

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

ORDER NO. R9-2009-0005
AS AMENDED BY ADDENDUM NO. 1

MASTER RECLAMATION PERMIT

FOR

RAMONA MUNICIPAL WATER DISTRICT
SAN VICENTE WASTEWATER TREATMENT PLANT
SAN DIEGO COUNTY

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

1. The Ramona Municipal Water District (Recycled Water Agency) owns and operates the San Vicente Wastewater Treatment Plant (SWWTP) located at 22758 San Vicente Road, Ramona, CA 92065 in San Diego County. The facility is situated in the southwest quarter of section 36, Township 13 South, Range 1 East, San Bernardino Base Meridian. This Order regulates the discharge from the SWWTP, comprised of disinfected secondary and disinfected tertiary treated recycled water, to land that overlies the Gower Hydrologic Subarea (HSA 907.23) of the San Vicente Hydrologic Area (HA 907.20) of the San Diego Hydrologic Unit (HU 907.00).
2. Discharges of recycled water from the SWWTP are subject to the following Orders of the Regional Board, Order No. R9-1993-0003 *Waste Discharge Requirements for the San Vicente Treatment Plant, Ramona Municipal Water District, San Diego County* as amended prescribed requirements for the treatment and disposal of up to 0.75 million gallons per day of disinfected secondary recycled water for irrigation of groves at Spangler Peak Ranch and disinfected tertiary recycled water for landscape irrigation at the San Vicente Golf Course. In order to facilitate the distribution of reclaimed/recycled water to multiple sites, Order No. 93-03 required the Recycled Water Agency to develop and enforce Rules and Regulations for recycled water users that were subject to Water Reclamation Requirements (WRRs) issued pursuant to California Water Code section 13523 and prescribed in Order No. 86-0074 for the use of recycled water for drip irrigation of avocado trees at Spangler Peak Ranch (formerly Solk Ranch).
3. By letter dated April 25, 2005, the Recycled Water Agency requested to be issued a master reclamation permit which would govern the production and use of recycled water from the SWWTP pursuant to the Water Recycling Law for discharges of recycled water established in Water Code Division 7, Chapter 7, Article 4. A master reclamation permit is issued in lieu of issuing waste discharge requirements pursuant to Water Code section 13263 or water reclamation requirements pursuant to Water Code section 13523 for each user of recycled water.
4. The SWWTP is designed to receive and treat wastewater flows from the San Diego Country Estates. The treatment process includes bar screens, an aerated grit chamber, oxidation ditches, clarifiers, dual media pressure filters, a reverse osmosis system, disinfectant chlorine contact basins, and drying beds. Solid waste, consisting of screenings and dried sludge, is hauled to a U.S. Environmental Protection Agency (USEPA) approved and permitted landfill appropriate for the waste characterization of the solids. The SWWTP is designed to handle ultimate flows of 0.8 million gallons per day (mgd) and is currently

processing 0.6 mgd. Three ponds provide 102 days of wet weather storage (236 acre-feet) at a 30-day average dry weather flowrate of 0.80 mgd. Additional storage of 15 acre-feet is available at Spangler Peak Ranch. Attachment No. 1 provides a flow schematic of the facility.

5. The discharge of treated wastewater may cause groundwater mineralization, the addition of nitrates to groundwater, surface runoff of nutrients and suspended material, nuisance odors, and health hazards. If not properly managed, the discharge could impact water quality in groundwater in the Gower subarea, in San Vicente Creek, and subsequently in San Vicente Reservoir.
6. In accordance with section 2200, Title 23 of the California Code of Regulations (CCR), the threat to water quality and complexity associated with the effluent from the SVWTP is determined to be category 1B.¹ Although the treated wastewater is not a toxic waste, there is a potential threat to receiving waters associated with effluent discharged from the SVWTP due to buildup of salts in the groundwater. These determinations are based on influent wastewater characteristics, which are typical of municipal wastewater; the physical, chemical, and biological treatment systems that are applied at the plant; and a history of noncompliance with the current and historical waste discharge requirements.
7. This Regional Board, acting in accordance with section 13244 of the Water Code, adopted the *Water Quality Control Plan for the San Diego Basin (9)*, (Basin Plan) on September 8, 1994. The Basin Plan was subsequently approved by the State Water Resources Control Board (SWRCB) on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the Board and approved by the SWRCB. The Basin Plan contains beneficial uses and water quality objectives, and a policy for regulating the discharge of reclaimed (or recycled) water to comply with water quality objectives. The requirements of this Order are consistent with the Basin Plan Recycled Water Policy.
8. The Basin Plan established municipal and domestic supply (MUN) and agricultural supply (AGR) as existing beneficial uses of groundwater in San Vicente HA 907.20.
9. The Basin Plan establishes the following groundwater water quality objectives for San Vicente HA 907.20:

¹ Category "1" – Those discharges of waste that could cause the long-term loss of a designated beneficial use of the receiving water. Examples of long-term loss of a beneficial use include the loss of drinking water supply, the closure of an area used for water contact recreation, or the posting of an area used for spawning or growth of aquatic resources, including shellfish and migratory fish. Category "B" – Any discharger not included above that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal), or any Class 2 or Class 3 waste management units.

Table 1. Water Quality Objectives for Groundwater

HYDROLOGIC AREA	CONSTITUENT (mg/L or as noted)												
	(Concentrations not to be exceeded more than 10% of the time during any one year period)												
	TDS	Cl	SO ₄	%Na ²	NO ₃ ⁻	Fe	Mn	M B A S	B	O D O R	TURB (NTU)	COLOR (UNITS)	F
San Vicente HA (907.20)	600	250	250	60	5	0.3	0.05	0.5	0.75	none	5	15	1.0

Notes: TDS = total dissolved solids; Cl = chlorine; SO₄ = sulfate; %Na = percent sodium; NO₃ = nitrate; Fe = iron; Mn = manganese; MBAS = methylene blue – activated substance, B = boron; Turb = turbidity (NTU = nephelometric turbidity units); F = fluoride.

10. A discharge of recycled wastewater for irrigation in the Gower HSA that complies with this order is not expected to adversely affect beneficial uses as set forth in the Basin Plan. Because irrigation operations can result in higher constituent concentrations in the fraction of the applied water which percolates to the groundwater due to evapotranspiration effects, and because Basin Plan groundwater quality objectives are, in most cases, intended to be achieved in the groundwater (i.e. not in the effluent), effluent limits frequently require constituent concentrations in the effluent to be lower than the corresponding groundwater quality objectives. Consequently, the 12-month average effluent limits in this Order for those constituents with groundwater quality objectives are statistically derived to meet the numerical groundwater quality objectives not to be exceeded more than ten percent of the time in a one year period in the effluent.
11. The Basin Plan specifies that for discharges of recycled water upgradient of municipal water supply reservoirs, the discharge specifications will be at levels that are not less than constituent concentrations of water supply, but not more than the Basin Plan groundwater water quality objectives. The recycled water use areas in the Gower HSA are upgradient of municipal water supply reservoirs.
12. The groundwater monitoring program being conducted pursuant to Order No. R9-1993-0003 must be expanded into a regional management plan for the Gower HSA. Order No. R9-1993-0003 established a groundwater monitoring plan consisting of one well located at 15942 Serra Street in Ramona; concentrations of TDS in this well have consistently exceeded WQOs for TDS since before 1993. Until the reverse osmosis system became inoperable in 1998, the Recycled Water Agency was operating generally in compliance with the discharge specification for total dissolved solids (TDS). The Basin Plan Recycled Water Policy described in Finding 11, above, formed the basis for the TDS discharge specification in both this Order and Order No. R9-1993-0003. Since the requirements in this Order must establish discharge specifications in agreement with the Policy as well as protect groundwater water quality, the Regional Board must consider the Gower HSA on a whole when considering a new groundwater monitoring program. The SWRCB Draft Recycled Water Policy addresses the buildup of salt in groundwater by requiring a salt and nutrient

- management plan be completed for every basin/sub-basin in California. The basis for this management measure is consistent with the conditions in the Gower HSA and development of a management plan by the Discharger with input from other stakeholders is appropriate.
13. The Basin Plan states that waters designated for MUN use shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCL) specified in the CCR, Title 22, Table 64431-A of section 64431 (Primary MCL, Inorganic Chemicals), Table 64431-B of section 64431 (Primary MCL, Fluoride), Table 64444-A of section 64444 (Primary MCL, Organic Chemicals), and Table 64449-A of section 64449 (Secondary Maximum Contaminant Levels, Consumer Acceptance Limits), incorporated by reference, including future changes to the incorporated provisions as the changes take effect.
 14. The SWRCB established California's antidegradation policy in Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*. Resolution No. 68-16 incorporates the federal antidegradation policy where applicable. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The discharge of wastes regulated under this Order may degrade existing water quality; however, the requirements of this Order require best practicable treatment or control of the discharge in order to avoid pollution or nuisance, and maintain the highest water quality consistent with the maximum benefit to the people of the state.
 15. This Order includes recycled water use and treatment requirements in compliance with the statewide minimum standards for discharges of recycled water established in CCR, Title 22, Division 4, Chapter 3, Water Recycling Criteria. Requirements for disinfected tertiary recycled water and secondary-2.2 recycled water are in accordance with CCR section 60301.220 and section 60301.230, respectively. Requirements for use of tertiary recycled water and secondary-2.2 recycled water are in accordance with CCR section 60304.
 16. A Mitigated Negative Declaration was approved by the Ramona Municipal Water District on August 24, 2000 for the treatment, storage, and purveyance of tertiary recycled water from the SWWTP in accordance with the California Environmental Quality Act (Public Resources Code, section 21000 et seq.). Prior to this environmental document, the previous expansion of SWWTP underwent environmental review and a Mitigated Negative Declaration was approved by the Ramona Municipal Water District. There have been no changes to the SWWTP since the Mitigated Negative Declaration was adopted in 2000.
 17. The issuance of this Order for discharge of domestic sewage or treated effluent is exempt from Title 27 regulations in accordance with CCR, Title 27, Division 2, Subdivision 1, Chapter 1, Article 1, section 20090.

18. This Regional Board has notified the Recycled Water Agency and all known interested parties of the intent to prescribe a master reclamation permit for the proposed discharge.
19. This Regional Board in a public meeting has heard and considered all comments pertaining to the proposed discharge of waste from the SWWTP.

IT IS HEREBY ORDERED THAT the Recycled Water Agency, in order to meet the provisions contained in Division 7 of the Water Code and Regulations adopted thereunder, shall comply with the following requirements for the treatment, storage, and discharge of recycled water from the San Vicente Wastewater Treatment Plant to recycled water use sites.

A. PROHIBITIONS

1. Discharges of recycled water, other than incidental runoff as defined in the Recycled Water Policy, to lands which have not been specifically described in the findings of this Order, and for which valid waste discharge requirements or water reclamation requirements are not in force, are prohibited.
2. Neither the treatment, nor storage, nor disposal of waste shall create a condition of pollution, contamination, or nuisance, as defined by Water Code section 13050.
3. Discharges of treated or untreated solid or liquid waste into San Vicente Creek or its tributaries are prohibited, unless as authorized by National Pollutant Discharge Elimination System (NPDES) requirements issued by this Regional Board.
4. A 30-day average flowrate from the San Vicente Wastewater Treatment Plant in excess of 0.80 mgd is prohibited unless the discharger obtains revised waste discharge requirements for the proposed increased flow.

B. DISCHARGE SPECIFICATIONS

1. Discharges of recycled water for landscape irrigation use described under CCR Title 22, Division 4, Chapter 3, section 60304(a), which would include the use of recycled water at the San Vicente Golf Course, shall be disinfected tertiary recycled water, as defined in section 60301.230.² The following discharge specifications apply to tertiary treated recycled water from the SWWTP:

² The regulations contained in CCR, Title 22, Division 4, Chapter 3 *Water Recycling Criteria* are incorporated into this Order by reference. Where the Title 22 requirements differ with the requirements of this Order, the Title 22 requirements govern.

- a. Disinfected tertiary treated water shall be filtered and subsequently disinfected such that the median concentration of total coliform bacteria does not exceed a most probable number (MPN) of 2.2 per 100 milliliters utilizing the last seven days for which analyses have been completed and the number of total coliform bacteria does 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.
 - b. Disinfection must provide a 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.
 - c. Turbidity of the disinfected tertiary recycled water shall not exceed a daily average value of 2 nephelometric turbidity units (NTU) based on the average of turbidity measurement at 4-hour intervals over a 24-hour period. Turbidity shall not exceed 5 NTU for more than 15 minutes and shall not exceed 10 NTU at any time.³
2. Discharges of recycled water for landscape irrigation use described under CCR Title 22, Division 4, Chapter 3, section 60304(b), which would include the use of recycled water at the Spangler Peak Ranch, shall be disinfected secondary recycled water, as defined in section 60301.220.² Secondary treated effluent shall be treated to the level of disinfected secondary-2.2 recycled water, in conformance with all applicable provisions of CCR, Title 22, Division 4, Chapter 3, section 60301.220. Secondary-2.2 recycled water shall be oxidized and disinfected such that the median concentration of total coliform bacteria does not exceed a MPN of 2.2 per 100 milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed and the number of total coliform bacteria does not exceed a MPN of 23 per 100 milliliters in more than one sample in any 30 day period.
 3. The discharge of treated recycled water to any recycled water use area shall not exceed the specifications below.
 - a. Recycled water shall not contain pollutants in excess of secondary treatment standards established in the Code of Federal Regulations (CFR) Title 40, Part 133, incorporated by reference, including future changes to the incorporated provisions as the changes take effect:

³ Coagulation need not be used as part of the treatment process provided that the filter effluent turbidity complies with Discharge Specification B.1.c of this Order.

Table 2. Discharge Specifications Based on Secondary Treatment Standards

Constituent	Units	30-Day Average ^a	7-Day Average ^b
Biochemical Oxygen Demand, Five Day	mg/L	30	45
Total Suspended Solids	mg/L	30	45
pH	pH Units	Within the limits of 6.0 to 9.0 at all times	

- a. The 30-day average discharge specification shall apply to the arithmetic mean of the results of all samples collected during any calendar month.
- b. The 7-day average discharge specification shall apply to the arithmetic mean of the results of samples collected in a period of 7 consecutive days.

- b. Recycled water discharged to the Gower HSA shall not contain pollutants in excess of the following Basin Plan water quality objectives:

Table 3. Effluent Discharge Specifications

Constituent	Units	Discharge Specification	
		Instantaneous Maximum	Annual Average ^a
TDS	mg/L	-	550
Chloride	mg/L	-	145
Sulfate	mg/L	-	140
MBAS	mg/L	-	0.9
Color	Color Units	-	13
Percent Sodium	%	-	55
Iron	mg/L	-	0.3
Fluoride	mg/L	-	0.9
Manganese	mg/L	-	0.06
Boron	mg/L	-	0.7
Aluminum	mg/L	1.0	-
Arsenic	mg/L	0.010	-
Antimony	mg/L	0.006	-
Asbestos	million fibers per liter	7	-
Barium	mg/L	1.0	-
Beryllium	mg/L	0.004	-
Cadmium	mg/L	0.0005	-
Cyanide	mg/L	0.2	-

Constituent	Units	Discharge Specification	
		Instantaneous Maximum	Annual Average ^a
Mercury	mg/L	0.002	-
Nickel	mg/L	0.1	-
Perchlorate	mg/L	0.006	-
Selenium	mg/L	0.05	-
Thallium	mg/L	0.002	-

a. Compliance with the discharge specifications shall be determined by the amount and quality of the multiple streams that are blended together to produce secondary and tertiary treated recycled water. Equations and sampling points are identified in Monitoring and Reporting Program No. R9-2009-0005. Annual averages shall be calculated once per calendar year in the annual reports.

4. Collected screenings, sludge, other solids removed from liquid wastes, and filter backwash shall be disposed in a manner described in the Findings of this Order or as approved by the Regional Board. Sewage sludge treatment and disposal must comply with all pertinent paragraphs of Part 503, Subchapter O, Chapter I of Title 40 CFR under the USEPA's jurisdiction.
5. Discharges to a landscape impoundment must be terminated whenever an overflow of the impoundment is imminent.

C. RECYCLED WATER PURVEYANCE REQUIREMENTS

1. Within 180 days of the adoption of this Order, the Recycled Water Agency shall update and submit Rules and Regulations for Recycled Water Users to the Regional Board, the California Department of Public Health (CDPH) and the County of San Diego Department of Environmental Health (County DEH). The updated Rules and Regulations shall, at a minimum, include:
 - a. The requirements that are contained in Attachment No. 2 of this Order; and
 - b. A program to conduct compliance inspections of recycled water reuse sites to determine the status of compliance with the Recycled Water Agency's Rules and Regulations. The assessment of compliance at recycled water reuse sites shall include an evaluation of the measures being taken to account for the nitrogen and other nutrient content in recycled water in the management of fertilizer application.
2. The Recycled Water Agency, prior to providing recycled water to a new use site, shall certify that the project conforms with what is described by

the Rules and Regulations established in Recycled Water Purveyance Requirement C.1 of this Order. A certification report shall document that all criteria described in the Rules and Regulations have been submitted to and approved by the CDPH and County DEH.

3. The Recycled Water Agency is required to do the following for all reuse sites:
 - a. Enforce the Rules and Regulations;
 - b. Inspect recycled water reuse sites in accordance with the program submitted for Recycled Water Purveyance Requirement C.1 of this Order;
 - c. 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
 - d. Maintain a current list of all on-site recycled water supervisors.

D. FACILITY DESIGN AND OPERATION SPECIFICATIONS

1. The Recycled Water Agency shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Recycled Water Agency to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Order.
2. Prior to any changes in the treatment facilities, the Recycled Water Agency shall prepare an engineering report conforming to CCR Title 22, Division 4, Chapter 3, Article 7, section 60323. The engineering report shall be submitted to the CDPH - Office of Drinking Water, the County DEH, and the Regional Board for review and response.
3. The Recycled Water Agency shall provide adequate storage facilities to contain recycled water during and after periods of rainfall when disposal by irrigation cannot be successfully practiced and to prevent the discharge of treated or untreated recycled water to any surface water body. A minimum of 84 days storage shall be maintained at all times.

4. A copy of the facility operations manual shall be maintained at the Recycled Water Agency's facility and shall be available to operation personnel and Regional Board staff at all times. The following portions of the operations manual shall be posted at the treatment plant as a quick reference for treatment plant operators:
 - a. Alarm set points for secondary turbidity, tertiary turbidity, and chlorine residual;
 - b. Levels at which flow will be diverted for secondary turbidity, tertiary turbidity, and chlorine residual;
 - c. When to divert flow for high daily and weekly median total coliform;
 - d. When the authorities (CDPH, County DEH, Regional Board) will be notified of a diversion;
 - e. Names and numbers of those authorities to be notified in case of a diversion; and
 - f. Frequency of calibration for turbidimeters and chlorine residual analyzers.
5. The Recycled Water Agency's wastewater treatment facilities shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to CCR Title 23, Division 3, Chapter 26.
6. 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.
7. 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.
8. The Recycled Water Agency shall comply with the attached Monitoring and Reporting Program No. R9-2009-0005, and future revisions thereto as specified by the Regional Board. Monitoring results shall be reported at the intervals specified in Monitoring and Reporting Program No. R9-2009-0005.

E. BIOSOLIDS SPECIFICATIONS

1. Management of all solids and sludge must comply with all applicable requirements of 40 CFR Parts 257, 258, 501, and 503; the federal Clean Water Act (CWA) Part 405(d), and CCR Title 27, including all monitoring,

record keeping, and reporting requirements. Since the state of California, hence the State and Regional Boards, has not been delegated the authority by the USEPA to implement the Biosolids (Sludge) Program, the enforcement of EPA Part 503 Biosolids Rule is under USEPA's jurisdiction. Once sludge leaves a facility, it is subject to all applicable local, state, and federal laws and regulations.

2. All collected screenings, sludge, and other solids removed from liquid wastes must be disposed of in a municipal solid waste landfill, reused by land application, or disposed of in a sludge-only landfill accordance with 40 CFR Parts 503 and 258, and CCR Title 27. If the Recycled Water Agency desires to dispose of solids or sludge by a different method, a request for order modification must be submitted to the USEPA and this Regional Board 180 days prior to the initiation of the alternative disposal.
3. Solids and sludge treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, and shall not result in groundwater contamination or pollution.
4. The solids and sludge treatment site and storage site shall have facilities adequate to divert surface water runoff from adjacent areas, to protect the boundaries of the site from erosion, and to prevent drainage from the treatment and storage site. Adequate protection is defined as protection from at least a 100-year storm and protection from the highest possible tidal stage that may occur.
5. The discharge of sewage sludge and solids shall not cause waste material to be in a position where it is, or can be, conveyed from the treatment and storage sites and deposited in the waters of the state.
6. The Recycled Water Agency shall submit a copy of each of the annual reports required by 40 CFR 503 to this Regional Board at the same time those reports are submitted to the USEPA. The Recycled Water Agency shall also submit an annual report of the quantity and disposition of sludge generated in the previous calendar year.

F. STANDARD PROVISIONS

1. The Regional Board may initiate enforcement action against the Recycled Water Agency, which may result in the termination of the recycled water supply, if any person uses, transports, or stores such water in a manner which creates, or threatens to create conditions of pollution, contamination, or nuisance, as defined in Water Code section 13050.
2. The Recycled Water Agency 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 a new or revised master reclamation permit.
3. The Recycled Water Agency shall allow the Regional Board, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to do the following:
 - a. Enter upon the Recycled Water Agency's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this Order;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this Order; and
 - d. Sample or monitor, at reasonable times for the purposes of assuring compliance with this Order or as otherwise authorized by the Water Code, any substances or factors at any location.
 4. The Water Code provides that any person who intentionally or negligently violates any master reclamation permit issued, reissued, or amended by this Regional 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 Recycled Water Agency shall report any noncompliance which 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 Regional Board within 24 hours from the time the Recycled Water Agency becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the Recycled Water Agency becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance

has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Regional Board, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. The following occurrence(s) must be reported to the Regional 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 chlorination equipment or loss of detectable chlorine residual; and
 - e. Effluent with total coliform greater than a MPN of 1,600 per 100 milliliters in more than one sample.
7. The Recycled Water Agency shall report all overflow events that occur at the SWWTP. 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 Recycled Water Agency not authorized by waste discharge requirements and/or NPDES requirements 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 SWRCB Order No. 2006-0003-DWQ and Regional Board Order No. R9-2007-0005. Overflows of the kind identified under this provision shall be reported to the Regional Board with the quarterly monitoring report in which the overflow occurs.
8. If a need for a discharge bypass is known in advance, the Recycled Water Agency shall submit prior notice (stating, at a minimum, the purpose, anticipated dates, duration, level of treatment, and volume of bypass) and, if at all possible, such notice shall be submitted at least 10 days prior to the date of the bypass.
9. The Recycled Water Agency shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.

10. In an enforcement action, a defense for the Recycled Water Agency shall not be that halting or reducing the regulated activity would have been necessary in order to maintain compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the Recycled Water Agency shall, to the extent necessary to maintain compliance with this Order, control production, 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 to the treatment facility fails, is reduced, or is lost.
11. Except for a discharge which is in compliance with this master reclamation permit, 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, County of San Diego in accordance with California Health and Safety Code section 5411.5 and notify 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 SWRCB or the appropriate Regional Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of section 13271 of the Water Code unless the Recycled Water Agency is in violation of a Basin Plan prohibition.
12. Except for a discharge which is in compliance with this master reclamation permit, 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.

13. A copy of this Order shall be maintained at the Recycled Water Agency's facility and shall be available to operating personnel at all times.
14. The Recycled Water Agency shall retain records of all monitoring information, including all calibration and maintenance records, copies of all reports required by this Order, and records of all data used to complete the application for this Order. Records shall be maintained for a minimum of five years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board.
15. The Recycled Water Agency shall furnish to the Regional Board, within a reasonable time, any information which the Regional Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The Recycled Water Agency shall also furnish to the Regional Board, upon request, copies of records required to be kept by this Order.
16. This Order may be amended, rescinded, or updated 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; or
 - c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

The filing of a request by the Recycled Water Agency for amending, rescinding, or updating this Order, or notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

17. The Recycled Water Agency shall file a new Report of Waste Discharge at least 120 days prior to the following:
 - a. Addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the wastes;
 - b. Significant change in the treatment or disposal method (e.g., change in the method of treatment which would significantly alter the nature of the waste);

- c. Change in the disposal area from that described in the findings of this Order;
 - d. Increase in flow beyond that specified in this Order;
 - e. Other circumstances that result in a material change in character, amount, or location of the waste discharge; or
 - f. Any planned change in the regulated facility or activity which may result in noncompliance with this Order.
18. This Order is not transferable to any person except after notice to the Regional Board. The Recycled Water Agency shall submit this notice in writing at least 30 days in advance of any proposed transfer. The notice must include a written agreement between the existing and new recycled water agency containing a specific date for the transfer of this Order's responsibility and coverage between the current Recycled Water Agency and the new recycled water agency. This agreement shall include an acknowledgement that the existing Recycled Water Agency is liable for violations up to the transfer date and that the new recycled water agency is liable from the transfer date on. The Regional Board may require modification or revocation and reissuance of this Order to change the name of the recycled water agency and incorporate such other requirements as may be necessary under the Water Code.
19. Where the Recycled Water Agency becomes aware that it failed to submit any relevant facts in a Report of Waste Discharge or submitted incorrect information in a Report of Waste Discharge or in any report to the Regional Board, it shall promptly submit such facts or information.
20. All applications, reports, or information submitted to the Regional 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; and
 - 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 Regional 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:

- 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 Regional 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."

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

California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, California 92123
Attn: Land Disposal Unit

G. NOTIFICATIONS

1. This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the Recycled Water Agency from liability under federal, state or local laws, nor create a vested right for the Recycled Water Agency to continue the waste discharge.
2. These requirements have not been officially reviewed by the USEPA and are not issued pursuant to CWA section 402.

3. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.
4. The requirements prescribed by this Order supersede the requirements prescribed by Order No. R9-1993-0003 and by Order No. R9-1986-0074.
5. This Order becomes effective on the date of adoption by the Regional Board.

H. EVAPORATION POND FACILITY AND DESIGN SPECIFICATIONS

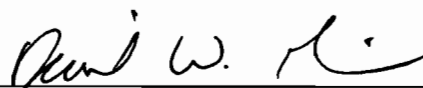
1. Disposal Location. Unless otherwise authorized by the San Diego Water Board, the discharge of brine shall either 1) be confined to the evaporation pond, which is underlain by the liner system prescribed by Evaporation Pond Facility and Design Specification H.7, or 2) be stored in the Recycled Water Agency's previous brine storage pond for daily removal to a waste management unit authorized to accept brine.
2. Groundwater Separation. The Recycled Water Agency shall maintain at least five feet of vertical separation between the groundwater and waste material at all times.
3. Operation and Maintenance. The Recycled Water Agency shall implement the following measures to ensure proper operation and maintenance of the evaporation pond:
 - a. Discharge only brine to the evaporation pond.
 - b. Maintain a minimum of six inches of freeboard in each pond section 13 at all times. In addition, the evaporation pond, must have a depth marker that clearly indicates the minimum capacity necessary to contain the direct precipitation on the pond attributed to a 25-year, 24-hour storm. The Recycled Water Agency shall maintain this capacity for emergency storage.
 - c. Update the Operations Manual for the SWWTP to account for the requirements contained in this addendum. The Operations Manual shall contain a water balance plan for the evaporation pond that provides operation levels and waste input quantities permitted each month based on anticipated precipitation, past precipitation, and evaporation.

- d. Inspect the evaporation pond at least once daily and maintain logs onsite.
 - e. Solids buildup shall be removed annually, as-needed, by October 31st of each year to provide adequate storage capacity prior to the anticipated rainy season.
4. Precipitation and Drainage Control Specifications. The Recycled Water Agency shall implement the following measures to control surface drainage in the vicinity of the evaporation pond:
- a. Implement any necessary erosion control measures, and complete any necessary construction, maintenance, or repairs of precipitation and drainage control facilities annually, prior to the anticipated rainy season but no later than October 31. This specification shall not preclude the Recycled Water Agency from performing maintenance and repairs necessitated by changing site conditions at any time.
 - b. Divert surface drainage upgradient of the evaporation from the pond via the precipitation and drainage control facilities.
 - c. Construct and maintain precipitation and drainage controls to effectively divert sheet flow runoff laterally, or via the shortest distance, into the drainage and collection facilities.
 - d. Prevent the accumulation of surface water (*i.e.*, ponding) or groundwater to cause or contribute to adverse impacts upon the integrity or performance of the evaporation pond's foundation; liner system; or the structures which control leachate, surface water drainage, or erosion.
 - e. Contain all precipitation not diverted by covers or drainage control systems within the evaporation pond.
5. Leachate Collection and Removal Specifications. The Recycled Water Agency shall implement the following measures to properly construct and manage the LCRS:
- a. Perform annual testing of the LCRS to demonstrate proper operation of the LCRS. The demonstration must include evidence that the LCRS functions without clogging and discussion of how the results compare with earlier tests made under comparable conditions.
 - b. Return all leachate accumulated in the observation ports to either a non-leaking section of the evaporation pond, to the headworks of the treatment plant, or to an offsite liquid waste management facility.

- c. Keep the depth of fluid in any observation port at the minimum depth necessary to ensure efficient pump operation in order to prevent the buildup of hydraulic head on the liner.
6. Construction Specifications. The Recycled Water Agency shall implement the following measures to construct the evaporation pond:
 - a. All diversion and drainage facilities shall be designed, constructed, and maintained to take into account the design capacity of the drainage systems of downstream and adjacent properties by providing for the gradual release of retained water downstream in a manner that does not exceed the expected peak flow rate at the point of discharge as if the evaporation pond were not constructed.
 - b. Use materials for construction of the liner that have appropriate physical and chemical properties to ensure containment of discharged wastes over the operating life of the evaporation pond.
 - c. Design and construct the evaporation pond, including the foundation, final slopes, and containment systems, to withstand the maximum credible earthquake (MCE) without damage to the foundation, waste containment structures, or to the structures which control leachate, surface drainage, or erosion.
 - d. Design, construct, and maintain all containment structures so they are capable of containing wastes, waste constituents, and degradation products of wastes so as to prevent degradation of waters of the state, as a result of discharging waste into the evaporation pond.
 - e. Design and construct the evaporation pond with a foundation or base capable of providing support for the structures and capable of withstanding hydraulic pressure gradients to prevent failure or settlement, compression, or uplift, and all effects of ground motions resulting from the MCE as certified by either a licensed civil engineer or a certified engineering geologist.
7. Liner Specifications. The Recycled Water Agency shall implement the following measures to properly construct and manage the liner:
 - a. Design and construct the cutoff walls and grout curtains to provide a hydraulic conductivity of at least 1×10^{-6} centimeters per second.

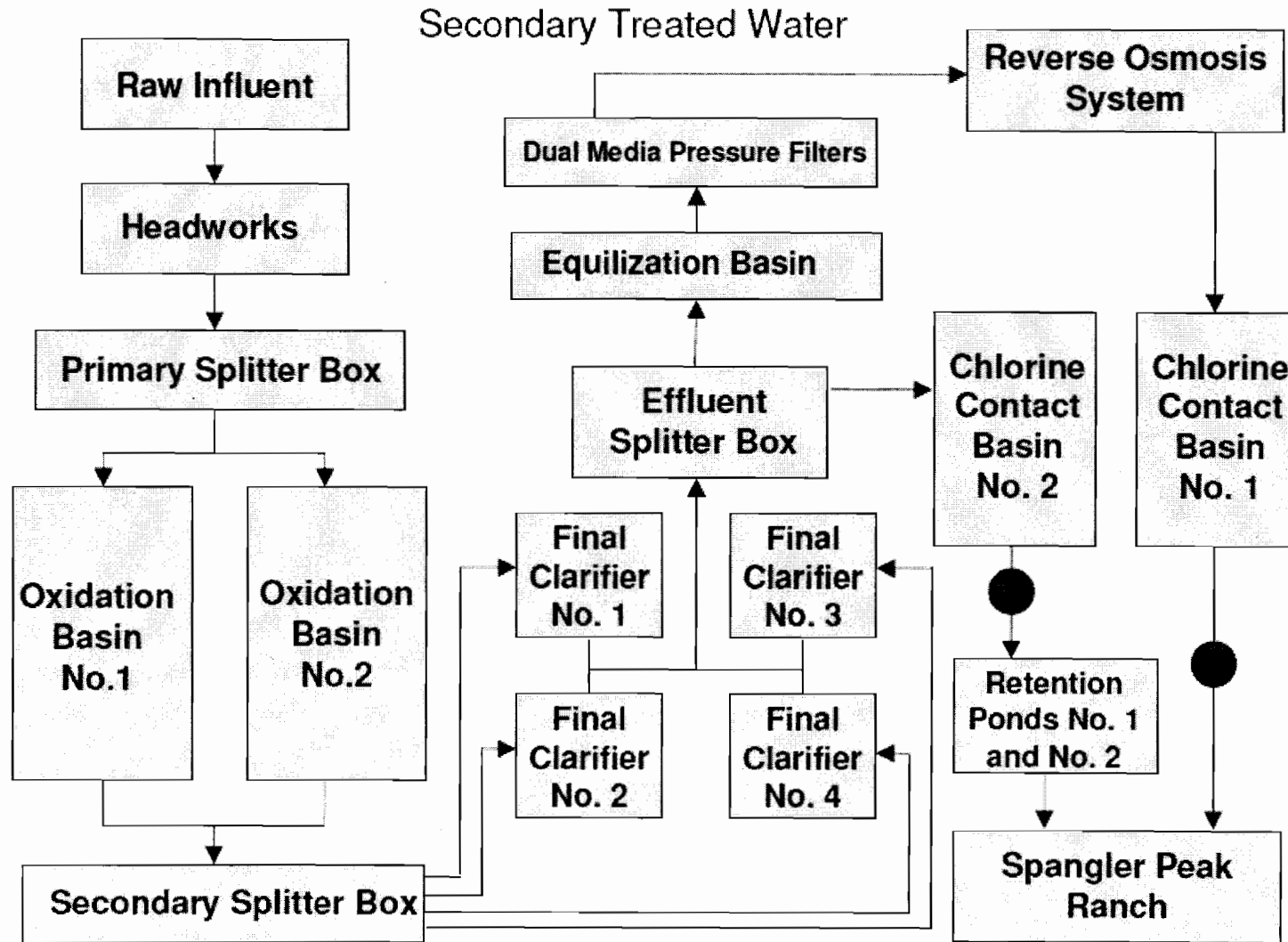
- b. Roll the subgrade (compacted fill material) to a smooth and level surface. The surface of the subgrade shall be free of stones greater than 0.5-inch in diameter, organics, and other deleterious material.
 - c. Use the components identified in Finding 6.a for the evaporation pond and install the gunite layer in a manner that ensures complete long-term coverage. The gunite layer shall provide complete coverage on the surface of the underlying liner system component.
 - d. Cover all natural geologic materials that are likely to be in contact with waste (including leachate) with the required liner system.
8. Certification Report. The evaporation pond shall be completely constructed and operable prior to the initiation of the discharge. A report from the design engineer certifying the adequacy of each component of the evaporation pond shall be submitted by the Recycled Water Agency prior to commencement of the discharge. The design engineer shall affix his or her signature and engineering license number to the certification report. Prior to initiation of the discharge, the following requirements shall be met:
- a. The certification report is received by the San Diego Water Board,
 - b. An adequately revised Operation Manual, required under Evaporation Pond Facility and Design Specification H.3.c, is received by the San Diego Water Board.
 - b. The San Diego Water Board has been notified of the completion of facilities by the Recycled Water Agency,
 - c. An inspection of the facilities has been made by the San Diego Water Board, and
 - d. The San Diego Water Board notifies the Recycled Water Agency by letter that discharge can be initiated.

I, David W. Gibson, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on March 11, 2009 and amended on September 8, 2010.

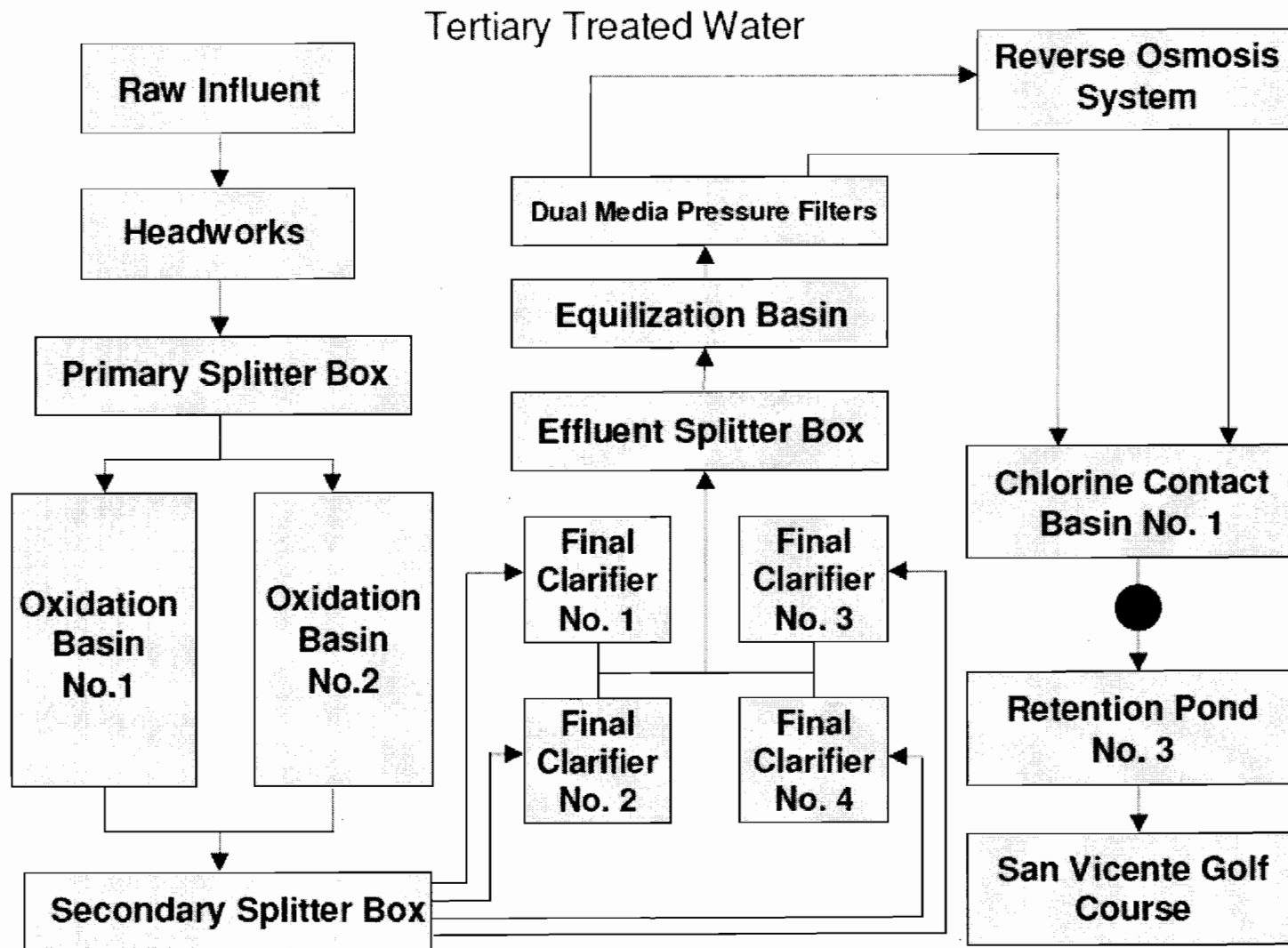


DAVID W. GIBSON, Executive Officer
California Regional Water Quality Control Board
San Diego Region

Attachment No. 1a: Wastewater Flow Schematic



Attachment No. 1b: Wastewater Flow Schematic



ATTACHMENT NO. 2
TO
ORDER NO. 2009-0005

RULES AND REGULATIONS FOR RECYCLED WATER USE PROJECTS

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

- Title 22, Division 4, Chapter 3, *Wastewater Reclamation Criteria*;
- Title 17, Division 1, Chapter 5, Subchapter 1, Group 4, Article 1 & 2, of the CCR;
- 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:

1. The use of recycled water shall not cause pollution, contamination, or nuisance as defined by section 13050 of the CWC.
2. The Recycled Water Agency, the Regional 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 Recycled Water Agency's rules and regulations.
3. The recycled water user shall provide written notification, in a timely manner, to the Recycled Water Agency of any material change or proposed change in the character of the use of recycled water.
4. Prior to the initiation of recycled water service, the recycled water user shall submit plans and specifications for recycled water distribution facilities to the Recycled Water Agency.
5. The recycled water user shall designate a recycled water supervisor who is responsible for the recycled water system at each use area under the user's

control. Specific responsibilities of the recycled water supervisor include the proper installation, operation, and maintenance of the irrigation system; compliance of the project with the Recycled Water Agency's rules and regulations, prevention of potential hazards and preservation of the recycled water distribution system plans in "as built" form. 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.

6. The Recycled Water Agency may terminate service to a recycled water user who uses, transports, or stores such water in violation of the Recycled Water Agency's rules and regulations.
7. 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 Regional Board Executive Officer approves relaxed storm protection measures for the facility.
8. 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 Regional Board Executive Officer approves relaxed storm protection measures for the facility.
9. The Regional Board may initiate enforcement action against any recycled water user, including but not limited to the termination of the recycled water supply, who:
 - a. Discharges recycled water in violation of any applicable discharge requirement prescribed by the Regional Board or in a manner which creates or threatens to create conditions of pollution, contamination, or nuisance, as defined in Water Code section 13050.
 - b. Uses, transports, or stores such water in violation of the rules and regulations governing the design, construction and use of recycled water distribution and disposal systems issued by the Recycled Water Agency in accordance with this attachment; or in a manner which creates or threatens to create conditions of pollution, contamination, or nuisance, as defined in Water Code section 13050.
10. 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.

11. Irrigation with disinfected tertiary recycled water shall not take place within 50 feet of any domestic water supply well unless all of the following conditions have been met:
 - a. A geological investigation demonstrates that an aquitard exists at the well between the uppermost aquifer being drawn from and the ground surface;
 - b. The well contains an annular seal that extends from the surface into the aquitard;
 - c. The well is housed to prevent any recycled water spray from coming into contact with the wellhead facilities;
 - d. The ground surface immediately around the wellhead is contoured to allow surface water to drain away from the well; and
 - e. The owner of the well approves of the elimination of the buffer zone requirement.
12. Impoundment of disinfected tertiary recycled water shall not occur within 100 feet of any domestic water supply well.
13. 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.
14. Irrigation with, or impoundment of, undisinfected secondary recycled water shall not take place within 150 feet of any domestic water supply well.
15. Recycled water facilities shall be operated in accordance with best management practices (BMPs) to prevent direct human consumption of recycled 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.
16. All windblown spray and surface runoff of recycled water applied for irrigation onto property not owned or controlled by the Recycled Water Agency or recycled water user shall be prevented by implementation of BMPs.
17. Irrigation with recycled 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.

18. 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.
19. 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.
20. Spray irrigation with recycled water, other than disinfected tertiary recycled water, shall not take place within 100feet 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.
21. All use areas where recycled water is used and that are accessible to the public shall be posted with conspicuous signs, in a size no less than 4 inches by 8 inches, that include the following wording and picture in a size no less than 4 inches high by 8 inches wide: "RECYCLED WATER - DO NOT DRINK". See Attachment No. 3 for the acceptable symbol. The sign(s) shall be of a size easily readable by the public. The prescribed wording should also be translated into Spanish and other appropriate languages and included in the required signs.
22. No physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying potable water.
23. 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.
24. 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 CCR Title 17 and the approval of the public water system has been obtained. If a "Swivel-ell" type connection is used it must be used in accordance with the provisions of the Department of Health Services Policy Memo 95-004. Approved backflow prevention devices shall be provided, installed, tested, and maintained by the recycled water user in accordance with the applicable provisions of CCR Title 17, Division 1, Chapter 5, Subchapter 1, Group 4, Article 2.
25. No person other than the Recycled Water Agency shall deliver recycled water to a facility. Connection to the irrigation system by an individual residence is prohibited.
26. 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 Division 104, Part 12, Chapter 5, Article 2, section 116815 of the California Health and Safety Code.

27. Customer complaints concerning recycled water use that may involve public illness shall be reported to the County DEH and the CDPH, and to the Recycled Water Agency who shall maintain a log of all customer complaints regarding recycled water.
28. Any backflow prevention device installed to protect the public water system shall be inspected and maintained in accordance with section 7605 of CCR Title 17.
29. The amount of nitrogen from commercial fertilizers applied to irrigation use sites shall be managed to take into account the nitrogen content of the recycled water in order to ensure sufficient nitrogen uptake by the vegetation and prevent leaching of excess nitrates and nitrogen compounds into the soil beyond the root zone.

ATTACHMENT NO. 3
TO
ORDER NO. R9-2009-0005



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

**MONITORING AND REPORTING PROGRAM NO. R9-2009-0005
AS AMENDED BY ADDUNDUM NO. 1**

**SAN VICENTE WASTEWATER RECLAMATION PLANT
RAMONA MUNICIPAL WATER DISTRICT
SAN DIEGO COUNTY**

This Monitoring and Reporting Program is issued pursuant to California Water Code section 13267 and is intended to determine compliance with Waste Discharge Requirements in Order No. R9-2009-0005.

A. MONITORING PROVISIONS

1. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this Monitoring and Reporting Program (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 notification to and the acceptance by the Regional Board.
2. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements 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.
3. Monitoring must be conducted according to U. S. Environmental Protection Agency (USEPA) test procedures approved under Code of Federal Regulations (CFR), Title 40, Part 136, "Guidelines Establishing Test Procedures for Analysis of Pollutants Under the Clean Water Act" as amended, unless other test procedures have been specified in this MRP.
4. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Public Health or a laboratory accepted by the Regional Board.
5. Monitoring results must be reported on discharge monitoring report forms accepted by the Regional Board.

6. If the Ramona Municipal Water District (Recycled Water Agency) 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 Recycled Water Agency's monitoring report. The increased frequency of monitoring shall also be reported.
7. The Recycled Water Agency 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 Regional Board.
8. Records of monitoring information shall include the following:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) analyses were performed;
 - d. The individual(s) who performed the analyses;
 - e. The analytical techniques or methods used; and
 - f. The results of such analyses.
9. All monitoring instruments and devices that are used by the Recycled Water Agency to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.
10. The Recycled Water Agency shall report all instances of noncompliance not reported under Provision F.6 of Order No. R9-2009-0005 at the time monitoring reports are submitted. The reports shall contain the information described in Provision F.6.
11. The monitoring reports shall be signed by an authorized person as required by Provision F.20.
12. A composite sample is defined as a combination of at least eight sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between

each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically.

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

B. INFLUENT MONITORING

The Recycled Water Agency shall calculate the flow rate of raw wastewater influent to the San Vicente Wastewater Treatment Plant (SVWTP) based on continuous flow measurement at other locations in the SVWTP. Cumulative 24-hour flow rates representing each calendar day in units of million gallons per day (MGD) shall be reported quarterly.

C. EFFLUENT MONITORING

1. Monitoring and Reporting for Flow Rate and Determining Compliance with Prohibition A.4.
 - a. Secondary and tertiary flow rates shall be monitored continuously and reported quarterly. Flow may be calculated based on continuous flow measurements at locations within the SVWTP.
 - b. Compliance with Prohibition A.4 of Order No. R9-2009-0005 shall be determined by comparing the arithmetic mean of daily flow rates during any thirty-day period with the 0.80 million gallons per day (mgd) prohibition.
2. Monitoring, Reporting, and Determining Compliance with California Code of Regulations Tertiary Recycled Water Standards.
 - a. Samples of tertiary recycled water discharged from the SVWTP shall be collected at a point downstream of the disinfection process and prior to any dilution in accordance with the following table:

Table 1. Tertiary Recycled Water Monitoring and Reporting

Constituent	Units ^a	Type of Sample	Sampling Frequency ^b	Reporting Frequency ^b
Turbidity ^c	NTU	Continuous	Continuous	Monthly
Chlorine Contact Time (CT) ^d	mg-min/L	Calculated	Continuous	Monthly
Total Chlorine Residual ^e	mg/L	Continuous	Continuous	Monthly
Total Coliform Bacteria ^f	MPN/100mL	Grab	Daily	Monthly

- a. NTU=nephelometric turbidity units; mg-min/L=milligram minutes per liter; mg/L=milligrams per liter; MPN/100mL=most probable number per one hundred milliliters.
- b. Daily is defined as a 24-hour period. Monthly is defined as a calendar month.
- c. Turbidity analyses shall be monitored continuously using a continuous monitoring and recording turbidimeter. Compliance with the daily average operating filter effluent turbidity limit of 2 NTU shall be determined using the levels of recorded turbidity levels at a minimum of four-hour intervals over a 24-hour period. Compliance with the turbidity standard of not exceeding 5 NTU more than 5 percent of the time over a 24-hour period shall be determined using the levels of recorded turbidity taken at intervals of no more than 1.2 hours over a 24-hour period. Should the continuous 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. Monthly, the Recycled Water Agency shall report results of four-hour turbidity readings, average effluent turbidity (24 hours), 95 percentile effluent turbidity (24 hours), and daily maximum turbidity readings. Continuous turbidity monitoring must also be provided prior to filtration to ensure adequate process control and to automatically actuate coagulant feed when the turbidity of the secondarily treated effluent is greater than 10 NTU.
- d. Calculated CT (chlorine concentration multiplied by modal contact time) values shall be determined and recorded continuously. The daily minimum CT value shall be reported monthly. The Recycled Water Agency shall report monthly the date, value, time, and duration when the CT value falls below 450 mg-min/L, and/or the modal contact time falls below 90 minutes.
- e. Chlorine concentrations shall be recorded by a continuous recording meter at a location in the pipeline where the effluent has experienced 90 minutes or more of modal contact time at maximum flow. Minimum daily chlorine residual shall be reported monthly.
- f. A representative sample of recycled water for total coliform bacteria shall be collected within 24 hours of plant start-up (and at a time when wastewater characteristics are most demanding on the treatment facilities and disinfection procedures).
 - b. Compliance with Discharge Specification B.1.a of Order No. R9-2009-0005 shall be determined by, 1) comparing the arithmetic median bacteriological results of any seven-day period with the 2.2 MPN per 100mL discharge specification; 2) ensuring no more than one sample in any thirty-day period exceeds the 23 MPN per 100mL discharge specification; and 3) ensuring no sample exceeds the 240 MPN per 100mL discharge specification.
 - c. Compliance with Discharge Specification B.1.b of Order No. R9-2009-0005 shall be determined by comparing the minimum reported CT value and modal contact time with the 450 mg-min/L and 90 minutes discharge specifications, respectively.
 - d. Compliance with Discharge Specification B.1.c of Order No. R9-2009-0005 shall be determined by 1) comparing the daily average turbidity to the 2 NTU discharge specification, and 2) checking that if effluent turbidity exceeds 2 NTU, then the effluent turbidity never exceeded 10 NTU and did not exceed 5 NTU for more than fifteen minutes.

3. Monitoring, Reporting, and Determining Compliance with California Code of Regulations Secondary Recycled Water Standards.

- a. Samples of secondary recycled water discharged from the SWWTP shall be collected at a point downstream of the disinfection process and prior to any dilution in accordance with the following table:

Table 2. Secondary Recycled Water Monitoring and Reporting

Constituent	Units	Type of Sample	Sampling Frequency ^a	Reporting Frequency ^a
Total Coliform Bacteria ^b	MPN/100mL	Grab	Daily	Monthly

- a. Daily is defined as a 24-hour period. Monthly is defined as a calendar month.
- b. A representative sample of recycled water for total coliform bacteria shall be collected within 24-hours of plant start-up (and at a time when wastewater characteristics are most demanding on the treatment facilities and disinfection procedures).

- b. Compliance with Discharge Specification B.2 of Order No. R9-2009-0005 will be determined by 1) comparing the arithmetic median bacteriological results of any seven-day period with the 2.2 MPN per 100mL discharge specification, and 2) ensuring that no more than one sample in any thirty-day period exceeds the 23 MPN per 100mL discharge specification.

4. Monitoring, Reporting, and Determining Compliance with Secondary Treatment Standards

- a. A sample of either secondary or tertiary treated recycled water discharged from the SWWTP shall be collected at a point downstream of the secondary treatment processes and prior to discharge to the storage ponds in accordance with the following table:

Table 3. Secondary Treatment Monitoring and Reporting

Constituent	Units	Type of Sample	Sampling Frequency ^{a,b}	Reporting Frequency ^{a,b}
pH	pH Units	Grab	Weekly	Quarterly
Biochemical Oxygen Demand (BOD ₅ @20°C)	mg/L	Composite	Weekly	Quarterly
Volatile Suspended Solids	mg/L	Composite	Weekly	Quarterly
Total Suspended Solids	mg/L	Composite	Weekly	Quarterly

- a. The Recycled Water Agency shall increase the sampling frequency from weekly to daily for any noted constituent that exceeds the limit specified by Discharge Specifications B.3 of Order No. R9-2009-0005. The increased frequency of monitoring shall continue until the Recycled Water Agency achieves compliance with the limitations for three consecutive periods. After compliance is achieved, the Recycled Water Agency shall resume sampling at the specified frequency.
- b. Weekly is defined as a calendar week (Sunday through Saturday). Quarterly is defined as a period of three consecutive calendar months beginning on January 1, April 1, July 1, or October 1.
- b. Compliance with Discharge Specification B.3.a of Order No. R9-2009-0005 shall be determined by 1) calculating the arithmetic mean of all samples collected during a period of seven consecutive days with their respective seven-day average discharge specification, 2) calculating the arithmetic mean of all samples collected during any calendar month with their respective thirty-day average discharge specification, and 3) ensuring that pH is maintained between 6.0 and 9.0 pH units at all times.
5. Monitoring, Reporting, and Determining Compliance with Discharge Specifications based on Water Quality Objectives.
- a. Samples of both secondary and tertiary recycled water discharged from the SWWTP shall be collected at a point downstream of the disinfection process and prior to any dilution in accordance with the following criteria:

Table 4. Recycled Water Monitoring and Reporting

Constituent	Units	Type of Sample	Sampling Frequency ^{a,b}	Reporting Frequency ^{a,b}
Total Dissolved Solids	mg/L	Composite	Quarterly	Quarterly
Methylene Blue Active Substances	mg/L	Composite	Quarterly	Quarterly
Color	Color Units	Composite	Quarterly	Quarterly
Percent Sodium	%	Composite	Quarterly	Quarterly
Nitrate (as NO ₃ ⁻)	mg/L	Composite	Quarterly	Quarterly
Chloride	mg/L	Composite	Quarterly	Quarterly
Sulfate	mg/L	Composite	Quarterly	Quarterly
Fluoride	mg/L	Composite	Quarterly	Quarterly
Iron	mg/L	Composite	Quarterly	Quarterly
Manganese	mg/L	Composite	Quarterly	Quarterly
Boron	mg/L	Composite	Quarterly	Quarterly

- a. The Recycled Water Agency shall increase the sampling frequency from quarterly to monthly for any noted constituent that exceeds the limit specified by Discharge Specifications B.3 of Order No. R9-2009-0005. The increased frequency of monitoring shall continue until the Recycled Water Agency achieves compliance with the limitations for three consecutive periods. After compliance is achieved, the Recycled Water Agency shall resume sampling at the specified frequency.
- b. Quarterly is defined as a period of three consecutive calendar months beginning on January 1, April 1, July 1, or October 1.
- b. Compliance with Discharge Specification B.3 of Order No. R9-2009-0005 shall be determined by calculating the twelve month average of reported quarterly blended recycled water qualities during the previous calendar year. Blended recycled water quality shall be calculated and reported by the Recycled Water Agency based on the amount and quality of secondary recycled water and the amount and quality of tertiary recycled water using the following equations:

$$Q_F = Q_S + Q_T \quad \text{and} \quad C_F = \frac{C_S * Q_S + C_T * Q_T}{Q_F}$$

'Q' is the total flow rate of the quarter,

'C' is the average concentration of all samples collected during the quarter,

'S' is the flow/concentration of secondary recycled water,

'T' is the flow/concentration of tertiary recycled water, and

'F' is the flow/concentration of the overall effluent.

6. Monitoring, Reporting, and Determining Compliance with Discharge Specifications based on Maximum Contaminant Levels.

- a. Samples of tertiary recycled water discharged from the SWWTP shall be collected at a point downstream of the disinfection process and prior to any dilution in accordance with the following criteria:

Table 5. CCR Title 22 Metals Monitoring and Reporting

Constituent	Units	Type of Sample	Sampling Frequency ^{a,b}	Reporting Frequency ^{a,b}
Aluminum	mg/L	Composite	Once every five years	Once every five years
Arsenic	mg/L	Composite	Once every five years	Once every five years
Antimony	mg/L	Composite	Once every five years	Once every five years
Asbestos	million fibers per liter	Composite	Once every five years	Once every five years
Barium	mg/L	Composite	Once every five years	Once every five years
Beryllium	mg/L	Composite	Once every five years	Once every five years
Cadmium	mg/L	Composite	Once every five years	Once every five years
Cyanide	mg/L	Composite	Once every five years	Once every five years
Mercury	mg/L	Composite	Once every five years	Once every five years
Nickel	mg/L	Composite	Once every five years	Once every five years
Perchlorate	mg/L	Composite	Once every five years	Once every five years
Selenium	mg/L	Composite	Once every five years	Once every five years
Thallium	mg/L	Composite	Once every five years	Once every five years

- a. The Recycled Water Agency shall increase the sampling frequency from once every 5 years to monthly for any noted constituent that exceeds the limit specified by Discharge Specifications B.3 of Order No. R9-2009-0005. The increased frequency of monitoring shall continue until the Recycled Water Agency achieves compliance with the limitations for three consecutive months. After compliance is achieved, the Recycled Water Agency shall resume sampling at the specified frequency.
 - b. Once every five years is defined as a period of five calendar years beginning in 2010.
- b. Compliance with Discharge Specification B.3 of Order No. R9-2009-0005 shall be determined by comparing the reported values of each constituent to their respective instantaneous maximum discharge specification.

7. The Recycled Water Agency shall review the monitoring results for compliance with Order No. R9-2009-0005 and submit a statement of compliance as part of the Monitoring and Reporting Program No. R9-2009-0005. The statement of compliance shall identify and report all violations of Discharge Specifications B.1 through B.5 of Order No. R9-2009-0005.

D. SEWAGE SOLIDS AND BIOSOLIDS

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

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

E. POTABLE SUPPLY WATER

Annually, the Recycled Water Agency shall submit water quality data provided by the San Diego County Water Authority for the potable water supplied to the San Diego Country Estates.

F. SPECIAL STUDIES

1. Salt and Nutrient Management Plan. The Recycled Water Agency shall submit a salt and nutrient management plan for the Gower Hydrologic Subarea (Gower HSA) within 5 years of the date the statewide Recycled Water Policy is approved by the Office of Administrative Law. The salt and nutrient management plan shall include the following components:
 - a. Identification of salt and nutrient sources, basin assimilative capacity and loading estimates, together with fate and transport of salts and nutrients;
 - b. Consideration for water recycling and stormwater recharge/use goals and objectives for the Gower HSA;
 - c. Determination of what reductions to loading rate, if any, are necessary to achieve water quality objectives in the Gower HSA;
 - d. Proposal of mitigation measures to manage salt and nutrient loading in the basin on a sustainable basis that considers that socioeconomic benefit and effectiveness of each measure;

- e. A proposed schedule for completion of tasks or mitigation measures and identification of entity responsible for completion of task.
 - f. Development of a monitoring plan to determine the effectiveness of the implemented mitigation measures.
2. Salt and Nutrient Management Workplan. The Recycled Water Agency shall submit a workplan within 180 days of adoption of this Order that will identify the specific measures and schedule that the Recycled Water Agency will take to complete the salt and nutrient management plan. At a minimum, the workplan must include the following:
- a. A proposal for ongoing basin wide monitoring that will update and expand upon the data contained in the technical report entitled, *Basin Plan Amendment Study for the Gower Hydrologic Subarea of the San Diego Region (9)* dated April 16, 1999 (Report). The purpose of the monitoring is to provide the data necessary to identify the salt and nutrient sources, to quantify the basin assimilative capacity and loading estimates, and determine the fate and transport of salts and nutrients in the Gower HSA.
 - i. Monitoring locations used in the Report should be monitored in addition to other proposed locations needed to characterize background water quality, groundwater in areas near water supply wells, and areas proximate to large water recycling projects. Also, monitoring locations shall, where appropriate, target groundwater and surface waters where groundwater has connectivity with overlying and adjacent surface waters.
 - ii. The preferred approach to monitoring is to collect samples from existing wells if feasible as long as the existing wells are constructed, screened, and located appropriately to determine water quality throughout the most critical areas of the basin.
 - iii. The workplan shall identify the number, locations, depths, and construction information of any existing or proposed monitoring wells as well as what constituents will be monitored, which method will be used; and the frequency and duration of monitoring.
 - b. Identification of other stakeholders potentially responsible for conducting the monitoring, and compiling, and reporting the monitoring data; and
 - c. A schedule for completion of all monitoring activities.

3. Other Special Studies. Core monitoring may include intake monitoring, effluent monitoring, receiving water monitoring, and groundwater monitoring. This Order includes core monitoring for intake, effluent, and groundwater monitoring. In addition to core monitoring requirements, the Recycled Water Agency may be required to conduct additional monitoring. Special studies are intended to be short-term and designed to address specific research or management issues that are not addressed by the routine core monitoring program. The Recycled Water Agency shall implement special studies as directed by this Regional Board

G. RECYCLED WATER USERS SUMMARY REPORT

The Recycled Water Agency shall submit a quarterly recycled water users summary report containing the following information:

1. Total volume and type of recycled water supplied to all recycled water users for each month of the reporting period;
2. Total number of recycled water use sites;
3. Address of the recycled water use sites;
4. Site supervisor name, address, and phone number for each use site;
5. Basin Plan name and number of hydrologic subarea underlying the recycled water 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, the period of noncompliance, and if the noncompliance has been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

H. ANNUAL RECYCLED WATER SUMMARY REPORT

The Regional Board regulates the production and discharge of recycled water to land using waste discharge requirements, Master Reclamation Permits, water reclamation requirements, and waivers of waste discharge requirements. The Regional Board is developing a standardized electronic reporting 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 January 31 every year.

I. REPORT SCHEDULE

Monitoring reports shall be submitted to the Regional Board in accordance with the following schedule:

Table 6. Reporting Schedule

Reporting Frequency	Report Period	Report Due
Monthly	January, February, March, April, May, June, July, August, September, October, November, December	By the 30 th of the following month
Quarterly	January – March	April 30 th
	April – June	July 30 th
	July – September	October 30 th
	October – December	January 30 th
Annual	January-December	January 30 th
Every 5 Years	January-December	January 30 th

Monitoring reports shall be submitted to:

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

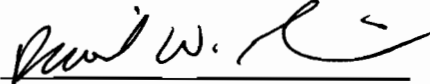
J. Evaporation Pond Monitoring Requirements

1. **Reporting Requirements.** Evaporation pond reporting shall consist of the following reports required to be submitted to the San Diego Water Board:
 - a. Quarterly Reports. The quarterly reports shall be submitted in accordance with Section I, Reporting Schedule and contain the following information:
 - i. Monthly records of the volume of brine discharged to each section and the total volume of brine discharged to the pond.
 - ii. A summary of observations of the pond. The Recycled Water Agency shall observe each pond daily, determine pond section 13's freeboard, and enter observations into a permanent log. The log shall be made available to the San Diego Water Board upon request.

- iii. A map of all monitoring points.
 - iv. LCRS observations and monitoring results.
- b. Annual Reports. The annual reports shall be submitted in accordance with Section I, Reporting Schedule and contain the following information:
- i. Documentation of measures taken to comply with Evaporation Pond Facility and Design Specification 4.a regarding surface and drainage controls.
 - ii. Results of the annual LCRS testing to comply with Evaporation Pond Facility and Design Specification 5.a.
 - iii. Data graphs for each monitoring point monitored.
2. **LCRS Monitoring.** Monitoring of the LCRS shall consist of the following components:
- a. The presence and level of any liquid in each LCRS observation port and any volume of liquid pumped from the LCRS back to the pond shall be monitored and recorded each week. The Recycled Water Agency shall evaluate any amount of liquid in the observation port and any amount pumped to the pond from the LCRS to determine if the liquid is condensate or if the liquid indicates leakage from the primary layer of the liner system. The Recycled Water Agency shall conduct weekly analyses of the liquid in the LCRS and the pond for specific conductance, measured in micromhos/centimeter.
 - b. The observation ports above the PVC containment liner shall be monitored for significant increases in specific conductance levels in the LCRS sump liquid and for significant increases in volume of liquid pumped from the LCRS. If either the Recycled Water Agency or the San Diego Water Board determines that there is significant physical evidence of leakage through the primary layer of the liner system and into the LCRS observation port, the Recycled Water Agency shall perform the following steps:
 - i. Pump out all liquid from the LCRS observation port.
 - ii. Inspect the LCRS observation port daily for a period of seven consecutive days for evidence of additional liquid. If no additional liquid has accumulated in the LCRS sump within the

seven-day period, the Recycled Water Agency can return to the weekly inspection program.

- iii. If liquid has accumulated in the LCRS sump within the seven day period, then the Recycled Water Agency shall immediately notify the San Diego Water Board of this fact and shall submit a corrective action proposal and an implementation schedule within thirty days.
 - iv. The Recycled Water Agency shall take corrective action according to the schedule in the corrective action proposal.
- c. The observation ports below the PVC containment liner shall be monitored for significant increases in specific conductance levels in the LCRS sump liquid. A significant increase in specific conductance of the LCRS sump liquid indicates the final containment layer of the brine pond has been compromised. The Recycled Water Agency shall, therefore, immediately notify the San Diego Water Board of this fact and shall submit a corrective action proposal and an implementation schedule within thirty days. The Recycled Water Agency shall take corrective action according to the schedule in the corrective action proposal.

Ordered by: 
DAVID W. GIBSON
Executive Officer

Date: March 11, 2009, amended on September 8, 2010