper Pressure Management Zone. By 2012, EMWD can effectively mitigate up to 2,450 acre-ft/year of recycled water in the San Jacinto Upper Pressure Management Zone, where approximately 1,345 acre-ft/year is incidentally recharged at the Alessandro Ponds. The mitigation activities used in this management zone include:

- Wetlands: Reduces the TIN level of the recycled water by 0.5 mg/L, results is partial mitigation.
- Nitrogen Uptake Rate: Using the nitrogen removal percentage of 60% as recommended in the '*Quantification of Nitrogen Removal under Recycled Water Ponds*', dated May 25, 2007, for the Alessandro ponds.
- Conjunctive Use: Includes the recharge of up to 10,000 acre-feet per year of State Water Project Water in the San Jacinto Riverbed.

Figure 4d5. Mitigation Model Results for the San Jacinto Upper Pressure Management Zone

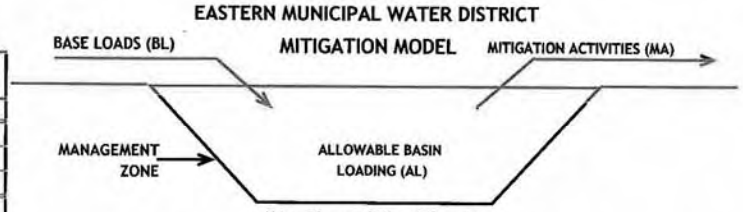
EASTERN MUNICIPAL WATER DISTRICT MITIGATION MODEL

Point Sources	Recycle Usage & Recharge			Recharge		
EMWD	Flow (AF/Year)	TDS Avg (mg/L)	TDS (tons/yr)	Flow (AF/Year)	TIN Avg (mg/L)	TIN (tons/yr)
SJVRWRF Vadose: 60%	2,450	600	1,997	1,345	9.5	6.9
	0	0	0	0	0.0	0.0
	0	0	0	0	0.0	0.0
SubTotal	2,450		1,997	1,345		6.9
Outside Sources	**Flow (AF)/Year**	**TDS Avg (mg/L)**	**TDS (tons/yr)**	**Flow (AF/Year)**	**TIN Avg (mg/L)**	**TIN (tons/yr)**
None	0	0	0.0	0.0	0	0.0
SubTotal	0		0.0	0.0		0.0
(EMWD + Outside Sources)	**Flow (AF/Year)**		TDS (tons/yr)	Flow (AF/Year)		TIN (tons/yr)
Total Basin Load (BL)	2,450		1,997	1,345		6.9

Basin Objective						
	Flow (AF/Year)	TDS Avg (mg/L)	TDS (tons/yr)	Flow (AF/Year)	TIN Avg (mg/L)	TIN (tons/yr)
Allowable Basin Load (AL)	2,450	320	1,065	1,345	1.4	2.6

Excess Basin Load						
			TDS (tons/yr)			TIN (tons/yr)
Excess Load Calculation (EL)		BL - AL =	932		BL - AL =	4.4

Mitigation Activities (MA)						
	Flow (AF/Year)	TDS Avg (mg/L)	TDS (tons/yr)	Flow (AF/Year)	TIN Avg (mg/L)	TIN (tons/yr)
Conjunctive Use Project (CUP)	10,000	70	951	10,000	0.8	10.9
Values are the difference of the TDS 250 TIN 0.6						
Mitigation Activity (MA)		MA =	951		MA =	10.9



MA ≥ EL, and EL = B L – AL

BL = EMWD Recycled Water and Outside Sources, and

EL = Excess Base Load to be Mitigated

	TDS (tons/year)		TIN (tons/year)
Basin Load (BL):	1,997	Basin Load (BL):	6.9
Allowable Basin Load (AL):	1,065	Allowable Basin Load (AL):	2.6
Excess Basin Load (EL):	932	Excess Basin Load (EL):	4.4
Mitigation Activities (MA):	951	Mitigation Activities (MA):	10.9
Acceptable TDS Condition	19	Acceptable TIN Condition	6.5
Is mitigation acceptable, where MA ≥ EL?	YES		YES

Notes: TIN from Point Sources only includes RW recharged, not irrigated.
Activities comply with Water Quality Objectives with site specifc 60% Nitrogen Removal Rate for Allesandro Ponds.
Conjunctive Use Project is the recharge of high quality State Water Project Water.
SJVRWRF includes wetland TIN mitigation.

4d6. Maximum Benefit Proposal for San Jacinto Upper Pressure Management Zone

EMWD and Lake Hemet Municipal Water District (LHMWD) along with the Cities of Hemet and San Jacinto and private groundwater producers developed the Hemet/San Jacinto Water Management Plan. The plan provides a foundation that guides and supports responsible water management in the future. Additionally, EMWD and LHMWD have also worked with the Soboba Band of Luiseño Indians (Soboba Tribe) and the Federal Government to develop a Settlement Agreement that would resolve past issues with respect to tribal water rights and water management practices in the Management Area. The stakeholders have developed a Stipulated Judgment that calls for the formation of a Watermaster to implement the plan, which describes water supply management to maximize the reasonable and beneficial use of all waters available to the area, eliminate overdraft, protect prior rights of the Soboba Tribe, and provide for the substantial enjoyment of all water rights by recognizing their priorities. As part of the plan, the Watermaster, through the EMWD, is implementing the following programs:

- **Hemet/San Jacinto Integrated Recharge and Recovery Program (IRRP)** – This program is designed to recharge State Water Project (SWP) water and extract groundwater at a capacity such that the following goals are met: satisfy prior and paramount Soboba Tribe water rights; offset the overdraft in the Management Area; and meet the projected demand increases. The program will be completed in two phases. The recharge of higher-quality SWP water will result in a net benefit to the management zone as it is less than the new TIN and TDS objectives.
- **Recycled Water In-Lieu Project** – This project will supply recycled water from the San Jacinto Valley RWRF for agricultural irrigation in-lieu of pumping native groundwater. The recycled water users will be subject to the requirements of the Santa Ana Regional Water Quality Control Board Order No. R8-2007-001, which includes a nutrient management plan.
- **Hemet Water Filtration Plant** – The EMWD recently constructed and operates the Hemet Water Filtration Plant to treat SWP water for potable supply. This additional supply is used in lieu-of native groundwater. The use of treated SWP water will reduce the TDS in the recycled water and result in a net decrease in the TDS concentration in returns from use to groundwater.

The commitment to implement these water management activities demonstrates that the management area is a highly managed, high-value asset for its in-basin producers and the people of California. The Watermaster and the stakeholders in the Hemet/San Jacinto Management Plan are acting responsibly in exercising their water management and stewardship obligations.

In the July 2007 request for the maximum benefit proposal, EMWD requested that the Santa Ana Regional Water Quality Control Board approve changes to the water quality objectives for the San Jacinto Upper Pressure Management Zone to enable the efficient implementation of the Hemet/San Jacinto Watershed Management Plan. Changing the objectives will create assimilative capacity and thereby enable the use of recycled water and allow for the recharge of imported water. The proposal requests the TDS objective be changed to 500 mg/L from 320 mg/L and the TIN objective be changed to 7.0 mg/L from 1.4 mg/L and the proposal demonstrates that this is the maximum benefit to the people of the state.

Figure 4d6 shows the results of the mitigation activities in the San Jacinto Upper Pressure Management Zone with maximum benefit objectives and the recycled water in-lieu project. EMWD plans to reuse 7,659 acre-ft/year of recycled water in the San Jacinto Upper Pressure Management

Zone where approximately 1,345 acre-ft/year is incidentally recharged at the Alessandro Ponds. The mitigation activities used in this management zone include:

- Wetlands: Reduces the TIN level of the recycled water by 0.5 mg/L, which results in partial mitigation.
- Nitrogen Uptake Rate: Using the nitrogen removal percentage of 64.0% as recommended in the '*Quantification of Nitrogen Removal under Recycled Water Ponds,*' dated May 25, 2007, for the Alessandro ponds.
- Conjunctive Use: Includes the recharge of 10,000 acre-feet per year of State Water Project Water in the San Jacinto Riverbed.
- Maximum Benefit: Using water quality objectives of 500 mg/L for TDS and 7.0 mg/L for TIN

Figure 4d6. Mitigation Model Results for the San Jacinto Upper Pressure Management Zone with Maximum Benefit Objectives

EASTERN MUNICIPAL WATER DISTRICT MITIGATION MODEL

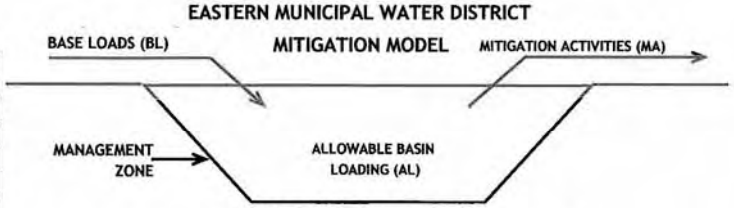
Point Sources		Recycle Usage & Recharge			Recharge		
EMWD		Flow (AF/Year)	TDS Avg (mg/L)	TDS (tons/yr)	Flow (AF/Year)	TIN Avg (mg/L)	TIN (tons/yr)
SJVRWRF	Vadose: 60%	7,659	600	6,242	1,345	9.5	6.9
		0	0	0	0	0.0	0.0
		0	0	0	0	0.0	0.0
SubTotal		7,659		6,242	1,345		6.9
Outside Sources		**Flow (AF)/Year**	**TDS Avg (mg/L)**	**TDS (tons/yr)**	**Flow (AF/Year)**	**TIN Avg (mg/L)**	**TIN (tons/yr)**
None		0	0	0.0	0.0	0	0.0
SubTotal		0		0.0	0.0		0.0
(EMWD + Outside Sources)		**Flow (AF/Year)**		TDS (tons/yr)	Flow (AF/Year)		TIN (tons/yr)
Total Basin Load (BL)		7,659		6,242	1,345		6.9

Basin Objective						
	Flow (AF/Year)	TDS Avg (mg/L)	TDS (tons/yr)	Flow (AF/Year)	TIN Avg (mg/L)	TIN (tons/yr)
Allowable Basin Load (AL)	7,659	500	5,202	1,345	7.0	12.8

Excess Basin Load					
			TDS (tons/yr)		TIN (tons/yr)
Excess Load Calculation (EL)		BL - AL =	1,040	BL - AL =	-5.8

Mitigation Activities (MA)						
	Flow (AF/Year)	TDS Avg (mg/L)	TDS (tons/yr)	Flow (AF/Year)	TIN Avg (mg/L)	TIN (tons/yr)
Conjunctive Use Project (CUP)	10,000	250	3,396	10,000	6.4	86.9
Values are the difference of the (TDS 250, TIN 0.6)						
Mitigation Activity (MA)		MA =	3,396		MA =	86.9

Notes: TIN from Point Sources only includes RW recharged, not irrigated.
Activities comply with Water Quality Objectives with site specifc 60% Nitrogen Removal Rate for Allesandro Ponds.
Conjunctive Use Project is the recharge of high quality State Water Project Water.
SJVRWRF includes wetland TIN mitigation.



MA ≥ EL, and EL = B L – AL

BL = EMWD Recycled Water and Outside Sources, and
EL = Excess Base Load to be Mitigated

	TDS (tons/year)		TIN (tons/year)
Basin Load (BL):	6,242	Basin Load (BL):	6.9
Allowable Basin Load (AL):	5,202	Allowable Basin Load (AL):	12.8
Excess Basin Load (EL):	1,040	Excess Basin Load (EL):	-5.8
Mitigation Activities (MA):	3,396	Mitigation Activities (MA):	86.9
Acceptable TDS Condition	2,355	Acceptable TIN Condition	92.8
Is mitigation acceptable, where MA ≥ EL?	YES		YES