



# California Regional Water Quality Control Board San Diego Region



Linda S. Adams  
Secretary for  
Environmental Protection

Over 50 Years Serving San Diego, Orange, and Riverside Counties  
Recipient of the 2004 Environmental Award for Outstanding Achievement from USEPA

Arnold Schwarzenegger  
Governor

9174 Sky Park Court, Suite 100, San Diego, California 92123-4353  
(858) 467-2952 • Fax (858) 571-6972  
[http:// www.waterboards.ca.gov/sandiego](http://www.waterboards.ca.gov/sandiego)

## ORDER NO. R9-2010-0032

### WASTE DISCHARGE REQUIREMENTS AND MASTER RECLAMATION PERMIT FOR THE CITY OF ESCONDIDO, HALE AVENUE RESOURCE RECOVERY FACILITY

The City of Escondido is subject to waste discharge requirements as set forth in this Order:

**Table 1. Discharger Information**

<b>Discharger</b>	City of Escondido
<b>Name of Facility</b>	Hale Avenue Resource Recovery Facility (HARRF)
<b>Facility Address</b>	1521 S. Hale Avenue
	Escondido, CA 92029
	San Diego County

The discharge by the City of Escondido from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

**Table 2. Discharge Location**

Discharge Point	Effluent Description	Hydrologic Area of Discharge
Recycled Water Service Area	Disinfected Tertiary Recycled Water	Escondido (HSA 904.62), Del Dios (HSA 905.21), Felicita (HSA 905.23), eastern 2,100 acres of Richland (HSA 904.52)

**Table 3. Administrative Information**

This Order was adopted by the California Regional Water Quality Control Board, San Diego Region and is effective on:	July 14, 2010
--	---------------

I, David W. Gibson, 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, San Diego Region, on July 14, 2010.

Executive Officer **David W. Gibson**

### Table of Contents

I. Facility Information ..... 4  
II. Findings ..... 5  
III. Discharge Prohibitions..... 8  
IV. Effluent Limitations and Discharge Specifications ..... 9  
    A. Effluent Limitations – Discharge Point Recycled Water Service ..... 9  
V. Provisions ..... 11  
    A. Standard Provisions..... 11  
    B. Monitoring and Reporting Program (MRP) Requirements ..... 16  
    C. Special Provisions..... 16  
        1. Facility Design and Operation Specifications..... 16  
        2. Reclamation Specifications..... 18  
        3. Notifications ..... 20

### List of Tables

Table 1. Discharger Information ..... 1  
Table 2. Discharge Location..... 1  
Table 3. Administrative Information ..... 1  
Table 4. Facility Information ..... 4  
Table 5. Basin Plan Beneficial Uses..... 6  
Table 6. Effluent Limitations ..... 9

**List of Attachments**

Attachment A – Map .....A-1  
Attachment B – Flow Schematic.....B-1  
Attachment C – Monitoring and Reporting Program .....C-1  
Attachment D – Information Sheet.....D-1  
Attachment E – Rules and Regulations for Recycled Water Use .....E-1

## I. FACILITY INFORMATION

The following Discharger is subject to waste discharge requirements as set forth in this Order:

**Table 4. Facility Information**

<b>Discharger</b>	City of Escondido
<b>Name of Facility</b>	Hale Avenue Resource Recovery Facility (HARRF)
<b>Facility Address</b>	1521 S. Hale Avenue
	Escondido, CA 92029
	San Diego County
<b>Facility Contact, Title, and Phone</b>	John Burcham, Deputy Utilities Manager (760) 839-6273
<b>Mailing Address</b>	1521 S. Hale Avenue, Escondido, CA 92029
<b>Type of Facility</b>	Domestic/Municipal Wastewater Recycling
<b>Facility Design Flow</b>	9 million gallons per day (recycled portion)

## II. FINDINGS

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

**A. Background.** The City of Escondido (hereinafter Discharger) is currently discharging recycled water pursuant to Order No. 93-70 and Addendum No. 1 thereto. The Discharger submitted a Report of Waste Discharge, dated January 30, 2003, and applied for revised waste discharge requirements to discharge up to 9 million gallons per day (mgd) of disinfected tertiary treated wastewater from the Hale Avenue Resource Recovery Facility (hereinafter Facility). The application was deemed complete on January 29, 2010.

For the purposes of this Order, references to the “discharger” in applicable state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

**B. Waste Description.** The Facility treats residential, commercial, and industrial wastewater from the City of Escondido, and a portion of the community of Rancho Bernardo within the City of San Diego. The discharge of wastewater could affect the quality of the waters of the state.

**C. Facility Description.** The Discharger owns and operates the domestic and municipal wastewater recycling facility. Primary and secondary treatment occurs through mechanically cleaned bar screens, cyclonic grit chambers, primary clarifiers, fixed fine-bubble aeration basins, and secondary clarifiers. Associated solids handling occurs through dissolved air flotation thickeners, primary and secondary anaerobic digesters, centrifuge dewatering units, and an odor control system. Tertiary treatment occurs through chemical coagulation and flocculation, monomedia continuous backwash upflow filtration, and ultraviolet disinfection and/or chlorination. Screened solids are trucked to a landfill and dewatered sludge is trucked offsite for land application. Recycled water that is not reused will be dechlorinated as needed and discharged to the San Elijo Ocean Outfall. The discharge from the Facility to San Elijo Ocean Outfall is separately regulated under Order No. R9-2005-0101 (NPDES CA0107981). Attachment A provides a map of the area around the facility. Attachment B provides a flow schematic of the facility.

**D. Legal Authorities.** This Order is issued pursuant to sections 13263 and 13523 of the California Water Code. This Order serves as Waste Discharge Requirements (WDRs) and a Master Reclamation Permit pursuant to Article 4, Chapter 4, Division 7 of the Water Code.

**E. Background and Rationale for Requirements.** The San Diego Water Board developed the requirements in this Order based on information submitted as part of the Report of Waste Discharge, through monitoring and reporting programs, and other available information. The Information Sheet (Attachment D), which contains background information and rationale for Order requirements, is hereby incorporated

into this Order and constitutes part of the Findings for this Order. Attachments A through E are also incorporated into this Order.

- F. California Environmental Quality Act.** This project involves requirements for existing waste treatment facilities. As such, this project is categorically exempt from the requirements of the California Environmental Quality Act (CEQA) as provided by Section 15301, and in compliance with Section 15300.2, of California Code of Regulations Title 14. In addition the Discharger certified a final Environmental Impact Report for this project in June 1992 in accordance with the CEQA (Public Resources Code section 21000, et seq.). The project identified no significant groundwater impact.
- G. Technology-based Effluent Limitations.** The discharge from the Facility to San Elijo Ocean Outfall is separately regulated under Order No. R9-2005-0101 (NPDES CA0107981). The National Pollutant Discharge Elimination System (NPDES) permit includes the minimum federal technology-based requirements.
- H. Water Quality-Based Effluent Limitations.** Section 13263 of the Water Code requires that waste discharge requirements implement the water quality control plans that have been adopted, taking into consideration the beneficial uses to be protected and the water quality objectives reasonably required for that purpose.
- I. Health Based Effluent Limitations.** California Code of Regulations (CCR) Title 22 Division 4, Chapter 3 establishes water recycling criteria. The recycled water will meet the CCR Title 22 section 60301.230 definition for “disinfected tertiary recycled water,” which is suitable for all uses of recycled water, as described in CCR Title 22 sections 60304-60307.
- J. Water Quality Control Plans.** The San Diego Water Board adopted a *Water Quality Control Plan for the San Diego Basin* (hereinafter Basin Plan) on September 8, 1994 that 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, the Basin Plan implements State Water Resources Control Board (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. Beneficial uses apply to recycled water service areas in the Escondido hydrologic subarea (HSA) 904.62 of Escondido hydrologic area (HA) 904.6, and the eastern approximately 2,100 acres of Richland HSA 904.52 of San Marcos HA 904.5, each of Carlsbad hydrologic unit (HU) 904; and Del Dios HSA 905.21 and Felicita HSA 905.23, each of Hodges HA 905.2 of San Dieguito HU 905. The beneficial uses are municipal and domestic supply, agricultural supply, and industrial service supply.

**Table 5. Basin Plan Beneficial Uses**

Discharge Point	Receiving Water Name	Beneficial Use(s)
Recycled Water Service Area	Escondido (904.62), Del Dios (905.21), Felicita (905.23), and the eastern 2,100 acres of Richland (904.52)	Municipal and domestic water supply (MUN), agricultural supply (AGR), and industrial service supply (IND).

Requirements of this Order implement the Basin Plan.

- K. Recycled Water Policy.** The State Water Board established the Recycled Water Policy in Resolution No. 2009-0011. The Recycled Water Policy establishes criteria for recycled water projects and waste discharge requirements. The intent of the Policy is to increase recycled water use, streamline regulation for appropriate projects, and manage salt and nutrients on a basin-wide approach. This Order is consistent with the intent and requirements of the Recycled Water Policy.
- L. 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. The San Diego Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Information Sheet, the discharge described in this Order is consistent with State Water Board Resolution No. 68-16.
- M. Monitoring and Reporting.** Water Code sections 13267 authorizes the San Diego Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (Attachment C) establishes monitoring and reporting requirements to implement state requirements. Additional information is provided in the Information Sheet (Attachment D)
- N. Standard and Special Provisions.** Standard Provisions apply to all WDRs. The standard provisions contain language the San Diego Water Board finds necessary to ensure the Order is enforced, the facility is designed and operated for the protection of human health, records are maintained, and changes are reported. The Discharger must comply with all standard provisions.
- O. Biosolids Treatment, Transport, and Disposal.** The biosolids requirements for handling, treatment, use, management, and disposal of sludge and solids derived from wastewater treatment at the Facility are separately regulated under Order No. R9-2005-0101 (NPDES CA0107981).
- P. Notification of Interested Persons.** The San Diego Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements as the Master Reclamation Permit in this Order for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Information Sheet of this Order.
- Q. Consideration of Public Comment.** The San Diego Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Information Sheet of this Order.

THEREFORE, IT IS HEREBY ORDERED, that Order No. 93-70 is 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 Water Code (commencing with section 13000) and regulations adopted thereunder, the Discharger shall comply with the requirements in this Order.

### **III. DISCHARGE PROHIBITIONS**

- A.** Discharge of waste, other than incidental runoff, to lands which have not been specifically described in the Order, and for which valid waste discharge requirements and *Rules and Regulations for Recycled Water Users* are not in force are prohibited.
- B.** 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 the San Diego Water Board.
- C.** The treatment, storage, or disposal of waste in a manner that creates a pollution, contamination or nuisance, as defined by Water Code section 13050, is prohibited.
- D.** Total recycled water effluent flow from the tertiary treatment process at the Facility in excess of 9.0 mgd is prohibited unless authorized by Order No. R9-2005-0101 (NPDES CA0107981) including revisions thereto.

#### IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

##### A. Effluent Limitations – Discharge Point Recycled Water Service

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point- Recycled Water Service, with compliance measured at Monitoring Locations RWS-001, RWS-002, RWS-003, and RWS-004 as described in the attached MRP.

##### 1. Effluent Limitations

**Table 6. Effluent Limitations**

Constituent	12-Month Average <sup>1</sup> (milligrams per Liter (mg/L) or as noted)
Chlorine Residual	See Specification A.2.a
Chlorine-Contact Time (CT)	See Specification A.2.a
Total Coliform Bacteria <sup>c</sup>	See Specification A.2.b
Turbidity (TURB)	See Specification A.2.c
Total Dissolved Solids (TDS)	1,000
Chloride (Cl)	300
Sulfate (SO <sub>4</sub> )	350
Percent Sodium (% Na)	60%
Iron (Fe)	0.50
Manganese (Mn)	0.20
Methylene Blue- Activated Substances (MBAS)	0.5
Boron (B)	0.75
Odor	N/A
Color	15 units
Fluoride (F)	2.0
Aluminum	1
Arsenic	0.05
Antimony	0.006
Asbestos	7 million fibers per liter
Barium	1
Beryllium	0.004
Cadmium	0.005
Cyanide	0.2
Mercury	0.002
Nickel	0.1
Perchlorate	0.006
Selenium	0.05

Constituent	12-Month Average <sup>1</sup> (milligrams per Liter (mg/L) or as noted)
Thallium	0.002
<sup>1</sup> The 12-month average effluent limitation shall apply to the arithmetic mean of the results of all samples collected during any 12 consecutive calendar month period.	

**2. Title 22 Specifications**

Recycled water effluent from the Facility shall meet the definition of “disinfected tertiary recycled water” in CCR Title 22 section 60301.230 and “filtered wastewater” in section 60301.320. These definitions are incorporated by reference, prospective including future changes to the incorporated provisions as the changes take effect.

- a. The chlorine disinfection process must provide a chlorine contact time (CT; the product of total chlorine residual and modal contact time 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.
- b. The median concentration of total coliform bacteria measured in the disinfected recycled water effluent from the Facility shall 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 shall not exceed a MPN of 23 per 100 milliliters in more than one sample in any 30-day period. No sample shall exceed a MPN of 240 total coliform bacteria per 100 milliliters.
- c. Turbidity measurement of the recycled water effluent from the Facility shall not exceed a daily average value of 2 NTU, 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.

## V. PROVISIONS

### A. Standard Provisions

The Discharger shall comply with all following Standard Provisions:

1. The San Diego Water Board may initiate enforcement action against the Discharger, which may result in the termination of the recycled water discharge, 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 Water Code section 13050.
2. The Discharger must comply with all conditions of this Order. Any noncompliance with this Order constitutes a violation of the 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. The Discharger shall allow the San Diego Water 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 Discharger'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 Water Code, any substances or parameters at any location.
4. The Water Code provides that any person who intentionally or negligently discharges waste in violation of any Order issued, reissued, or amended by the San Diego Water Board shall be liable civilly in accordance with Water Code section 13350.
5. The 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 in accordance with Water Code section 13268.

- 6.** The Discharger shall report any noncompliance that may endanger health or the environment. Pursuant to section 5411.5 of the California Health and Safety Code, any sewage overflow or spill shall be immediately reported to the Director of Environmental Health, County of San Diego. In addition, any such information shall be provided orally to the San Diego Water Board within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the Discharger 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 San Diego Water Board 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 San Diego Water Board within 24 hours:

  - a.** Any bypass from any portion of the treatment facility.
  - b.** Any discharge of treated or untreated wastewater resulting from sewer line breaks, obstruction, surcharge, or any other circumstances.
  - c.** Any treatment plant upset which causes the discharge specifications of this Order to be exceeded;
  - d.** Failure of disinfection system; and
  - e.** Effluent total coliform bacteria greater than 240 MPN/100 mL.
- 7.** The Discharger shall report all overflow events that occur at the Facility. For purposes of this reporting requirement, an overflow event is defined as a discharge of treated or untreated wastewater at a location onsite or other lands owned by the Discharger not authorized by waste discharge requirements and/or 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 those events subject to regulation under the State Board Order No. 2006-0003-DWQ and San Diego Water Board Order No. R9-2007-0005. Overflows of the kind identified under this provision shall be reported to the San Diego Water Board with the monthly monitoring report in which the overflow occurs.
- 8.** 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 the San Diego Water Board in accordance with reporting requirements in Standard Provision F.6.

- 9.** The incidental discharge of recycled water to waters of the State is not a violation of these requirements if the incidental discharge does not unreasonably affect the beneficial uses of the water, and does not result in the receiving water exceeding an applicable water quality objective.
- 10.** If a need for a discharge bypass is known in advance, the Discharger 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, such notice shall be submitted at least 10 days prior to the date of the bypass.
- 11.** 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 noncompliance.
- 12.** In an enforcement action, it shall not be a defense for the Discharger 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 Discharger 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.
- 13.** Except for a discharge which is in compliance with this Order, 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 San Diego in accordance with California Health and Safety Code section 5411.5 and the California Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan adopted pursuant to Government Code Title 2, Division 1, Chapter 7, Article 3.7 (commencing with section 8574.17), and immediately notify the State Board or the appropriate San Diego Water 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 Discharger is in violation of a Basin Plan prohibition.
- 14.** Except for a discharge which is in compliance with this Order, 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 California Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State oil spill contingency plan adopted pursuant to Government Code Title 2, Division 1, Chapter 7, Article 3.7 (commencing with section 8574.1). 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 CWA section 311, or the discharge is in violation of a Basin Plan prohibition.

- 15.** A copy of this Order shall be maintained at the Facility and shall be available to operating personnel at all times.
- 16.** The Discharger 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. Records may be maintained electronically. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the San Diego Water Board.
- 17.** The Discharger shall furnish to the San Diego Water Board, within a reasonable time, any information which the San Diego Water Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The Discharger shall also furnish to the San Diego Water Board, upon request, copies of records required to be kept by this Order.
- 18.** 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 Discharger for the modification, revocation, reissuance, or termination of this Order, or notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

- 19.** The Discharger 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.
- 20.** This Order is not transferable to any person except after notice to the San Diego Water Board. The Discharger 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 Discharger containing a specific date for the transfer of this Order's responsibility and coverage between the current Discharger and the new discharger. This agreement shall include an acknowledgement that the existing Discharger is liable for violations up to the transfer date and that the new discharger is liable from the transfer date on. The San Diego Water Board may require modification or revocation and reissuance of this Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the Water Code.
- 21.** Where the Discharger 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 San Diego Water Board, it shall promptly submit such facts or information.
- 22.** All applications, reports, or information submitted to the San Diego Water Board shall be signed and certified as follows:
  - a.** The Report of Waste Discharge shall be signed as follows:
    - i.** For a corporation - by a principal Executive Officer of at least the level of Vice-President.
    - ii.** For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.
    - iii.** 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 San Diego Water Board 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:

- i. The authorization is made in writing by a person described in paragraph (a) of this provision,
  - ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, and
  - iii. The written authorization is submitted to the San Diego Water Board.
- 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."

23. The Discharger shall submit reports required under this Order or other information required by the San Diego Water Board 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

## **B. Monitoring and Reporting Program (MRP) Requirements**

The Discharger shall comply with the MRP and future revisions thereto, in Attachment C of this Order.

## **C. Special Provisions**

### **1. Facility Design and Operation Specifications**

- a. The Discharger 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 Discharger 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.

- b.** Prior to any changes in the treatment facilities, the Discharger shall notify the San Diego Water Board, and, for changes that may affect the discharge including increasing the flow from the UV disinfection system to greater than 4.0 mgd, prepare an engineering report conforming to CCR Title 22 section 60323. The engineering report shall be submitted to the CDPH, County DEH, and San Diego Water Board for review and response.
- c.** Disinfection of recycled water shall comply with all requirements of CCR Title 22, Division 4. Disinfection may be accomplished by either:

  - i.** 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 where the chlorine residual is sampled at the same point determined to meet the modal chlorine contact time requirement; or
  - ii.** 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.
- d.** Within 180 days of adoption of the Order, the Discharger must submit to the San Diego Water Board a certification that the operations manual includes the following information. A copy of the facility operations manual shall be maintained at the Facility and shall be available to operation personnel and San Diego Water Board staff 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:

  - i.** Alarm set points for secondary turbidity, tertiary turbidity, and UV transmittance.
  - ii.** Levels at which flow will be diverted for secondary turbidity, tertiary turbidity, and chlorine residual/UV transmittance.
  - iii.** When to divert flow for high daily and weekly median total coliform.
  - iv.** When the authorities (CDPH, County DEH, San Diego Water Board) will be notified of a diversion.
  - v.** Names and numbers of those authorities to be notified in case of a diversion.
  - vi.** Frequency of calibration for turbidimeters and chlorine residual analyzers.

- e. The Facility shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to CCR Title 23, Chapter 3, Subchapter 14,
- f. All waste treatment, storage and purveyance facilities shall be protected against 100-year peak stream flows as defined by the San Diego County flood control agency.
- g. 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.

## **2. Recycled Water Use Provisions**

- a. Within 180 days of adoption of the Order, the Discharger must submit to the San Diego Water Board, the CDPH, and the County of San Diego Department of Environmental Health (County DEH) a certification that its Rules and Regulations for Recycled Water Users are compliant with this Order. The certification shall include any update to the Rules and Regulations. The updated Rules and Regulations shall, at a minimum, include:
  - i. The requirements that are contained in Attachment E of this Order; and
  - ii. A program to conduct inspections of recycled water reuse sites to determine the status of compliance with the Discharger's approved Rules and Regulations.
- b. Within 1 year of adoption of the Order, the Discharger must submit to the CDPH and the County DEH a certification that a Master Plan covering multiple reuse sites and/or any individual Plans and Specifications reports are compliant with this Order. The certification shall include any update to plans and specifications. The report shall include a detailed description of each reuse site identifying all of the information below:
  - i. A copy of the long-term agreement between the Discharger and the user for the use of recycled water on the site.
  - ii. 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.
  - iii. The average number of persons estimated to be served at each use area on a daily basis.
  - iv. 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.

- v.** The person or persons responsible for operation of the recycled water system at each use area.
- vi.** The specific use to be made of the recycled water at each use area.
- vii.** The methods to be used by the Discharger 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.
- viii.** Plans and specifications shall include the following and shall be submitted to the CDPH and County DEH for approval:
  - (a)** Proposed piping system to be used,
  - (b)** Pipe locations of both the recycled and potable systems,
  - (c)** Type and location of the outlets and plumbing fixtures that will be accessible to the public,
  - (d)** The methods and devices to be used to prevent backflow of recycled water into the public water system,
  - (e)** Plan notes relating to recycled water specific installation and use requirements.
- c.** Prior to providing recycled water to a new use site, the Discharger shall do the following:
  - i.** Submit for review and approval a plans and specifications report that either certifies (by the Discharger) that the project conforms with what is described in the master plan or information to supplement what is described in the master plan to the CDPH and the County DEH. A certification report shall document that all criteria described in Reclamation Specification 2.b above has been submitted to and approved by the CDPH.
  - ii.** Prior to the initial operation of the dual-plumbed recycled water system and annually thereafter, the Discharger shall ensure that the dual plumbed system within each facility and use area is inspected for possible cross connections with the potable water system. The recycled water system shall also be tested for possible cross connections at least once every four years. The testing shall be conducted in accordance with the method described in the report submitted pursuant to section 60314. The inspections and the testing shall be performed by a cross connection control specialist certified by the California-Nevada section of the American Water Works Association or an organization with equivalent certification requirements. The County DEH shall be notified 30 days prior to any cross connection test. A written report documenting the

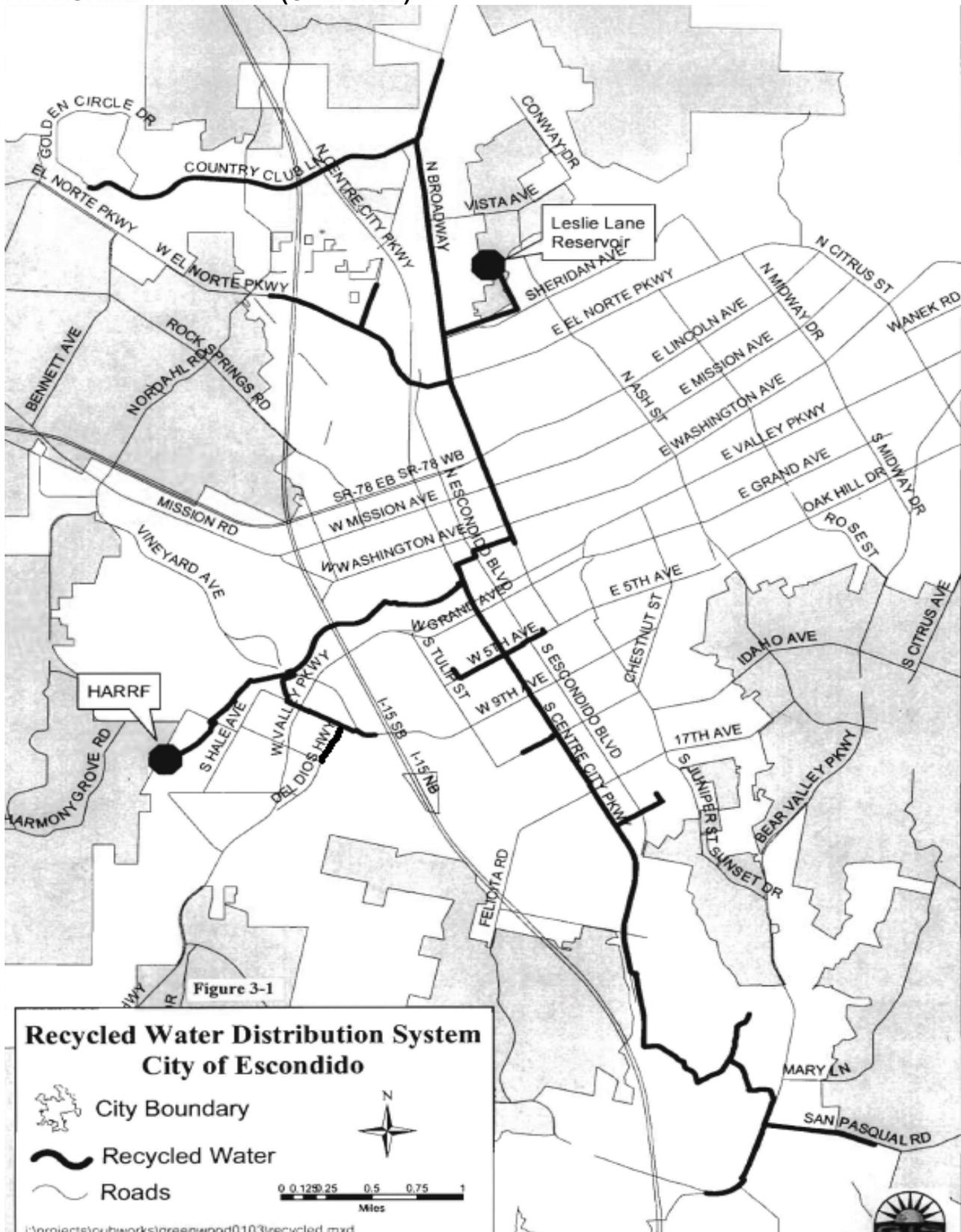
result of the inspection or testing for the prior year shall be submitted to the County DEH within 30 days following completion of the inspection or testing.

- d.** The Discharger shall do the following for all reuse sites:
  - i.** Enforce recycled water rules and regulations;
  - ii.** Conduct recycled water reuse site inspections in accordance with the programs submitted in compliance with Reclamation Specifications 2.a and 2.c of this Order;
  - iii.** Notify the CDPH 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
  - iv.** Maintain a current list of all on-site recycled water supervisors.
- e.** The Discharger shall make available all relevant data needed for the purpose of completing salt and nutrient management plans for hydrologic basins described in Finding J.

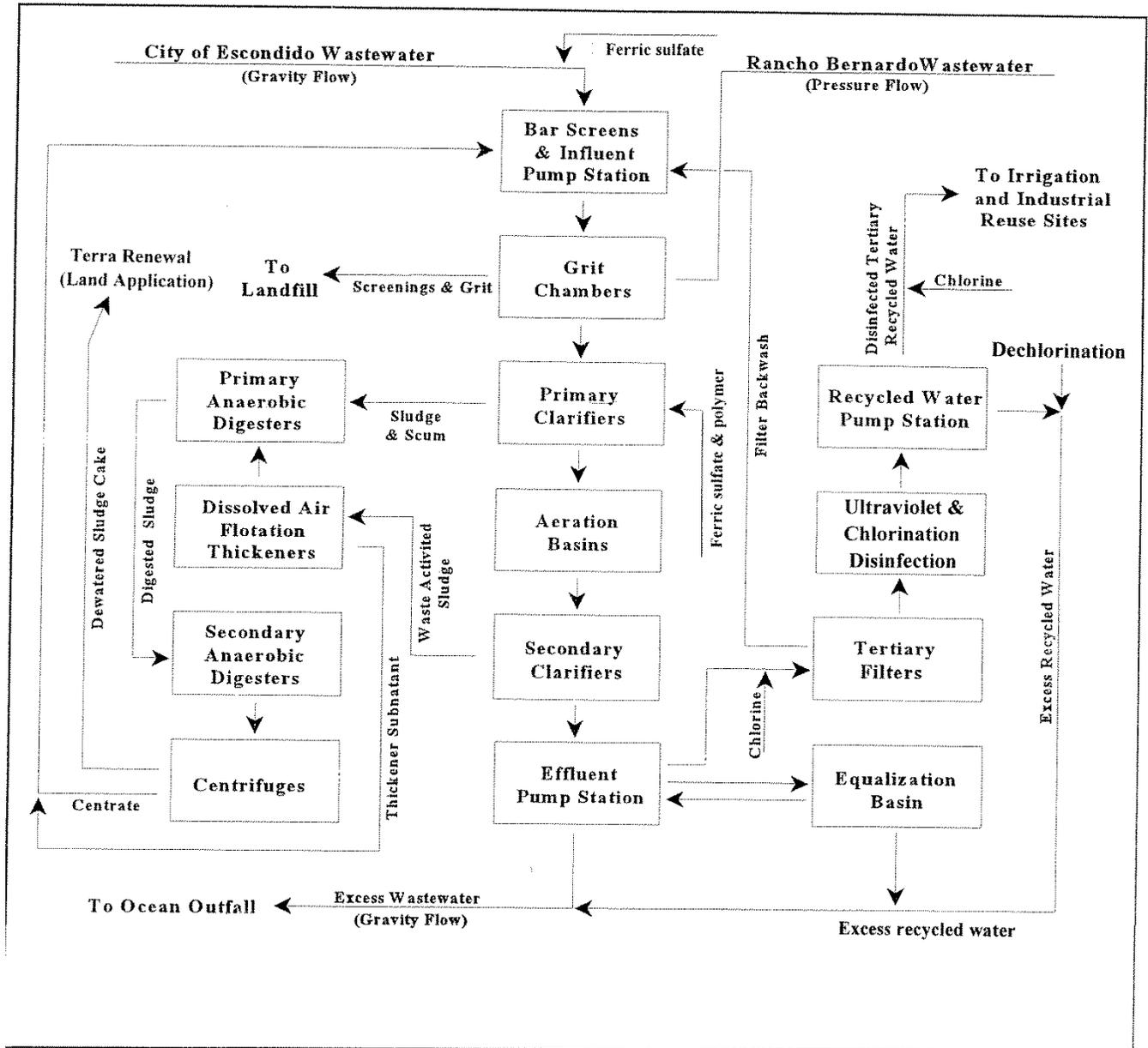
### **3. Notifications**

- a.** 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 Discharger from liability under federal, state or local laws, nor create a vested right for the Discharger to continue the waste discharge.
- b.** These requirements have not been officially reviewed by the USEPA and are not issued pursuant to CWA section 402.
- c.** 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.
- d.** This Order becomes effective on the date of adoption by the San Diego Water Board.

**ATTACHMENT A – MAP (UPDATED)**



**ATTACHMENT B – FLOW SCHEMATIC (UPDATED)**



Schematic of HARRF Treatment Processes

## ATTACHMENT C – MONITORING AND REPORTING PROGRAM

### Table of Contents

I.	General Monitoring Provisions.....	C-2
II.	Monitoring Locations .....	C-5
III.	Effluent Monitoring Requirements .....	C-6
	A. Monitoring Location - Recycled Water Service .....	C-6
IV.	Receiving Water Monitoring Requirements – Surface Water and Groundwater .....	C-7
	A. Monitoring Location - RGW-001, RGW-002, RGW-003, and RGW-004 .....	C-7
V.	Reporting Requirements.....	C-8
	A. Self Monitoring Reports (SMRs) .....	C-8
	B. Quarterly Recycled Water Summary.....	C-10
	C. Annual Recycled Water Summary .....	C-10

### List of Tables

Table C-1.	Monitoring Station Locations .....	C-5
Table C-2.	Effluent Monitoring .....	C-6
Table C-3.	Receiving Water Monitoring Requirements .....	C-7
Table C-4.	Monitoring Periods and Reporting Schedule .....	C-8

## **ATTACHMENT C – MONITORING AND REPORTING PROGRAM (MRP)**

Water Code Sections 13267 and 13383 authorize the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the State regulations.

### **I. GENERAL MONITORING PROVISIONS**

- A.** 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 (MRP) 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 notifying, and receiving approval from the San Diego Water Board for the proposed monitoring location change.
- B.** 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 is 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.
- C.** Monitoring must be conducted according to United States Environmental Protection Agency (USEPA) test procedures approved under 40, Code of Federal Regulations (CFR), Part 136, "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act" as amended, unless other test procedures have been specified in this MRP.
- D.** Unless otherwise permitted by the San Diego Water Board, all analyses shall be conducted at a laboratory certified to perform such analyses by the California Department of Public Health (CDPH). The Discharger must use a laboratory capable of producing and providing quality assurance/quality control (QA/QC) records for San Diego Water Board review. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports submitted to the San Diego Water Board.
- E.** Any report presenting new analytical data is required to include the complete laboratory analytical report(s). The laboratory analytical report must be signed by the laboratory director and contain:
  - 1.** A complete sample analytical report.
  - 2.** A complete laboratory quality assurance/quality control (QA/QC) report.
  - 3.** A discussion of the QA/QC data.

4. A transmittal letter that shall indicate whether or not all the analytical work was supervised by the director of the laboratory, and contain the following statement, "All analyses were conducted at a laboratory certified for such analyses by the CDPH in accordance with current USEPA procedures."
- F. Specific methods of analysis must be identified in the Discharger's monitoring reports. If the Discharger proposes to use methods or test procedures other than those included in the most current version of 40 CFR 136, "*Guidelines Establishing Test Procedures for the Analysis of Pollutants; Procedures for Detection and Quantification*", the exact methodology must be submitted for review and must be approved by the San Diego Water Board prior to use.
- G. Monitoring results must be reported on discharge monitoring report forms approved by the San Diego Water Board.
- H. If the Discharger monitors any pollutants more frequently than required by this MRP, using test procedures approved under 40 CFR, Part 136, or as specified in this MRP, 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.
- I. 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 MRP, and records of all data used to complete the application for this MRP. 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 required by the San Diego Water Board. Records of monitoring information shall include the following:
  1. The date, exact place, and time of sampling or measurements.
  2. The individual(s) who performed the sampling or measurements.
  3. The date(s) analyses were performed.
  4. The individual(s) who performed the analyses.
  5. The analytical techniques or methods used.
  6. The results of such analyses.

- J.** 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.
- K.** The Discharger shall report all instances of noncompliance not reported under Standard Provision V.A.6 of Order No. R9-2010-0032 at the time monitoring reports are submitted. The reports shall contain the information described in Provision V.A.6.
- L.** The monitoring reports shall be signed by an authorized person as required by Standard Provision V.A.22 of Order No. R9-2010-0032.
- M.** 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, aliquot 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. Aliquot may be collected manually or automatically.
- N.** 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.
- O.** The Discharger shall identify all missing or non-valid monitoring or sampling results in monitoring reports submitted. All instances of missing or non-valid results must be accompanied by an explanation of their root cause and the steps the Discharger has or will take to prevent future instances. Missing or non-valid results may be considered violations of Order No. R9-2010-0032 that could result in enforcement action depending on the frequency of such instances and efforts by the Discharger to prevent such failures.

## 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 C-1. Monitoring Station Locations**

<b>Discharge Point Name</b>	<b>Monitoring Location Name</b>	<b>Monitoring Location Description (include Latitude and Longitude when available)</b>
Recycled Water Service Area	RWS-001	Final effluent prior to discharge to the recycled water distribution system
Recycled Water Service Area	RWS-002	CT test point for minimum chlorine residual and modal contact time based on peak dry weather design flow
Recycled Water Service Area	RWS-003	Ultraviolet dose monitoring point exiting the ultraviolet disinfection basin
Recycled Water Service Area	RWS-004	Turbidity monitoring point exiting the monomedia filtration basin
Receiving Groundwater	RGW-001	Kit Carson Park Well No. 7
Receiving Groundwater	RGW-002	Kit Carson Park Well No. 14
Receiving Groundwater	RGW-003	Kit Carson Park Well No. 15
Receiving Groundwater	RGW-004	1960 W. Mission Rd (33.1302341, -117.1201372)

### III. EFFLUENT MONITORING REQUIREMENTS

#### A. Monitoring Location - Recycled Water Service

1. The Discharger shall monitor the discharge to the recycled water service as follows:

**Table C-2. Effluent Monitoring RWS-001**

Parameter	Units	Sample Type	Minimum Sampling Frequency <sup>a,b</sup>
Flow Rate	mgd	Continuous	Continuous
Total Dissolved Solids (TDS)	mg/L	Composite	Quarterly
Chloride (Cl)	mg/L	Composite	Quarterly
Sulfate (SO <sub>4</sub> )	mg/L	Composite	Quarterly
Percent Sodium (% Na)	%	Composite	Quarterly
Nitrate (NO <sub>3</sub> )	mg/L	Composite	Quarterly
Total Nitrogen	mg/L	Composite	Quarterly
Iron (Fe)	mg/L	Composite	Quarterly
Manganese (Mn)	mg/L	Composite	Quarterly
Methylene Blue- Activated Substances (MBAS)	mg/L	Composite	Quarterly
Boron (B)	mg/L	Composite	Quarterly
Color	units	Composite	Quarterly
Fluoride (F)	mg/L	Composite	Quarterly
Aluminum	mg/L	Composite	Once every 5 years
Arsenic	mg/L	Composite	Once every 5 years
Antimony	mg/L	Composite	Once every 5 years
Asbestos	Million fibers per liter	Composite	Once every 5 years
Barium	mg/L	Composite	Once every 5 years
Beryllium	mg/L	Composite	Once every 5 years
Cadmium	mg/L	Composite	Once every 5 years
Cyanide	mg/L	Composite	Once every 5 years
Mercury	mg/L	Composite	Once every 5 years
Nickel	mg/L	Composite	Once every 5 years
Perchlorate	mg/L	Composite	Once every 5 years
Selenium	mg/L	Composite	Once every 5 years
Thallium	mg/L	Composite	Once every 5 years

a. The Recycled Water Agency shall increase the sampling frequency from weekly to daily, from quarterly to monthly, and from once every 5 years to annually for any constituent that exceeds the Discharge Specifications of the Order. The increased frequency of monitoring shall continue until the Recycled Water Agency achieves compliance with the Specification for three consecutive periods, at which point the Recycled Water Agency shall resume sampling at the specified frequency.

b. Weekly is defined as a calendar week (Sunday through Saturday). Monthly is defined as a calendar month. Quarterly is defined as a period of three consecutive calendar months beginning on January 1, April 1, July 1, or October 1. Annually is defined as a period of 12 consecutive calendar months beginning on January 1.

**Table C-3. Effluent Monitoring RWS-002**

Parameter	Units	Sample Type	Minimum Sampling Frequency <sup>a,b</sup>
Chlorine Residual	mg/L	Continuous	Continuous
Chlorine-Contact Time (CT)	mg-min/L	Calculated	Continuous
Total Coliform Bacteria <sup>c</sup>	MPN/100 mL	Grab	Daily when chlorination system operates
c. 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.			

**Table C-4. Effluent Monitoring RWS-003**

Parameter	Units	Sample Type	Minimum Sampling Frequency <sup>a,b</sup>
UV dose	mWs/cm <sup>2</sup>	Continuous	Continuous
Total Coliform Bacteria <sup>c</sup>	MPN/100 mL	Grab	Daily when UV system operates
c. 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.			

**Table C-5. Effluent Monitoring RWS-004**

Parameter	Units	Sample Type	Minimum Sampling Frequency <sup>a,b</sup>
Turbidity <sup>d</sup>	NTU	Continuous	Continuous
d. Effluent tertiary 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 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 turbidimeter 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 Recycled Water Agency shall report quarterly results of four-hour turbidity readings, average effluent turbidity (24-hours), 95 percentile effluent turbidity (24-hours), and daily maximum turbidity readings.			

**IV. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER**

**A. Monitoring Location - RGW-001, RGW-002, RGW-003, and RGW-004**

1. The Discharger shall monitor the receiving groundwater at Kit Carson Park Wells No. 7, No. 14, No. 15, and an additional well located at 1960 W. Mission Rd, Escondido, CA 92029 (33.1302341, -117.1201372) as follows:

**Table C-6. Receiving Water Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency
pH	pH units	Grab	Semiannually
Specific Conductance	umhos/cm	Grab	Semiannually
Total Dissolved Solids (TDS)	mg/L	Grab	Semiannually

Parameter	Units	Sample Type	Minimum Sampling Frequency
Chloride (Cl)	mg/L	Grab	Semiannually
Sulfate (SO <sub>4</sub> )	mg/L	Grab	Semiannually
Nitrate (NO <sub>3</sub> )	mg/L	Grab	Semiannually
Total Nitrogen	mg/L	Grab	Semiannually
Iron (Fe)	mg/L	Grab	Semiannually
Manganese (Mn)	mg/L	Grab	Semiannually
Boron (B)	mg/L	Grab	Semiannually
Fluoride (F)	mg/L	Grab	Semiannually
Sodium	mg/L	Grab	Semiannually
Calcium	mg/L	Grab	Semiannually
Potassium	mg/L	Grab	Semiannually
Magnesium	mg/L	Grab	Semiannually

**V. REPORTING REQUIREMENTS**

**A. Self Monitoring Reports (SMRs)**

1. At any time during the term of this permit, the State or San Diego 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 and IV. The Discharger shall submit quarterly SMRs including the results of all required monitoring using USEPA-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 C-7. Monitoring Periods and Reporting Schedule**

Sampling Frequency	Monitoring Period	SMR Due Date
Continuous	All	Submit with monthly SMR
Daily	8:00 AM through 7:59 AM	Submit with monthly SMR
Monthly	January, February, March, April, May, June, July, August, September, October, November, December	By the first day of the second month following sampling (ie. March 1 for January)

Quarterly	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
Semiannually	January 1 through June 30 July 1 through December 31	September 1 March 1
Annually	January 1 through December 31	March 1
5 years	5 year period	March 1

4. Reporting limits shall be lower than or equal to the effluent limitations. Constituents not detected below the method detection limit shall be reported as non-detect with the applicable value (i.e. ND<0.05 mg/L). Constituents detected between the laboratory reporting limit and method detection limit shall be reported as “estimated concentrations” or noted with appropriate laboratory flags.
5. Annual reports shall include a summary assessment of monitoring required by the NPDES permit. The discharger shall summarize detections of priority pollutants and exceedance of MCLs.
6. The Discharger shall submit SMRs 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. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.
  - 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. The Discharger shall include historical data in either tabular or graphical format for parameters in section IV of this MRP. The data shall be summarized to clearly indicate trends in Receiving Groundwater monitoring locations.
  - d. SMRs must be submitted to the San Diego Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

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

## **B. Quarterly Recycled Water Summary**

The discharger shall submit a quarterly recycled water use summary report containing the following:

1. Total number of reclaimed water use sites;
2. The locations of reclaimed water use sites including the names of the underlying hydrologic subareas;
3. Total volume of reclaimed water supplied to each use site for each month of the reporting period;
4. Total volume of reclaimed water supplied to all recycled water users for each month of the reporting period;
5. Site supervisor name and contact information for each use site;
6. Number of inspections conducted for each use site; and
7. Number of violations for each use site including description of the noncompliance and its cause, including the period of noncompliance, 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.

## **C. Annual Recycled Water Summary**

The Regional Board is developing a standardized electronic form to promote consistent review and enforcement of recycled water facilities as well as establish trends on recycled water production, delivery, and beneficial reuse throughout the San Diego Region. The Regional Board will provide the standard form in Microsoft Excel format in which the Recycled Water Agency shall provide information summarizing annual recycled water quantity, quality, and beneficial reuse. This electronic form shall be completed and submitted electronically by March 1 every year.

## ATTACHMENT D – INFORMATION SHEET

### Table of Contents

I.	Permit Information .....	D-2
II.	Facility Description .....	D-3
III.	Applicable Plans, Policies, and Regulations.....	D-5
IV.	Rationale For Effluent Limitations and Discharge Specifications.....	D-6
V.	Rationale for Monitoring and Reporting Requirements.....	D-9
VI.	Rationale for Provisions.....	D-9
VII.	Public Participation .....	D-10

### List of Tables

Table D-1.	Facility Information .....	D-2
Table D-2.	Historic Effluent Limitations and Monitoring Data.....	D-4
Table D-3.	Basin Plan Groundwater Water Quality Objectives .....	D-6
Table D-4.	Estimated Long-Term Concentrations of Iron and Manganese .....	D-6
Table D-5.	Summary of Final Effluent Limitations.....	D-7

**ATTACHMENT D – INFORMATION SHEET**

As described in section I of this Order, this Information 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 D-1. Facility Information**

<b>WDID</b>	9 000000592
<b>Discharger</b>	City of Escondido
<b>Name of Facility</b>	Hale Avenue Resource Recovery Facility, City of Escondido
<b>Facility Address</b>	1521 S. Hale Avenue
	Escondido, CA 92029
	San Diego
<b>Facility Contact, Title and Phone</b>	John Burcham, Deputy Utilities Manager (760) 839-6273
<b>Authorized Person to Sign and Submit Reports</b>	John Burcham, Deputy Utilities Manager (760) 839-6273
<b>Mailing Address</b>	SAME
<b>Billing Address</b>	SAME
<b>Type of Facility</b>	POTW
<b>Threat to Water Quality</b>	2
<b>Complexity</b>	B
<b>Reclamation Requirements</b>	Producer
<b>Facility Permitted Flow</b>	9 million gallons per day
<b>Facility Design Flow</b>	9 million gallons per day
<b>Receiving Water</b>	Eastern 2100 acres of Richland (HSA 904.52), Escondido (HSA 904.62), Del Dios (HSA 905.21), Felicita (HSA 905.23)
<b>Receiving Water Type</b>	Groundwater

**A.** The City of Escondido (hereinafter Discharger) is the owner and operator of the Hale Avenue Resource Recovery Facility (hereinafter Facility), a publicly owned treatment works (POTW).

For the purposes of this Order, references to the “discharger” in applicable state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

- B.** The Facility discharges disinfected tertiary recycled wastewater to the eastern approximately 2100 acres of Richland hydrologic subarea (HSA) 904.52 of San Marcos hydrologic area (HA) 904.5, and Escondido HSA 904.62 of Escondido HA 904.6, each of Carlsbad hydrologic unit (HU) 904; and Del Dios HSA 905.21 and Felicita HSA 905.23, each of Hodges HA 905.2 of San Dieguito HU 905, waters of the United States, and is currently regulated by Order No. 93-70 which was adopted on June 21, 1993 and Addendum No. 1 thereto adopted on March 10, 1999.
- C.** The Discharger filed a report of waste discharge and submitted an application for revision of its Waste Discharge Requirements (WDRs) on January 30, 2003. Supplemental information was received on September 30, 2005, January 20, 2010, and February 2, 2010. A site visit was conducted on March 24, 2010, to observe operations and collect additional data to develop permit limitations and conditions.

## II. FACILITY DESCRIPTION

The Facility provides 18 million gallons per day (mgd) secondary treatment capacity of residential, commercial and industrial wastewater generated within the City of Escondido, including 5.3 mgd capacity for wastewater from a portion of the community of Rancho Bernardo within the City of San Diego. The Facility has a tertiary treatment capacity of 9 mgd.

- A. Description of Wastewater and Biosolids Treatment or Controls.** Primary and secondary treatment occurs through mechanically cleaned bar screens, cyclonic grit chambers, primary clarifiers, fixed fine-bubble aeration basins, and secondary clarifiers. Associated solids handling occurs through dissolved air flotation thickeners, primary and secondary anaerobic digesters, centrifuge dewatering units, and odor control system. Tertiary treatment occurs through chemical coagulation and flocculation, monomedia continuous backwash upflow filtration, and ultraviolet disinfection and/or chlorination. Screened solids are trucked to a landfill and dewatered sludge is trucked offsite for land application. Excess recycled water that is not reused will be dechlorinated as needed and discharged to the San Elijo Ocean Outfall. The discharge from the Facility to San Elijo Ocean Outfall and biosolids treatment are separately regulated under Order No. R9-2005-0101 (NPDES CA0107981).
- B. Discharge Points and Receiving Waters.** All recycled water discharges from the Facility are located in the eastern approximately 2100 acres of Richland hydrologic subarea (HSA) 904.52 of San Marcos hydrologic area (HA) 904.5, and Escondido HSA 904.62 of Escondido HA 904.6, each of Carlsbad hydrologic unit (HU) 904; and Del Dios HSA 905.21 and Felicita HSA 905.23, each of Hodges HA 905.2 of San Dieguito HU 905. The Discharger constructed a recycled water distribution network to serve users within the City of Escondido and Rincon Del Diablo Water District (RDDWD). Recycled water is used primarily for industrial services including power generation that would not result in discharge to groundwater. Additional use, approximately 18 percent, is for landscape irrigation. Significant recycled water users are the San Diego Gas and Electric Palomar Energy Center, RDDWD, Kit Carson Park, Reidy Creek Golf Course, and Vineyard Golf Course.

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

Effluent Limitations/Discharge Specifications contained in the existing Order for discharges from the recycled water distribution system and representative monitoring data from the term of the previous Order are as follows:

**Table D-2. Historic Effluent Limitations and Monitoring Data**

Parameter	Units	Effluent Limitation			Monitoring Data From 01/2008 – To 12/2009
		12-month Average	30-day Average	Maximum Daily	12-month Average
Biochemical Oxygen Demand <sub>5</sub>	mg/L		30	45	7.3
Total Suspended Solids	mg/L		30	45	4.6
pH	pH units	Within the limits of 6.0 to 9.0 at all times.			7.7
Total Coliform	Organisms per 100 ml	The median number of coliform organisms shall not exceed 2.2 per 100 milliliters and the number of coliform organisms shall not exceed 23 per 100 milliliters in more than one sample within any 30-day period.			<2
Total Dissolved Solids (TDS)	mg/L	1,000		1,100	902
Chloride (Cl)	mg/L	300		330	201
Sulfate (SO <sub>4</sub> )	mg/L	350		400	227
Percent Sodium (% Na)	%	60		65	55.0
Nitrate (NO <sub>3</sub> as N)	mg/L				8.66
Iron (Fe)	mg/L	0.3		0.4	0.078
Manganese (Mn)	mg/L	0.05		0.06	0.06
Methylene Blue-Activated Substances (MBAS)	mg/L				0.22
Boron (B)	mg/L	0.8			0.38
Odor	Units				--
Turbidity (NTU)	NTU	Not to exceed an average operating turbidity of 2 turbidity units. Not to exceed 5 turbidity units more than 5 percent of the time during any 24-hour period.			1.0
Color	Units				--
Fluoride (F)	mg/L	2.0			0.71

**D. Compliance Summary.** The Discharger has repeatedly violated the daily maximum and 12-month average specifications for manganese. Manganese is a naturally occurring mineral that varies in concentration depending on the imported water supply source for the Discharger.

**E. Planned Changes.** The Discharger has modified the design and operation of the ultraviolet disinfection system to maximize water recycling. The California Department

of Public Health has reviewed the Title 22 Engineering Report and provided recommendations for the Discharger to meet the design requirements.

### 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 is issued pursuant to section 13263 and 13523 of the California Water Code. This Order serves as a master reclamation permit pursuant to article 4, chapter 4, division 7 of the Water Code. A master reclamation permit includes requirements for waste discharge, recycling, user rules and regulations, summary reporting, user inspection, and others as appropriate.

**B. California Environmental Quality Act.** This project involves requirements for existing waste treatment facilities. As such, this project is categorically exempt from the requirements of the California Environmental Quality Act (CEQA) as provided by Section 15301, and in compliance with Section 15300.2, of California Code of Regulations Title 14. The Discharger certified a final Environmental Impact Report for this project in June 1992 in accordance with the CEQA (Public Resources Code section 21000, et seq.). The project identified no significant groundwater impact.

**C. Water Quality Control Plans.** The San Diego Water Board adopted a Water Quality Control Plan for the San Diego Region (hereinafter Basin Plan) on September 8, 1994 that 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, the Basin Plan implements State Water Resources Control Board (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. Beneficial uses applicable to the eastern approximately 2100 acres of Richland hydrologic subarea (HSA) 904.52 of San Marcos hydrologic area (HA) 904.5, and Escondido HSA 904.62 of Escondido HA 904.6, each of Carlsbad hydrologic unit (HU) 904; and Del Dios HSA 905.21 and Felicita HSA 905.23, each of Hodges HA 905.2 of San Dieguito HU 905 are municipal and domestic supply, agricultural supply, and industrial service supply.

Requirements of this Order implement the Basin Plan.

**D. Recycled Water Policy.** The State Water Board established the Recycled Water Policy in Resolution No. 2009-0011. The Recycled Water Policy establishes criteria for recycled water projects and permits. The intent of the Policy is to increase recycled water use, streamline permitting for appropriate projects, and manage salt and nutrients on a basin-wide approach.

**E. 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.

**IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

**A. Effluent Limitations**

The Order establishes numeric discharge specifications for the discharge of recycled water to the service system. The discharge specifications are based on California Department of Public Health (CDPH) standards, groundwater water quality objectives for the specific hydrologic areas, and actual recycled water quality data provided with the ROWD and reported pursuant to Order No. 93-70.

**Table D-3. Basin Plan Groundwater Water Quality Objectives**

Hydrologic Area	TDS	Cl	SO <sub>4</sub>	%Na	NO <sub>3</sub>	Fe	Mn	M B A S	B	O D O R	TURB (NTU)	COLOR	F
San Marcos HA 904.5	1,000	400	500	60	10	0.3	0.05	0.5	0.75	None	5	15	1.0
Escondido HSA 904.62	1,000	300	400	60	10	0.3	0.05	0.5	0.75	None	5	15	1.0
Hodges HA 905.2	1,000 <sup>1</sup>	400 <sup>1</sup>	500 <sup>1</sup>	60	10 <sup>1</sup>	0.3 <sup>1</sup>	0.05 <sup>1</sup>	0.5	0.75 <sup>1</sup>	None	5	15	1.0
Concentrations not to be exceeded more than 10% of the time during any one year period. (mg/L or as noted)													
1 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 groundwater recharge with water quality inferior to the tabulated numerical values may be permitted following individual review and approval by the San Diego Water Board if such projects do not degrade existing groundwater quality to the aquifers affected by the recharge.													

Where the recycled water quality effluent does not meet groundwater water quality objectives for fluoride, iron, and manganese, the Discharger conducted an assimilative capacity analysis (detailed salt balance recommended in the Basin Plan) to model the long-term, steady-state concentrations in groundwater. The analysis in the 2003 ROWD, which includes by reference analysis for fluoride in the original 1993 report of waste discharge, concludes that a discharge in compliance with the specifications will not cause the groundwater to exceed water quality objectives. Iron is a component of the chemical treatment process. Manganese and fluoride vary for different water supplies. The analysis considers potential flow, vegetation uptake, groundwater recharge, and mass flux to estimate long-term concentrations in groundwater as a result of the discharge. The analysis is based on projected constant “worst-case” discharge specifications of 0.5 mg/L iron and 0.2 mg/L manganese.

**Table D-4. Estimated Long-Term Concentrations of Iron and Manganese**

Hydrologic Area	Recycled Water Use (mgd)	Constituent	Basin Plan Groundwater Quality Objective (mg/L)	Long-Term Steady-State Groundwater Concentration (mg/L)
San Marcos HA	Up to 0.3	Iron	0.30	0.21

			Manganese	0.05	0.05
Escondido HSA 904.62		Up to 1.5	Iron	0.30	0.20
			Manganese	0.05	0.04
Hodges HA 905.2	905.21	Up to 1.0	Iron	0.30	0.21
			Manganese	0.05	0.05
	905.23	Up to 0.1	Iron	0.30	0.21
			Manganese	0.05	0.03

The degradation in water quality is justified as consistent with the maximum benefit to the people of California because recycling reduces discharges to the ocean and replaces demand for imported water. Further, the degradation is not expected to result in water quality poorer than described in the Basin Plan and therefore is not expected to unreasonably affect beneficial uses protected by the water quality objectives. The completed analysis makes the included basins low priorities for a Salt/Nutrient Management Plan, however, should the Discharger or other stakeholder complete a Salt/Nutrient Management Plan for the included basins, the Order may be modified accordingly. The Discharger recognizes that modeling uncertainties exist in the analysis pertaining to effluent quality, groundwater quality data, groundwater recharge, and groundwater outflow that require confirmation groundwater monitoring and reporting.

Historical data demonstrates that the nitrate concentration in the Receiving Groundwater in the Recycled Water Service Areas is above the water quality objectives. Recent recycled water use, however, has not further degraded groundwater quality. Nitrogen is a nutrient taken in by plants. Nitrogen concentration in applied irrigation water that percolates past the root zone is thereby reduced. Rules and Regulations for Recycled Water Use CC, DD and EE (Attachment E) require recycled water be applied at agronomic rates to ensure that the application of recycled water does not contribute to the exceedances of the nitrate water quality objective in the receiving water. The uncertainty in calculating agronomic rates requires confirmation groundwater monitoring and reporting.

**Table D-5. Summary of Effluent Limitations**

Constituent	12-Month Average <sup>1</sup> (mg/L or as noted)
Chlorine Residual	See Specification A.2.a
Chlorine-Contact Time (CT)	See Specification A.2.a
Total Coliform Bacteria <sup>c</sup>	See Specification A.2.b
Turbidity (TURB)	See Specification A.2.c
Total Dissolved Solids (TDS)	1,000
Chloride (Cl)	300
Sulfate (SO <sub>4</sub> )	350
Percent Sodium (% Na)	60%
Iron (Fe)	0.50
Manganese (Mn)	0.20
Methylene Blue- Activated Substances (MBAS)	0.5

<b>Constituent</b>	<b>12-Month Average <sup>1</sup> (mg/L or as noted)</b>
Boron (B)	0.75
Odor	N/A
Color	15 units
Fluoride (F)	2.0
Aluminum	1
Arsenic	0.05
Antimony	0.006
Asbestos	7 million fibers per liter
Barium	1
Beryllium	0.004
Cadmium	0.005
Cyanide	0.2
Mercury	0.002
Nickel	0.1
Perchlorate	0.006
Selenium	0.05
Thallium	0.002
<sup>1</sup> The 12-month average effluent limitation shall apply to the arithmetic mean of the results of all samples collected during any 12 consecutive calendar month period.	

## **B. Title 22 Specifications**

The Title 22 Specifications are based on recommendations of the CDPH for the protection of human health at use sites. Recycled water effluent from the Facility shall meet the definition of “disinfected tertiary recycled water” in CCR Title 22 section 60301.230 and by reference “filtered wastewater” in section 60301.320 incorporated by reference, including future changes to the incorporated provisions as the changes take effect.

## **V. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS**

Water Code sections 13267 authorizes the San Diego Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (Attachment C) establishes monitoring and reporting requirements to implement State requirements. The use of laboratories certified for federally standardized test methods, and quality assurance and control procedures ensures the reliability and validity of the data as well as consistency and comparability with regulations. The assessment summary of NPDES monitoring is necessary to determine if discharge specifications are required for discharges to land. Recycled water use reports are required in the Water Code for master reclamation permits and determine the effectiveness of the Order on recycled water users and the Discharger’s impact on the State goal for increased water recycling.

### **A. Effluent Monitoring**

Effluent monitoring is required to determine compliance with discharge specifications, facility design and operation specifications, and reclamation requirements.

### **B. Receiving Water Monitoring**

- 1. Groundwater.** Groundwater monitoring is required based on the modeling uncertainties in the assimilative capacity analysis.

## **VI. RATIONALE FOR PROVISIONS**

### **A. Standard Provisions**

The standard provisions contain language the San Diego Water Board finds necessary to ensure the Order is enforced. Provisions include need for inspection, spill and emergency reporting, records are maintained, and changes are reported. Standard provisions apply to all WDRs and are consistent with San Diego Water Board findings.

### **B. Monitoring and Reporting Program Requirements**

The MRP is a requirement of the Order. Details on the rationale are provided in section V of the Information Sheet above.

### **C. Special Provisions**

- 1. Facility Design and Operation Specifications.** The existing Facility was designed and constructed in accordance with CDPH-reviewed Title 22 Engineering Reports.

The Specifications here, which continually apply, include need for properly trained operators, operation and maintenance manuals and references, and best management practices for the protection of human health.

- 2. Reclamation Specifications.** Reclamation Specifications are included pursuant to Water Code section 13523 with recommendations based on CPDH and San Diego County Department of Environmental Health (County DEH) requirements. In accordance with California Code of Regulations (CCR) Title 22, the CDPH reviews engineering reports for the production, distribution, and use of recycled water. The San Diego Water Board relies on the expertise of the CDPH for recommendations needed to protect human health for inclusion in the requirements. The Discharger must certify that the Facility and other existing purveyance facilities meet CDPH requirements, or must update the Title 22 engineering report to comply. The Discharger must also certify or update the Rules and Regulations for Recycled Water Users including inspection and cross-connection testing to comply with CDPH and County DEH requirements.
- 3. Notifications.** The notifications inform the Discharger of administrative issues regarding this Order.

## VII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a master reclamation permit for the Hale Avenue Resource Recovery Facility. As a step in the WDR adoption process, the San Diego Water Board staff has developed tentative WDRs. The San Diego Water Board encourages public participation in the WDR adoption process.

### A. Notification of Interested Parties

The San Diego 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. Notification was provided through the San Diego Water Board website and board meeting agenda publication.

### 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 San Diego Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the San Diego Water Board, written comments must be received at the San Diego Water Board offices by 5:00 p.m. on May 6, 2010.

### **C. Public Hearing**

The San Diego 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: **July 14, 2010**  
Time: **9:00 am**  
Location: **San Diego Water Board Meeting Room**  
**9174 Sky Park Ct, Suite 100**  
**San Diego, California 92123**

Interested persons are invited to attend. At the public hearing, the San Diego 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 is [http://www.waterboards.ca.gov/sandiego/board\\_info/agendas/](http://www.waterboards.ca.gov/sandiego/board_info/agendas/) 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 Resources Control Board to review the decision of the San Diego Water Board regarding the final WDRs. The petition must be submitted within 30 days of the San Diego 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 (ROWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the San Diego Water Board by calling 858-467-2952.

### **F. Register of Interested Persons**

Any person interested in being placed on the mailing list for information regarding the Order should contact the San Diego 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 Robert Pierce at 858-627-3935.

## **ATTACHMENT E – RULES AND REGULATIONS FOR RECYCLED WATER USE**

Pursuant to Water Code section 13523.1(b)(3), this Order requires the Discharger 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, *Water Recycling Criteria*;
- Title 17, Division 1, Chapter 5, Group 4, Article 1 & 2, of the California Code of Regulations;
- The California Department of Public Health (CDPH) *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 CDPH.

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

- A.** The use of recycled water shall not cause pollution, contamination, or nuisance, as defined by section 13050 of the Water Code.
- B.** The Discharger, the San Diego Water Board, the CDPH, and the 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 Discharger's rules and regulations.
- C.** The recycled water user shall provide written notification, in a timely manner, to the Discharger of any material change or proposed change in the character of the use of recycled water.
- D.** Prior to the initiation of recycled water service, the recycled water user shall submit plans and specifications for recycled water distribution facilities to the Discharger.
- E.** 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 Discharger's rules and regulations, prevention of potential hazards and preservation of the recycled water distribution system plans in "as built" form. Designated recycled water supervisors shall obtain instruction in the use of recycled water from an institution approved by the CDPH and County DEH. Additional guidance regarding recycled water supervisor responsibilities and instruction requirements is provided in Attachments 17 and 18 of the *Recycled Water Plan Check and Inspection Manual* developed by the County DEH, and which are incorporated herein by reference.

- F.** The Discharger may terminate service to a recycled water user who uses, transports, or stores such water in violation of the Discharger's rules and regulations.
- G.** All recycled water storage facilities owned and/or operated by recycled water users shall be protected against erosion, overland runoff, and other impacts resulting from a 100-year, 24-hour frequency storm unless the San Diego Water Board approves relaxed storm protection measures for the facility.
- H.** All recycled water storage facilities owned and/or operated by recycled water users shall be protected against 100-year frequency peak stream flows as defined by the San Diego County flood control agency unless the San Diego Water Board approves relaxed storm protection measures for the facility.
- I.** The San Diego Water Board may initiate enforcement action against any recycled water user, including but not limited to the termination of the reclaimed water supply, who:

  - 1.** Discharges recycled water in violation of any applicable discharge requirement prescribed by the San Diego Water Board or in a manner which creates or threatens to create conditions of pollution, contamination, or nuisance, as defined in Water Code section 13050.
  - 2.** 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 Discharger in accordance with this attachment; or in a manner which creates or threatens to create conditions of pollution, contamination, or nuisance, as defined in Water Code section 13050.
- J.** 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.
- K.** 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:

  - 1.** A geological investigation demonstrates that an aquitard exists at the well between the uppermost aquifer being drawn from and the ground surface.
  - 2.** The well contains an annular seal that extends from the surface into the aquitard.
  - 3.** The well is housed to prevent any recycled water spray from coming into contact with the wellhead facilities.
  - 4.** The ground surface immediately around the wellhead is contoured to allow surface water to drain away from the well.
  - 5.** The owner of the well approves of the elimination of the buffer zone requirement.
- L.** Impoundment of disinfected tertiary recycled water shall not occur within 100 feet of any domestic water supply well.

- M.** 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.
- N.** Irrigation with, or impoundment of, undisinfected secondary recycled water shall not take place within 150 feet of any domestic water supply well.
- O.** Reclaimed water facilities shall be operated in accordance with best management practices (BMPs) to prevent direct human consumption of reclaimed water and to minimize misting, ponding, and runoff. BMPs shall be implemented that will minimize both public contact and discharge onto areas not under customer control.
- P.** All windblown spray and surface runoff of reclaimed water applied for irrigation onto property not owned or controlled by the discharger or reclaimed water user shall be prevented by implementation of BMPs.
- Q.** 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.
- R.** All drinking fountains located within the approved use area shall be protected by location and/or structure from contact with recycled water spray, mist, or runoff. Protection shall be by design, construction practice, or system operation.
- S.** Facilities that may be used by the public, including but not limited to eating surfaces and playground equipment and located within the approved use areas, 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.
- T.** 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.
- U.** 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". 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.
- V.** No physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying potable water.
- W.** 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.

- X.** 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 Public Health 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.
- Y.** No person other than the Discharger shall deliver recycled water to a facility. Connection to the irrigation system by an individual residence is prohibited.
- Z.** 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.
- AA.** Customer complaints concerning recycled water use that may involve public illness shall be reported to the County DEH and the CDPH, and to the Discharger who shall maintain a log of all customer complaints regarding recycled water.
- BB.** Any backflow prevention device installed to protect the public water system shall be inspected and maintained in accordance with section 7605 of Title 17.
- CC.** Application of recycled water to the use area shall be at reasonable agronomic rates and shall consider soil, climate, and nutrient demand. The description of agronomic application compliance shall be included in the Quarterly Recycled Water Summary (Monitoring and Reporting Program, Attachment C, V.B.).
- DD.** The seasonal nutritive loading of the use area including the nutritive value of organic and chemical fertilizers and of the recycled water, shall not exceed the nutritive demand of the landscape. The Discharger shall communicate to the users the nutrient levels in the recycled water.
- EE.** The recycled water irrigation users shall report the volume of recycled water, total number of use areas in each basin, the total area of application, nitrogen application rate, and salinity application rate.