

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**ORDER NO. R9-2003-0123**

MASTER RECLAMATION PERMIT  
WITH WASTE DISCHARGE REQUIREMENTS  
FOR THE PRODUCTION AND PURVEYANCE OF RECYCLED WATER

CITY OF SAN CLEMENTE  
WATER RECLAMATION PLANT  
ORANGE COUNTY

**Table of Contents**

	Findings	1
A.	Prohibitions	7
B.	Discharge Specifications	9
C.	Recycled Water Purveyance Requirements	10
D.	Facility Design and Operation Specifications	12
E.	Biosolids Specifications	15
F.	Standard Provisions	16
G.	Special Provisions	24
H.	Notifications	25
	Attachment 1 (Rules and Regulations for Recycled Water Use)	27
	Attachment 2 ("Do Not Drink" Standard Signage)	32
	Monitoring and Reporting Program No. R9-2003-0123	
A.	Monitoring Provisions	33
B.	Effluent Monitoring	35
C.	Filtration Process Monitoring	38
D.	Sewage Solids and Biosolids	38
E.	Recycled Water Users Summary Report	38
F.	Bahia Storage Pond	39
G.	PGC Brine Interception and Disposal Facilities	39
H.	Rainfall Runoff	40
I.	Ground Water Filter Backwash	40
J.	Ground Waters	41
K.	Potable Water Supplies	41
L.	Report Schedule	41

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**ORDER NO. R9-2003-0123**

**MASTER RECLAMATION PERMIT  
WITH WASTE DISCHARGE REQUIREMENTS  
FOR THE PRODUCTION AND PURVEYANCE OF RECYCLED WATER**

**CITY OF SAN CLEMENTE  
WATER RECLAMATION PLANT  
ORANGE COUNTY**

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

1. On May 4, 1987, the Regional Board adopted Order No. 87-40, "Waste Discharge Requirements for Land Disposal of Wastewater by the City of San Clemente, Orange County."
2. On May 20, 1991, this Regional Board adopted Order No. 91-50, "Waste Discharge Requirements for the City of San Clemente Water Reclamation Plant, Reclamation Projects, Orange County." Order No. 91-50 superseded Order No. 87-40, and updated requirements for the disposal of up to 2.2 million gallons per day (MGD) of secondarily treated domestic wastewater for irrigation.
3. On June 21, 1993, this Regional Board adopted Technical Change Order T-1 for Monitoring and Reporting Program No. 91-50. T-1 added Section I, Potable Supply Water, to Monitoring and Reporting Program No. 91-50.
4. On July 15, 1993, this Regional Board adopted Technical Change Order T-2 for Monitoring and Reporting Program No. 91-50. T-2 deleted well nos. 3 and 4 from Section G, Ground Waters of Monitoring and Reporting Program No. 91-50.
5. On October 21, 1993, this Regional Board adopted Technical Change Order T-3 for Monitoring and Reporting Program No. 91-50. T-3 modified Section D, Brine Interception and Disposal Facilities, of Monitoring and Reporting Program No. 91-50 by requiring that the liquid depth and freeboard of the storage pond of the leachate collection system at the Pacific Golf Course be measured monthly and reported semiannually.
6. By letter dated October 19, 2001, the City of San Clemente (City) was notified that Regional Board staff was in the process of reviewing Order No. 91-50 as part of the Regional Board's permit update program. This Order incorporates updated information submitted by the discharger and other information obtained by Regional Board staff during the update process.

7. The City of San Clemente Water Reclamation Plant (CSCWRP) facilities consist of preliminary treatment, primary treatment, activated sludge secondary treatment, and tertiary treatment for recycled water use. Existing secondary treatment capacity is 7.0 MGD, average daily flow. Tertiary treatment facilities, designed to produce effluent that meets the recycled water use criteria established in Title 22 of the California Code of Regulations, consist of a reclamation forebay, two rapid mix alum mix tanks, coagulation, four dual media filters, chlorine contact basin, and a reclamation storage bay. Current Title 22 design capacity is 2.2 MGD, average daily flow. Filter backwash from the dual media filters is discharged to the primary clarifiers. Grit and screenings are disposed of at the Simi Valley Landfill in Ventura County. Anaerobically digested, dewatered sludge is transported to and disposed of at the Synagro Compost Facility in Riverside County and Prima Deshecha Landfill in Orange County.
8. Secondary effluent from the CSCWRP is either discharged to the Pacific Ocean through the South Orange County Wastewater Authority (SOCWA) San Juan Creek Ocean Outfall or sent to the tertiary treatment portion of the plant for production of recycled water. The discharge of wastewater through the San Juan Creek Ocean Outfall is regulated under this Regional Board's Order No. 2000-13, NPDES No. CA0107417. The discharge of tertiary treated recycled water from the CSCWRP is regulated by this Order.
9. The discharger has identified the following recycled water use areas for disposal of tertiary treated Title 22 effluent:

Existing Use Areas	Acreage	Average Demand (MGD)
Municipal Golf Course	125	0.35
Pacific Golf Club	130	0.35

Of the total 130 acres, 42 acres of the Pacific Golf Course overlie the Segunda Deshecha Hydrologic Sub Area (HSA) (Hydrologic Basin Unit Number 901.32) of the San Clemente Hydrologic Area (HA) (901.30) and 88 acres overlies the San Mateo HA (901.40). The City's Municipal Golf Course is located entirely within the Segunda Deshecha HSA (901.32). As of the adoption date of this Order, the City had not identified any other recycled water users.

10. This Order authorizes the use of reclaimed water at the following user sites within the San Clemente HA:
- The City of San Clemente Municipal Golf Course.
  - The Pacific Golf Club (a portion of which is located in the San Mateo HA).
- This Order also authorizes the use of recycled water at additional sites within the

San Clemente HA, provided that such additional sites are approved by the State Department of Health Services and the Orange County Department of Environmental Health in accordance with Recycled Water Purveyance Requirements set forth in this Order. This Order does not authorize any further use of recycled water in the San Mateo HA.

11. The San Mateo Basin is a principal drinking water aquifer of the US Marine Corps (USMC) Base, Camp Pendleton. To prevent recycled water with potentially elevated total dissolved solids concentration from impacting the San Mateo basin, the Pacific Golf Course has installed a brine interception and disposal system along the border of the San Mateo basin at the Pacific Golf Course. The captured brine is pumped to a lined decorative lake (brine disposal pond) located in the Segunda Deshecha drainage area at the Pacific Golf Course. Overflow from the lake is discharged to an area in the Segunda Deshecha HSA. USMC staff has indicated their support of the interception system.

Regional Board staff noted during an inspection of the PGC on February 20, 2002 that the discharge of collected brine from the brine disposal pond contains elevated total dissolved solids (TDS) concentration, and therefore may cause or contribute to exceedences of Basin Plan objectives for TDS within the Segunda Deshecha HSA. Data collected subsequent to the inspection showed TDS concentrations in the pond water up to 7,000 mg/L. In order to protect water quality in the Segunda Deshecha HSA, this Order establishes a time schedule requiring the City's brine pond irrigation operation to achieve compliance with Basin Plan water quality objectives and also establishes interim effluent limitations for the irrigation use of the brine pond water.

12. On September 30, 1986, the City of San Clemente adopted a Negative Declaration for the use of recycled water at the PGC in accordance with the California Environmental Quality Act (Public Resource Code Section 21000 et seq.). The project as approved by the City contained the following mitigation measures for any potential water quality impacts as the result of use of recycled water at the PGC:
  - a. Surface runoff from the site will be sampled on a regular basis during the rainy season (October-March) in drainage channels exiting the site at the eastern boundary. This mitigation measure is contained in the Monitoring and Reporting Program for this Order.
  - b. A subdrain system beneath irrigated areas of the golf course designed to collect leachate water flushed through the system on a periodic basis. The subdrain shall direct leachate water toward evaporating ponds. The City of San Clemente has incorporated a subsurface drain as a mitigation measure to collect percolated reclaimed water and will temporarily pump it to a pond located on the golf course. Permanent measures for the disposal of this

percolate are currently being investigated by the City of San Clemente.

- c. The Landscape Management Plan shall contain regulations and guidelines for the application of fertilizers and pesticides. Guidelines shall indicate general rules for frequency, dosages, methodology and fertilizer types to be used. These guidelines shall be based on site-specific soils analyses and the recommendations of a qualified horticultural consultant. Soils testing shall be continued throughout the life-time of the golf course on a monthly basis to allow adjustment of fertilizer applications. Results of the monthly soils tests shall be forwarded to the City Engineer's office directly from the soils laboratory.

Regional Board staff noted during an inspection of the PGC on February 20, 2002 that the subdrain system described above in Finding 12.b is installed on the San Mateo HA portion, but not on the San Clemente HA portion of the golf course. This Order requires the City to develop a plan and a schedule for achieving compliance with mitigation measures for the use of recycled water at the PGC as described in the Environmental Assessment dated September 15, 1986 (listed above), to submit the plan and schedule to the Regional Board Executive Officer for approval, and to implement the plan in accordance with the schedule approved by the Executive Officer.

13. Recycled water has been used to irrigate the City of San Clemente Municipal Golf Course (MGC) since 1957. The use of recycled water to irrigate the MGC is an ongoing project being carried out by a public agency that was approved prior to November 23, 1970, and therefore is exempt from the California Environmental Quality Act under Title 14, Section 15261 of the California Code of Regulations.
14. The Bahia pond stores recycled water for use at the MGC. Filter backwash from well water filtering is also discharged to the Bahia pond. The Bahia pond has a storage capacity of approximately 3.0 million gallons.
15. This Regional Board, acting in accordance with Section 13244 of the California Water Code, adopted the Water Quality Control Plan for the San Diego Basin (9), (hereinafter Basin Plan) on September 8, 1994. The Basin Plan was approved by the State Water Resources Control Board (SWRCB) on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the Board and approved by the SWRCB. The Basin Plan contains beneficial uses, water quality objectives and waste discharge prohibitions.
16. The Basin Plan states that waters designated for use as domestic or municipal supply shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCL) specified in the California Code of Regulations, Title 22, Table 64431-A of Section 64431 (Primary MCL, Inorganic Chemicals), Table 64431-B of Section 64431 (Primary MCL, Fluoride), Table

64444-A of Section 64444 (Primary MCL, Organic Chemicals), and Table 64449-A of Section 64449 (Secondary Maximum Contaminant Levels, Consumer Acceptance Limits), incorporated by reference, including future changes to the incorporated provisions as the changes take effect. The Basin Plan lists the following additional ground water quality objectives for the Prima Deshecha (901.31) and Segunda Deshecha (901.32) HSAs of the San Clemente HA (901.30):

BASIN PLAN WATER QUALITY OBJECTIVES FOR GROUNDWATER (mg/L or as noted)													
(Concentrations not to be exceeded more than 10% of the time during any one year period)													
HYDROLOGIC AREA/ SUB AREA <sup>1</sup>	TDS	Cl	SO <sub>4</sub>	%Na <sup>2</sup>	NO <sub>3</sub>	Fe	Mn	M B A S	B	O D O R	TURB (NTU)	COLOR (UNITS)	F
901.31 Prima Deshecha	1200	400	500	60	10	0.3	0.05	0.5	0.75	None	5	15	1.0
901.32 Segunda Deshecha	1200	400	500	60	10	0.3	0.05	0.5	0.75	None	5	15	1.0
901.40 San Mateo Canyon	500 <sup>3</sup>	250	250 <sup>3</sup>	60	45 <sup>3</sup>	0.3	0.05	0.5	0.75	None	5	15	1.0

1 The water quality objectives do not apply westerly of the easterly boundary of Interstate 5.

2 In some cases, Adjusted Sodium Adsorption Ratio (ASAR) may be a better indicator of the potential sodium hazard in irrigation water than percent sodium. The Regional Board may authorize the use of the ASAR instead of percent sodium to indicate the potential sodium hazard.

3 Detailed salt balance studies are recommended for this area to determine limiting mineral concentration levels for discharge. On the basis of existing data, the tabulated objectives would probably be maintained in most areas. Upon completion of the salt balance studies, significant water quality objective revisions may be necessary. In the interim period of time, projects of ground water recharge with water quality inferior to the tabulated numerical values may be permitted following individual review and approval by the Regional Board if such projects do not degrade existing ground water quality to the aquifers affected by the recharge.

17. A discharge in compliance with this Order will be consistent with the standards, policies, and regulations established in the Basin Plan for the achievement of water quality objectives.
18. The CSCWRP has consistently been in violation of the manganese effluent limit contained in Order No. 91-50 as derived from the Basin Plan water quality objective for groundwater. On May 9, 2002, the Regional Board received a report entitled "Manganese Assessment" regarding the use of recycled water produced by the CSCWRP for irrigation purposes at the MGC and PGC. The report requested an increase in the 12-month average effluent limit for manganese from 0.05 mg/L as stated in Order No. 91-50 to 0.075 mg/L and deletion of a daily maximum effluent limit. A mass balance presented in the report illustrated that an increase in the 12-month average manganese effluent limit to 0.075 mg/L will not violate the Basin Plan objective for groundwater of 0.05 mg/L. To ensure compliance with the Basin Plan groundwater objective,

the City is required to monitor manganese in the plant effluent and in the brine collection return water at the PGC as directed by the Monitoring and Reporting Program accompanying this Order. If the City is not in compliance, the Regional Board reserves the right to amend Order No. R9-2003-0123 at a future date to reduce the effluent limit as necessary to achieve full compliance with the Basin Plan objective.

19. For flows exceeding the existing storage capacity, the CSCWRP has authorization to discharge to the SOCWA San Juan Creek Ocean Outfall pursuant to Order No. 2000-13, NPDES No. CA0107417, and as such is exempt from the required 84-day on-site storage capacity as required by the Basin Plan.
20. In establishing the requirements contained herein the Regional Board considered factors including, but not limited to, the following:
  - a. Beneficial uses to be protected and the water quality objectives reasonably required for that purpose,
  - b. Other waste discharges,
  - c. The need to prevent nuisance,
  - d. Past, present, and probable future beneficial uses of the hydrologic subunits under consideration,
  - e. Environmental characteristics of the hydrologic subunits under consideration, including the quality of water thereto,
  - f. Water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area,
  - g. Economic considerations,
  - h. The need for developing housing within the region, and
  - i. The need to develop and use recycled water.
21. The proposed project will make use of recycled water consistent with the goals of California Water Code, Division 7, Chapter 7, *Water Recycling Law*.
22. Pursuant to California Water Code (CWC) Section 13523.1, this Regional Board, after consulting with, and receiving the recommendations of, the State Department of Health Services (State DHS) and any party who has requested in writing to be consulted and with the consent of the proposed permittee, issues a master reclamation permit to the recycled water supplier in lieu of issuing waste discharge requirements pursuant to CWC Section 13263 or water reclamation requirements pursuant to CWC Section 13523.
23. As specified by CWC Section 13523.2, this Order includes the following: waste

discharge requirements adopted pursuant to Article 4;

- Requirements that the permittee comply with the uniform statewide criteria established by the State DHS pursuant to Section 13521 and other applicable permit conditions for the use of recycled water;
- Requirements for the discharger to establish and enforce rules and regulations for recycled water users in accordance with statewide reclamation criteria;
- Requirements for the submittal of quarterly recycled water use summary reports;
- Requirements for the recycled water agency to conduct periodic inspections of the recycled water use sites; and
- Other requirements determined to be appropriate by this Regional Board.

24. In accordance with the *Memorandum Of Agreement Between The Department Of Health Services And The State Water Resources Control Board On Use Of Reclaimed Water*, this Order incorporates any conditions of approval submitted as part of the State DHS recommendations into water reclamation requirements proposed for adoption by this Regional Board.
25. This Regional Board has considered all water resource related environmental factors associated with the proposed discharge of waste from the proposed CSCWRP.
26. This Regional Board has notified the City and all known interested parties of the intent to prescribe master reclamation permit requirements for the discharge described in the Findings of this Order.
27. This Regional Board in a public meeting has heard and considered all comments pertaining to the proposed discharge of waste from the CSCWRP.

**IT IS HEREBY ORDERED THAT**, the City of San Clemente (hereinafter discharger or Recycled Water Agency), in order to meet the provisions contained in Division 7 of the California Water Code and Regulations adopted thereunder, shall comply with the following requirements for the production, purveyance, and discharge of recycled water from the CSCWRP to HA 901.30, HSA 901.31, HSA 901.32, and HA 901.40:

**A. PROHIBITIONS**

1. Discharge of wastes to lands which have not been specifically described



- in the Report of Waste Discharge and for which valid waste discharge requirements are not in force are prohibited.
2. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the Regional Board.
  3. The discharge of wastewater shall not:
    - (a) Cause, wholly or in combination with any other discharge(s), this Regional Board's objectives for the ground or surface waters of the San Clemente Hydrologic Area (901.30), Prima Deshecha HSA (901.31), Segunda Deshecha HSA (901.32), and the San Mateo Hydrologic Area (901.40), as established in the Basin Plan, to be exceeded;
    - (b) Cause, wholly or in combination with any other discharge(s), a surface flow recognizable as sewage in any inland watercourse.
  4. Discharges of treated or untreated solid or liquid waste to a navigable water or tributary of a navigable water are prohibited unless as authorized by an NPDES permit issued by this Regional Board.
  5. Odors, vectors, and other nuisances of sewage or sewage sludge origin beyond the limits of the treatment plant site or disposal area(s) are prohibited.
  6. The bypassing of wastewater from the CSCWRP which does not meet the effluent limitations established in Discharge Specification B.1 of this Order is prohibited.
  7. The discharge of waste in a manner other than as described in the findings of this Order is prohibited unless the discharger obtains revised waste discharge requirements that provide for the proposed change.
  8. Neither the treatment, storage, nor disposal of waste shall create a pollution, contamination or nuisance, as defined by Section 13050 of the California Water Code.
  9. The discharge of treated wastewater shall not cause a violation of the prohibitions contained in the Basin Plan, incorporated herein by reference.
  10. The unauthorized discharge of treated or untreated sewage to waters of

the state or to a storm water conveyance system is prohibited.

11. The discharge of a 30-day average treated wastewater flow volume for irrigation in excess of 2.2 MGD is prohibited unless the discharger obtains revised waste discharge requirements for the proposed increased flow.

## B. DISCHARGE SPECIFICATIONS

1. Effluent used for landscape irrigation purposes shall be treated to the most restricted level in conformance with all applicable provisions of California Code of Regulations, Title 22, Division 4, Chapter 3 (Reclamation Criteria) for landscaping irrigation [currently Section 60304 (b) and 60320.5]. Recycled water from the CSCWRP shall not contain constituents in excess of the following limitations:

CONSTITUENT	UNITS	DAILY MAXIMUM <sup>1</sup>	30-DAY AVERAGE <sup>2</sup>	12-MONTH AVERAGE <sup>3</sup>
Biochemical Oxygen Demand (BOD <sub>5</sub> @ 20°C)	mg/L	45	30	--
Total Suspended Solids	mg/L	45	30	--
pH	Within limits of 6.0 – 9.0 at all times			
TDS	mg/L	1,500	--	1,200
Chloride	mg/L	500	--	400
Sulfate	mg/L	600	--	500
Percent Sodium	%	65	--	60
Nitrate (as NO <sub>3</sub> )	mg/L	12	--	10
Boron	mg/L	0.9	--	0.75
Iron	mg/L	0.4	--	0.3
Manganese	mg/L	--	--	0.075
Fluoride	mg/L	1.2	--	1.0
Methylene blue active substances	mg/L	0.6	--	0.5

<sup>1</sup>The daily maximum effluent limitation shall apply to the results of a single composite or grab sample.

<sup>2</sup>The 30-day average effluent limitation shall apply to the arithmetic mean of the results of all samples collected during any calendar month.

<sup>3</sup>The running 12-month average effluent limitation shall apply to the arithmetic mean of the results of all samples collected during the current month and the previous 11 consecutive calendar months.

2. The median concentration of total coliform bacteria measured in the disinfected effluent shall not exceed an 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 shall not exceed an MPN of 23 per 100 milliliters in more than one sample in any 30 day period. No sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters.
3. Turbidity concentration of the recycled water effluent from the CSCWRP shall not exceed a 24-hour average value of 2 NTU (nephelometric turbidity units), shall not exceed 5 NTU more than 5% of the time during a 24-hour period, and shall not exceed 10 NTU at any time.
4. Pacific Golf Course leachate and pond water used for irrigation purposes in the Segunda Deshecha HSA shall not contain constituents in excess of the following interim limitations:

CONSTITUENT	UNITS	DAILY MAXIMUM <sup>1</sup>	12-MONTH AVERAGE <sup>2</sup>
TDS	mg/L	7,000	6,000
Chloride	mg/L	2,500	2,000
Sulfate	mg/L	2,500	2,000
Percent Sodium	%	65	60
Methylene blue active substances	mg/L	0.6	0.5

<sup>1</sup>The daily maximum effluent limitation shall apply to the results of a single composite or grab sample.

<sup>2</sup>The running 12-month average effluent limitation shall apply to the arithmetic mean of the results of all samples collected during the current month and the previous 11 consecutive calendar months.

The interim limitations shall apply until August 31, 2008 or until compliance is achieved under Section G.2 of this Order.

### C. RECYCLED WATER PURVEYANCE REQUIREMENTS

1. The Recycled Water Agency shall have existing, or establish new, Regional Board, State DHS and the County of Orange Department of Environmental Health (County DEH) approved *Rules and Regulations for Recycled Water Users* governing the design and construction of recycled water use facilities and the use of recycled water. The Recycled Water Agency shall ensure that the rules and regulations are implemented and

enforced with respect to the recycled water users. The Recycled Water Agency shall certify within 180 days of the adoption of this Order, that the Recycled Water Agency's *Rules and Regulations for Recycled Water Users* are consistent with the requirements contained in Attachment No. 1 of this Order.

2. The Recycled Water Agency shall certify, within 180 days of the adoption of this Order, that it has developed and submitted for approval a program to conduct compliance inspections of recycled water reuse sites to the Regional Board, State DHS and County DEH. Inspections shall determine the status of compliance with the Recycled Water Agency's approved rules and regulations for recycled water users.
3. The Recycled Water Agency shall certify, within 180 days of the adoption of this Order, that the following information has been developed and is available to the State DHS and the County DEH, for all current recycled water use areas:
  - a. The number, location, and type of facilities within the use area proposing to use domestic and recycled water. "Facility" means any type of building or structure, or defined area of specific public use that utilizes or proposes to utilize a dual plumbed system.
  - b. The average number of persons estimated to be served by each facility on a daily basis.
  - c. 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 served.
  - d. The person or persons responsible for operation of the recycled water system at each use area.
  - e. The specific use to be made of the recycled water at each use area.
  - f. The methods to be used by the Recycled Water Agency to assure that the installation and operation of the recycled system will not result in cross connections between the recycled water piping system and the potable water piping system. This shall include a description of pressure, dye or other test methods to be used to test the system.
  - g. Plans and specifications shall include the following and shall be submitted to the State DHS and County DEH for approval:
    - (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 public water system,
  - (5) Plan notes relating to recycled water specific installation and use requirements.
4. The Recycled Water Agency shall do the following for all reuse sites:
    - a. Enforce recycled water rules and regulations,
    - b. Conduct recycled water reuse site compliance inspections in accordance with the program submitted in compliance with *Recycled Water Purveyance Requirements C.2* of this Order,
    - c. Notify the State DHS and the County DEH of any incidence of recycled water backflow into the potable water system as soon as possible, but in no case later than 24 hours of finding the incident, and
    - d. Maintain a current list of all on-site recycled water supervisors.
  5. Prior to providing recycled water to a dual plumbed system as defined in Title 22, Chapter 3, Article 1, of the California Code of Regulations, the Recycled Water Agency shall obtain an amendment to this Order.
  6. Recycled water shall not be supplied to parties who use, transport, or store such water in a manner which causes a pollution, contamination or nuisance, as defined by Section 13050 of the California Water Code.
  7. Prior to using recycled water or supplying recycled water for use by other parties in any manner or in any area other than as described in the Findings of this Order, the Recycled Water Agency shall obtain an amendment to this Order.

#### **D. FACILITY DESIGN AND OPERATION SPECIFICATIONS**

##### **1. PROPER OPERATION**

The Recycled Water Agency shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Recycled Water Agency to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate

operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Order.

2. WET WEATHER STORAGE

The discharger shall provide adequate storage facilities to contain recycled water, or have in place alternate recycled water disposal methods approved by the Regional Board, during and after periods of rainfall when disposal by irrigation cannot be successfully practiced and to prevent the discharge of treated or untreated recycled water to any surface water body.

3. COAGULATION ALTERNATIVE

Coagulation need not be used as part of the treatment process provided that the filter effluent turbidity does not exceed 2 NTU, the turbidity of the influent to the filters is continuously measured, the influent turbidity does not exceed 5 NTU for more than 15 minutes and never exceeds 10 NTU, and that there is capability to automatically activate chemical addition or divert wastewater should the turbidity of the influent to the filters exceed 5 NTU for more than 15 minutes.

4. DISINFECTION PROCESS

Disinfection of recycled water shall comply with all requirements of California Code of Regulations, Title 22, Division 4. Disinfection may be accomplished by either:

- a. A chlorine disinfection process that provides a CT (chlorine concentration times modal contact time) value of not less than 450 mg-min/liter at all times with a modal chlorine contact time of at least 90 minutes based on peak dry weather design flow; or
- b. A disinfection process, that, when combined with the filtration process, has been demonstrated to reduce the concentration of plaque-forming units of F-specific bacteriophage MS2, or polio virus, per unit volume of water in the wastewater to one hundred thousandths (1/100,000) of the initial concentration in the filter influent throughout the range of qualities of wastewater that will occur during the recycling process. A virus that is at least as resistant to disinfection as polio virus may be used for purposes of the demonstration.

5. OPERATION MANUAL

A copy of the facility operations manual shall be maintained at the Recycled Water Agency's facility and shall be available to operation personnel and Regional Board staff upon request at all times. The following portions of the operations manual shall be posted at the treatment plant as a quick reference for treatment plant operators:

- a. Alarm set points for secondary turbidity, tertiary turbidity and chlorine residual.
- b. Levels at which flow will be diverted for secondary turbidity, tertiary turbidity and chlorine residual.
- c. When to divert flow for high daily and weekly median total coliform.
- d. When the authorities (State DHS, County DEH, Regional Board) will be notified of a diversion.
- e. Names and numbers of those authorities to be notified in case of a diversion.
- f. Frequency of calibration for turbidimeters and chlorine residual analyzers.

6. OPERATORS CERTIFICATION

The Recycled Water Agency's wastewater treatment facilities shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Division 3, Chapter 26, Title 23 of the California Code of Regulations.

7. FLOOD PROTECTION

All waste treatment, storage and conveyance facilities shall be protected against 100-year peak stream flows as defined by the Orange County flood control agency.

8. RUNOFF PROTECTION

All wastewater and recycled water storage facilities shall be protected against erosion, overland runoff, and other impacts resulting from a 100-year, 24-hour frequency storm.

9. MONITORING AND REPORTING

The Recycled Water Agency shall comply with the attached Monitoring and Reporting Program No. R9-2003-0123, and future revisions thereto as specified by the Executive Officer. Monitoring results shall be reported at the intervals specified in Monitoring and Reporting Program No. R9-2003-0123.

10. MAINTENANCE

A preventive maintenance program shall be provided at the Recycled Water Agency's reclamation plant to ensure that all equipment is kept in a reliable operating condition.

11. RELIABILITY REQUIREMENTS

The Recycled Water Agency's facilities shall comply with all applicable reliability requirements contained in Title 22, Division 4, Chapter 3, Article 10, *Alternative Reliability Requirements for Uses Requiring Oxidized Disinfected Wastewater or Oxidized, Coagulated, Clarified, Filtered, Disinfected Wastewater*, of the California Code of Regulations.

**E. BIOSOLIDS SPECIFICATIONS**

1. Collected screenings, sludges, other solids removed from liquid wastes, and filter backwash shall be disposed of in a manner approved by the Executive Officer.
2. Management of all solids and sludge must comply with all applicable requirements of 40 CFR Parts 257, 258, 501 and 503; CWA Part 405(d), and Title 27, CCR, including all monitoring, record keeping and reporting requirements. Since the State of California, hence the State and Regional Boards, has not been delegated the authority by the United States Environmental Protection Agency (USEPA) to implement the sludge program, enforcement of sludge requirements of CFR Part 503 is under USEPA's jurisdiction. Once sludge leaves a facility, it is subject to all applicable local, state and federal laws and regulations.
3. All solids and sludge must be disposed of in a municipal solid waste landfill, reused by land application or disposed of in a sludge-only landfill accordance with 40 CFR Parts 503 and 258, and Title 27 CCR. If the discharger desires to dispose of solids or sludge by a different method, a



request for permit modification must be submitted to the USEPA and this Regional Board 180 days prior to the initiation of the alternative disposal.

4. Solids and sludge treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, and shall not result in groundwater contamination.
5. The solids and sludge treatment site and storage site shall have facilities adequate to divert surface water runoff from adjacent areas, to protect the boundaries of the site from erosion, and to prevent drainage from the treatment and storage site. Adequate protection is defined as protection from at least a 100-year storm and protection from the highest possible tidal stage that may occur.
6. The discharge of sewage sludge and solids shall not cause waste material to be in a position where it is, or can be, conveyed from the treatment and storage sites and deposited in the waters of the state.
7. The Recycled Water Agency shall submit a copy of each of the annual reports required by 40 CFR 503 to this Regional Board Executive Officer at the same time those reports are submitted to USEPA. The Recycled Water Agency shall also submit an annual report of the quantity and disposition of sludge generated in the previous calendar year.

#### **F. STANDARD PROVISIONS**

##### 1. ENFORCEMENT

The Regional Board may initiate enforcement action against the recycled water agency, which may result in the termination of the recycled water supply, if any person uses, transports, or stores such water in a manner which creates, or threatens to create conditions of pollution, contamination, or nuisance, as defined in the California Water Code, Section 13050.

##### 2. DUTY TO COMPLY

The Recycled Water Agency must comply with all conditions of this Order. Any noncompliance with this Order constitutes a violation of the California Water Code and is grounds for (a) enforcement action; (b) termination, revocation and reissuance, or modification of this Order; or (c) denial of a report of waste discharge in application for new or revised master reclamation permit requirements.

3. ENTRY AND INSPECTION

The Recycled Water Agency shall allow the Regional Board, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to do the following:

- a. Enter upon the Recycled Water Agency's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this Order,
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order,
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this Order, and
- d. Sample or monitor, at reasonable times for the purposes of assuring compliance with this Order or as otherwise authorized by the California Water Code, any substances or parameters at any location.

4. CIVIL MONETARY REMEDIES

The California Water Code provides that any person who intentionally or negligently violates any master reclamation permit requirements issued, reissued, or amended by this Regional Board shall be liable civilly in accordance with California Water Code.

5. PENALTIES FOR INVESTIGATION, MONITORING OR INSPECTION VIOLATIONS

The California Water Code provides that any person failing or refusing to furnish technical or monitoring program reports, as required under this Order, or falsifying any information provided in the monitoring reports is guilty of a misdemeanor and is subject to a civil liability for each day in which the violation occurs.

6. ENDANGERMENT OF HEALTH AND ENVIRONMENT

The Recycled Water Agency shall report any noncompliance that may endanger health or the environment. Any such information shall be provided orally to the Executive Officer within 24 hours from the time the Recycled Water Agency becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the Recycled

Water Agency becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive Officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. The following occurrence(s) must be reported to the Executive Officer within 24 hours:

- a. Any bypass from any portion of the treatment facility that will result in noncompliance with any of the terms and conditions of this Order. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility to other than a sewer system.
- b. Any discharge of non-disinfected effluent or untreated wastewater that may endanger public health, or is greater than 1,000 gallons, or reaches surface waters.
- c. Any treatment plant upset which causes the effluent limitations of this Order to be exceeded including, but not limited to, the following:
  - (1) Failure of chlorination equipment
  - (2) Effluent total coliform bacteria greater than 240 MPN/100 ml
  - (3) Turbidity greater than 10 NTU if distributed to any recycled water user
  - (4) CT less than 450 mg-min/L if distributed to any recycled water user

These incidents shall also be reported orally to the State DHS and County DEH within 24-hours of the incident.

#### 7. PLANT OVERFLOW EVENTS

The discharger shall report all overflow events that occur at the CSCWRP. For purposes of this reporting requirement, an overflow event is defined as a discharge of treated or untreated wastewater not authorized by waste discharge requirements and/or a NPDES permit which results from a pump station failure, line break, obstruction, surcharge, or any other operational dysfunction. This reporting requirement applies to all overflow events other than: 1) events required to be reported under Standard Provision 6 above, and 2) those events subject to regulation under this Regional Board's Order No. 96-04, *General Waste Discharge*

*Requirements Prohibiting Sanitary Sewer Overflows by Sewage Collection Agencies.* Overflows identified under this provision shall be reported to the Regional Board with the quarterly monitoring report for the period in which the overflow occurs.

8. UNAUTHORIZED DISCHARGES OF RECYCLED WATER

Any person who, without regard to intent or negligence, causes or permits an unauthorized discharge of 50,000 gallons or more of recycled water that has been treated to at least disinfected tertiary 2.2 recycled water or 1,000 gallons or more of recycled water that is treated at a level less than disinfected tertiary 2.2 recycled water in or on any waters of the state, or causes or permits such unauthorized discharge to be discharged where it is, or probably will be, discharged in or on any waters of the state, shall, as soon as (1) that person has knowledge of the discharge, (2) notification is possible, and (3) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify this regional board in accordance with reporting requirements in Standard Provision F.6.

9. PRIOR NOTICE OF BYPASS

If a need for a discharge bypass is known in advance, the Recycled Water Agency shall submit prior notice (stating, at a minimum, the purpose, anticipated dates, duration, level of treatment, and volume of bypass) and, if at all possible, shall submit such notice at least 10 days prior to the date of the bypass. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility to other than a sewer system.

10. CORRECTIVE ACTION

The Recycled Water Agency 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 noncompliance.

11. TREATMENT FAILURE

In an enforcement action, it shall not be a defense for the Recycled Water Agency that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the Recycled Water Agency shall,

to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies for example, when the primary source of power of the treatment facility is failed, reduced, or lost.

12. HAZARDOUS RELEASES

Except for a discharge which is in compliance with these master reclamation permit requirements, any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, shall as soon as (a) that person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Director of Environmental Health Services, County of Orange in accordance with California Health and Safety Code Section 5411.5 and the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan adopted pursuant to Article 3.7 (commencing with Section 8574.7) of Chapter 7 of Division 1 of Title 2 of the Government Code, and immediately notify the State Board or the appropriate Regional Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of Section 13271 of the Water Code unless the Recycled Water Agency is in violation of a prohibition in the applicable Water Quality Control Plan.

13. PETROLEUM RELEASES

Except for a discharge which is in compliance with these master reclamation permit requirements, any person who without regard to intent or negligence, causes or permits any oil or petroleum product to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) such person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State oil spill contingency plan adopted pursuant to Article 3.5 (commencing with Section 8574.1) of Chapter 7 of Division 1 of Title 2 of the Government Code. This requirement does not require reporting of any discharge of less than 42 gallons unless the discharge is also required to be reported pursuant to Section 311 of the Clean Water Act or the discharge is in

violation of a prohibition in the applicable Water Quality Control Plan.

14. PERMIT REPOSITORY

A copy of this Order shall be maintained at the Recycled Water Agency's facility and shall be available to operating personnel at all times.

15. RETENTION OF RECORDS

The Recycled Water Agency shall retain records of all monitoring information, including all calibration and maintenance records, copies of all reports required by this Order, and records of all data used to complete the application for this Order. Records shall be maintained for a minimum of five years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

16. GENERAL REPORTING REQUIREMENT

The Recycled Water Agency shall furnish to the Executive Officer of this Regional Board, within a reasonable time, any information which the Executive Officer may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The Recycled Water Agency shall also furnish to the Executive Officer, upon request, copies of records required to be kept by this Order.

17. PERMIT REVISION

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

- a. Violation of any terms or conditions of this Order.
- b. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts.
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

The filing of a request by the Recycled Water Agency for the modification, revocation and reissuance, or termination of this Order, or notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

18. CHANGE IN DISCHARGE

The Recycled Water Agency shall file a new Report of Waste Discharge at least 120 days prior to the following:

- a. Addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the wastes.
- b. Significant change in the treatment or disposal method (e.g., change in the method of treatment which would significantly alter the nature of the waste.)
- c. Change in the disposal area from that described in the findings of this Order.
- d. Increase in flow beyond that specified in this Order.
- e. Other circumstances that result in a material change in character, amount, or location of the waste discharge.
- f. Any planned change in the regulated facility or activity which may result in noncompliance with this Order.

19. CHANGE IN OWNERSHIP

This Order is not transferable to any person except after notice to the Executive Officer. The Recycled Water Agency shall submit this notice in writing at least 30 days in advance of any proposed transfer. The notice must include a written agreement between the existing and new Recycled Water Agency containing a specific date for the transfer of this Order's responsibility and coverage between the current Recycled Water Agency and the new Recycled Water Agency. This agreement shall include an acknowledgement that the existing Recycled Water Agency is liable for violations up to the transfer date and that the new Recycled Water Agency is liable from the transfer date on. The Regional Board may require modification or revocation and reissuance of this Order to change the name of the Recycled Water Agency and incorporate such other requirements as may be necessary under the California Water Code.

20. INCOMPLETE REPORTS

Where the Recycled Water Agency becomes aware that it failed to submit any relevant facts in a Report of Waste Discharge or submitted incorrect information in a Report of Waste Discharge or in any report to the Regional Board, it shall promptly submit such facts or information.

## 21. REPORT DECLARATION

All applications, reports, or information submitted to the Executive Officer shall be signed and certified as follows:

- a. The Report of Waste Discharge shall be signed as follows:
  - (1) For a corporation - by a principal executive officer of at least the level of vice-president.
  - (2) For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.
  - (3) For a municipality, state, federal or other public agency - by either a principal executive officer or ranking elected official.
- b. All other reports required by this Order and other information required by the Executive Officer shall be signed by a person designated in paragraph (a) of this provision, or by a duly authorized representative of that person. An individual is a duly authorized representative only if all of the following are true:
  - (1) The authorization is made in writing by a person described in paragraph (a) of this provision,
  - (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, and
  - (3) The written authorization is submitted to the Executive Officer.
- c. Any person signing a document under this section shall make the following certification:

*"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."*

## 22. REGIONAL BOARD ADDRESS

The Recycled Water Agency shall submit reports required under this Order or other information required by the Executive Officer to the following address:



POTW Compliance Unit  
California Regional Water Quality Control Board  
San Diego Region  
9174 Sky Park Court, Suite 100  
San Diego, California 92123

## **G. SPECIAL PROVISIONS**

1. Pacific Golf Course Mitigation Measures
  - a. As described in Finding No. 12 of this Order, the City shall submit a plan and a schedule for achieving compliance with mitigation measures for the use of recycled water at the Pacific Golf Course (PGC), as described in the Environmental Assessment dated September 15, 1986, within one year of the adoption of this Order. The plan and the schedule shall be subject to the approval of the Regional Board Executive Officer. The City is required to implement the plan in accordance with the schedule approved by the Executive Officer.
  - b. The City shall submit a progress report to the Regional Board 90 days after the submittal of the technical report described in Section G.1.a above. Thereafter, the City shall submit semiannual compliance progress reports to the Regional Board until compliance is achieved. Final compliance shall be achieved no later than 5 years after the adoption date of this Order. The City shall submit a final report including, but not necessarily limited to, a description and chronology of all steps taken to comply with this Order, to the Regional Board by August 31, 2008 indicating the status of compliance with Section G.1 of this Order.
2. Pacific Golf Course Brine Pond
  - a. As described in Finding No. 11 of this Order, the City shall submit to the Regional Board a course of action with a compliance time schedule for the use of PGC leachate and brine pond water for irrigation purposes in the Segunda Deshecha HSA to comply with Discharge Specification B.1 of this Order within one year of the adoption of this Order.
  - b. The City shall submit a progress report to the Regional Board 90 days after the submittal of the technical report described in Section G.2.a above. Thereafter, the City shall submit semiannual compliance progress reports to the Regional Board until compliance is achieved. Final compliance shall be achieved no later than 5 years after the adoption date of this Order. The City shall submit a final report including, but not necessarily limited to, a

description and chronology of all steps taken to comply with this Order, to the Regional Board by August 31, 2008 indicating the status of compliance with Section G.2 of this Order. Once compliance is achieved, Discharge Specification B.4 shall no longer apply and PGC leachate and pond water shall be regulated under Discharge Specification B.1 of this Order.

#### H. NOTIFICATIONS

1. VESTED RIGHTS

This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the Recycled Water Agency from liability under federal, state or local laws, nor create a vested right for the Recycled Water Agency to continue the waste discharge.

2. U.S. EPA REVIEW

These requirements have not been officially reviewed by the United States Environmental Protection Agency and are not issued pursuant to Section 402 of the Clean Water Act.

3. SEVERABILITY

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.

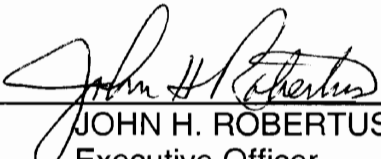
4. PREVIOUS ORDER

The requirements prescribed in this Order supercede the requirements prescribed in Order No. 91-50.

5. EFFECTIVE DATE

This Order becomes effective on the date of adoption by the San Diego RWQCB.

*I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on August 13, 2003.*

  
\_\_\_\_\_  
JOHN H. ROBERTUS  
Executive Officer

**ATTACHMENT NO. 1****TO****ORDER NO. R9-2003-0123****RULES AND REGULATIONS FOR RECYCLED WATER USE PROJECTS**

Pursuant to California Water Code (CWC) Section 13523.1(b)(3), this Order requires the Recycled Water Agency to establish and to enforce rules and regulations governing the design, construction and use of recycled water distribution and disposal systems by its customers. The rules and regulations shall be consistent with the following criteria:

- Title 22, Division 4, Chapter 3, *Wastewater Reclamation Criteria*;
- Title 17, Division 1, Chapter 5, Group 4, Article 1 & 2, of the California Code of Regulations;
- The State Department of Health Services (State DHS) *Preparation of an Engineering Report for the Production, Distribution and Use of Recycled Water*;
- Any measures that are deemed necessary for protection of public health, such as the American Water Works Association (AWWA) California/Nevada section, *Guidelines for the Distribution of Non-Potable Water and Guidelines for Retrofitting To Recycled Water* or alternate measures that are acceptable to the State DHS.

At a minimum, the rules and regulations shall notify the users that:

1. The use of recycled water shall not cause pollution, contamination, or nuisance, as defined by Section 13050 of the California Water Code.
2. The Recycled Water Agency, Regional Board, State DHS, County DEH or an authorized representative of these parties, upon presentation of proper credentials, shall have the right to enter upon the recycled water use site during reasonable hours, to verify that the user is complying with the Recycled Water Agency's rules and regulations.
3. The recycled water user shall provide written notification, in a timely manner, to the Recycled Water Agency of any material change or proposed change in the character of the use of recycled water.
4. Prior to the initiation of recycled water service, the recycled water user shall submit plans and specifications for recycled water distribution facilities to

the Recycled Water Agency.

5. The recycled water user shall designate a recycled water supervisor who is responsible for the recycled water system at each use area under the user's control. Specific responsibilities of the recycled water supervisor include the proper installation, operation, and maintenance of the irrigation system; compliance of the project with the Recycled Water Agency's rules and regulations, prevention of potential hazards and preservation of the recycled water distribution system plans in "as built" form.
6. The Recycled Water Agency may terminate service to a recycled water user who uses, transports, or stores such water in violation of the Recycled Water Agency's rules and regulations.
7. The Regional Board may initiate enforcement action against any recycled water user, including but not limited to the termination of the recycled water supply, who:
  - a. Discharges recycled water in violation of any applicable discharge requirement prescribed by the Regional Board or in a manner which creates or threatens to create conditions of pollution, contamination, or nuisance, as defined in the California Water Code Section 13050.
  - b. Uses, transports, or stores such water in violation of the rules and regulations governing the design, construction and use of recycled water distribution and disposal systems issued by the recycled water agency in accordance with this attachment; or in a manner which creates or threatens to create conditions of pollution, contamination, or nuisance, as defined in the California Water Code Section 13050.
8. A copy of the recycled water rules and regulations, irrigation system layout map, and a recycled water system operations manual shall be maintained at the use area. These documents shall be available to operating personnel at all times.
9. Irrigation with disinfected tertiary recycled water shall not take place within 50 feet of any domestic water supply well unless all of the following conditions have been met:
  - a. A geological investigation demonstrates that an aquitard exists at the well between the uppermost aquifer being drawn from and the ground surface.
  - b. The well contains an annular seal that extends from the surface into the aquitard.

- c. The well is housed to prevent any recycled water spray from coming into contact with the wellhead facilities.
  - d. The ground surface immediately around the wellhead is contoured to allow surface water to drain away from the well.
  - e. The owner of the well approves of the elimination of the buffer zone requirement.
10. Impoundment of disinfected tertiary recycled water shall not occur within 100 feet of any domestic water supply well.
11. Irrigation with, or impoundment of, disinfected secondary-2.2 or disinfected secondary-23 recycled water shall not take place within 100 feet of any domestic water supply well.
12. Irrigation with, or impoundment of, undisinfected secondary recycled water shall not take place within 150 feet of any domestic water supply well.
13. Recycled water facilities shall be operated in accordance with best management practices (BMP's) to prevent public contact with, and prevent direct human consumption of reclaimed water. All windblown spray of reclaimed water applied for irrigation onto property not owned or controlled by the discharger or reclaimed water user shall be prevented by the implementation of BMP's.
14. Facilities that may be used by the public shall be protected to the maximum extent possible by siting and/or structure from contact by irrigation with recycled water spray, mist, or runoff. Protection shall be by design, construction practice or system operation.
15. Any use of recycled water shall comply with the following:
  - a. Any irrigation runoff shall be confined to the recycled water use area.
  - b. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities.
  - c. Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff.
16. Irrigation with reclaimed water shall be during periods of minimal human use of the service area. Consideration shall be given to allow an adequate dry-out time before the irrigated area will be used by the public.
17. Spray irrigation with recycled water, other than disinfected tertiary recycled water, shall not take place within 100 feet of the property line of a residence or a place where public exposure could be similar to that of a park,

playground, or school yard.

18. All use areas where recycled water is used and that are accessible to the public shall be posted with conspicuous signs, in a size no less than 4 inches by 8 inches, that include the following wording and picture in a size no less than 4 inches high by 8 inches wide: "RECYCLED WATER - DO NOT DRINK". See Attachment No. 2 for the acceptable symbol. The sign(s) shall be of a size easily readable by the public. The prescribed wording should also be translated into Spanish and other appropriate languages and included in the required signs.
19. Except as allowed under Section 7604 of Title 17, California Code of Regulations, no physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying potable water.
20. The recycled water piping system shall not include any hose bibs. Quick couplers that are different from that used on the potable water system may be used.
21. The public water supply shall not be used as a backup or supplemental source of water for a recycled water system unless the connection between the two systems is protected by an air gap separation which complies with the requirements of Sections 7602(a) and 7603(a) of Title 17 and the approval of the public water system has been obtained. If a "Swivel-ell" type connection is used it must be used in accordance with the provisions of the Department of Health Services Policy Memo 95-004. Approved backflow prevention devices shall be provided, installed, tested, and maintained by the recycled water user in accordance with the applicable provisions of Title 17, Division 1, Chapter 5, Group 4, Article 2.
22. No person other than the Recycled Water Agency shall deliver recycled water to a facility. Connection to the irrigation system by an individual residence is prohibited.
23. All recycled water piping and appurtenances in new installations and appurtenances in retrofit installations shall be colored purple or distinctively wrapped with purple tape in accordance with Chapter 7.9, Section 4049.54 of the California Health and Safety Code.
24. Customer complaints concerning recycled water use that may involve public illness shall be reported to the County DEH and the State DHS, and to the Recycled Water Agency who shall maintain a log of all customer complaints regarding recycled water.
25. All reclaimed water storage facilities owned and/or operated by the

Recycled Water Agency shall be protected against erosion, overland runoff, and other impacts resulting from a 100-year frequency storm, 24 hour storm.

26. All reclaimed water storage facilities owned and/or operated by the Recycled Water Agency shall be protected against 100-year frequency peak stream flows as defined by the local flood control agency.
27. Any backflow prevention device installed to protect the public water system shall be inspected and maintained in accordance with Section 7605 of Title 17.



**ATTACHMENT NO. 2**  
**TO**  
**ORDER NO. R9-2003-0123**



**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**MONITORING AND REPORTING PROGRAM NO. R9-2003-0123**

**CITY OF SAN CLEMENTE  
WATER RECLAMATION PLANT  
ORANGE COUNTY**

**A. MONITORING PROVISIONS**

1. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this Monitoring and Reporting Program (M&RP) and, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water or substance. Monitoring points shall not be changed without notification to and the approval of the Executive Officer.
2. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10 percent from true discharge rates throughout the range of expected discharge volumes.
3. Monitoring must be conducted according to United States Environmental Protection Agency (USEPA) test procedures approved under Title 40, Code of Federal Regulations (CFR), Part 136, "Guidelines Establishing Test Procedures for Analysis of Pollutants Under the Clean Water Act" as amended, unless other test procedures have been specified in this M&RP.
4. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services or a laboratory approved by the Executive Officer.
5. Monitoring results must be reported on discharge monitoring report forms approved by the Executive Officer.
6. If the City of San Clemente (discharger) monitors any pollutants more frequently than required by this M&RP, using test procedures approved under 40 CFR, Part 136, or as specified in this M&RP, the results of this

monitoring shall be included in the calculation and reporting of the data submitted in the discharger's monitoring report. The increased frequency of monitoring shall also be reported.

7. The discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation and copies of all reports required by this M&RP, and records of all data used to complete the application for this M&RP. Records shall be maintained for a minimum of five years from the date of the sample, measurement, report or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.
8. Records of monitoring information shall include the following:
  - a. The date, exact place, and time of sampling or measurements,
  - b. The individual(s) who performed the sampling or measurements,
  - c. The date(s) analyses were performed,
  - d. The individual(s) who performed the analyses,
  - e. The analytical techniques or method used, and
  - f. The results of such analyses.
9. All monitoring instruments and devices that are used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.
10. The discharger shall report all instances of noncompliance not reported under Provision F.6 of Order No. R9-2003-0123 at the time monitoring reports are submitted. The reports shall contain the information described in Provision F.6.
11. The monitoring reports shall be signed by an authorized person as required by Provision F.21.
12. A composite sample is defined as a combination of at least eight sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically.

13. A grab sample is an individual sample of at least 100 milliliters collected at a randomly selected time over a period not exceeding 15 minutes.
14. Sampling and analysis shall, at a minimum, be conducted in accordance with Article 6 of California Code of Regulations, Title 22, Division 4, Chapter 3 (Reclamation Criteria).
15. Any known direct cross-connection between recycled and potable water shall be reported to the Regional Board, State DHS, and County DEH within 24 hours.

#### B. EFFLUENT MONITORING

1. Samples of the effluent discharged from the City of San Clemente Water Reclamation Plant (CSCWRP) shall be collected at a point at or nearest to the effluent pump station, downstream of the disinfection process and prior to any dilution.
2. The discharger is responsible for monitoring and reporting in accordance with Section B.1 above and the following criteria:

CONSTITUENT	UNIT	TYPE OF SAMPLE	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flowrate <sup>1</sup>	Gallons/Day	Continuous	Continuous	Monthly
Turbidity	NTU	Continuous	*	Monthly
Chlorine Contact Time (CT)	mg-min/L	Calculated	**	Monthly
Chlorine Residual	mg/L	Continuous	***	Monthly
Total Coliform	MPN/100 ml	Grab	****	Monthly
Biochemical Oxygen Demand (BOD <sub>5</sub> @ 20°C)	mg/L	Composite	Weekly <sup>2</sup>	Monthly
Total Suspended Solids	mg/L	Composite	Weekly <sup>2</sup>	Monthly
Volatile Suspended Solids	mg/L	Composite	Weekly <sup>2</sup>	Monthly
Total Dissolved Solids	mg/L	Composite	Monthly <sup>2</sup>	Monthly
pH	Unit	Grab	Monthly <sup>2</sup>	Monthly
Boron	mg/L	Composite	Monthly <sup>2</sup>	Monthly
Chloride	mg/L	Composite	Monthly <sup>2</sup>	Monthly
Percent Sodium	%	Composite	Monthly <sup>2</sup>	Monthly
Sulfate	mg/L	Composite	Monthly <sup>2</sup>	Monthly

CONSTITUENT	UNIT	TYPE OF SAMPLE	SAMPLING FREQUENCY	REPORTING FREQUENCY
Iron	mg/L	Composite	Monthly <sup>2</sup>	Monthly
Manganese <sup>3</sup>	mg/L	Composite	Monthly <sup>2</sup>	Monthly
Methylene Blue Active Substances	mg/L	Composite	Monthly <sup>2</sup>	Monthly
Nitrate (as NO <sub>3</sub> )	mg/L	Composite	Annually <sup>2</sup>	Annually
Adjusted Sodium Adsorption Ratio <sup>4</sup>	---	Composite	Annually <sup>2</sup>	Annually
Electroconductivity <sup>5</sup>	dS/m	Composite	Annually <sup>2</sup>	Annually
Total Organic Carbon	mg/L	Composite	Annually <sup>2</sup>	Annually
Aluminum	mg/L	Composite	Annually <sup>2</sup>	Annually
Arsenic	mg/L	Composite	Annually <sup>2</sup>	Annually
Antimony	mg/L	Composite	Annually <sup>2</sup>	Annually
Barium	mg/L	Composite	Annually <sup>2</sup>	Annually
Beryllium	mg/L	Composite	Annually <sup>2</sup>	Annually
Cadmium	mg/L	Composite	Annually <sup>2</sup>	Annually
Chromium	mg/L	Composite	Annually <sup>2</sup>	Annually
Copper	mg/L	Composite	Annually <sup>2</sup>	Annually
Cyanide	mg/L	Composite	Annually <sup>2</sup>	Annually
Fluoride	mg/L	Composite	Annually <sup>2</sup>	Annually
Mercury	mg/L	Composite	Annually <sup>2</sup>	Annually
Nickel	mg/L	Composite	Annually <sup>2</sup>	Annually
Selenium	mg/L	Composite	Annually <sup>2</sup>	Annually
Thallium	mg/L	Composite	Annually <sup>2</sup>	Annually

Notes: MPN/100 ml = Most Probable Number per 100 milliliters  
mg/L = milligrams per liter  
NTU = Nephelometric Turbidity Units  
dS/m = deciseimens per meter

- 1 Report both the daily average and daily maximum.
- 2 The discharger shall increase the sampling frequency from weekly to daily, from monthly to weekly, and from annually to quarterly for any noted constituent that exceeds the limit specified by Discharge Specification B.1, B.2, and B.3 of Order No. R9-2003-0123. The increased frequency of monitoring shall continue until the discharger achieves compliance with the limitations for three consecutive periods. After compliance is achieved, the discharger shall resume sampling at the specified frequency. Weekly is defined as a calendar week (Sunday through Saturday). Monthly is defined as a

calendar month. Quarterly is defined as three consecutive calendar months beginning at the first of the year. Annual is defined as a calendar year.

3 The discharger shall report the current monthly value, the previous 11 monthly values, and the monthly running 12-month average for both samples taken at the CSCWRP and of the leachate at the PGC before it enters the brine holding pond.

4 The adjusted sodium adsorption ratio (Adj. SAR) is calculated as follows:

$$\text{Adj. SAR} = \frac{Na}{\sqrt{(Ca_x + Mg)/2}}$$

where Na, Ca<sub>x</sub>, and Mg are in milliequivalent per liter (meq/L)

Ca<sub>x</sub> is a modified Ca value calculated using Table 3-2 contained in *Irrigation with Reclaimed Municipal Wastewater, A Guidance Manual*.

5 Samples for electroconductivity shall be monitored concurrently with Adj. SAR.

\* Effluent turbidity analyses shall be conducted continuously using a continuous monitoring and recording turbidimeter. Compliance with the daily average operating filter effluent turbidity limit of 2 NTU shall be determined using the levels of recorded turbidity levels at a minimum of four-hour intervals over a 24-hour period. Compliance with the turbidity standard of not exceeding 5 NTU more than 5 percent of the time over a 24-hour period shall be determined using the levels of recorded turbidity taken at intervals of no more than 1.2-hours over a 24-hour period. Should the continuous turbidity meter and/or recorder fail, grab sampling at a minimum frequency of 1.2 hours may be substituted for a period of up to 24 hours. The discharger shall report monthly results of four-hour turbidity readings, average effluent turbidity (24-hours), 95 percentile effluent turbidity (24-hours), and daily maximum turbidity readings. Continuous turbidity monitoring must also be provided prior to filtration to ensure adequate process control, and automatically actuate coagulant feed when the turbidity of the secondarily treated effluent is greater than 10 NTU.

\*\* The daily minimum CT (chlorine concentration multiplied by modal contact time) value shall be reported monthly. The discharger shall report monthly the date(s), value(s), time, and duration when the CT value falls below 450 mg-min/L, and/or the modal contact time falls below 90 minutes. The City is permitted to manually measure chlorine concentration for up to a maximum of 12 months after the adoption of this Order to be used to calculate CT compliance. After which, CT values shall be determined and recorded continuously.

\*\*\* The City is permitted to manually measure chlorine concentration for up to a maximum of 12 months after the adoption of this Order. After which, chlorine concentrations shall be recorded by a continuous recording meter. Minimum daily chlorine residual values shall be reported monthly.

\*\*\*\* Samples for total coliform bacteria shall be collected at least daily and at a time when wastewater characteristics are most demanding on the treatment facilities and disinfection procedures. Results of daily total coliform bacteria monitoring, running 7-day median determination, and maximum daily coliform reading in each of the previous 12 months shall be reported monthly.

3. The discharger shall review the monitoring results for compliance with

Order No. R9-2003-0123 and submit a statement of compliance as part of the Monitoring and Reporting Program No. R9-2003-0123. The statement of compliance shall identify and report all effluent limitation violations of Discharge Specifications B.1, B.2, B.3, and B.4 of Order R9-2003-0123.

**C. FILTRATION PROCESS MONITORING**

If coagulation is not used as part of the treatment process, the turbidity of the filter influent and effluent shall be continuously measured. If effluent turbidity exceeds 2 NTU based on a 24-hour average, or if the influent turbidity exceeds 5 NTU for more than 15 minutes or 10 NTU at any time, then discharger shall submit a written report of the incident as part of the monthly monitoring report to the Regional Board. The report shall describe the measures taken to automatically activate chemical addition or to divert wastewater.

**D. SEWAGE SOLIDS AND BIOSOLIDS**

A record of the type, quantity, and manner of disposal and/or reuse of all solids removed in the course of sewage treatment shall be maintained at the CSCWRP and be made available to Regional Board staff upon request.

A biosolids certification, certifying that the use and disposal of biosolids complies with existing Federal and State laws and regulations, including permitting requirements and technical standards included in 40 CFR 503 shall be submitted annually.

**E. RECYCLED WATER USERS SUMMARY REPORT**

1. The discharger shall submit a quarterly recycled water users summary report containing the following information:
  - a. Total volume of recycled water supplied to all recycled water users for each month of the reporting period,
  - b. Total number of recycled water use sites,
  - c. Address of the recycled water use sites and
  - d. Basin Plan name and number of hydrologic subarea underlying the recycled water use site.
2. The discharger shall submit an annual recycled water users compliance report containing the following information:
  - a. Recycled water use site summary report.
    - (1) Name of the reclaimed water reuse site
    - (2) Owner of the reclaimed water use facility
    - (3) Address of the reuse site

- (4) Name of the reclaimed water user supervisor
  - (5) Phone number of the on-site water user supervisor
  - (6) Mailing address of the recycled water use supervisor, if different from site address
  - (7) Volume of reclaimed water delivered to the reuse site on a monthly basis
- b. Recycled water user site inspections.
- Number of reclaimed water reuse site inspections conducted by discharger/producer staff and identification of sites inspected for the year.
- c. Recycled water user violations of the Recycled Water Agency's rules and regulations.
- The discharger shall identify all recycled water users known to be in violation of the Recycled Water Agency's rules and regulations for recycled water users. The report shall include a description of the noncompliance and its cause, including the period of non-compliance, and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

**F. BAHIA STORAGE POND**

The discharger shall record monthly inflows of recycled water, potable water, and groundwater filter backwash discharged to the Bahia storage pond. The discharger shall record monthly outflows of Bahia pond water to each approved use site. The blended quality of water discharged to the Bahia pond shall be computed on a quarterly basis in accordance with recorded flows of recycled water, potable water, and groundwater filter backwash water discharged to the pond for the following constituents: total dissolved solids, chloride, sulfate, manganese, percent sodium, nitrate, boron, iron, fluoride, and methylene blue active substances. Results and values used to calculate the results, shall be reported with the monthly monitoring report covering the period in which testing was performed.

**G. PACIFIC GOLF COURSE BRINE INTERCEPTION AND DISPOSAL FACILITIES**

Flows directed from the PGC leachate collection system to the brine storage pond shall be recorded monthly and reported semiannually. Brine pond water quality shall be monitored prior to the initiation of any discharge of pond water for irrigation purposes at the PGC for the following constituents: total dissolved solids, chloride, sulfate, manganese, percent sodium, nitrate, boron, iron,



fluoride, and methylene blue active substances. Results shall be reported with the monthly monitoring report covering the period in which testing was performed.

#### H. RAINFALL RUNOFF

During the months of October through March of each year, rainfall runoff shall be sampled in the drainage channels exiting the PGC on the eastern boundary. These sampling points shall include the brine collection system and the low flow detention system. Rainfall runoff shall be monitored at the frequency shown and reported at monthly intervals:

CONSTITUENT	UNIT	TYPE OF SAMPLE	SAMPLING FREQUENCY	REPORTING FREQUENCY
Total Dissolved Solids	mg/L	Grab	Weekly*	Monthly
Nitrate (as NO <sub>3</sub> )	mg/L	Grab	Weekly*	Monthly

\*Only when rainfall runoff from the Pacific Golf Club occurs during the months of October-March.

#### I. GROUND WATER FILTER BACKWASH

The following shall constitute the filter backwash monitoring program:

CONSTITUENT	UNIT	TYPE OF SAMPLE	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flowrate	Gallons/Day	Continuous	Continuous	Quarterly
Biochemical Oxygen Demand (BOD <sub>5</sub> @ 20°C)	mg/L	Composite	Quarterly	Quarterly
Total Suspended Solids	mg/L	Composite	Quarterly	Quarterly
Volatile Suspended Solids	mg/L	Composite	Quarterly	Quarterly
Total Dissolved Solids	mg/L	Composite	Quarterly	Quarterly
Percent Sodium	%	Composite	Quarterly	Quarterly
Fluoride	mg/L	Composite	Quarterly	Quarterly
Boron	mg/L	Composite	Quarterly	Quarterly
Nitrate (as N)	mg/L	Composite	Quarterly	Quarterly
Phosphate (as P)	mg/L	Composite	Quarterly	Quarterly
Iron	mg/L	Composite	Quarterly	Quarterly
Manganese	mg/L	Composite	Quarterly	Quarterly
Settleable Solids	mg/L	Composite	Quarterly	Quarterly

**J. GROUND WATERS**

The following shall constitute the Municipal Golf Course ground water monitoring program for the City of San Clemente. Representative samples of ground water from the City of San Clemente well Nos. 6 (State Well No. 09S/07W-10H01) and 7 (State Well No. 09S/07W-11H01) shall be collected and monitored as specified below:

CONSTITUENT	UNIT	TYPE OF SAMPLE	SAMPLING FREQUENCY	REPORTING FREQUENCY
Total Dissolved Solids	mg/L	Composite	Semiannually	Semiannually
Percent Sodium	%	Composite	Semiannually	Semiannually
Fluoride	mg/L	Composite	Semiannually	Semiannually
Boron	mg/L	Composite	Semiannually	Semiannually
Manganese	mg/L	Composite	Semiannually	Semiannually

**K. POTABLE SUPPLY WATER**

The potable water supplied to the service area of the City of San Clemente Water Reclamation Plant shall be analyzed for concentrations of total dissolved solids (mg/L), chloride (mg/L), and sulfate (mg/L) at least semiannually with the results of the latest analysis reported monthly.

**L. REPORT SCHEDULE**

Monitoring reports shall be submitted to the Executive Officer in accordance with the following schedule:

<u>Reporting Frequency</u>	<u>Report Period</u>	<u>Report Due</u>
Monthly	January, February, March, April, May, June, July, August, September, October, November, December	By the 1 <sup>st</sup> day of the second month following the month of sampling
Quarterly	January - March April - June July - September October - December	May 1 <sup>st</sup> August 1 <sup>st</sup> November 1 <sup>st</sup> February 1 <sup>st</sup>
Semiannually	January-June July-December	August 1 <sup>st</sup> February 1 <sup>st</sup>


Annually

January-December

February 1<sup>st</sup>

**Monitoring reports shall be submitted to:**

ATTN: POTW Compliance Unit  
California Regional Water Quality Control Board  
San Diego Region  
9174 Sky Park Court, Suite 100  
San Diego, CA 92123

Ordered by:   
JOHN H. ROBERTUS  
Executive Officer

Date: August 13, 2003