



## THE CITY OF SAN DIEGO

November 5, 2015

Mr. Fisayo Osibodu  
Water Resources Control Engineer  
California Regional Water Quality Control Board, San Diego Region  
2375 Northside Drive, Suite 100  
San Diego, CA 92108  
Re: 244506:osibodu Submitted via Email at sandiego@waterboards.ca.gov

**Subject: Comments on the North City Water Reclamation Plant Master Recycling Permit  
Tentative Order No. R9-2015-0091**

Thank you for the opportunity to submit written comments for the North City Water Reclamation Plant Master Recycling Permit, Tentative Order No. R9-2015-0091 (Tentative Order). The City of San Diego (City) appreciates the time and effort Regional Board staff has spent to create the Tentative Order. The majority of permit requirements are reasonable, well thought-out, and protective of water quality. However, as written, the City has concerns that some requirements pose operational challenges that may discourage the generation and distribution of recycled water from the North City Water Reclamation Plant.

The City wholeheartedly supports the use of recycled water as a means to augment water supplies affected by California's five year drought and anticipates increased demand and use of recycled water throughout the Region over the coming years. One of the City's main distribution centers of recycled water is the North City Water Reclamation Plant, the subject of this Tentative Order. The City urges the Regional Board staff to consider and incorporate the enclosed comments so that the City can continue to increase recycled water use and distribution in an efficient and cost effective manner that is protective of the environment.

The City also requests that the Regional Board include a finding or acknowledgement that reflects the inclusion of the demonstration-scale Advanced Water Purification Facility (AWPF) into the Tentative Order. The operational AWPF, installed in July 2011, is a component of the Water Purification Demonstration Project (Demonstration Project). The Demonstration Project is part of the City's effort to identify and evaluate potential strategies for enhancing our local water supplies.



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The AWPf was a key element of the Demonstration Project which confirmed that the purified water was of high quality and met all applicable water quality standards. After completion of the Demonstration Project in 2013, the City embarked on its 20-year Pure Water San Diego Program (Pure Water Program) and continues to operate the AWPf for ongoing research of potable and non-potable reuse alternatives. As part of this ongoing research, additional pretreatment steps of ozone and biological activated carbon (BAC) were installed in June 2014. The primary goal of this additional pretreatment is to enhance reliability through treatment redundancy and robustness to the AWPf. In June 2015, the report summarizing the ozone and BAC testing and operations highlighted the effectiveness of these pretreatment steps in removing and destroying organic contaminants in the recycled water and enhancing downstream membrane filtration performance.

The feed water to the 1.0 million gallons per day (mgd) AWPf is tertiary treated water from the North City Water Reclamation Plant. The AWPf currently includes:

- Ozone disinfection system,
- Biological activated carbon filters,
- Membrane filtration,
- Reverse Osmosis demineralization, and
- Disinfection through the use of ultraviolet light and peroxide.

The AWPf product water (purified water) is tested and monitored prior to being blended with North City Water Reclamation Plant tertiary effluent and discharged to the City's non-potable reuse distribution system. The purified water contains low concentrations of total dissolved solids (TDS) and assists the non-potable reuse distribution system by providing reliable recycled water that meets applicable TDS effluent limits. To support Pure Water Program initiatives and ongoing research, the City will continue to operate the AWPf and purified water will continue to be blended with North City Water Reclamation Plant tertiary effluent to manage TDS concentrations in the non-potable reuse distribution system. As a result, the City requests acknowledgement in the Tentative Order that the AWPf is included under the North City Water Reclamation Plant Master Recycling Permit and that changes to the Demonstration Project will not trigger additional requirements for the North City Water Reclamation Plant Recycled Water Distribution System.

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Thank you again for the opportunity to comment. We look forward to continued discussions to find ways to improve and protect water quality while augmenting water resources. If you would like additional information on the AWWPF or the Pure Water Program, please contact Amy Dorman at (858) 614-5504. If you have any other questions, please contact Rachel Davenport at (619) 758-2370.

Sincerely,



Peter S. Vroom, Ph.D.

Public Utilities Deputy Director

Environmental Monitoring and Technical Services Division

Enc: City of San Diego Public Utilities Department Comments on the Master Recycling Permit for the North City Water Reclamation Plant Tentative Order No. R9-2015-0091

**City of San Diego Public Utilities Department**  
**Comments on the Master Recycling Permit for the North City Water Reclamation Plant**  
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Comment Number	Page Number	Section/Topic	Comment
<i>Tentative Order (Main)</i>			
1	Global	Global/Authority to waive or change requirements	Under the Prior Order 97-03, the Executive Officer had the authority to make certain changes or waive specific requirements. The current draft order has removed the authority from the Executive Officer and delegated it to the San Diego Water Board. The City requests reversal of this change because many minor changes, items, or waivers that are not required to be addressed in a public forum or subject to public notice requirements will have to be approved by the San Diego Water Board, causing unnecessary delay and potentially limiting the City's ability to effectively use and provide recycled water. Specific provisions include but are not limited to: VI.B; VI.L; VI.S.2; VII.E; Attachment B, I.F; Attachment B, I.G; Attachment D, I.A; Attachment D, I.G; and Attachment D, I.K.
2	5	II. Last paragraph (1st full paragraph on p.5)/Enforcement of prior order	Add clarifying language to the first and last sentences of the paragraph to limit the City's exposure to violations that are based on current requirements and not requirements that have been revised and superseded, such as the discharge effluent limits. Suggested revisions are as follows: <del>"...that this order supersedes Order No. 97-03 upon the effective date of this order. except for enforcement purposes ... actions for past violations that occurred under the previous Order, unless it would not be a violation under the current Order."</del>
3	5	IV.A/Average Monthly Flow Discharge Specifications	Add flexibility to include redesign of the plant to support advanced water purification, which may increase the peak capacity and average monthly flow, similar to the language in the prior Order 97-03, page 1 #2, such as <del>"Advanced water purification facility testing and future implementation of the pure water program may increase the peak capacity of the plant in the future."</del>
4	6	Table 5/Discharge Specifications	Reverse the BOD and TSS limits for the daily maximum and monthly average. Change the daily maximum to 45 mg/L and the monthly average to 30 mg/L for BOD and TSS.
5	7	V.A.3.b/Reporting of Estimated Persons Served	Tracking occupancy figures are not required by State Code nor does it have an impact on the safe use of recycled water, and no rationale for reporting this data is covered under section VII (pg C-19) of this Order. Remove language as follows: <del>"The average number of persons estimated to be served at each use area on a daily basis."</del>

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6	8	V.A.3.g/Recycled Water Purveyance Requirements	DDW has delegated all or a portion of the regulatory oversight of recycled water use sites to the local health agency, as allowed under CA Water Code 13554.2 (c) and memorialized in an agreement between the City and DEH. Revise language as follows: "...plans and specifications shall include the following and shall be submitted to <del>DDW and</del> County DEH."
7	8	V.B.1/Recycled Water Purveyance Requirements	A full report should not be required for a plant that has been up and running over fifteen years. Revise as follows: "Submit for review and approval a <del>report</del> letter..."
8	8	V.B.2/Recycled Water Purveyance Requirements	Delete this section because it is already covered in the City's Rules and Regulations for recycled water use, as required under V.A.1.
9	10	VI.B.1/Recycled Water Purveyance Requirements: Bypass	Add a definition for bypass, similar to the definition from Order No. 97-03, to clarify intent of this provision.
10	10	VI.D/Reporting of Unauthorized Discharges	The City has limited enforcement mechanisms for discharges that occur outside their jurisdiction by the end user or where the City is not the discharger and should not be held to standards that are more restrictive than California Water Code Section 13529.2(a). The strict liability language included in the first sentence is impractical and too stringent. Revise the provision as follows: <del>"If the Discharger or end user, without regard to intent or negligence, causes or permits an unauthorized discharge within the Discharger's jurisdiction, the Discharger will adhere to the requirements set forth in California Water Code Section 13529.2(a). 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, the Discharger or end user shall immediately notify the San Diego Water Board in accordance with reporting requirements in Provision VI. B. "</del>

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Comment Number	Page Number	Section/Topic	Comment
11	12	VI.P/Report of Waste Discharge	Add flexibility to this section so that redesign of the plant to support advanced water purification, which may increase the peak capacity and average monthly flow (similar to the language in the Prior Order 97-03 #2) does not trigger a report of waste discharge.
12	14	VII.B.1/Special Provisions	The City has posted recycled water quality data on the internet on a monthly basis for several years. Revise as follows: "Monitor and make readily available to end users the nutrient levels in recycled water supplies. <del>and notify to end users of the nutrient value of recycled water.</del> "
13	15	VII.D/Certification Report: Production Levels vs. Capacity	Delete Provision VII.D. This provision would require an unexpected expense and not yield new information since the plant has already been certified for the current design capacity and there are no substantive changes to the plant design. We request that, in anticipation of the engineering report the City will submit when Pure Water-related improvements are in their final design stage, this requirement be delayed until that time.
14	15	VII.D/Applicability to Fill stations	Clarify whether any additional requirements are triggered if the fill stations are up and running after 180 days of permit adoption, specifically in relation to sections VII.D and the language on p. B-3.
15	16	VII.M/Compliance with MRP	Remove section VII.M because it is redundant with section VII.K.
<b>Attachment B</b>			
16	B-3	I.V/Use of drinking water to supplement recycled water	Revise as follows for clarification: "To supplement recycled water with drinking water, the City will need air gap separation (same) and the approval of the public water system has been obtained <del>from the DDW and County DEH...</del> "
17	B-4	I.W/Connections to recycled water system	There are situations where the City is the purveyor and not the discharger. Revise as follows: "No person <del>or entity</del> other than the Discharger, <del>Purveyor,</del> <del>or their representative,</del> shall make a connection to the recycled water distribution system."
18	B-4 - B-8	II./Fill Station Requirements	Confirm these provisions are not more restrictive than the original engineering report that was submitted by CWA, on behalf of the recycled water agencies, and approved by Regional Board staff, DDW and DEH.
<b>Attachment C</b>			

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Comment Number	Page Number	Section/Topic	Comment
19	C-3	I.A/Facility Description	Add “ <b>peak flow</b> ” in front of design capacity for tertiary, primary, and secondary treatment facility design capacities to clarify that the design capacity numbers refer to peak flow and not average flow.
20	C-3	I.B/Recycled Water Use/Discharge	Revise the 2nd sentence as follows: “More than <del>79</del> 90 miles of distribution pipelines are installed in Mira Mesa, Miramar Ranch North, Scripps Ranch, University City, Torrey Pines, Santa Luz, <b>Olivenhein Municipal Water District</b> , and Black Mountain Ranch to provide recycled water to customers for irrigation, landscaping, and industrial use.”
21	C-3	I.B Last paragraph/Recycled Water Use	The City has no jurisdiction to regulate sites or discharges in other municipalities' jurisdictions. Revise as follows: "The Order authorizes the City to provide/ <del>regulate</del> recycled water <del>discharges</del> at authorized use sites located within the San Diego Region <b>and to regulate recycled water discharges within the City's jurisdiction</b> , including the following Groundwater Hydrologic Units, Hydrologic Areas and Subareas listed in Table 1 below."
22	C-14	Table 6/Discharge Specifications	Reverse the BOD and TSS limits for the daily maximum and monthly average. Change the daily maximum to 45 mg/L and the monthly average to 30 mg/L for BOD and TSS.
23	C-19	VI.B/Salt Nutrient Management Plan	Update the third paragraph to be consistent with Provision VII.L, recognizing that the City will participate as a stakeholder for the Salt Nutrient Management Plan development, but will not be the lead agency because the City has a limited number of discharges into the Poway groundwater basin.
<b>Attachment D</b>			
24	D-1	I.D/General Monitoring Provisions	Remove section I.D because it is redundant with section I.A.
25	D-2	I.E/General Monitoring Provisions	Remove section I.E because it is redundant with section I.B.
26	D-2	I.F/General Monitoring Provisions	Remove section I.F because it is redundant with section I.C.
27	D-2	I.G, I.H, & I.H.4/Laboratory Director	The City’s equivalent of a laboratory director is the Senior Chemist position. Change the “laboratory director” title to “Senior Chemist.”
28	D-2	I.H/New Data	Provide a definition of what constitutes "new data."

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29	D-2	I.H./Analytical Reports	Revise language to allow for the City to provide analytical reports upon request instead of inclusion in every report where new data are submitted. The inclusion of analytical reports to every report will prove cumbersome with little added benefit and no justification provided. In addition, inclusion of complete analytical reports will significantly increase the report size, potentially inhibiting the City's ability to comply with the electronic submittal requirements on a regular basis.
30	D-3	I.L./General Monitoring Provisions	Move the first sentence of I.L so that it is I.K.6.
31	D-3 to D-4	I.M through I.O/General Monitoring Provisions	Remove these sections because they are redundant with language in sections VI.B, VI.D, VI.S, respectively.
32	D-8	III.B.1.h & i/Reporting for landscape irrigation sites	The City does not have the resources or mechanisms in place to track this information at the level requested without a significant amount of effort and expense; however, the City can reasonably provide estimates or averages without overly cumbersome efforts. Revise III.B.1.H & I so that estimates can be used for the data reporting as follows: “h. Total <b>estimated</b> area (in acres) of each landscape irrigation site. i. The <b>estimated</b> amount of nitrogen <sup>1</sup> (in pounds per acre per year) applied in recycled water on each landscape irrigation site.”
33	D-8	III.B.1.j/ Reporting of Nitrogen in Fertilizer	Reporting of the amount of Nitrogen in fertilizer added to each irrigation site is a burdensome requirement with no justification provided for its inclusion. The City currently has limited mechanisms in place to collect accurate data or enforce overuse of fertilizer on lands outside the City's jurisdiction or those covered by the Tentative General Agricultural Order. Remove Provision J.
34	D-10	Table 2/Monitoring Periods and Reporting Schedule	Remove the five year report because no additional data is required to be submitted. All data will have been reported in monthly and annual reports. If additional data or analyses are required for a five year report, reporting requirements require clarification.
35	D-10	IV.C.3/Self Monitoring Reports historical data	Clarify which Self Monitoring Reports require historical data (based on frequency of report). This requirement is impractical and time consuming for reports formulated more often than quarterly reports and provides minimal benefit.





## San Diego County Water Authority

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November 13, 2016

### MEMBER AGENCIES

Carlsbad  
Municipal Water District

City of Del Mar

City of Escondido

City of National City

City of Oceanside

City of Poway

City of San Diego

Fallbrook  
Public Utility District

Helix Water District

Lakeside Water District

Olivenhain  
Municipal Water District

Otay Water District

Padre Dam  
Municipal Water District

Camp Pendleton  
Marine Corps Base

Rainbow  
Municipal Water District

Ramona  
Municipal Water District

Rincon del Diablo  
Municipal Water District

San Dieguito Water District

Santa Fe Irrigation District

South Bay Irrigation District

Vallecitos Water District

Valley Center  
Municipal Water District

Vista Irrigation District

Yuima  
Municipal Water District

### OTHER REPRESENTATIVE

County of San Diego

**Mr. Fisayo Osibodu**

**Water Resources Control Engineer**

**California Regional Water Quality Control Board, San Diego Region**

**2375 Northside Drive, Suite 100**

**San Diego, CA 92108**

**Subject: Comments on the North City Water Reclamation Plant Master Recycling Permit, Tentative Order No. R9-2015-0091**

**Dear Fisayo,**

**Thank you for the opportunity to submit written comments for the North City Water Reclamation Master Recycling Permit, Tentative Order No. R9-2015-0091. We are providing comments from the perspective of the policies that have been put in place by the San Diego Water Board with respect to recycled water and the approaches that were agreed on to ensure that the regulations and permitting, while protecting water quality, do not become an impediment to recycled water use in the San Diego Region.**

**Our primary concern with the draft permit is that the approach being considered to address nutrient loading is not consistent with the “amendments to the Water Quality Control Plan for the San Diego Basin (9) (Basin Plan) to change the water quality objective for nitrate in groundwaters, incorporate the State Water Board’s Onsite Wastewater Treatment Systems Policy (OWTS Policy) and incorporate other miscellaneous updates” approved by the San Diego Water Board in May 2015. Specifically, it is not consistent with the provisions for landscape irrigation with recycled water. This same amendment will be under consideration by the State Board on November 17, 2015, and sets forth an approach for managing nutrients in recycled water by requiring use of agronomic rates for irrigation with recycled water and associated fertilizer applications. We expect that this basin plan amendment will be in place at the time the North City permit is presented to the San Diego Water Board for approval. In addition, this proposed permit is not consistent with the State Board’s Policy on salt and nutrient management and the subsequent Guidelines for Salt/Nutrient Management Planning in the San Diego Region that were endorsed by the Regional Board on November 10, 2010, through Resolution No. R9-2010-0125.**

*A public agency providing a safe and reliable water supply to the San Diego region*

### Conformance with the Basin Plan

Attachment A to this letter highlights the language in the basin plan that reflects the San Diego Water Board's approach for managing nitrates in recycled water through agronomic rates. When drafting this approach, the San Diego Water Board was aware that many of the plants in the region produce recycled water containing nitrates above the basin plan objectives of 45 mg/L as nitrate. Attached is the letter submitted to the San Diego Water Board on February 12, 2015, from the Water Authority and numerous recycled water agencies on the issue of recycled water use and nutrient impacts. It was understood through various meetings with stakeholders and San Diego Regional Board staff, that through concerted education and training, Site Supervisors would be informed regarding the nutrient value of recycled water, the need to irrigate at agronomic rates, and through the review of existing irrigation practices during site inspections, the impact to the groundwater basin would be minimal. That is why this approach was included in the basin plan update. While the provisions and approach for application at agronomic rates are included in the permit, the requirements go above and beyond what is necessary to protect water quality:

1. Section VII.C. requires the city to complete a nitrate study that evaluates nitrate removal at the treatment plant and the need for additional treatment to remove nitrate, fate and transport of nitrate in the groundwater, and application of recycled water and fertilizers at agronomic rates. If fertilizers are applied at agronomic rates as required in the basin plan, there is no need to evaluate the treatment plant process or fate and transport nitrogen in the groundwater. The draft permit itself acknowledges this on page C-19 Section VI B. where it states: "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." Therefore, application of recycled water and fertilizers at agronomic rates should be adequate to protect groundwater quality in lieu of establishing a numeric effluent limit for nitrate or total nitrogen. The provision to complete a nitrate study should be removed from this draft permit.
2. Page D-8, Sections III.B., i, and j require detailed reporting, on a per site basis, of nitrogen applied to each recycled use site from recycled water and fertilizer. This is an onerous and inefficient approach to regulating agronomic rates and creates an impediment to recycled water use that is out of proportion to the potential impact. The basin plan requirement of education and training in conjunction with periodic

inspections of end use areas was deemed by the San Diego Water board to be a more reasonable approach. Provisions III.B., I, and j should be removed from the permit.

#### Salt and Nutrient Management Plan Approach

In 2009, when the State Board updated their recycled water policy, it recognized that recycled water is not the primary contributor of salt and nutrients in most groundwater basins. The salt and nutrient management planning approach looked basin-wide, considering all contributions of nutrients and salts. In the San Diego region, the basins were prioritized to ensure completion of salt and nutrient management plans only for the highest priority basins. It was not anticipated that additional studies of fate of nutrients would be needed for every recycled water discharger. Several salt and nutrient management plans have already been completed for the highest priority basins. Therefore, the requirement in this permit to complete a nitrate study is not appropriate.

#### Listing of Basins Impacted

An additional concern we have regarding the permit is the listing of all basins in the region, based on the potential for hauled recycled water to reach other parts of the county. The amount of recycled water that would be hauled outside of the city's service area is inconsequential, and the listing of these basins in the permit creates confusion about the city's role in those basins. In addition, where the city wholesales water to other agencies outside the city's service area and jurisdictional boundaries, those agencies operate under their own recycled water master permits and take responsibility for their own service area. Listing those basins in this permit creates confusion. We recommend listing only those basins where the city serves recycled water directly to retail customers.

Finally, the Water Authority supports the City of San Diego's Pure Water project efforts, and encourages the San Diego Regional Board to direct resources to help expedite program regulatory approvals in our region's quest to develop and diversify our local water supplies. We appreciate your consideration of our comments and the staff's willingness to work with the recycled water stakeholders in the region. If you have any questions regarding this letter, please contact me at (858) 522-6743.

Sincerely,



FOR Toby Roy, P.E., Esq.  
Water Resources Manager