

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

**ORDER NO. R9-2015-0091**

**MASTER RECYCLING PERMIT FOR THE CITY OF SAN DIEGO  
NORTH CITY WATER RECLAMATION PLANT,  
SAN DIEGO COUNTY**

The Discharger, as described in the following table is subject to waste discharge and other requirements as set forth in this Order:

**Table 1. Discharger Information**

<b>Discharger</b>	City of San Diego
<b>Name of Facility</b>	North City Water Reclamation Plant
<b>Facility Address</b>	4949 Eastgate Mall
	San Diego, CA 92121
	San Diego County

The discharge by the City of San Diego Public Utilities Department from the discharge points identified in Table 2 is subject to waste discharge and other requirements as set forth in this Order.

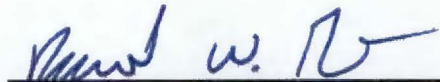
**Table 2. Discharge Location**

<b>Discharge Point</b>	<b>Effluent Description</b>	<b>Hydrologic Area of Discharge</b>
Recycled Water Use Areas/Sites	Disinfected Tertiary Recycled Water	See Section II.B of Attachment C (Information Sheet)

**Table 3. Effective Date**

This Order was adopted by the California Regional Water Quality Control Board, San Diego Region and is effective on:	December 16, 2015
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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 December 16, 2015.

  
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David W. Gibson, Executive Officer

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**I. FACILITY INFORMATION**

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

**Table 4. Facility Information**

<b>Discharger</b>	City of San Diego
<b>Name of Facility</b>	North City Water Reclamation Plant
<b>Facility Address</b>	4949 Eastgate Mall
	San Diego, CA 92121
	San Diego County
<b>Facility Contact, Title and Phone</b>	Mr. Ernesto Molas, 858-824-6000
<b>Mailing Address</b>	9191 Kearny Villa Court, San Diego, CA 92123
<b>Type of Facility</b>	Wastewater Treatment Plant
<b>Tertiary Treatment Capacity</b>	32 million gallons per day

**II. FINDINGS**

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

- A. **Background.** The City of San Diego (hereinafter City or Discharger) submitted a Report of Waste Discharge, dated January 12, 2015 requesting an amendment to Order No. 97-03, *Waste Discharge and Water Recycling Requirements for the Production and Purveyance of Recycled Water for the City of San Diego North City Water Reclamation Plant.*
- B. **Legal Authorities.** This Order is issued pursuant to Water Code sections 13263 and 13523.1. This Order serves as a Master Recycling Permit, which also includes Waste Discharge Requirements (WDRs) issued pursuant to Water Code, division 7, chapter 4, article 4.
- C. **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, self-monitoring reports, water quality control plans and policies,<sup>1</sup> and other available information. An Information Sheet (Attachment C) was prepared for this Order, which contains background information and rationale for Order requirements. The Information Sheet is hereby incorporated into and constitutes Findings for this Order.
- D. **Antidegradation Policy.** The State Water Resources Control Board (State Water Board) established California’s Antidegradation Policy in State Water Board Resolution No. 68-16, *the Statement of Policy with Respect to Maintaining High*

<sup>1</sup> Including the State Water Board’s Recycled Water Policy (2009, as modified in 2013): [http://www.waterboards.ca.gov/water\\_issues/programs/water\\_recycling\\_policy/draft\\_amendment\\_to\\_policy.shtml](http://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/draft_amendment_to_policy.shtml)

*Quality of Waters in California*. 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 the Information Sheet, the discharge described in the Order is consistent with the Antidegradation Policy.

- E. **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 to the extent permitted by federal law.
- F. **Notification of Interested Persons.** The San Diego Water Board has notified the Discharger and known interested agencies and persons of its intent to prescribe Waste Discharge Requirements 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 (Attachment C of this Order).
- G. **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.
- H. **California Environmental Quality Act.** Adoption of Order No. R9-2015-0091 is exempt from requirements of the California Environmental Quality Act (CEQA; Public Resources Code section 21000, *et seq.*). Pursuant to the title 14, California Code of Regulations (Cal. Code Regs.), chapter 3, article 19, section 15301, the project is exempted because adoption of the Order will not involve expansion or modification of the existing facility. Adoption of Order No. R9-2015-0091 will not have any significant impact on the environment.
- I. **Rescission of Outdated Waste Discharge Requirements.** The North City Water Reclamation Plant (NCWRP) is regulated under Order No. 97-03, Waste Discharge and Water Recycling Requirements for the Production and Purveyance of Recycled Water for the City of San Diego North City Water Reclamation Plant. Order No. R9-2015-0091 supersedes Order No. 97-03.
- J. **Water Quality Objectives.** The NCWRP service area includes the Hydrologic Areas/Subareas tabulated below. Groundwater quality objectives are not to be exceeded more than 10 percent of the time during any one year period. Recycled water produced from the NCWRP is used in the following seven HA/HsAs:
- Miramar Reservoir Hydrologic Area (Miramar Reservoir HA 906.10)
  - Poway Hydrologic Area (Poway HA 906.20)
  - Scripps Hydrologic Area (Scripps HA 906.30)
  - Miramar Hydrologic Area (Miramar HA 906.40)
  - Tecolote Hydrologic Area (Tecolote HA 906.50)
  - Solana Beach Hydrologic Area (Solana Beach HA 905.10)
  - Mission San Diego Hydrologic Subarea (Mission HSA 907.11)

The water quality objectives for the NCWRP service area can be found in Table 3-3 of Chapter 3 of the *Water Quality Control Plan for the San Diego Basin* (Basin Plan). Although, the Poway HA is in the NCWRP’s service area, the end use sites regulated under this Order do not include those in the Poway HA. Recycled water used within the Poway HA is regulated under an Order prescribing separate water reclamation requirements for the City of Poway.

**THEREFORE, IT IS HEREBY ORDERED**, that this Order supersedes Order No. 97-03 upon the effective date of this Order except for enforcement purposes. In order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and applicable regulations, it is further ordered that the Discharger comply with the requirements in this Order. If any part of this Order is subject to a temporary stay of enforcement, unless otherwise specified in the order granting stay, the Discharger shall comply with the analogous portions of the previous Order. This action does not prevent the San Diego Water Board from taking enforcement actions for past violations of the previous Order.

**III. DISCHARGE PROHIBITIONS**

- A. Discharge of waste, other than incidental runoff, to lands which have not been specifically described in this Order or in the Report of Waste Discharge, and for which valid waste discharge requirements are not in force are prohibited.
- B. Discharges of treated or untreated solid or liquid waste to waters of the United States are prohibited unless as authorized by a National Pollutant Discharge Elimination System (NPDES) permit issued by the San Diego Water Board.
- C. Discharges of treated or untreated solid or liquid waste directly or indirectly to any surface waters of the State (including ephemeral streams and vernal pools) are prohibited.
- D. The treatment, storage, or disposal of waste in a manner that creates pollution, contamination, or nuisance, as defined by Water Code section 13050, is prohibited.

**IV. DISCHARGE SPECIFICATIONS**

- A. The average monthly flow from the tertiary treatment facilities at the North City Water Reclamation Plant (NCWRP) shall not exceed 32 million gallons per day.
- B. Recycled water discharged from the NCWRP shall not contain constituents in excess of the discharge specifications in Table 5.

**Table 5. Discharge Specifications**

Constituent	Units	Daily Maximum <sup>1</sup>	Monthly Average <sup>2</sup>	12-Month Average <sup>3</sup>
Chlorine Residual	Milligrams per liter (mg/L)	See Section IV.C		
Chlorine-Contact Time (CT)	Milligrams minute per liter (mg-min/L)	See Section IV.C		

Constituent	Units	Daily Maximum <sup>1</sup>	Monthly Average <sup>2</sup>	12-Month Average <sup>3</sup>
Total Coliform Bacteria	Most Probable Number per 100 milliliters (MPN per 100 mL)	See Section IV.D		
Turbidity (TURB)	Nephelometric Turbidity Units (NTU)	See Section IV.E		
Biological Oxygen Demand (BOD <sub>5</sub> @ 20°C)	mg/L	45	30	-
Total Suspended Solids (TSS)	mg/L	45	30	-
pH	pH units	Within the limits of 6.5-8.5 at all times		
Total Dissolved Solids (TDS)	mg/L	-	-	1,200
Chloride (Cl)	mg/L	-	-	300
Sulfate (SO <sub>4</sub> )	mg/L	-	-	300
Percent Sodium (% Na)	%	-	-	60%
Total Nitrogen (N)	mg/L	-	-	-
Iron (Fe)	mg/L	-	-	0.30
Manganese (Mn)	mg/L	-	-	0.1
Methylene Blue-Activated Substances (MBAS)	mg/L	-	-	0.5
Boron (B)	mg/L	-	-	0.75
Fluoride (F)	mg/L	-	-	1.0
Aluminum	mg/L	-	-	1.0
Arsenic	mg/L	-	-	0.05
Antimony	mg/L	-	-	0.006
Barium	mg/L	-	-	1.0
Beryllium	mg/L	-	-	0.004
Cadmium	mg/L	-	-	0.005
Cyanide	mg/L	-	-	0.2
Mercury	mg/L	-	-	0.002
Nickel	mg/L	-	-	0.1
Selenium	mg/L	-	-	0.05
Thallium	mg/L	-	-	0.002

<sup>1</sup>The daily maximum discharge specification shall apply to the results of a single composite or grab sample representing non-overlapping 24 hour periods.

<sup>2</sup>The monthly average discharge specification shall apply to the arithmetic mean of the results of all samples collected during each calendar month.

<sup>3</sup>The 12-month average discharge specification shall apply to the arithmetic mean of the results of all samples collected in a calendar year.

- C. The chlorine disinfection process must provide a chlorine contact time (or CT)<sup>2</sup> 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.
- D. The median density 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 organisms per 100 milliliters, utilizing the bacteriological results of the last seven days for which analyses have been completed; and the number of total coliform bacteria shall not exceed an MPN of 23 organisms per 100 milliliters in more than one sample in any 30-day period. No sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters.
- E. Turbidity measurement of the recycled water effluent from the NCWRP shall not exceed a daily average value of 2 Nephelometric Turbidity Units (NTU), shall not exceed 5 NTU more than 5 percent of the time during a 24-hour period, and shall not exceed 10 NTU at any time.

## V. RECYCLED WATER PURVEYANCE REQUIREMENTS

- A. The Discharger must maintain and submit the following to the San Diego Water Board, State Water Board Division of Drinking Water (DDW), and County of San Diego Department of Environmental Health (County DEH) upon request.
  - 1. *Rules and Regulations for Recycled Water Users* governing the design and construction of recycled water use facilities and the use of recycled water. Rules and regulations for purveyance of recycled water shall, at a minimum, include the requirements which are contained in Attachment B to this Order.
  - 2. A program to conduct compliance inspections of recycled water reuse sites. Inspections shall determine the status of compliance with the Discharger's approved rules and regulations for recycled water users.
  - 3. A report containing the information listed below. The Discharger may submit a report that covers more than one reuse site. The report shall include a detailed description of each reuse site identifying all of the information below.
    - a. The number, location, and type of facilities within the use area proposing to use domestic and recycled water. "Facility" means any type of building or structure, or defined area of specific public use that utilizes or proposes to utilize a dual plumbed system.
    - b. The 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.

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<sup>2</sup> Defined as the product of total chlorine residual and modal contact time measured at the same point.

- c. The person or persons responsible for operation of the recycled water system at each use area.
  - d. The specific use to be made of the recycled water at each use area.
  - e. The methods to be used 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.
  - f. Plans and specifications shall include the following and shall be submitted to the DDW and/or County DEH as required by the *Recycled Water Oversight Agreement* between the Discharger and the County DEH.
    - i. Proposed piping system to be used.
    - ii. Pipe locations of both the recycled and potable systems.
    - iii. Type and location of the outlets and plumbing fixtures that will be accessible to the public.
    - iv. The methods and devices to be used to prevent backflow of recycled water into the public water system.
    - v. Plan notes relating to recycled water specific installation and use requirements.
- B. Prior to providing recycled water to a new use site, the Discharger shall do the following.
1. Submit for review and approval a letter certifying that the project conforms to all criteria described in Recycled Water Purveyance Requirements V.A.3. The letter shall document that all criteria described in Recycled Water Purveyance Requirements V.A.3 has been submitted to and approved by the appropriate regulatory agency. Information submitted as a supplement to this letter shall document compliance with any criteria, as described by Recycled Water Purveyance Requirements V.A.3, not met through submittal of the initial report.
  2. Prior to the operation of a 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 title 22, Cal. Code Regs., 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 at least 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.

- C. The Discharger shall ensure the following requirements are met for all reuse sites.
  - 1. Enforce recycled water rules and regulations.
  - 2. Conduct recycled water reuse site compliance inspections in accordance with the program submitted in compliance with Recycled Water Purveyance Requirements V.A.2 of this Order.
  - 3. Notify the DDW 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 after finding the incident.
  - 4. Maintain a current list of all on-site recycled water supervisors.

## VI. PROVISIONS

- A. The Discharger shall comply with all of the following Standard Provisions.
  - 1. 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 waste discharge requirements.
  - 2. 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.

- B. The Discharger shall report any noncompliance that may endanger health or the environment. Pursuant to Health and Safety Code, section 5411.5, any sewage overflow or spill shall be immediately reported to the County DEH to the extent permitted by federal law. 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 report shall also be provided within 5 days of the time the Discharger becomes aware of the circumstances. The written report 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:
1. Any bypass from any portion of the treatment facility.
  2. Any discharge of treated or untreated wastewater resulting from sewer line breaks, obstruction, surcharge, or any other circumstances.
  3. Any treatment plant upset that causes the discharge specifications of this Order to be exceeded.
  4. Failure of disinfection system.
  5. An effluent total coliform bacteria value greater than 240 MPN/100 mL.
- C. The Discharger shall report all overflow events that occur at the plant. 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, 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.
- D. If the Discharger or end user, without regard to intent or negligence, (1) causes or permits an unauthorized discharge of (a) 50,000 gallons or more of recycled water that has been treated to at least disinfected tertiary recycled water<sup>3</sup> or; (b) 1,000 gallons or more of recycled water that is treated at a level less than disinfected tertiary recycled water in or on any waters of the State, or (2) 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 or entity has knowledge of the discharge, (2) notification is possible, and (3) notification can be

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<sup>3</sup> Disinfected tertiary recycled water is defined in title 22, Cal. Code Regs., Chapter 3, section 60301.230

provided without substantially impeding cleanup or other emergency measures, that person or entity shall immediately notify the San Diego Water Board in accordance with reporting requirements in Provision VI. B.

- E. The incidental discharge of recycled water to waters of the United States 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.
- F. 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, notify the San Diego Water Board at least 10 days prior to the date of the bypass. "Bypass" means the intentional diversion of waste streams from any portion of the treatment facility other than a sewer system.
- G. 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.
- H. 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 has failed, is reduced, or is lost.
- I. Except for a discharge that is in compliance with this Order, the Discharger shall notify the San Diego Water Board or State Water Board of the discharge, without regard to intent or negligence, if it causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, as soon as (a) it 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 County DEH in accordance with 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 title 2, Government Code, division 1, chapter 7, article 3.7 (commencing with section 8574.17). This provision does not require reporting of any discharge of less than a reportable quantity as provided for under Water Code, section 13271, subdivisions (f) and (g) unless the Discharger is in violation of a prohibition in the *Water Quality Control Plan for the San Diego Basin* (Basin Plan).
- J. Except for a discharge which is in compliance with this Order, if the Discharger, 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, the Discharger 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 title 2, Government Code, division 1, chapter 7, article 3.7 (commencing with section 8574.1) to the extent permitted by federal law. 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 Clean Water Act section 311, or the discharge is in violation of a Basin Plan prohibition applicable to federal facilities in accordance with federal law.

- K. A copy of this Order shall be maintained at the Facility and shall be available to operating personnel at all times.
- L. 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.
- M. 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.
- N. This Order may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following.
  - 1. Violation of any terms or conditions of this Order.
  - 2. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts.
  - 3. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- O. 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.
- P. The Discharger shall file a new Report of Waste Discharge, stamped or signed by a licensed professional,<sup>4</sup> at least 120 days prior to the following.

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<sup>4</sup> All reports, plans, and documents required under this Order must be prepared under the direction of appropriately qualified professionals. California Business and Professions Code sections 6735, 7835, and 7835.1 require that engineering and geologic evaluations and judgments be performed by or under the direction

1. 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.
  2. 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).
  3. Change in the disposal area from that described in the findings of this Order.
  4. Increase in flow beyond that specified in this Order.
  5. Other circumstances that result in a material change in character, amount, or location of the waste discharge.
  6. Any planned change in the regulated facility or activity which may result in noncompliance with this Order.
- Q. This Order is not transferable to any person except after notice to the San Diego Water Board. This notice must be in writing and received by the San Diego Water Board 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 and forward. 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.
- R. 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.
- S. All applications, reports, or information submitted to the San Diego Water Board shall be signed and certified as follows:
1. The Report of Waste Discharge shall be signed as follows.
    - a. For a corporation by either a principal executive officer or ranking elected official; or
    - b. For a municipality, state, or federal or other public agency by either a public Executive Officer or ranking elected official.

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of licensed professionals. The lead professional shall sign and affix their license stamp to the report, plan, or document.

- c. By direction of the person designated in paragraph "a." or "b." of this provision, only if:
  - i. The authorization is made in writing by a person described in paragraph 1.a. or 1.b. of this provision; and
  - ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity.
2. 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 Provision S.1 of this Order or a duly authorized representative of that person. An individual is a duly authorized representative only if all of the following are true:
  - a. The authorization is made in writing by a person described in Provision S.1 of this Order.
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity.
  - c. The written authorization is submitted to the San Diego Water Board.
  - d. Any person signing a document under Provision S.1 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 a fine and imprisonment."

## **VII. SPECIAL PROVISIONS: 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. The Discharger must implement the following to ensure that recycled water and fertilizer are applied in use sites at agronomic rates.<sup>5</sup>
1. Monitor nutrient levels in recycled water supplies and notify end users of the nutrient value of recycled water.
  2. Educate and train site supervisors on how to minimize the potential for runoff or over irrigation and take into account the nutrient value of the recycled water.
  3. Conduct periodic inspections of end use sites.
- C. The Discharger shall submit results of a nitrate study by December 23, 2016 which demonstrates whether or not the discharge from the plant will cause groundwater to exceed the proposed groundwater quality objective for nitrate of 45 mg/L as nitrate (in areas with applicable numerical groundwater quality objectives). The nitrate study must evaluate factors such as existing nitrogen removal achieved at the plant, need for additional treatment processes to remove nitrate, fate and transport of nitrogen in the groundwater, groundwater monitoring, application of recycled water and fertilizer at agronomic rates, and other best management practices. A workplan for the nitrate study must be submitted by June 23, 2016 which identifies proposed tasks and milestones for completing the nitrate study.
- D. Prior to any changes in the treatment facilities, the Discharger shall prepare an engineering report conforming to title 22, Cal. Code Regs., section 60323. The engineering report shall be submitted to the DDW, County DEH, and San Diego Water Board for review and response.
- E. Disinfection of recycled water shall comply with all requirements of title 22, Cal. Code Regs., division 4. Disinfection may be accomplished by either:
1. A chlorine disinfection process that provides a CT (chlorine concentration times modal contact time) value of not less than 450 milligram-minutes per 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
  2. 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.

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<sup>5</sup> Agronomic rates refers to the rates of application of recycled water to plants necessary to satisfy the plants' evapotranspiration requirements, considering allowances for supplemental water (e.g., effective precipitation), irrigation distribution uniformity, and leaching requirement, thus minimizing the movement of nutrients below the plants' root zone.

- F. A copy of the facility operations manual shall be maintained at the plant 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.
1. Alarm set points for secondary turbidity, tertiary turbidity, and chlorine residual.
  2. Levels at which flow will be diverted for secondary turbidity, tertiary turbidity, and chlorine residual.
  3. When to divert flow for high daily and weekly median total coliform.
  4. When the authorities (DDW, County DEH, San Diego Water Board) will be notified of a diversion.
  5. Names and numbers of those authorities to be notified in case of a diversion.
  6. Frequency of calibration for turbidity meters and chlorine residual analyzers.
- G. The Facility shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to title 23, Cal. Code Regs., chapter 3, subchapter 14.
- H. 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.
- I. 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.
- J. The Discharger shall comply with Monitoring and Reporting Program No. R9-2015-0091 and future revisions thereto as specified by the San Diego Water Board. Monitoring results shall be reported at the frequency specified in Monitoring and Reporting Program No. R9-2015-0091.
- K. The City must participate as a stakeholder in developing a salt and nutrient management plan for the Poway groundwater basin. The City must submit a status update to the San Diego Water Board by June 23, 2016 identifying proposed tasks and measures it will implement, as a stakeholder involved in developing a salt and nutrient management plan for the Poway groundwater basin.

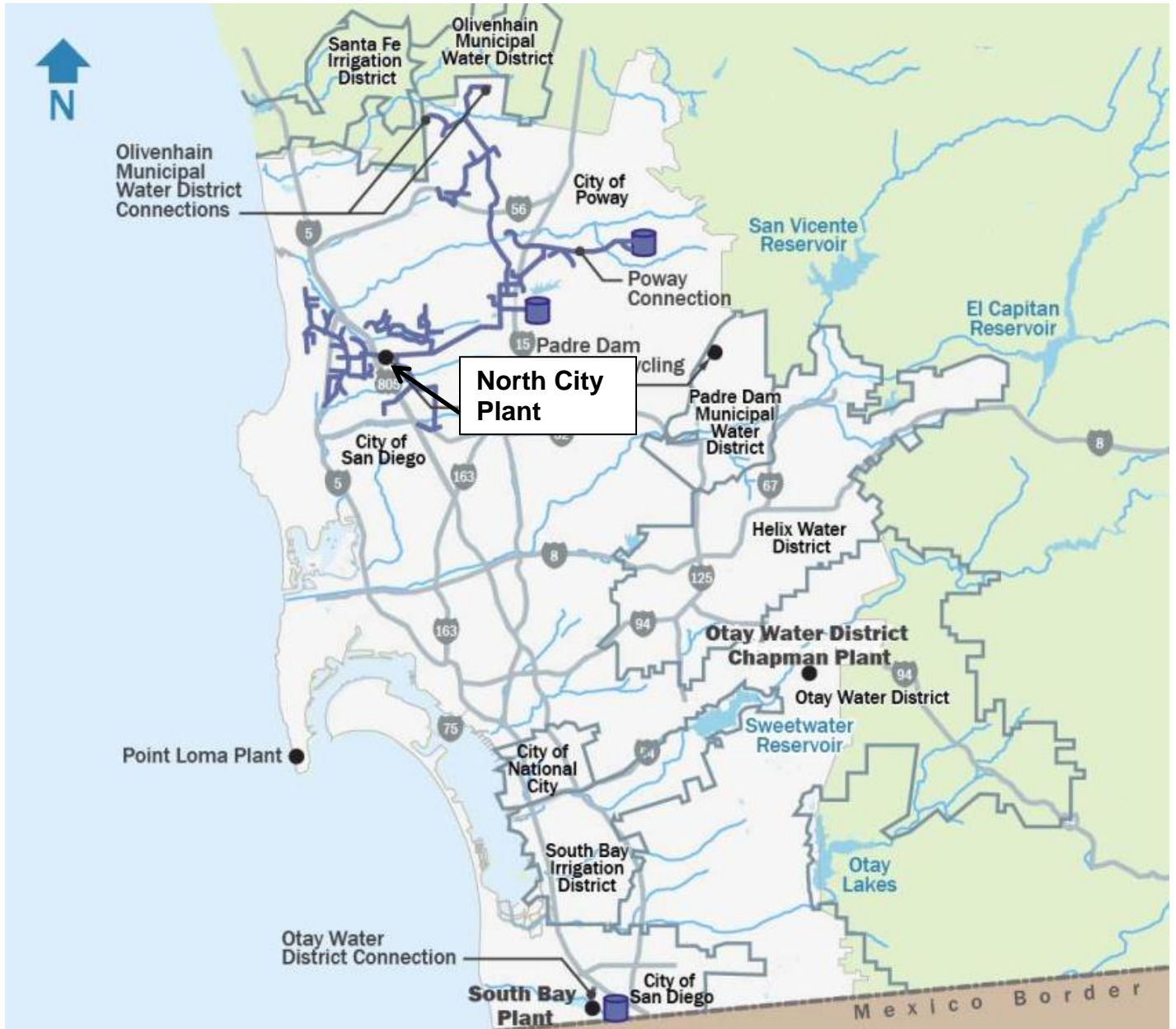
## VIII. NOTIFICATIONS

- A. 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.



- B. 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.
- C. These requirements have not been officially reviewed by the United States Environmental Protection Agency and are not issued pursuant to Clean Water Act section 402.
- D. Any person aggrieved by this action of the San Diego Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and title 23, Cal. Code Regs., sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or State holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: [http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request. 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.
- E. This Order becomes effective on the date of adoption by the San Diego Water Board.

# ATTACHMENT A – MAP SHOWING THE CITY OF SAN DIEGO'S NON POTABLE WATER SYSTEM



## **ATTACHMENT B - 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, Cal. Code Regs., division 4, chapter 3 (Wastewater Reclamation Criteria);
- Title 17, Cal. Code Regs., division 1, chapter 5, group 4, article 1 & 2;
- The State Water Board Division of Drinking Water (DDW) *Guidelines For Use of Recycled Water, Guidelines for Use of Recycled Water for Construction*; and
- 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 DDW.

### **I. STANDARD RULES AND REGULATIONS**

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

- A. The use of recycled water shall not cause a condition of pollution, contamination or nuisance, as defined by Water Code section 13050. The Discharger, the San Diego Water Board, the DDW, and the County Department of Environmental Health (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.
- B. 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.
- C. Prior to the initiation of recycled water service, the recycled water user shall submit to the Discharger plans and specifications for recycled water distribution facilities.
- D. 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 DDW and County DEH, as required.

- E. 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.
- F. 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.
- G. 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.
- H. The San Diego Water Board may initiate enforcement action against any recycled water user who 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.
- I. 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.
- J. 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.
- K. Impoundment of disinfected tertiary recycled water shall not occur within 100 feet of any domestic water supply well.
- L. Irrigation with, or impoundment of, disinfected secondary-2.2<sup>1</sup> or disinfected secondary - 23<sup>2</sup> recycled water shall not take place within 100 feet of any domestic water supply well.

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<sup>1</sup> Disinfected secondary-2.2 recycled water is defined in, title 22, Cal. Code Regs. , chapter 3, section 60301.220

<sup>2</sup> Disinfected secondary-23 recycled water is defined in title 22, Cal. Code Regs. , chapter 3, section 60301.225

- M. Irrigation with, or impoundment of, undisinfected secondary recycled water shall not take place within 150 feet of any domestic water supply well.
- N. 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.
- O. Irrigation with reclaimed water shall be during periods of minimal human use of the service area. Consideration shall be given to allow a maximum dry-out time before the irrigated area will be used by the public.
- P. 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.
- Q. 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.
- R. 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.
- S. 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 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.
- T. No physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying potable water.
- U. 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.
- V. 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 title 17, Cal. Code Regs., sections 7602(a) and 7603(a) and the approval of the public water system has been obtained from the DDW and County DEH. If a "Swivel-ell" type connection is used it must be used in accordance with the provisions of the State Water Board Division of Drinking Water 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, Cal. Code Regs., division 1, chapter 5, group 4, article 2.

- W. No person or entity other than the Discharger, purveyor, or their representative shall make a connection to the recycled water distribution system.
- X. 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 Health and Safety Code, chapter 7.9, section 4049.54.
- Y. Reuse site shut down tests and inspections shall be monitored by the DDW.
- Z. Customer complaints concerning recycled water use that may involve public illness shall be reported to the County DEH, DDW, and to the Discharger who shall maintain a log of all customer complaints regarding recycled water.
- AA. Any backflow prevention device installed to protect the public water system shall be inspected and maintained in accordance with title 17, Cal. Code Regs., section 7605.
- BB. Apply recycled water and fertilizer on landscape at agronomic rates.
- CC. Avoid overwatering of landscapes and runoff.

## II. General Requirements for Hauling or Transportation of Recycled Water

The Discharger must submit updated Draft Rules and Regulations for Recycled Water Use to the San Diego Water Board, State Water Board Division of Drinking Water (DDW), and County of San Diego Department of Environmental Health (County DEH) by **February 23, 2016** and updated Final Rules and Regulations for Recycled Water Use by **June 23, 2016**. In addition, the Discharger must submit its draft program for training customers, haulers, and fill station staff on proper handling of recycled water to the DDW and County DEH by **February 23, 2016**. The final training program must be submitted to the DDW and County DEH by **June 23, 2016**.

The Discharger's updated Rules and Regulations for Recycled Water Use must include requirements that will be implemented to ensure use and transport of recycled water from the fill stations will be protective of public health and the environment. At a minimum the Rules and Regulations must include the requirements below.

The Discharger or hauler must comply with the following requirements in sections II-IV of Attachment B to this Order, unless the DDW or County DEH determine that alternative criteria provide equivalent or better protection of public health and the environment.

- A. Haulers interested in participating in this program must apply for a Recycled Water Use Permit issued by the Discharger.
- B. Use areas receiving hauled recycled water must follow the same requirements of titles 17 and 22, Cal. Code Regs. as a similar use area receiving traditionally piped recycled water. These requirements must be addressed in the Discharger's permitting process.

- C. Before trucks or containers can be filled for the first time, all haulers are required to attend a brief on-site orientation or training in order to learn about using the filling station and the proper handling and safe use of recycled water. Annual refresher training should be required. The Discharger must maintain records which document when each hauler completed the required training.
- D. Once the hauler completes the on-site orientation or training and a Recycled Water Program inspector verifies the tanker truck or containers meet the recycled water use requirements, the inspector will issue a signed Recycled Water Use Permit. The Recycled Water Use Permit must be available for inspection at all times. The hauler must carry a copy in the vehicle at all times while hauling recycled water.
- E. Recycled water must not be introduced into any potable water piping system and no connection shall be made between the tank and any part of a potable water system.
- F. If the hauler requests to supply recycled water to a use area that uses any plumbed potable or recycled water distribution systems, the Discharger must ensure that the end use complies with all applicable requirements of titles 17 and 22, Cal. Code Regs., including cross connection control testing and backflow prevention device installation prior to allowing pick up of recycled water. Dual plumbed use areas can only receive recycled water from a recycled water agency that has been granted approval under title 22, Cal. Code Regs., section 60313(a).
- G. The hauler must keep a log book for each vehicle, tank, or container used to transport recycled water. The log book must be available for inspection at all times. The hauler must carry a copy in the vehicle at all times while hauling recycled water. The log book should include:
  - 1. Date of delivery and use,
  - 2. Volume of water delivered and used,
  - 3. Intended use of water, and
  - 4. Name and address of the recipient/customer.
- H. The hauler or Recycled Water Site Supervisor must notify workers and the public when recycled water is used at a use site and inform workers and the public not to drink recycled water or use it for food preparation.
- I. Precautions should be taken to avoid food coming in contact with recycled water while the use site is wet.
- J. No irrigation or impoundment of recycled water is allowed within a minimum of 50 feet of any domestic drinking water well.
- K. The hauler shall take adequate measures to prevent overspray, ponding, or run off of recycled water from the authorized recycled water use area.

- L. No connection shall be made between a tank or container of recycled water and any part of a potable water system.
- M. The Recycled Water Use Permit issued by the Discharger must be available for inspection at all times.
- N. Recycled water shall not be applied where it could spray on external drinking water fountains, passing vehicles, buildings, or areas where food is handled or eaten.
- O. Tank trucks, containers, and appurtenances must be clearly identified as “non-potable,” equipped with a legally sized air gap, and must not be used to provide potable water. Containers and hoses associated with hauling recycled water must not be used for potable water. Commercial hauling trucks that may be filled with potable water for non-potable uses must have two separate filling systems, one dedicated to potable water and one dedicated to recycled water. When the truck is filled from a potable water source, there must be a water agency or municipality provided meter and backflow device between the truck fill line and the potable source.
- P. Vehicles, tanks, and containers must have water-tight valves and fittings, must not leak or spill contents during transport, and must be cleaned of contaminants. This must be checked by the hauler before each use. Water-containing vessels that are open to the atmosphere during hauling are not acceptable for use.
- Q. Haulers should not overfill containers or trucks.
- R. Hoses used for the application of recycled water shall be removable and shall be stored in a disconnected condition during transport. Hoses should be inspected prior to filling to ensure that they are in serviceable condition and free from leaks.
- S. In the event of an emergency concerning the recycled water hydrant, meter, fill pipe or hose (spillage, leaks, etc.), the hauler should call the emergency contact number listed on the filling station sign for further instructions.
- T. The Discharger may conduct use area visits to ensure proper use of recycled water according to all applicable requirements of titles 17 and 22, Cal. Code Regs. and Recycled Water Use Permit conditions. This may include follow up phone calls or surveys of end users about completion of the hauling process and recycled water application.
- U. Conditions under which haulers may lose their permits should be clearly communicated by the Discharger. Those conditions should specify that failure to follow program requirements, including adhering to applicable State, County or local codes, will result in suspension of the hauler’s permit. Violations of such codes may also result in agencies levying fines and applicable administrative fees.



- V. Residential hauling programs shall have fill stations staffed at all times by a representative from the Discharger. This is to ensure proper handling and filling procedures are being conducted at the fill stations.
- W. Residential hauling programs must limit onetime hauls to 300 gallons.
- X. The permitted hauler shall notify the Discharger prior to using recycled water for a use not approved by the Discharger.
- Y. The Discharger, San Diego Water Board, DDW, and County DEH have the right to enter any recycled water use site during reasonable hours to ensure the user is complying with these requirements and the Discharger's Rules and Regulations for Recycled Water Use.

**III. Rules and Regulations for Hauling or Transportation of Recycled Water From Commercial Vehicle Fill Stations**

- A. Trucks hauling recycled water that may also be filled with potable supplies for non-potable purposes shall have a dedicated potable use fill line through an air gap separation. The fill lines shall be properly labeled as potable or recycled water. As an alternative, the water supplier may install a reduced pressure principle backflow device on the potable system for filling trucks with potable water. Vehicles used to transport recycled water shall not be used to carry water for potable purposes.
- B. The risers, hoses, and fittings for each supply shall be color coded or painted blue for potable and purple for recycled water.
- C. The hoses, hydrants, and risers for each supply shall have separate and unique fittings (e.g., 2-1/2 inch diameter on the potable system and 2 inch diameter on the recycled water system) such that the potable system cannot accidentally be used on the recycled system and vice versa.
- D. All vehicles used in transporting recycled water must be clearly marked with typical signage that reads: "CAUTION: RECYCLED WATER - DO NOT DRINK" in English and Spanish. The Discharger shall conduct annual inspections of the trucks to ensure that all requirements in this Order are being met and that recycled water is being used in compliance with the requirements of this Order.
- E. Vehicles used for transportation or distribution of recycled water, or for street sweeping must be equipped with an air gap to ensure backflow protection.
- F. The use of recycled water for street sweeping or construction shall comply with the appropriate local storm water ordinance. Typical compliance measures include preventing overspray, ponding, or runoff of recycled water from the use area.

- G. Haulers shall be required to enter the date and amount collected on the fill station log sheet during each visit. Include locations the recycled water will be used and approximate amounts.
- H. For Hydrant Meter Filling Stations, ensure the meter is shut off before disconnecting the fill line and make sure no water is leaking from the meter or hydrant.
- I. For Gate Access Filling Stations ensure no water is leaking from the fill pipe or hose and securely re-lock the gate after leaving the filling station.
- J. A truck or tank that has contained material from a septic tank or cesspool shall not be used to distribute recycled water.

**IV. Rules and Regulations for Use of Recycled Water for Fire Fighting**

- A Unused recycled water must not be released into streams, rivers, or waterways.
- B Fire hydrants supplied with recycled water must be clearly identified by purple paints, signs, tags, stencils or other such labeling, in order to notify firefighters that the fire hydrants are supplied with recycled water.
- C Fire truck tanks must be disinfected following the use of recycled water for firefighting, since fire trucks could be used to distribute drinking water during civil emergencies.
- D Firefighting personnel must be adequately trained in safe use of recycled water. New and current firefighting personnel must receive periodic refresher courses regarding proper handling and use of recycled water.

## ATTACHMENT C- INFORMATION SHEET

ORDER NO. R9-2015-0091

### MASTER RECYCLING PERMIT FOR THE CITY OF SAN DIEGO NORTH CITY WATER RECLAMATION PLANT, SAN DIEGO COUNTY

This Information Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of Order No. R9-2015-0091 (Order).

#### I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

**Table 1. Facility Information**

<b>WDID</b>	9 000000730
<b>Discharger</b>	City of San Diego Public Utilities Department
<b>Name of Facility</b>	North City Water Reclamation Plant
<b>Facility Address</b>	4949 Eastgate Mall
	San Diego, CA 92121
	San Diego County
<b>Facility Contact, Title and Phone</b>	Mr. Ernesto Molas, 858-824-6000
<b>Mailing Address</b>	9191 Kearny Villa Court, San Diego, CA 92123
<b>Billing Address</b>	9191 Kearny Villa Court, San Diego, CA 92123
<b>Type of Facility</b>	Wastewater Treatment Plant
<b>Threat to Water Quality</b>	2
<b>Complexity</b>	B
<b>Reclamation Requirements</b>	Producer
<b>Tertiary Treatment Capacity</b>	32 million gallons per day (mgd)
<b>Receiving Water</b>	See Table 1 below
<b>Receiving Water Type</b>	Groundwater

- A. Order No. 97-03 establishes requirements for the discharge of tertiary treated recycled water from the City of San Diego North City Water Reclamation Plant (NCWRP). The City of San Diego (hereinafter City or Discharger) submitted a Report of Waste Discharge (ROWD), dated January 12, 2015 requesting an amendment to Order No. 97-03, *Waste Discharge and Water Recycling Requirements for the Production and Purveyance of Recycled Water for the City of San Diego North City Water Reclamation Plant*. The Order prescribes new requirements for the discharge of recycled water from the NCWRP rather than amending Order No. 97-03 because Order No. 97-03 is outdated and not consistent with some of the requirements contained in the State Board Recycled Water Policy (2013). This Order replaces and supersedes Order No. 97-03. For the purposes of this Order, references to the “Discharger” in applicable State laws, plans, or policy are held to be equivalent to the references to the Discharger herein.

- B. On January 17, 2014, California's Governor proclaimed a [Drought State of Emergency](#) and directed State officials to take all necessary actions to prepare for drought conditions. The California Legislature has declared that a substantial portion of the future water requirements of the State may be economically met by beneficial use of recycled water (Water Code section 13511). The Legislature also expressed its intent that the State undertake all possible steps to encourage development of water recycling facilities so that recycled water may be made available to help meet the growing water requirements of the State (Water Code section 13512). The Order is consistent with the legislature's declaration because it encourages the increased use of recycled water in place of potable water supplies.
- C. On February 3, 2009, the State Water Board adopted Resolution 2009-0011, *Adoption of a Policy for Water Quality Control for Recycled Water* (Recycled Water Policy,<sup>1</sup> revised January 22, 2013 and effective April 25, 2013). The Recycled Water Policy promotes the use of recycled water to achieve sustainable local water supplies and reduce greenhouse gas emissions. The Order is consistent with the Recycled Water Policy because it requires the City to conduct priority pollutant monitoring, implement nutrient management measures, and participate as a stakeholder in developing a salt and nutrient management plan for the Poway groundwater basin.
- D. Recycled water use can help to reduce the scarcity of local water supplies. It is not the only option for bringing supply and demand into a better balance, but it is a viable cost effective solution that is appropriate in many cases. The feasibility of recycled water use depends on local circumstances, which affect the balance of costs and benefits. In drought conditions, recycled water can be particularly valuable, given the scarcity of alternative potable water supplies. In normal precipitation years recycled water use may reduce groundwater extraction. Broader and more effective uses of recycled water are consistent with the goals and objectives of the Recycled Water Policy and the California Regional Water Quality Control Board, San Diego Region's (San Diego Water Board) Practical Vision strategy for achieving a sustainable local water supply.<sup>2</sup>
- E. The Order adds new provisions for the safe transport and use of recycled water from proposed recycled water fill stations. The Order requires the Discharger to amend its *Rules and Regulations for Recycled Water Use* and implement measures to ensure that the use and transport of recycled water from the fill stations complies with the Uniform Statewide Recycling Criteria, and is protective of public health and the environment.

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<sup>1</sup> [http://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/resolutions/2013/rs2013\\_0003\\_a.pdf](http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2013/rs2013_0003_a.pdf)

<sup>2</sup> See Practical Vision for "Strategy for Achieving a Sustainable Local Water Supply"  
[http://www.waterboards.ca.gov/sandiego/water\\_issues/Practical\\_Vision/index.shtml](http://www.waterboards.ca.gov/sandiego/water_issues/Practical_Vision/index.shtml)

## II. FACILITY DESCRIPTION

- A. **Description of the North City Water Reclamation Plant.** The NCWRP is located north of Miramar Road, west of Eastgate Mall, and east of Interstate 805. Treatment facilities at the NCWRP include influent screening, grit removal, primary sedimentation, flow equalization, biological treatment with an activated sludge process and an anoxic selector zone (which provides partial denitrification), secondary clarification, and tertiary treatment which include coagulation, filtration, and disinfection. The peak design flow of the plant's tertiary treatment facilities is 32 mgd. The peak design flow of the plant's primary treatment facilities is 60 mgd, while the peak design flow of the plant's secondary treatment facilities is 45 mgd. The Discharger did not propose any modifications to the treatment processes, flow capacity, or other facilities at the plant in the ROWD.

The flow from the NCWRP may increase after the Discharger begins operation of its advanced water purification facility, however, the Discharger would be required to submit a separate ROWD prior to operation of its advanced water purification facility. Upon receipt of the ROWD, the San Diego Water Board will either prescribe modify the Order, prescribe new waste discharge requirements, or prescribe a National Pollutant Discharge Elimination System (NPDES) permit.

- B. **Recycled Water Use/Discharge.** Recycled water produced at the NCWRP is distributed throughout the northern portion of the City of San Diego via an extensive recycled water pipeline system. More than 90 miles of distribution pipelines are installed in Mira Mesa, Miramar Ranch North, Scripps Ranch, University City, Torrey Pines, Santa Luz, Olivenhain Municipal Water District's service area, and Black Mountain Ranch to provide recycled water to customers for irrigation, landscaping, and industrial use. The NCWRP also provides recycled water to the southwestern portion of the City of Poway. The City proposes to establish Recycled Water Fill Stations from which customers can transport recycled water to use sites for the following uses.

- Street sweeping and cleaning of sidewalks and outdoor work areas.
- Dust control, soil compaction, and construction.
- Sewer flushing and pressure testing of newly constructed tertiary recycled water pipelines, sewer force main pipelines, and gas pipelines.
- Irrigation of commercial and residential landscapes, crops, and nursery stock.
- Fire protection
- Other uses approved in title 22, California Code of Regulations (Cal. Code of Regs.) upon receiving approval from the State Water Resources Control Board Division of Drinking Water (DDW).

The primary service area for the NCWRP encompasses recycled water use sites located in seven different HAs/HSAs, including: Miramar Reservoir Hydrologic Area (Miramar Reservoir HA 906.10), Poway Hydrologic Area (Poway HA 906.20), Scripps Hydrologic Area (Scripps HA 906.30), Miramar Hydrologic Area (Miramar HA 906.40), Tecolote Hydrologic Area (Tecolote HA 906.50), Solana Beach Hydrologic Area (Solana Beach HA 905.10), and the Mission San Diego Hydrologic Subarea (Mission HSA 907.11).

C. **Plant Effluent Quality.** Table 2 lists the average concentrations of selected chemical constituents for effluent samples analyzed between 2010 and 2014.

**Table 2. Effluent Quality (units in milligrams per liter)**

Year	TDS	BOD	TSS	Fe	Mn	B	Cl <sup>-</sup>	F <sup>-</sup>	NO <sub>3</sub> <sup>-</sup>	SO <sub>4</sub>	MBAS	%Na
2010	890	ND	ND	0.090	0.061	0.343	233	0.45	48.0	216	0.19	57
2011	830	ND	ND	0.078	0.071	0.313	236	0.64	48.8	165	0.14	57
2012	805	ND	ND	0.097	0.081	0.330	245	0.69	52.9	144	0.16	58
2013	828	ND	ND	0.066	0.077	0.314	237	0.61	54.7	172	0.06	56
2014	1,130	ND	ND	0.053	0.062	0.370	239	0.56	52.9	192	0.10	56

**Endnotes for Table 2**

TDS = Total Dissolved Solids, ND = Non Detect, BOD = Biological Oxygen Demand, TSS = Total Suspended Solids, Fe = Iron, Mn = Manganese, B = Boron, Cl<sup>-</sup> = Chloride, F<sup>-</sup> = Fluoride, NO<sub>3</sub><sup>-</sup> = Nitrate, SO<sub>4</sub> = Sulfate, MBAS = Methylene Blue Activated Substances, % Na = Percent Sodium

D. **Proposed Changes in Master Recycling Permit.** The City’s ROWD requested that the Order be modified to establish an annual average discharge specification for manganese of 0.1 mg/L. The City requested this change because, since 2004, the average annual effluent manganese concentrations have exceeded the discharge specification of 0.05 mg/L in Order No. 97-03. The Order also includes requirements for Rules and Regulations for hauling and transporting recycled water, includes updated effluent monitoring requirements, establishes annual average discharge specifications as a calendar average,<sup>1</sup> requires the City to participate as a stakeholder in the salt and nutrient management planning process for the Poway Groundwater Basin, requires the City to conduct a nitrate study, and makes other miscellaneous updates to Order No. 97-03.

**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 sections 13263 and 13523.1 of the Water Code. This Order serves as a Master Recycling Permit which also includes Waste Discharge Requirements (WDRs) issued pursuant to Water Code, article 4, chapter 4, division 7.

<sup>1</sup> The annual average discharge specifications from Order No. 97-03 have been retained in this Order. However, the annual average discharge specifications in this Order are expressed as calendar averages rather than running averages.

- B. **California Environmental Quality Act.** Adoption of Order No. R9-2015-0091 is exempt from Provisions of the California Environmental Quality Act (CEQA; Public Resources Code section 21000, et seq.) pursuant to title 14, Cal. Code Regs., chapter 3, article 19, section 15301 because adoption of the Order will not involve expansion or modification of the existing facility.
  
- C. **Water Quality Control Plans.** The Water Quality Control Plan for the San Diego Basin (hereinafter Basin Plan) designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. The beneficial uses of groundwater designated for the HAs/HSAs in which recycled water from the plant is used are shown in Table 3.

**Table 3. Beneficial Uses**

Beneficial Uses	Hydrologic Area (HA)
Municipal supply, Agricultural supply, Industrial supply	Miramar Reservoir HA 906.10, <sup>1,2</sup> Poway HA 906.20, Solana Beach HA 905.10 <sup>1</sup>
Industrial	Miramar HSA 906.4 <sup>3</sup>
Municipal supply, Agricultural supply, Industrial supply, Industrial process supply	, Mission San Diego HSA 907.11 <sup>1</sup> , ,
No beneficial uses specified in Basin Plan	Scripps HA 906.30, Tecolote HA 906.50,

**Endnotes for Table 3**

1. These beneficial uses do not apply westerly of the easterly boundary of the right-of-way of Interstate 5 and this area is excepted from the sources of drinking water policy. The beneficial uses for the remainder of the hydrologic area are as shown.
  
2. These beneficial uses do not apply to all lands which drain to Los Penasquitos Canyon from 1.5 miles west of Interstate Highway 15 and this area is excepted from the sources of drinking water policy. The beneficial uses for the remainder of the hydrologic area are as shown.
  
3. These beneficial uses do not apply west of Interstate Highway 15. The beneficial uses for the remainder of the hydrologic area are as shown.

- D. **Implementation of the Basin Plan.** This Order implements the Basin Plan by prescribing requirements for the production and reuse of recycled water that will not impact water quality, beneficial uses, human health, or the environment.
  
- E. **Recycled Water Policy.** The State Water Board adopted the Recycled Water Policy in Resolution No. 2009-0011, as amended in 2013. The Recycled Water Policy establishes criteria for recycled water projects, reclamation requirements, and permits. The intent of the Policy is to protect designated beneficial uses and protect water quality while increasing recycled water use, streamline permitting for appropriate projects, and

allow basin-wide management of salts and nutrients. The Recycled Water Policy states that the appropriate way to address salts and nutrients is through development of regional and sub-regional salt and nutrient management plans.

F. **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 DISCHARGE SPECIFICATIONS**

This Order retains the technology and water quality based discharge specifications from Order No. 97-03 and many of the same numerical discharge specifications from Order No. 97-03. A new annual average discharge specification for manganese of 0.1 mg/L has been included in this Order as requested by the City. The City requested this increase because average annual effluent manganese concentrations have exceeded the discharge specification of 0.05 mg/L in Order No. 97-03 since 2004. This Order also establishes the annual average discharge specifications for all constituents as averages based upon the calendar year rather than the running average of the previous 12 months. This change is appropriate because short-term fluctuations in recycled water quality may cause a running average discharge specification to be exceeded, but not adversely impact receiving groundwater quality in the long term. Basing discharge specifications on the annual average concentrations of constituents in recycled water will result in better compliance with the Order while protecting receiving groundwater quality. Due to lengthy timeframes normally associated with groundwater recharge and storage in many areas of the San Diego Region, annual average discharge specifications are appropriate for tracking long-term water quality trends and assessing compliance with waste discharge and water reclamation requirements for irrigation operations using recycled water.

The technology based discharge specifications in the Order for biological oxygen demand, total suspended solids, and pH are based on design criteria for removal of these constituents by secondary wastewater treatment technology. The water quality-based discharge specifications in the Order are derived from the water quality objectives shown in Table 4 and listed in Table 3.3 of the Basin Plan.

**Table 4. Basin Plan Groundwater Water Quality Objectives**

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 <sup>-</sup>	SO <sub>4</sub>	% Na	NO <sub>3</sub> <sup>-</sup> *	Fe	Mn	MBAS	B	ODOR	TURB (NTU)	COLOR (UNITS)	F <sup>-</sup>
Solana Beach HA 905.10 <sup>a</sup>	1,500 <sup>b</sup>	500 <sup>b</sup>	500 <sup>b</sup>	60	45 <sup>b</sup>	0.85 <sup>b</sup>	0.15 <sup>b</sup>	0.5	0.75 <sup>b</sup>	None	5	15	1.0



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 <sup>-</sup>	SO <sub>4</sub>	% Na	NO <sub>3</sub> <sup>-</sup> *	Fe	Mn	MBAS	B	ODOR	TURB (NTU)	COLOR (UNITS)	F <sup>-</sup>
Miramar Reservoir HA 906.10 <sup>a, f</sup>	1,200	500	500	60	10	0.3	0.05	0.5	0.75	none	5	15	1.0
Eastern Portion of Poway HA 906.20	750 <sup>d</sup>	300	300	60	10	0.3	0.05	0.5	0.75	none	5	15	1.0
Western Portion of Poway HA 906.20	1,000	300	300	60	10	0.3	0.05	0.5	0.75	none	5	15	1.0
Scripps HA 906.30	-	-	-	-	-	-	-	-	-	-	-	-	-
Miramar HA 906.40 <sup>g</sup>	750	300	300	60	10	0.3	0.05	0.5	0.75	none	5	15	1.0
Tecolote HA 906.50	-	-	-	-	-	-	-	-	-	-	-	-	-
Mission San Diego HSA 907.11 <sup>a</sup>	3,000 <sup>b</sup>	800 <sup>b</sup>	600 <sup>b</sup>	60 <sup>b</sup>	45 <sup>b</sup>	0.3 <sup>b</sup>	0.05 <sup>b</sup>	0.5	2.0 <sup>b</sup>	none	5	15	1.0

**Endnotes for Table 4**

mg/L = milligrams per liter, TDS = Total Dissolved Solids, Cl<sup>-</sup> = Chloride, SO<sub>4</sub> = Sulfate, % Na = Percent Sodium, NO<sub>3</sub><sup>-</sup> = Nitrate, Fe = Iron, Mn = Manganese, MBAS = Methylene Blue Activated Substances, B = Boron, TURB = Turbidity, NTU = Nephelometric Turbidity Units, F<sup>-</sup> = Fluoride

\* The San Diego Water Board adopted a Basin Plan Amendment on April 15, 2015 changing the groundwater quality objective for nitrate to 45 mg/L as nitrate for all the HAs in the San Diego Region with numerical groundwater quality objectives. The State Water Board adopted the Basin Plan Amendment on November 17, 2015. The Basin Plan Amendment will become effective after final approval by the Office of Administrative Law.

- a. The water quality objectives do not apply westerly of the easterly boundary of Interstate Highway 5. The objectives for the remainder of the Hydrologic Area (Subarea) are as shown.
- b. Detailed salt balance studies are recommended for this area to determine limiting mineral concentration levels for discharge. On the basis on existing data, the tabulated objectives would probably be maintained in most areas. Upon completion of the salt balance studies, significant water quality objective revisions may be necessary. In the interim period of time, projects of ground water recharge with water quality inferior to the tabulated numerical values may be permitted following individual review and approval by the Regional Board if such projects do not degrade existing ground water quality to the aquifers affected by the recharge.
- f. The water quality objectives do not apply to all lands which drain to Los Penasquitos Canyon from 1.5 miles west of Interstate Highway 15. The objectives for the remainder of the Hydrologic Area are as shown.
- g. The water quality objectives do not apply west of Interstate Highway 15. The objectives for the remainder of the Hydrologic Area are as shown.
- h. These objectives apply to ground waters of the Poway HSA (6.2) that lie east of the San Diego County Water Authority's (SDCWA) First Aqueduct. Ground water quality objectives west of the SDCWA First Aqueduct are 1,000 mg/L.

As requested by the City's ROWD, this Order modifies the annual average discharge specification for manganese from 0.05 to 0.1 mg/L. The NCWRP has produced recycled water with an average manganese concentration of approximately 0.071mg/L and a maximum manganese concentration of 0.125 mg/L since 2007. The average concentration of manganese in recycled water is above 0.05 mg/L, which is the manganese groundwater quality objective for all the HAs in which recycled water from the NCWRP is presently used, with three exceptions. The Solana Beach HA has a manganese groundwater quality objective is 0.15 mg/L, and the Scripps and Tecolote HAs do not have any specified numerical groundwater quality objectives for manganese.

Although some of the recycled water end use areas are located in HAs that have a municipal supply beneficial use designation, groundwater in these HAs is generally not used due to low-yield potential for wells, difficulty in reaching the groundwater due to its depth, and poor water quality. Background manganese concentrations in HAs in which recycled water is currently used typically exceed the manganese groundwater quality objective and manganese concentrations in recycled water.

Manganese uptake by vegetation in the use areas and adsorption of manganese onto soil particles is expected to reduce manganese levels and prevent the discharge of recycled water from causing the concentration of manganese in groundwater to exceed the water quality objective for manganese. Manganese is an essential micronutrient for plants and is used by plants in growth, photosynthesis, nitrogen metabolism, and several additional functions. Assuming an annual irrigation rate of 3 feet/year, the annual manganese loading to the landscape would be approximately 0.57 pounds per acre (lbs/acre). Annual uptake

of manganese by grasses is approximately 0.4 to 0.6 lbs/acre.<sup>2</sup> Based on the annual manganese loading to the vegetated areas and the uptake values presented, the majority of the manganese will be taken up by the vegetation.

The Order also contains discharge specifications for chlorine residual, turbidity, chlorine contact time, and total coliform bacteria. The specifications are based upon concentration limits found in title 22, Cal. Code Regs. and upon recommendations from the DDW for the protection of human health at use sites. Recycled water from the NCWRP must meet the definitions of “disinfected tertiary recycled water”<sup>3</sup> and “filtered wastewater”<sup>4</sup> in title 22, Cal. Code Regs., which are incorporated herein by reference, including future changes to the incorporated provisions as the changes take effect. The discharge specifications contained in the Order are shown in Table 5.

**Table 5. Discharge Specifications**

Constituent	Units	Daily Maximum <sup>1</sup>	Monthly Average <sup>2</sup>	12-Month <sup>3</sup>
Chlorine Residual	Milligrams per liter (mg/L)	See Section IV.C of Order		
Chlorine-Contact Time (CT)	Milligrams minute per liter (mg-min/L)	See Section IV.C of Order		
Total Coliform Bacteria	Most Probable Number per 100 milliliters(MPN per 100 mL)	See Section IV.D of Order		
Turbidity (TURB)	Nephelometric Turbidity Units (NTU)	See Section IV.E of Order		
Biological Oxygen Demand (BOD <sub>5</sub> @ 20°C)	mg/L	45	30	-
Total Suspended Solids (TSS)	mg/L	45	30	-
pH	pH units	Within the limits of 6.5-8.5 at all times		
Total Dissolved Solids (TDS)	mg/L	-	-	1,200
Chloride (Cl)	mg/L	-	-	300
Sulfate (SO <sub>4</sub> )	mg/L	-	-	300
Percent Sodium (% Na)	%	-	-	60%
Total Nitrogen (N)	mg/L	-	-	-
Iron (Fe)	mg/L	-	-	0.30
Manganese (Mn)	mg/L	-	-	0.1
Methylene Blue-Activated Substances (MBAS)	mg/L	-	-	0.5
Boron (B)	mg/L	-	-	0.75
Fluoride (F)	mg/L	-	-	1.0

<sup>2</sup> Mitchell, Charles C., *Nutrient Removal by Alabama Crops*, Alabama Cooperative Extension, ANR-0449, 2011.

<sup>3</sup> As defined in, title 22, Cal. Code Regs., section 60301.230.

<sup>4</sup> As defined in title 22, Cal. Code Regs., section 60301.320.

Constituent	Units	Daily Maximum <sup>1</sup>	Monthly Average <sup>2</sup>	12-Month <sup>3</sup>
Aluminum	mg/L	-	-	1.0
Arsenic	mg/L	-	-	0.05
Antimony	mg/L	-	-	0.006
Barium	mg/L	-	-	1.0
Beryllium	mg/L	-	-	0.004
Cadmium	mg/L	-	-	0.005
Cyanide	mg/L	-	-	0.2
Mercury	mg/L	-	-	0.002
Nickel	mg/L	-	-	0.1
Selenium	mg/L	-	-	0.05
Thallium	mg/L	-	-	0.002

**Endnotes for Table 5**

<sup>1</sup>The daily maximum discharge specification shall apply to the results of a single composite or grab sample representing non-overlapping 24 hour periods.

<sup>2</sup>The monthly average discharge specification shall apply to the arithmetic mean of the results of all samples collected during each calendar month.

<sup>3</sup>The 12-month average discharge specification shall apply to the arithmetic mean of the results of all samples collected in a calendar year.

**V. COMPLIANCE WITH THE ANTIDegradATION POLICY**

State Water Board Resolution No. 68-16, the *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (the Antidegradation Policy) requires that disposal of waste into the waters of the State be regulated to achieve the highest water quality consistent with the maximum benefit to the people of the State. The quality of some waters is higher than established by adopted policies and that higher quality water must be maintained to the maximum extent possible consistent with the Antidegradation Policy. The Antidegradation Policy requires the following.

- A. Higher quality water will be maintained until it has been demonstrated to the State that any change will be consistent with the maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of the water, and will not result in water quality less than that prescribed in the Basin Plan.
- B. Any activity that produces a waste or may produce waste or increased volume or concentration of waste, and discharges to existing high quality waters will be required to meet waste discharge requirements that will result in the best practicable treatment or control of the discharge necessary to assure pollution or nuisance will not occur, and the highest water quality consistent with the maximum benefit to the people of the State will be maintained.

In a semi-arid climate, such as that of the San Diego Region, the maximum benefit to the people of the State can only be achieved by ensuring both short and long-term protection of economic opportunities, human health, and the environment. In order to do that, water uses must be better matched to water quality, and use of local supplies must be encouraged to the extent possible, including reusing treated wastewater that would otherwise flow to the ocean or other salt sinks without supporting beneficial uses during transmission.<sup>5</sup> The use of recycled water in place of both raw and potable water supplies for the non-potable uses allowed under this Order improves water supply availability and helps to ensure that higher quality water will continue to be available for human uses and for instream uses for fish and wildlife. The limited degradation of receiving groundwater that may occur as the result of recycling under the conditions of the Order provides maximum benefit to the people of the State, provided recycled water treatment and use are managed to ensure long-term reasonable protection of beneficial uses of waters of the State.

Recycled water from the NCWRP has been treated to levels that comply with discharge specifications contained in the Order pursuant to the Basin Plan and title 22, Cal. Code Regs. requirements. Treatment technologies required under title 22, Cal. Code Regs. include secondary treatment, tertiary treatment, and disinfection for pathogen removal. Title 22, Cal. Code Regs. imposes limitations on the uses of recycled water based on the level of treatment and the specific uses in order to protect human health. This Order restricts the uses of recycled water to be consistent with title 22, Cal. Code Regs. requirements ensuring that recycled water is used safely. To the extent that the use of recycled water may result in some waste constituents entering the environment after effective source control, treatment, and control measures are implemented, this Order requires application of recycled water at agronomic rates.

Constituents associated with recycled water that have the potential to degrade groundwater quality include Total Dissolved Solids (TDS or salts), nutrients, pathogens (represented by coliform bacteria), disinfection by-products (DBPs), and manganese. The use of recycled water permitted under the Order will not unreasonably affect beneficial uses or result in water quality that is less than that prescribed in applicable policies because of the following characteristics and requirements associated with each of the recycled water constituents of concern. Each of the recycled water constituents are discussed below.

1. TDS or salts can be present in recycled water at a concentration that can degrade groundwater quality. TDS levels in the receiving water can be affected by the use of recycled water if the recycled water has elevated TDS concentrations.

Most of the HAs in which recycled water from the NCWRP is used or could potentially be used have relatively high TDS groundwater quality objectives that exceed 1,000 mg/L. Average annual TDS concentrations of recycled water produced from the NCWRP are typically below 1,000 mg/L, as a result the use of recycled water is not expected to cause TDS concentrations in groundwater to exceed the water quality

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<sup>5</sup> The Legislature also expressed its intent that the State undertake all possible steps to encourage development of water recycling facilities so that recycled water may be made available to help meet the growing water requirements of the state (Water Code section 13512).

objectives for most of the HAs that contain use sites that receive recycled water from the NCWRP. The Miramar HA has a groundwater quality objective for TDS of 750 mg/L, however, the water quality objectives for the Miramar HA do not apply west of Interstate Highway 15 where the recycled water reuse sites are located. .

2. Nitrogen is a nutrient that may be present in recycled water at a concentration that can degrade groundwater quality. The Order requires end users to take into consideration nutrient levels in recycled water and nutrient demand by plants when using recycled water for landscape irrigation. Application of recycled water at agronomic rates considers nutrient and water demand, and minimizes the movement of nutrients below the plant's root zone. When applied to cropped or landscaped land, some of the nitrogen in recycled water will be taken up by the plants, and lost to the atmosphere through volatilization of ammonia or denitrification. Applying recycled water at agronomic rates will prevent the use of recycled water from impairing an existing and/or potential beneficial use of groundwater.
3. Pathogens and other microorganisms may be present in recycled water depending upon the disinfection status of the recycled water. Coliform bacteria are used as a surrogate (indicator) because they are present in untreated wastewater, survive in the environment similar to pathogenic bacteria, and are easy to detect and quantify. Pathogens are generally limited in their environmental mobility when applied to land.

Setbacks from recycled water use areas are required in, title 22, Cal. Code Regs. as a means of reducing pathogenic risks by coupling pathogen inactivation rates with groundwater travel time to a well or other potential exposure route (e.g. water contact activities). In general, a substantial unsaturated zone reduces pathogen survival compared to saturated soil conditions. Fine grained soil particles, like silt or clay, reduce the rate of groundwater transport and therefore are generally less likely to transport pathogens. Setbacks also provide attenuation of other recycled water constituents through physical, chemical, and biological processes. Attachment B of the Order requires the Discharger to include requirements for implementing and maintaining adequate setback distances in the end use areas from drinking water wells. These requirements must be specified in the City's Rules and Regulations for Recycled Water Use. The Order also requires the Discharger to treat recycled water to meet disinfection requirements for tertiary treated recycled water specified in title 22, Cal. Code Regs.

4. Disinfection by-products consisting of organic and inorganic substances may be present in recycled water. These by-products may be produced by the interaction of chemical disinfectants with naturally occurring substances in the water source. Common disinfection by-products (DBPs) include trihalomethanes, haloacetic acids, bromate, and chlorite. DBPs present in recycled water receive additional treatment when applied to land. Biodegradation, adsorption, volatilization, and other attenuative processes that occur naturally in soil will reduce the concentrations and retard migration of DBPs in the subsurface.
5. Manganese may be present in recycled water at a concentration that can degrade groundwater quality. Manganese is present in recycled water and when present in

domestic water supplies at high concentrations can cause unpleasant tastes, deposits on food during cooking, stains on laundry and plumbing fixtures, and could lead to regrowth of some microorganisms in reservoirs, filters, and distribution systems. Most of the HAs in the San Diego Region have a groundwater quality objective of 0.05 mg/L, which is also the secondary drinking water standard for manganese. Secondary drinking water standards are guidelines regulating contaminants that may cause cosmetic or aesthetic effects in drinking water.

The City's ROWD requested that the San Diego Water Board raise the manganese discharge specification from 0.05 to 0.1 mg/L, because recycled water manganese concentrations have exceeded the manganese discharge specification since 2007. As discussed in Section II of this Information Sheet, raising the manganese discharge specification to 0.1 mg/L will not unreasonably affect beneficial uses of groundwater or result in water quality that is less than that prescribed in applicable policies.

## **VI. RATIONALE FOR RECYCLED WATER PURVEYANCE REQUIREMENTS**

Recycled Water Purveyance Requirements are included in the Order pursuant to Water Code section 13523 and based on recommendations from the DDW. In accordance with title 22, Cal. Code Regs., the DDW reviews engineering reports for the production, distribution, and use of recycled water. The San Diego Water Board relies on the expertise of the DDW and includes recommendations from DDW in WDRs to ensure recycled water is treated and used in a manner that protects human health. The Discharger must certify that the Facility and other existing purveyance facilities meet DDW's requirements, or must update the title 22 engineering report to comply with DDW's requirements. The Order also requires the Discharger to maintain Rules and Regulations for Recycled Water Use (Rules and Regulations) that comply with DDW's requirements. The Rules and Regulations must include an inspection and cross-connection testing program. The Order also requires the Discharger to update its Rules and Regulations to include requirements to ensure use and transport of recycled water from recycled water fill stations will be protective of public health and the environment.

## **VII. RATIONALE FOR STANDARD PROVISIONS, SPECIAL PROVISIONS, AND NOTIFICATIONS**

### **A. Standard Provisions**

The standard provisions contain language that allows the San Diego Water Board to enforce Order No. R9-2015-0091. Provisions include need for inspection, spill and emergency reporting, records maintenance, and reporting of changes. Standard provisions apply to all WDRs and are consistent with San Diego Water Board findings.

### **B. Special Provisions-Facility Design and Operation Specifications.**

The NCWRP was designed and constructed in accordance with title 22 engineering reports reviewed by the DDW. The Design and Operation Specifications in the Order require that the plant be operated by appropriately certified wastewater operators, require application of recycled water and fertilizer in end use sites at agronomic rates,

require maintenance of a facility operation manual and appropriate references, and require implementation of best management practices for protection of human health.

The Order requires the Discharger to conduct a nitrate study to verify that the discharge of recycled water will not cause groundwater to exceed 45 mg/L as nitrate in the hydrologic areas where recycled water is used. The result of the study will enable the San Diego Water Board to determine if a discharge specification for nitrate should be added to the Order in the future. The Order requires end users to apply recycled water at agronomic rates, which considers the nutrient and water demand of the plants in the end use sites. When applied to cropped (or landscaped) land, some of the nitrogen in recycled water will be taken up by the plants, lost to the atmosphere through volatilization of ammonia or denitrification, or stored in the soil matrix. As a result, the use of recycled water is not expected to cause nitrogen concentrations in groundwater to exceed 45 mg/L.

The Order also requires that the Discharger work with the City of Poway to develop and submit a salt and nutrient management plan (SNMP) for the Poway groundwater basin by January 1, 2018. The State Recycled Water Policy requires local water and wastewater entities and local salt/nutrient contributing stakeholders to develop regional or sub-regional SNMPs for all groundwater basins within the State. Pursuant to the Recycled Water Policy, local agencies were to be complete SNMPs and propose them to the Regional Water Boards by May 2014, five years after adoption of the policy. The Discharger will participate as a stakeholder in the development of an SNMP for the Poway Basin, but will not be the lead agency because it has a limited number of end use sites in the basin. . The Poway Basin is one of the few groundwater basins within the NCWRP's service area for which a SNMP is yet to be developed.

### **C. Notifications.**

Notifications are included in the Order to inform the Discharger of administrative issues regarding this Order.

## **VIII. RATIONALE FOR MONITORING AND REPORTING PROGRAM REQUIREMENTS**

The purpose of the MRP is to determine and ensure compliance with effluent discharge specifications and other requirements established in this Order, assess treatment efficiency, characterize effluents, and to minimize the effects of the discharge on the receiving water quality. The MRP also specifies requirements concerning the proper use, maintenance, methods, and the monitoring type intervals and frequency necessary to provide data that are representative of the activities and discharges regulated under this Order.

The MRP is issued pursuant to Water Code section 13267, which authorizes the San Diego Water Board to require dischargers to submit technical and monitoring reports. 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.



Consistent with the *Framework for Monitoring and Assessment in the San Diego Region*,<sup>6</sup> the monitoring required by the Order answers the two specific monitoring questions below.

- Will the production, conveyance, and end use of recycled water regulated by this Order be done in a manner that protects public health and the environment?
- Is groundwater designated for municipal and domestic use safe to drink in irrigation end use areas regulated by this Order?

This monitoring program has basic two components, effluent quality monitoring and recycled water production/distribution monitoring. Specific monitoring questions related to the questions above for each component are provided below.

1. Effluent monitoring consists of the basic site-specific monitoring necessary to measure compliance with individual effluent discharge specifications and/or assess potential impacts to receiving water quality. Core monitoring is typically conducted at the end of the treatment process and prior to distribution of recycled water to use sites. Effluent monitoring will answer the following questions.
  - a. Does the effluent comply with permit discharge specifications and other requirements of this Order, thereby ensuring that water quality objectives are achieved in the groundwater?
  - b. Does the effluent comply with the statewide treatment standards for recycled water, as required by title 22, Cal. Code Regs.?
  - c. Is the Facility being properly operated and maintained to ensure compliance with the conditions of the Order?
2. Recycled water distribution monitoring provides information necessary to track the distribution of recycled water in the San Diego Region. This information provides an essential part of a cumulative picture of the distribution and use of recycled water within the San Diego Region.

Collection and analysis of recycled water production and use site data will help answer the following:

- a. What is the total volume of recycled water produced from the NCWRP?
- b. Where are the recycled water use sites located?
- c. What is the volume of recycled water delivered to each use site?
- d. What is the level of compliance with Rules and Regulations at recycled water reuse sites?

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<sup>6</sup> California Regional Water Quality Control Board, San Diego Region, Staff Report, November 2012.

## IX. PUBLIC PARTICIPATION

Two of the four values of the San Diego Water Board espoused in its Practical Vision are communication and transparency. Participation of the public in the decision making process of the Board is a hallmark of the board governmental structure in California and essential to this Board's success. The San Diego Water Board has taken the following steps to encourage public participation in the Master Recycling Permit adoption process.

### A. Notification of Interested Parties

Consistent with Water Code section 13167.5, the San Diego Water Board has notified the Discharger and interested agencies and persons of its intent to adopt a Master Recycling Permit for the discharge and made Order No. R9-2015-0091 available on its website. Furthermore, the San Diego Water Board has provided the public with an opportunity to submit written comments and recommendations. Notification was provided through the San Diego Water Board website and board meeting agenda publication.

### B. Written Comments

Interested persons were invited to submit written comments concerning the tentative Master Recycling Permit. Comments were submitted via email to [sandiego@waterboards.ca.gov](mailto:sandiego@waterboards.ca.gov).

Written comments were received before the **November 16, 2015** due date for submitting comments.

### C. Public Hearing

The San Diego Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: **December 16, 2015**  
Time: **9:00 am**  
Location: **Padre Dam Municipal Water District  
Advanced Water Purification Facility Visitor's Center  
12001 Fanita Parkway, Santee, CA**

### D. 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 Master Recycling Permit. 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, Master Reclamation Permit, 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 619-516-1990.

### **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, phone number, and email address.

### **G. Additional Information**

Requests for additional information or questions regarding this order should be directed to Mr. Fisayo Osibodu at 619-521-8036 or at [Olufisayo.Osibodu@waterboards.ca.gov](mailto:Olufisayo.Osibodu@waterboards.ca.gov) or Alex Cali at 619-521-3355 or [Cali.Alex@waterboards.ca.gov](mailto:Cali.Alex@waterboards.ca.gov).

## **ATTACHMENT D**

### **MONITORING AND REPORTING PROGRAM NO. R9-2015-0091**

#### **FOR THE CITY OF SAN DIEGO NORTH CITY WATER RECLAMATION PLANT, SAN DIEGO COUNTY**

This Monitoring and Reporting Program (MRP) is issued to the City of San Diego pursuant to Water Code Section 13267, which authorizes the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) to require technical and monitoring reports. The San Diego Water Board Executive Officer can modify the MRP as appropriate.

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

- A. Samples and measurements collected as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be collected at the monitoring points specified in this 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 in 40 Code of Federal Regulations (CFR), part 136, Guidelines Establishing Test Procedures for the Analysis of Pollutants 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 State Water Board Resources Control Board, Division of Drinking Water (DDW). The Discharger must use a laboratory capable of producing and providing quality assurance and 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 and 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 QA/QC report.
  - 3. A discussion of the QA/QC data.
  - 4. A transmittal letter indicating whether or not all the analytical work was supervised by the director of the laboratory, and containing the following statement, "All analyses were conducted at a laboratory certified for such analyses by the DDW 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 part 136, Guidelines Establishing Test Procedures for the Analysis of Pollutants, the exact methodology must be submitted for review and must be approved by the San Diego Water Board prior to use.
- G. If the Discharger monitors any pollutants more frequently than required by this MRP, using test procedures approved in 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.
- H. The Discharger shall retain records of all monitoring information, including all calibration and maintenance records including all original strip chart and/or electronic 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.

- I. 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.
- J. The Discharger shall report any noncompliance that may endanger health or the environment. Pursuant to Health and Safety Code section 5411.5, any sewage overflow or spill shall be immediately reported to the County DEH to the extent permitted by federal law. 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:
  1. Any bypass from any portion of the treatment facility.
  2. Any discharge of treated or untreated wastewater resulting from sewer line breaks, obstruction, surcharge, or any other circumstances.
  3. Any treatment plant upset which causes the discharge specifications of this Order to be exceeded.
  4. Failure of disinfection system.
  5. An effluent total coliform bacteria value greater than 240 MPN/100 mL.
- K. If the Discharger or end user, 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 recycled water or 1,000 gallons or more of recycled water that is treated at a level less than disinfected tertiary 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 Section M.
- L. All applications, reports, or information submitted to the San Diego Water Board shall be signed and certified as follows:
  1. The Report of Waste Discharge shall be signed as follows.

- a. For a corporation-by a principal Executive Officer of at least the level of Vice President.
  - b. For a partnership or sole proprietorship-by a general partner or the proprietor, respectively.
  - c. For a municipality, State, federal or other public agency-by either a public Executive Officer or ranking elected official.
2. All other reports required by this MRP and other information required by the San Diego Water Board shall be signed by a person designated in Monitoring Section O.1 or a duly authorized representative of that person. An individual is a duly authorized representative only if all of the following are true.
- a. The authorization is made in writing by a person described above.
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity.
  - c. The written authorization is submitted to the San Diego Water Board.
3. 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 a fine and imprisonment."
- 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, 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.
- 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 MRP No. R9-2015-0091 that could result in

enforcement action depending on the frequency of such instances and efforts by the Discharger to prevent such failures.

## II. DISCHARGE MONITORING REQUIREMENTS

- A. Representative samples of the final effluent from the North City Water Reclamation Plant shall be collected in accordance with the following criteria:

**Table 1. Effluent Monitoring**

Parameter	Units	Sample Type	Minimum Sampling Frequency <sup>a,b</sup>	Reporting Frequency
Flow Rate	mgd	Continuous	Continuous	Monthly
Chlorine Residual	mg/L	Continuous	Continuous	Monthly
Chlorine-Contact Time (CT) <sup>c</sup>	mg-min/L	Continuous	Continuous	Monthly
Total Coliform Bacteria <sup>d</sup>	MPN/100 mL	Grab	Daily	Monthly
Turbidity <sup>e</sup>	NTU	Continuous	Continuous	Monthly
Biological Oxygen Demand (BOD <sub>5</sub> @ 20°C)	mg/L	Composite	Weekly	Monthly
Total Suspended Solids	mg/L	Composite	Weekly	Monthly
pH	pH units	Grab	Weekly	Monthly
Chloride (Cl)	mg/L	Composite	Monthly	Monthly
Sulfate (SO <sub>4</sub> )	mg/L	Composite	Monthly	Monthly
Percent Sodium (% Na)	%	Composite	Monthly	Monthly
Nitrate (NO <sub>3</sub> )	mg/L	Composite	Monthly	Monthly
Total Nitrogen	mg/L	Composite	Monthly	Monthly
Iron (Fe)	mg/L	Composite	Monthly	Monthly
Manganese (Mn)	mg/L	Composite	Monthly	Monthly
Methylene Blue-Activated Substances (MBAS)	mg/L	Composite	Monthly	Monthly
Boron (B)	mg/L	Composite	Monthly	Monthly
Fluoride (F)	mg/L	Composite	Monthly	Monthly
Total Dissolved Solids (TDS)	mg/L	Composite	Monthly	Monthly
Aluminum	mg/L	Composite	Annually	Annually
Arsenic	mg/L	Composite	Annually	Annually
Antimony	mg/L	Composite	Annually	Annually
Barium	mg/L	Composite	Annually	Annually
Beryllium	mg/L	Composite	Annually	Annually
Cadmium	mg/L	Composite	Annually	Annually
Cyanide	mg/L	Composite	Annually	Annually
Mercury	mg/L	Composite	Annually	Annually
Nickel	mg/L	Composite	Annually	Annually
Perchlorate	mg/L	Composite	Annually	Annually
Selenium	mg/L	Composite	Annually	Annually
Thallium	mg/L	Composite	Annually	Annually



Parameter	Units	Sample Type	Minimum Sampling Frequency <sup>a,b</sup>	Reporting Frequency
Priority Pollutants <sup>f</sup>	mg/L	Composite	Annually	Annually
<p>a. The Discharger shall increase the sampling frequency from weekly to daily, from quarterly to monthly, and from annually to monthly for any constituent that exceeds the Discharge Specifications of the Order. The increased frequency of monitoring shall continue until the Discharger achieves compliance with the Specification for three consecutive periods, at which point the Discharger shall resume sampling at the specified frequency.</p> <p>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.</p> <p>c. 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 Discharger shall report monthly the date(s), value(s), time and duration when the CT value falls below 450 mg-min/L, and/or the modal contact time falls below 90 minutes.</p> <p>d. Samples for total coliform bacteria shall be collected at least daily and at a time when wastewater characteristics are most demanding on the treatment facilities and disinfection procedures. Results of daily coliform bacteria monitoring, running 7-day median determination shall be reported monthly.</p> <p>e. Effluent samples collected to determine turbidity (when required) shall be collected after the media filters. Effluent tertiary turbidity analyses shall be conducted continuously using a continuous monitoring and recording turbidity meter. Compliance with the daily average operating filter effluent turbidity limit of 2 Nephelometric Turbidity Units (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 turbidity meter and/or recorder fail, grab sampling at a minimum frequency of 1.2 hours may be substituted for a period of up to 24 hours. The Discharger shall report quarterly results of four-hour turbidity readings, average effluent turbidity (24-hours), 95 percentile effluent turbidity (24-hours), and daily maximum turbidity readings.</p> <p>f. Required by the State Water Board Recycled Water Policy, see section 7.b.4 of the State Water Board Recycled Water Policy.</p>				

### III. RECYCLED WATER REPORTS

- A. The Discharger shall submit a quarterly recycled water users summary report containing the following information:
  - 1. Total volume 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 site.
  - 4. Basin Plan name and number of hydrologic subarea underlying the recycled water use sites.
- B. The Discharger shall submit an annual recycled water users compliance report containing the following information.

1. Recycled water use site summary report.
  - a. Name of each recycled water reuse site.
  - b. Owner of each recycled water use facility.
  - c. Address of each reuse site.
  - d. Name of the recycled water on-site user supervisor.
  - e. Phone number of the on-site user supervisor.
  - f. Mailing address of the recycled water on-site use supervisor, if different from site address.
  - g. Volume of recycled water delivered to each reuse site for each of the 12 months in a calendar year.
  - h. Total estimated area (in acres) of each landscape irrigation site.
  - i. The estimated amount of nitrogen<sup>1</sup> (in pounds per acre per year) applied in recycled water on each landscape irrigation site.

2. Recycled water user site inspections.

The Discharger shall report the number of recycled water reuse site inspections conducted by its staff and identify the sites inspected for the reporting period.

3. Recycled water user violations of the Discharger's rules and regulations.

The Discharger shall identify all recycled water users known to be in violation of its rules and regulations for recycled water users. The report shall include a 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. The Discharger shall also include the following in the annual recycled water compliance report.

1. A list of all approved residential and commercial recycled water haulers. The Discharger's annual list must also indicate any new recycled water haulers that were approved during the calendar year.

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<sup>1</sup> Concentration of nitrogen in recycled water can be obtained from the recycled water producer.

2. A list of users receiving or proposing to receive recycled water from the fill stations (including a list of uses of recycled water for each user).
3. A list of recycled water end use sites outside the Discharger’s recycled water service area.
4. A summary of the volume of recycled water used (in acre feet) from the fill stations each quarter during the calendar year.
5. A summary table of all inspections conducted of recycled water use sites which received recycled water from the fill stations during the calendar year and enforcement/corrective actions initiated by the Discharger during the calendar year. Include a discussion of compliance and the corrective action taken, as well as any planned or proposed actions needed to bring the discharge into compliance with this Order. Copies of any enforcement actions taken by the Discharger shall be provided to DDW, the San Diego Water Board and County DEH.
6. An evaluation of the performance of the recycled water treatment facility, including discussion of capacity issues, system problems, and a forecast of the flows anticipated in the next year.
7. The name and contact information for the recycled water operator/staff responsible for overseeing operation, maintenance, and system monitoring of the fill stations.

**IV. REPORTING REQUIREMENTS**

- A. The Discharger shall report in the Self-Monitoring Report (SMR) the results for all monitoring specified in Section II (Discharge Monitoring Requirements) of this MRP. The Discharger shall submit quarterly SMRs including the results of all required monitoring using test methods approved by the U.S. Environmental Protection Agency 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.
- B. Monitoring periods and reporting for all required monitoring shall be completed according to the schedule in Table 2.

**Table 2. Monitoring Periods and Reporting Schedule**

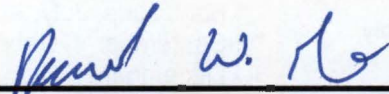
Sampling Frequency	Monitoring Period	SMR Due Date
Continuous	All	Submit with monthly SMR
Daily	Daily	Submit with monthly SMR

Sampling Frequency	Monitoring Period	SMR Due Date
Monthly	January, February, March, April, May, June, July, August, September, October, November, December	By the first day of the second month following sampling (i.e 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
Annually	January 1 through December 31	March 1

Laboratory reporting limits shall be lower than or equal to the discharge specifications. Constituents not detected below the method detection limit shall be reported as non-detect with the applicable value (e.g., 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.

- C. The Discharger shall submit SMRs in accordance with the following requirements.
1. The Discharger shall arrange all reported data in monthly SMRs and annual reports in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with discharge specifications.
  2. 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.
  3. Self-Monitoring Reports must be submitted in text searchable PDF format to the San Diego Water Board via email. The email submittals must include a signed cover/transmittal letter (with the facility name, facility contact information, and reference code), and, unless directed otherwise by the Executive Officer, be sent via email to sandiego@waterboards.ca.gov.

I, David W. Gibson, Executive Officer, do hereby certify that this Monitoring and Reporting Program Order is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on December 16, 2015.



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David W. Gibson  
Executive Officer