



Item 8  
Supporting Document No. 5  
April 15, 2015

January 20, 2015

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**David Gibson, Executive Officer**  
C/O Fisayo Osibodu, Water Resource Control Engineer  
**SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD**  
2375 Northside Drive, Suite 100  
San Diego, CA 92108-2700

**SUBJECT: COMMENTS ON PROPOSED AMENDMENTS TO THE WATER QUALITY CONTROL PLAN FOR THE SAN DIEGO REGION (9) INCORPORATING THE STATE WATER RESOURCES CONTROL BOARD'S ONSITE WASTEWATER TREATMENT SYSTEMS POLICY**

**Dear Mr. Osibodu:**

Rancho California Water District (RCWD/District) is concerned about proposed revisions to the Water Quality Control Plan for the San Diego Region (Region 9 Basin Plan) that will change how septic and other onsite wastewater treatment systems are regulated in the Temecula Valley.

As you may be aware, the Temecula Valley Groundwater Basin (Temecula Basin), (Pauba/Temecula aquifer system) underlies most of the Temecula Valley and a large portion of the District's service area. The Temecula Basin is in close contact with the Temecula Creek before it merges to become the Santa Margarita River. The Temecula Basin provides drinking and irrigation water for thousands of people between Camp Pendleton and Vail Lake. Although the Temecula Basin is adjudicated as part of the Santa Margarita River system, the District is one of the primary Temecula Basin managers because of its reliance on the Temecula Basin as a large part of the District's water supply portfolio.

RCWD's role as the Temecula Basin manager gives the District heightened concern about and responsibility for the water quality conditions in the Temecula Basin. Those concerns are not shared by the County of Riverside, whose interests are based on the County's authority over public health and land use development. The health of the Temecula Basin is critical to the core function of the District—water supply—and the livelihood of its residents and businesses in a way that far exceeds the basic public health concerns held by the County.

Therefore, District is concerned that the proposed revisions to the Region 9 Basin Plan do not go far enough to protect water quality in the Temecula Basin and ensure a consistent healthful supply of water for the District's residents and businesses.

***Proposed Changes to Draft Basin Plan Amendments:***

RCWD has been working with the County of Riverside on its Local Area Management Plan (LAMP) but it remains the District's position that changes to the County's LAMP alone are not sufficient to fully protect water quality in the Temecula Basin. There must be protections in the San Diego Region's Basin Plan. The District therefore requests that a special section on the Temecula Basin include the proposed revisions to Chapter 4 of the Region 9 Basin Plan. That section should provide the following:

- 1) For properties within the District's service area but outside of Groundwater Basin 9-5 (Temecula Valley Basin), as defined in Department of Water Resources Bulletin 118, Tier 1 onsite wastewater treatment systems with a 3,500 gpd discharge limit should be allowed. However, in the case where onsite wastewater treatment systems would be within 600 feet of an impaired water body, then only Tier 3 onsite wastewater treatment systems with a maximum discharge of 1,200 gpd should be allowed. All other onsite wastewater treatment systems (aside from Tier 0) should be prohibited.
- 2) For properties within the Groundwater Basin 9-5 boundary, including the Pauba Valley groundwater sub-basin, only Tier 3 onsite wastewater treatment systems, with a maximum discharge of 1,200 gpd should be allowed.
- 3) For properties within 600 feet of the Upper and Lower Valle De Los Caballos Recharge Basins, no onsite wastewater treatment systems should be allowed under any circumstances.

If these protections are incorporated directly into the Region 9 Basin Plan, the District believes that the Temecula Basin should be adequately protected. Without these protections, the District is concerned that new development in the Temecula Basin that is not connected to municipal sewer lines may irreversibly damage the Pauba/ Temecula aquifer system.

As the Regional Water Quality Control Board – San Diego Region (Regional Board) is aware, onsite wastewater treatment systems can be major sources of nitrogen, phosphorous, and TDS. These pollutants, especially TDS, accumulate in groundwater basins when there is limited recharge. If large-scale development that does not rely on sewerage occurs in the Temecula Basin, it will contribute TDS and nutrients to the Basin. It is the Regional Board's responsibility to ensure that this does not occur.

***Without Requested Changes, Legal Infirmities Remain***

If the aforementioned requested changes are not incorporated in the Region 9 Basin Plan, RCWD is concerned that the Temecula Basin will not be adequately protected and that increased growth will harm its ability to use the Temecula Basin as a water supply aquifer.



Failure to adequately address this issue will render the Proposed Amendments legally deficient on several grounds. These include the following:

- The supplemental environmental document fails to adequately consider potential water supply and water quality impacts to the Temecula Basin.
- The supplemental environmental document fails to adequately consider the growth-inducing impacts in the Temecula Basin.
- The Proposed Amendments ignore the requirements of Water Code sections 13000 and 13241, which require the Regional Board to adopt standards and requirements based on existing and probable future uses of the waters of the State.
- The Proposed Amendments ignore the requirements of State Water Resources Control Board Resolution 68-16 and State Board Administrative Procedures Update 90-004, which prohibit degradation of waters of the State and require the Regional Board to make specific findings before authorizing activities which may cause degradation.
- The Proposed Amendments ignore the requirements of State Board Resolution 88-63, which requires the Regional Board to provide heightened protection to aquifers that serve as sources for drinking water.
- The Proposed Amendments do not address how implementation of Basin Plan surface water quality objectives for nitrogen, are to be achieved if Basin Plan groundwater objectives for nitrate are relaxed.
- The Proposed Amendments ignore the direction and authority of the State Board's onsite wastewater treatment systems policy by failing to incorporate more stringent requirements necessary to protect drinking water uses of the Temecula Basin.

As stated above, if the changes that the District has requested are incorporated into the Basin Plan, the District believes that the Regional Board will be providing adequate protections for the Temecula Basin. Absent those changes, it is the District's position that the Regional Board cannot lawfully move forward with adoption of the amendments without significant revisions to both the supplemental environmental document and amendments themselves.

Thank you for your attention to this matter. RCWD would like to coordinate with the Regional Board on continuing to develop the Basin Plan amendment. If you have any questions on the District's concerns, please contact me at your earliest convenience at (951) 296-6926 or [williamsonr@ranchowater.com](mailto:williamsonr@ranchowater.com).

Sincerely,

**RANCHO CALIFORNIA WATER DISTRICT**



Richard S. Williamson  
Assistant General Manager





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 April 15, 2015

**San Diego County Water Authority**

4677 Overland Avenue • San Diego, California 92123-1233  
 (858) 522-6600 FAX (858) 522-6568 www.sdcwa.org

February 12, 2015

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- Rincon del Diablo Municipal Water District
- San Dieguito Water District
- Santa Fe Irrigation District
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- Vollecitos Water District
- Valley Center Municipal Water District
- Vista Irrigation District
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OTHER REPRESENTATIVE

County of San Diego

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

**Ms. Jody Ebsen**  
 2735 Northside Drive, Suite 100  
 San Diego, CA 92108-2700

**Subject: Comments on Proposed Basin Plan Amendments Modification of Groundwater Nitrate Objectives and Incorporation of the State Onsite Wastewater Treatment System (OWTS) Policy**

Dear Ms. Ebsen:

The San Diego County Water Authority (Water Authority) and the recycled water agencies in Region 9 that are signatory to this letter have reviewed the proposed Basin Plan modifications which would:

1. Revise Chapter 3 (Water Quality Objectives) to establish the groundwater quality objective for nitrate at 45 mg/l as NO3 for over 40 basins within the San Diego Region.
2. Revise provisions of Chapter 4 (Implementation) to incorporate the State Water Resources Control Board Onsite Wastewater Treatment System (OWTS) Policy into the Basin Plan and make minor corrections to other sections regarding Waste Discharge Requirements (WDRs).
3. Revise Chapter 4 (Implementation) to add implementation provisions for the nitrate groundwater quality objective to protect surface water quality where groundwater and surface water are interconnected.
4. Revise Chapter 5 (Plans and Policies) to include descriptions of the 2012 State Water Board OWTS Policy and 2009 (as amended in 2013) Recycled Water Policy.
5. Delete the expired conditional waivers of waste discharge requirements from the Basin Plan and make other minor non-substantive changes to the Basin Plan.

We support the Water Board's intent to modify the Basin Plan to address the 2012 OWTS Policy and 2009 Recycled Water Policy. We have significant issues, however, with the proposed Basin Plan language changes within the "Landscape Irrigation with Recycled Water" section of Chapter 4 (Implementation). While proposed modifications to this landscape irrigation section are described within the Basin Plan modification public notice as "minor corrections to other sections regarding Waste Discharge

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Requirements", we believe that the proposed modifications within the "Landscape Irrigation with Recycled Water" section are problematic because they:

1. Do not reflect the actual potential recycled water irrigation impacts to groundwater and incorrectly overstate the contribution of recycled water irrigation to groundwater nitrate concentrations.
2. Do not reflect the groundwater quality issues or loads within the San Diego Region, are inconsistent with the goals of the Recycled Water Policy, and are inconsistent with findings presented within Salt and Nutrient Management Plans prepared within the San Diego Region.
3. Would inappropriately result in increased regulation of nitrate loads from recycled water irrigation (which has a minor, if any, influence on groundwater nitrate concentrations) while at the same time resulting in decreased water quality regulation of OWTS (which represent a greater threat to groundwater nitrate quality than recycled water use).
4. Do not take into account typical professional practices or management actions which result in nutrient loads from recycled water use (which is regulated by the Regional Water Board) being no different from nutrient loads from potable water irrigation (which is not regulated by the Regional Water Board).
5. Do not foster implementation of (and in fact represent potential impediments to) recycled water goals and objectives established within the 2013 California Water Plan, the 2009 Recycled Water Policy and the 2013 San Diego Water Board Practical Vision.

**Nitrate Loading Issues.** Currently, Chapter 4 of the Basin Plan establishes criteria under which the Regional Board can delegate review and approval of OWTS to the appropriate county health officer. The proposed modifications would allow significant greater OWTS flows without the need for Regional Water Board review or water quality evaluation. Under these modifications, Tier 1 OWTS discharges of up to 3500 gallons per day (gpd) could be approved by the counties without the need for any water quality assessment. (This is approximately triple the current 1200 gpd threshold OWTS discharge limit addressed within the Basin Plan and the Regional Board delegation agreements with the counties.)

As acknowledged within the OWTS Policy support documents, OWTS discharges typically contain total nitrogen concentrations (comprised primarily of nitrate) of 50 to 90 mg/l.<sup>1</sup> Because the OWTS discharges occur beneath the root zone, little or no vegetative uptake of these nutrients occurs. Additionally, little nitrogen removal occurs as water moves downward to groundwater, resulting in almost 100 percent of OWTS nitrogen loads impacting groundwater quality. The OWTS Policy mitigates against these potential impacts by imposing precipitation-based land density requirements in

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<sup>1</sup> As reported in Table 4-9 of the Onsite Wastewater System Policy, Final Substitute Environmental Document, approved by the State Water Resources Control Board on June 19, 2012.

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order to prevent OWTS loads from causing exceedance of a groundwater quality nitrate objective of 45 mg/l as NO<sub>3</sub> (10 mg/l as nitrogen).<sup>2</sup>

Recycled water irrigation represents a much lower threat to groundwater nitrate quality (if any) than OWTS discharges. First, total nitrogen concentrations in recycled water are less than OWTS discharges, and typically range from 10 to 40 mg/l.<sup>3</sup> More importantly, unlike OWTS discharges, recycled water is applied to the land surface, and irrigated nutrient demands of landscape irrigation can be equal or greater than the available nitrogen concentrations in the irrigation supply. As a result, recycled water users (particularly those removing cuttings) typically periodically apply fertilizers to satisfy additional vegetation nutrient demands of the irrigated vegetation. Finally, recycled water users are required to undergo training and are required to implement professional management practices under adopted recycled water agency Rules and Regulations established pursuant to county and Regional Water Board requirements. In accordance with these required practices (and as a result of water conservation guidance and directives issued by the state, county and local governments), recycled water irrigation operations operate at a high irrigation efficiency, resulting in a minimal amount of water and significantly reduced nutrient loads percolating downward to groundwater.

While OWTS dischargers (along with agricultural fertilization) were identified as a primary contributor to basin nutrient loads within San Diego region Salt and Nutrient Management Plans (SNMPs) prepared pursuant to the 2009 Recycled Water Policy, none of the SNMPs identified recycled water irrigation operations as representing a threat to cause exceedance of Basin Plan nitrate groundwater objectives. Furthermore, none of the SNMPs identified any recycled water management strategies or controls (over and above those currently implemented) as being necessary to ensure compliance with Basin Plan nitrate objectives.<sup>4</sup>

These SNMP findings are consistent with a half-century history of recycled water use within the San Diego Region, in which not one instance has occurred where recycled water irrigation has resulted in nitrate exceedance of the 45 mg/l drinking water nitrate objective in a downstream potable supply well. As an example of this lack of significant impact, nitrate concentrations of 2.4 mg/l were reported in 2014 at the Carlton Oaks Golf course, which is immediately downstream and makes use of recycled water discharged from the Padre Dam MWD Santee Lakes project that has been in operation for more than 60 years.<sup>5</sup>

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<sup>2</sup> See Table 1 of the *OWTS Policy, Water Quality Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems*, adopted by the State Water Resources Control Board on June 19, 2012.

<sup>3</sup> Typical range of total nitrate in recycled water supplies produced by Water Authority member agencies that produce disinfected tertiary treated recycled water that conforms to criteria established in Title 22, Division 4, Chapter 3 of the *California Code of Regulations*.

<sup>4</sup> Includes SNMPs submitted to the Regional Water Board for the San Juan Creek basin, Temecula basin, lower Santa Margarita River basin, Escondido basin, San Pasqual basin, Gower basin, and Santee basin.

<sup>5</sup> See Chapter 5 of the Santee Basin Salt and Nutrient Management Plan, prepared by Montgomery Watson-Harza and submitted by Padre Dam MWD to the Regional Water Board in 2014.

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All existing documented groundwater nitrate problems within the region (e.g. San Pasqual Valley, Pauma Valley) are in areas where recycled water irrigation is minimal or non-existent, and nitrate loads are dominated by agricultural irrigation and applied fertilizers. Indeed, the Salt and Nutrient Management Plan for the San Pasqual Valley (one of the areas most impacted by groundwater nitrate concentrations), identified recycled water as comprising less than one-half of one percent of the total basin-wide nitrogen load.<sup>6</sup>

Given this history, it is inconsistent for the Basin Plan to reflect a need for increased regulation of nitrate loads in recycled water irrigation, while at the same time proposing a reduction in Regional Board oversight and water quality regulation of OWTS discharges (which represent a greater threat to groundwater quality than recycled water irrigation in unsewered portions of the Region).

**Trace Nutrients.** In addition to addressing how nitrate within OWTS and recycled water irrigation operations are to be regulated, it is worthwhile for the Basin Plan to address the regulation of trace nutrients. Iron and manganese are two key trace nutrients found both in recycled water supplies and OWTS discharges. Unlike nitrate, which is a primary (health-based) drinking water standard, iron and manganese are secondary (aesthetic) consumer acceptance standards established to minimize staining in plumbing fixtures. Iron and manganese groundwater quality objectives are typically established at the secondary consumer acceptance drinking water standards of 0.3 mg/l and 0.05 mg/l respectively.

Iron and manganese concentrations in OWTS wastewater and recycled water supplies periodically exceed these limits. Unlike OWTS discharges which occur below the ground surface and may directly impact groundwater quality, recycled water irrigation operations result in vegetative uptake of iron, manganese and other trace nutrients, reducing the impact on groundwater quality. As documented in numerous studies conducted within the San Diego Region, this trace nutrient uptake limits the amount of iron and manganese that is available for recharging groundwater.<sup>7</sup> As a result, recycled water effluent limits for iron and manganese can be established at levels that are slightly higher than the corresponding groundwater quality objectives to account for the assimilative capacity effects of trace nutrient uptake. The Basin Plan section on "Landscape Irrigation with Recycled Water" should address this effect and how trace nutrients in recycled water irrigation supplies are to be regulated.

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<sup>6</sup> See Chapter 3 of the *San Pasqual Valley Groundwater Basin Salt and Nutrient Management Plan*, prepared by CH2M Hill, and submitted by the City of San Diego to the Regional Water Board in 2014.

<sup>7</sup> See *City of Carlsbad Report of Waste Discharge for Revised Iron and Manganese Limits* (June 2011), *City of Escondido Report of Waste Discharge for Revised Waste Discharge Requirements, Hale Avenue Resource Recovery Facility* (January 2003), *City of San Clemente Manganese Assessment, City of San Clemente Water Reclamation Facility* (April 2002). Similar results are reported in January 2015 by the City of San Diego in *Draft Amendment to Report of Waste Discharge Permit 93-03* (North City Water Reclamation Plant).

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**Proposed Basin Plan Revisions.** As part of the "minor corrections to other sections" identified in the Regional Water Board "Notice of Public Workshop" for the proposed OWTS Basin Plan amendments, the Regional Water Board staff propose a complete rewrite of the Chapter 4 section entitled "Landscape Irrigation with Recycled Water". To address the above-discussed issues, the Water Authority, its member agencies, and other impacted regional agencies propose an alternative version of the "Landscape Irrigation with Recycled Water" section, with the intent of:

1. Better defining, prioritizing, and reflecting the relative threats that different types of discharges present toward achieving compliance with Basin Plan groundwater nutrient objectives.
2. Establishing the rationale for why professionally operated recycled water irrigation operations do not represent a threat to cause exceedances to Basin Plan groundwater quality objectives for nutrients.
3. Clearly establishing nitrogen management requirements that should be incorporated into WDRs and water reclamation requirements to ensure that recycled water operations are in keeping with protecting groundwater quality and achieving Basin Plan groundwater quality objectives for nutrients.
4. Addressing effects of trace nutrients such as iron and manganese.
5. Establishing the rationale for why it is not necessary for the Regional Water Board to establish numerical effluent concentration limits for nitrogen within recycled water, except in special circumstances.
6. Identifying the special circumstances which may warrant Regional Board attention in regulating sources of nutrients in applied recycled waters.
7. Encouraging the production and use of recycled water in Region 9 in conjunction with stakeholders.

A proposed draft of the "Landscape Irrigation with Recycled Water" section of Chapter 4 (Implementation) is attached for your consideration which addresses these issues and needs. The revisions to the "Landscape Irrigation with Recycled Water" section that we propose herein is necessary to maintain existing recycled water use within the region and to offer opportunities for expanded recycled water use that is consistent with implementing Basin Plan water quality objectives for nutrients. The proposed Basin Plan revisions we propose:

1. Are consistent with implementing goals of the California Water Plan, Recycled Water Policy, and San Diego Water Board Practical Vision.
2. Would promote recycled water use by providing clear and unambiguous direction to Regional Board staff and recycled water agencies on how recycled water irrigation operations are to be regulated.
3. Would ensure that nitrate loads associated with recycled water irrigation operations (which the Regional Board regulates) are not unreasonably restricted to levels below nitrate loads associated with imported or potable water use (which the Regional Water Board does not regulate).

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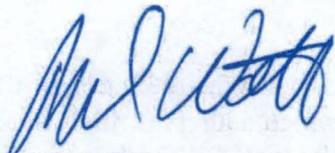
Thank you for the opportunity to comment on the proposed Basin Plan modifications. The Water Authority, its member agencies, and other regional agencies that purvey recycled water are supportive of the Regional Water Board's intent of modifying the Basin Plan to incorporate OWTS Policy recommendations and the 2009 Recycled Water Policy, but have significant concerns that the currently proposed "Landscape Irrigation with Recycled Water" section of Chapter 4 (Implementation) runs contrary to the goal of promoting the use of recycled water.

We look forward to coordinating with the San Diego Water Board to ensure that proposed Basin Plan modifications are consistent with promoting recycled water use and implementing the goals set forth in the California Water Plan, Recycled Water Policy, and San Diego Water Board Practical Vision.

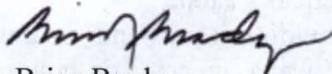
Sincerely,



Ken Weinberg  
Director of Water Resources  
San Diego County Water Authority

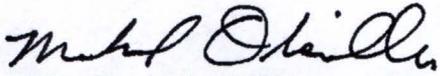


Mark Watton  
General Manager  
Otay Water District

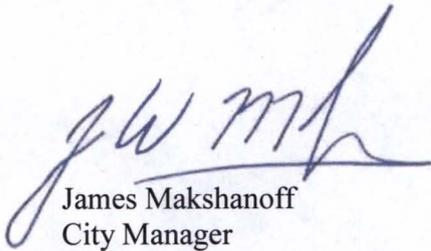


Brian Brady  
General Manager  
Fallbrook Public Utility District

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Mike Obermiller, P.E.  
Assistant Director of Public Works  
City of Poway



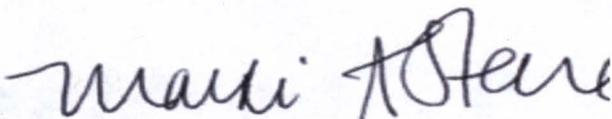
James Makshanoff  
City Manager  
City of San Clemente



Wendy Chambers General Manager  
Carlsbad Municipal Water District

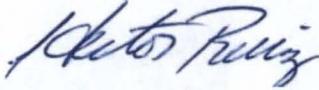


Joone Lopez  
General Manager  
Moulton Niguel Water District

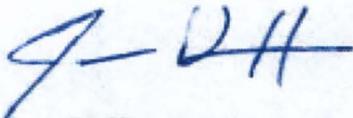


Marsi A. Steirer  
Deputy Director  
Long-Range Planning & Water Resources Division

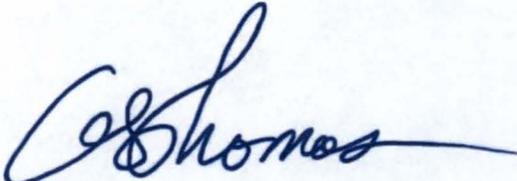
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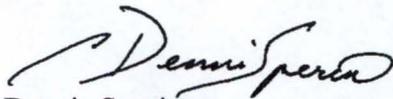
Hector Ruiz, P.E.  
General Manager  
Trabuco Canyon Water District



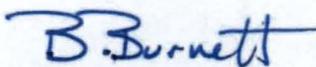
Jason Dafforn  
Interim Water Utilities Director  
City of Oceanside



Greg Thomas  
General Manager  
Rincon del Diablo Municipal Water District



Dennis Sperino  
Deputy Director/Utilities-Waste Water  
City of Escondido

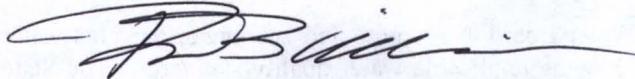


Ms. Betty Burnett  
General Manager  
South Orange County Wastewater Authority



34156 Del Obispo St.  
Dana Point, CA. 92629

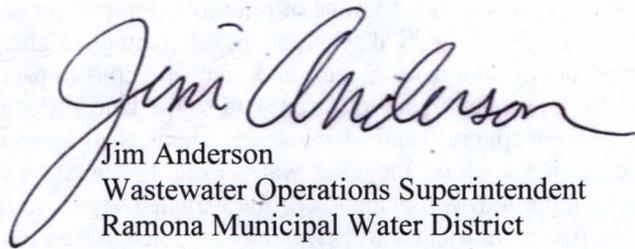
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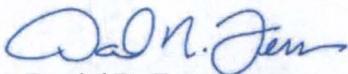
Richard S. Williamson, Assistant General Manager  
Rancho California Water District



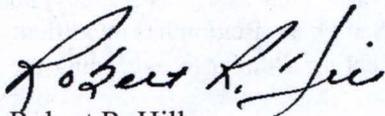
Paul A. Cook, General Manager  
Irvine Ranch Water District



Jim Anderson  
Wastewater Operations Superintendent  
Ramona Municipal Water District



Daniel R. Ferons  
General Manager  
Santa Margarita Water District



Robert R. Hill  
General Manager  
El Toro Water District



MM/tp  
Attachment (1): Recommended Basin Plan Revisions - Landscape Irrigation with  
Recycled Water  
by email:

Recommended Basin Plan Revisions  
Landscape Irrigation with Recycled Water

**Landscape Irrigation with Recycled Water**

It is the stated interest of the Regional Water Board to promote and encourage recycled water use where such use is consistent with achieving applicable water quality standards. The State Recycled Water Policy establishes goals for increasing state-wide recycled water use in a manner that implements state and federal water quality laws. Consistent with the State Recycled Water Policy, the San Diego Water Board Practical Vision establishes a policy of using the San Diego Water Board's leadership and regulatory authority to encourage, promote, and facilitate development of new and diverse sustainable local water supplies in an environmentally responsible manner. The Practical Vision specifically lists supporting and encouraging direct use of recycled water and indirect potable reuse as key elements of this sustainability strategy.

The use of tertiary treated recycled water within the San Diego Region dates back to the 1960s, and recycled water is currently used within each of the eleven hydrologic units that comprise the San Diego Region. A significant majority of this reuse is in the form of landscape irrigation, and virtually all of this reuse involves disinfected tertiary recycled water, as defined within Title 22, Division 4, Chapter 3, Section 60301.230 of the California Water Code.

Disinfected tertiary recycled water typically contains concentrations of total nitrogen that range from approximately 10 mg/l to 40 mg/l. Unlike OWTS discharges which contain higher concentrations of nitrogen, which occur below the root zone, and can directly impact groundwater quality, recycled water used for landscape irrigation is applied to the land surface where primary nutrients such as nitrogen and phosphorus, and secondary nutrients such as iron and manganese can be taken up by vegetation. Since recycled water used for landscape irrigation typically contains less nitrogen than the nitrogen demands of the irrigated vegetation, fertilization is required to ensure that sufficient nutrients are available to meet vegetation demands. Recycled water concentrations of trace nutrients such as iron and manganese may exceed vegetation nutrient demands, but vegetation uptake can reduce the degree to which such trace nutrients can affect groundwater quality.

Proper, professional operation of recycled water landscape irrigation that includes (1) maintaining high irrigation efficiencies appropriate to the vegetation and soil conditions, and (2) reducing fertilizer use commensurate with the nutrient value of the recycled water, can ensure that recycled water nutrient loads do not cause exceedance of Basin Plan water quality objectives, and are equivalent to nutrient loads that would occur if potable water were to be substituted for recycled water use. Demonstrating the effectiveness of this strategy, none of the Salt and Nutrient Management Plans prepared for the San Diego Region has identified:

- Recycled water landscape irrigation as representing a threat to exceeding the 45 mg/l (as NO<sub>3</sub>) groundwater nitrate objective,
- Need for reducing nutrient concentrations in applied recycled water, or
- Need for implementation of nutrient management as part of recycled water landscape irrigation use.

Additionally, historic groundwater concentrations downstream from long-operating recycled water landscape irrigation projects within the Region demonstrate consistent compliance with the 45 mg/l (as NO<sub>3</sub>) groundwater nitrate objective, and no instance has occurred within the San Diego Region where recycled water irrigation use has resulted in groundwater nitrate concentrations exceeding the 45 mg/l (as NO<sub>3</sub>) objective.

Establishing recycled water nitrogen effluent concentration limits in WDRs that would require a reduction in nutrient concentrations in recycled water supplies would not lead to any discernible groundwater quality improvement because this would lead irrigation users to simply increase fertilizer applications to the site by a commensurate amount in order to satisfy vegetative nutrient demands. Similarly, terminating recycled water operations at the site and substituting potable water as the irrigation supply would not result in any discernible water quality improvement, as fertilizer application rates would be commensurately increased.

Although recycled water nitrate concentration limits would not protect groundwater quality, the professional management of recycled water operations can ensure that recycled water that percolates past the landscape root zone is consistent with achieving applicable Basin Plan groundwater quality objectives. As such, the following requirements shall be used by the Regional Water Board in establishing landscape irrigation requirements within Waste Discharge Requirements, Master Reclamation Permits, and Water Recycling Requirements:

- Recycled water purveying agencies must monitor nutrient levels in their recycled water supplies, and annually notify recycled water users of the nutrient value of recycled water.
- For recycled water use in a basin where a Salt and Nutrient Management Plan has been adopted and incorporated into the Basin Plan by the Regional Board, recycled water purveying agencies will implement any applicable nutrient management requirements mandated within the Salt and Nutrient Management Plan.
- For recycled water use in a basin where a Salt and Nutrient Management Plan has been adopted and incorporated into the Basin Plan by the Regional Board, recycled water purveying agencies shall implement applicable nutrient management requirements that pertain to them as stipulated within the Salt and Nutrient Management Plan. Additionally, the Regional Board shall require other agencies or entities to implement any applicable nutrient management requirements mandated by the Salt and Nutrient Management Plan that pertain to these other agencies or entities.
- Recycled water site supervisors shall be responsible for determining onsite fertilizer needs and shall complete training and education in compliance with recycled water agency rules and regulations to: (1) Minimize the potential for runoff or over-irrigation and, (2) Take into account the nutrient value of the recycled water.

In establishing applicable recycled water landscape irrigation effluent concentration limits for iron and manganese, recycled water permits issued by the Regional Board shall take into account the projected nutrient uptake of the irrigated vegetation and projected iron and manganese loads. Where plant uptake is not adequate to reduce iron and manganese loadings to an insignificant level, the Regional Board shall also consider beneficial uses and local groundwater conditions, including existing groundwater quality and available assimilative capacity.

**Osibodu, Olufisayo@Waterboards**

---

**From:** Roy, Toby <TRoy@sdewa.org>  
**Sent:** Thursday, February 12, 2015 5:16 PM  
**To:** sandiego  
**Subject:** Attn: Fisayo Osibodu. OWTS Basin Plan Amendment

Fisayo,

The Water Authority is a signatory to the letter from recycled water agencies requesting a change to the proposed basin plan amendments as they related to recycled water management that considers plant update of nutrients contained in irrigation water and recommends a practical approach to nutrient management by recycled water users. In addition to those comments, we also have the following comments:

Additional Amendment to Encourage Recycled Water Use

This basin plan amendment addresses both on site waste treatment systems and recycled water. Currently there is a requirement that only a public entity may assume legal authority and responsibility for the ownership, operation and maintenance for a proposed community wastewater treatment and disposal system (Page 4-31). To increase the use of recycled water in the region and overcome impediments to distributed recycling systems, we would encourage you to include an amendment that removes the requirement to have a public entity management system in cases where small scale on-site waste treatment is treating water for beneficial recycled water use.

Impact of OWTS Policy on Water Quality in Surface Water Supplies

To protect groundwater and surface water quality, the policy requires Regional Board review of on-site waste treatment systems with over 10,000 gpd capacity. The County will review and approve all other septic systems under their Local Agency Management Program. The basin plan amendment does not consider the existing groundwater quality or the interface between groundwater and surface water where a groundwater basin currently contains high concentrations of nitrates in excess of 45 mg/L. Of particular concern is groundwater from the San Pasqual Basin which has underflows of high nitrate water into Hodges Reservoir. Hodges Reservoir is already impacted by high nutrient levels which are causing eutrophication of the reservoir. Although Hodges Reservoir and the San Pasqual Basin were not identified as impaired water bodies in the State Board Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems, this is a serious water quality concern. To address this impact, the Regional's Board's Basin Plan amendment should require the County's Local Agency Management Program to include special provisions for an Advanced Protection Management Program for septic systems installed within the San Pasqual Basin.

Sincerely,

Toby Roy

Cary D. Lowe  
Ph.D., AICP  
Attorney & Mediator

Item 8  
Supporting Document No. 5  
April 15, 2015

3517 GARRISON STREET  
SAN DIEGO, CALIFORNIA 92106

(619) 255-3078  
caryl原因@cox.net

February 9, 2015

San Diego Regional Water Quality Control Board  
Attn: Jody Ebsen  
2375 Northside Drive, Suite 100  
San Diego, CA 92108

Re: Nitrate/OWTS Policy Basin Plan Amendment

Hon. Members of the Regional Water Quality Control Board:

On behalf of Sudberry Properties, developer of the Civita planned community in the Mission Valley area of the City of San Diego, I am submitting the comments below in connection with your Board's current consideration of an amendment to the Water Quality Control Plan for the San Diego Basin (the "Basin Plan") relating in part to policies governing on-site wastewater treatment systems. We have submitted similar comments in connection with your triennial Basin Plan review.

The proposed amendment already makes significant changes to the portion of Chapter 4 of the Basin Plan dealing with on-site wastewater treatment systems. We request that you additionally consider eliminating a provision which presents a significant obstacle to the development of privately owned and operated on-site wastewater treatment and recycling systems. The Civita project is planning to construct a facility of this kind. The current prohibitory provision is found at page 4-26 of the Basin Plan, in the portion of Chapter 4 addressing Guidelines for New Community and Individual Sewerage Facilities. Specifically, we are concerned about the passage which reads:

"Community Sewerage Systems

The Regional Board will regulate all discharges of wastes from community sewerage systems. The Regional Board will require a RWD to be filed for all proposed waste discharges which involve the use of new community sewerage systems. Before the Board will consider the RWD to be complete, the following requirements must be met:

- A public entity must assume legal authority and responsibility for the ownership, operation and maintenance of the proposed wastewater treatment and disposal system. The RWD must be submitted by the public entity.

[Emphasis added.]

..."

The Board may be aware that, since the adoption of the above-referenced provision, interest has grown significantly in this region in wastewater recycling generally, and more recently in private development, ownership and operation of such facilities. The City of San Diego, the largest jurisdiction in the region, has committed through its Pure Water program to the development of facilities which eventually will treat for reuse 84 million gallons of wastewater per day. Numerous other municipal jurisdictions and water agencies in the region are pursuing similar programs. At the same time, the City of San Diego is in the midst of developing a permitting system for privately owned and operated on-site wastewater treatment facilities. The City has expressed clearly that it does not wish to be the party responsible for ownership and operation of facilities such as the one to be developed in the Civita community, but has no opposition to such facilities.

The Board has recognized for many years that reclamation of wastewater is a highly preferable alternative to ocean disposal. In 2013, the Board, in adopting the *Practical Vision: Healthy Waters Healthy People*, highlighted the importance of wastewater recycling as an important element in meeting the water needs of this region. Similarly, the Recycled Water Policy adopted by the State Water Resources Control Board in that same year sets very ambitious goals for increasing the use of recycled water. The policies and goals are far more likely to be met if the obstacles to private ownership and operation of wastewater reclamation facilities are alleviated and modernized.

Civita is only the first major development for which this is an important issue. Water supply concerns are motivating many other developers to become interested in constructing such facilities. Similar interest is being shown by homeowners associations in existing developments, which desire to retrofit their projects with wastewater treatment facilities to provide irrigation water for on-site use. You will hear more in this regard from the Building Industry Association and other interested parties.

We recognize that this has been a sensitive issue in the past and that there were valid reasons for incorporating the current restriction in the Basin Plan. We suggest, however, that technological advances and added experience have largely addressed the issue. Any remaining concerns can be addressed fully through review of the report of waste discharge for any project and through rigorous operating standards. Specifically:

- The report of waste discharge will be required to demonstrate to the satisfaction of the Board and its staff that the technology proposed to be used meets the desired standards of quality and reliability.
- Professional operators having appropriate training and licenses will be responsible for running and maintaining the system.
- Financing for operation and maintenance of the system will be secure. In the case of Civita, this funding will be derived from a long-term contract with a homeowners association to purchase treated water from the facility.
- There will be a fail-safe feature, in that the community sewerage system still will be connected to a public sewer main so that, in the event of system shutdown for any reason (including routine maintenance), effluent will

automatically be discharged to the public sewer just as it would have been in the absence of the reclamation facility.

We have discussed this issue at length with your staff and understand them to be supportive of updating the regulations in this area. The timing of the current amendment is auspicious, and we urge you to give this issue the most serious consideration. We will be pleased to provide any additional information which will assist you in your review of our request.

Thank you for your consideration.

Sincerely,



Cary Lowe, Ph.D., AICP

CL/sh

cc: Mark Radelow, Sudberry Properties  
David Gibson, Executive Officer, San Diego RWQCB  
Michael McSweeney, Building Industry Association of San Diego



South Orange County Wastewater Authority

VIA EMAIL ([sandiego@waterboards.ca.gov](mailto:sandiego@waterboards.ca.gov))

February 12, 2015

Mr. Fisayo Osibodu  
San Diego Regional Water Quality Control Board  
2375 Northside Drive, Suite 100  
San Diego, CA 92108-2700

Re: Basin Plan Amendment Incorporating the State Water Board Onsite Wastewater Treatment Systems Policy, Changing the Water Quality Objective for Nitrate for Groundwater, and Making Other Updates

Dear Mr. Osibodu:

South Orange County Wastewater Authority ("SOCWA") and its member agencies have reviewed the above-referenced proposed Basin Plan Amendment and we are collectively concerned about the new nitrogen requirements with respect to recycled water and the waste discharge requirements ("WDRs") for total nitrogen which may be adopted as a result. We hereby support and join in the letter by San Diego County Water Authority and its member agencies dated February 12, 2015.

SOCWA is a Joint Powers Authority consisting of ten member agencies in South Orange County including Moulton Niguel Water District, South Coast Water District, Irvine Ranch Water District, Santa Margarita Water District, Trabuco Canyon Water District, El Toro Water District, Emerald Bay Service District, City of Laguna Beach, City of San Clemente, and City of San Juan Capistrano (SOCWA's "Member Agencies"). SOCWA's mission is to collect, treat, beneficially reuse, and dispose of wastewater in an effective and economical manner that respects the environment, protects the public's health and meets or exceeds all local, state and federal regulations to the mutual benefit of SOCWA's member agencies and the general public in South Orange County. SOCWA and its Member Agencies provide, at a minimum, full secondary treatment at all of its regional wastewater facilities, and also have active water recycling, industrial waste (pretreatment), biosolids management and ocean/shoreline monitoring programs to meet the needs of South Orange County and the requirements of applicable National Pollutant Discharge Elimination System ("NPDES") permits.

SOCWA's Member Agencies have been producing and using recycled water for landscape irrigation for over 45 years and they collectively provide recycled water to over 7,200 Use Sites. In 2014, SOCWA agencies produced and beneficially reused 17,664 acre feet of recycled water for landscape irrigation in Region 9, which is the highest level of recycled water production to date. The expanded production and use of recycled water has greatly reduced South Orange County's reliance on costly, imported water from the region's primary supply sources, Northern California and the Colorado River.

The proposed Basin Plan Amendments to Chapter 4, which add implementation provisions for the nitrate groundwater quality objective to protect surface water quality where groundwater and surface water are interconnected (the "Proposed Amendments"), directly impact SOCWA's recycled water program and SOCWA's Member Agencies which utilize recycled water to serve their customers. SOCWA believes that the provisions are (1) inconsistent with the State's Recycled Water Policy and SOCWA's Salt and Nutrient Management Plan ("SNMP"); (2) redundant of the requirements set forth in the Recycled Water Policy and SNMPs' required Monitoring and Assessment Plan; and (3) an unnecessary over regulation of recycled water Use Sites with minimal, if any, resulting benefit to water quality.

SOCWA and its Member Agencies are also extremely concerned about the arbitrary imposition of total nitrogen limits in WDRs because Camp Pendleton recently received a limit of 10 mg/L of total nitrogen in its Master Reclamation Permit (Tentative Order No. R9-2014-006). Fallbrook Utility District received the same total nitrogen limit in its draft Master Recycling Permit. This limit of 10 mg/L may be difficult, highly costly, and/or impossible to meet for POTWs since most of the existing treatment plants are not designed to remove nitrogen. The nitrogen in recycled water is assimilated by plant life within the first few feet of soil. This occurs well before the recycled water reaches the groundwater, as evidenced by the very low average nitrate levels documented in our recently completed SNMP.

Pursuant to the State's current Recycled Water Policy (effective April 25, 2013), the State Water Resources Control Board ("State Water Board") established a mandate to increase the use of recycled water in California by 200,000 acre foot per year (afy) by 2020 and by an additional 300,000 afy by 2030. "These mandates shall be achieved through the cooperation and collaboration of the State Water Board, the Regional Water Boards, the environmental community, water purveyors and the operators of publicly owned treatment works." Recycled Water Policy at 3.

The State Water Board has further declared:

"It is the intent of this Policy that salts and nutrients from all sources be managed on a basin-wide or watershed-wide basis in a manner that ensures attainment of water quality objectives and protection of beneficial uses. The State Water Board finds that the appropriate way to address salt and nutrient issues is through the development of regional or subregional salt and nutrient management plans rather than through imposing requirements solely on individual recycled water projects."

Recycled Water Policy at 5-6.

Furthermore,

"Salt and nutrient plans shall be tailored to address the water quality concerns in each basin/sub-basin and may include constituents other than salt and nutrients that impact water quality in the basin/sub-basin. Such plans shall address and implement provisions, as appropriate, for all sources of salt and/or nutrients to groundwater basins, including recycled water irrigation projects and groundwater recharge reuse projects."

Recycled Water Policy at 6.

Each salt and nutrient management plan must include a monitoring plan that is

“designed to determine water quality in the basin. The plan must focus on basin water quality near water supply wells and areas proximate to large water recycling projects, particularly groundwater recharge projects. Also, monitoring locations shall, where appropriate, target groundwater and surface waters where groundwater has connectivity with adjacent surface waters.”

Recycled Water Policy at 7-8.

Indeed, SOCWA’s SNMP Monitoring and Assessment Plan specifically addresses the following water quality management questions:

“3. What is the impact to the constituent concentrations in groundwater in the lower watershed HSAs caused by recycled water reuse for irrigation and recharge?

a) What is the change in groundwater quality over time? (requires monitoring)

b) Where in the basin is recycled water applied (parcel-level analysis)? (data provided by water agencies)

c) What is the volume and quality of recycled water used for irrigation in the lower watershed HSAs? (data provided by water agencies)

d) What is the volume and quality of other water used for irrigation in the lower watershed HSAs? (monitoring provided by water agencies and subsequent calculations)

e) What is the relative impact of recycled and other waters used for irrigation in the lower watershed HSAs? (calculation based on monitoring data)

f) What is the volume and quality of recycled water recharged in the lower watershed HSAs? (requires monitoring)

SOCWA’s SNMP at 8-5 (Section 8.3 Salt and Nutrient Management Monitoring and Reporting Program of the SNMP is attached hereto as Attachment 1).

As discussed above, pursuant to the Recycled Water Policy, “the State Water Board finds that the appropriate way to address salt and nutrient issues is through the development of regional or subregional salt and nutrient management plans rather than through imposing requirements solely on individual recycled water projects.” While the Proposed Basin Plan Amendments require recycled water agencies to “ensure that their discharges comply with any applicable salt and nutrient management plan,” they add many other requirements based on the criteria for streamlined permitting of irrigation projects under the Recycled Water Policy including:

- Submit an operations and management plan that specifies agronomic rate(s) and describes reasonably practicable measures to ensure recycled water is applied in amounts and at rates as needed for the landscape which may include:
  - Development of water budgets for use areas;
  - Site supervisor training;
  - Periodic inspections;
  - Tiered rate structures;
  - The use of smart controllers; and
  - Other appropriate measures

- Ensure appropriate use of fertilizers that takes into account the nutrient levels in recycled water.
- Monitor and communicate to the users the nutrient levels in their recycled water

As recognized by the current language, these criteria are meant to apply to irrigation projects seeking streamlined permitting pursuant to the Recycled Water Policy; they are not meant to apply to Master Reclamation/Water Recycling/WDR Permits.

Furthermore, these proposed requirements are inconsistent with the State Board's finding that salt and nutrient issues are best addressed through the development of SNMPs and the Proposed Amendments would impose requirements that would be applicable to individual recycled water projects. For example, pursuant to the Proposed Amendments, recycled water agencies may be required to set, track, and report the agronomic application rates of nitrogen on each individual Use Site, provide formal site supervisor training, and require the use of smart controllers. These requirements would essentially require recycled water agencies to micromanage Use Sites, which is impracticable, and they may interfere on a larger scale with overall operations and resource management of these agencies (e.g., water budgets and tiered rate structures).

However, SOCWA and its Member Agencies lack both regulatory authority and adequate resources to track the application of fertilizers at recycled water Use Sites and recycled water agencies may not be able to get cooperation from recycled water users to disclose fertilizer usage rates.<sup>1</sup> Even if SOCWA and its Member Agencies were able to collect this information, with over 7,200 Use Sites (nearly 3,000 in Region 9), the Proposed Amendments would be extremely onerous, time consuming, and expensive for SOCWA and all its member agencies currently or planning to use recycled water. The costs of collection would far outweigh the usefulness of the information since the accuracy of the data could not be verified.

These requirements are also of questionable value given all the nutrient monitoring and reporting that are already required by SOCWA's SNMP as described above. The purpose of SNMPs are to "address and implement provisions, as appropriate, for all sources of salt and/or nutrients to groundwater basins, including recycled water irrigation projects and groundwater recharge reuse projects" and to monitor water quality particularly where "groundwater has connectivity with adjacent surface waters." This purpose mirrors the objective of the Proposed Amendments which is to "add implementation provisions for the nitrate groundwater quality objective to protect surface water quality where groundwater and surface water are interconnected." As such, SNMPs should be and, in fact, are already accomplishing the objectives of the Proposed Amendments.

In addition, SOCWA's Member Agencies already have rules and regulations in place to prevent over-application of recycled water, perform periodic inspections of Use Sites, and educate their Use Site supervisors on the nutrient content and application of recycled water. We have found this education to be effective in optimizing recycled water use. As such, the Proposed Amendments are redundant and unnecessary.

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<sup>1</sup> SOCWA also has no control over fertilizer application in private and commercial usage where potable water is applied. This source is a far greater contributor to surface runoff.

Through implementation of our SNMP, SOCWA has shown that the total nitrogen in our groundwater is well below drinking water standards. See Attachment 2.<sup>2</sup> Yet if the Proposed Amendments are adopted, SOCWA would potentially still need to track application rates of nitrate on an individual Use Site basis, provide Use Site supervisor training, etc. Given the State Water Board's goal of promoting greater recycled water use, it certainly could not have intended for Regional Boards to add these layers of redundant regulation to recycled water programs. Rather than facilitate the increased production of recycled water, the Proposed Amendments would, in effect, serve as an impediment to achieving the State's recycled water goals. Thus, SOCWA and its Member Agencies suggest that the requirements under "Landscape Irrigation with Recycled Water" should not be applicable to recycled water agencies with approved SNMPS with Monitoring and Assessment Plans which already address nitrogen in recycled water or Tier D or Sub Tier D Basins where SNMPS were not deemed appropriate pursuant to Region 9 Salt and Nutrient Management Plan Guidelines.<sup>3</sup>

Furthermore, while SOCWA understands the Regional Board's concern regarding the groundwater pathway for nitrogen, we believe that the wording of the Basin Plan Amendments is too broad and invites the arbitrary unnecessary imposition of total nitrogen discharge limits in WDRs. The current proposed language is as follows:

"Where ***potential*** discharges of total nitrogen to surface waters are determined to exist via the ground water pathway, the Regional Board may and ***most likely will*** adopt WDRs that require a reduced concentration in the proposed discharge effluents, reduction in total nitrogen loads, and or compliance with more stringent water quality objectives in receiving surface waters for the protection of beneficial uses of water resources."

Proposed Basin Plan Amendments at 4-9 (emphasis added).

This language effectively directs ("most likely will") the Regional Board to impose reduced total nitrogen discharge limits when it determines that there may be "***potential*** discharges of total nitrogen to surface water." However, applying nitrogen effluent limits to recycled water would not necessarily improve water quality, yet it could result in the unintended consequence of inhibiting the planning and implementation of additional recycled water use in the future.

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<sup>2</sup> SOCWA's SNMP (page 6-6) shows the wells in the San Juan Basin ranged between 0.04 mg/L and 17 mg/L Nitrate-N and the median value was 0.57 mg/L. Although one well exceeded the Basin Plan objective of 10 mg/L for drinking water, this well was associated with an underground storage tank contamination site. The spatial distribution of the nitrate-N statistics at the wells suggests that the ambient concentration is much less than the current objective of 10 mg/L and far below the proposed objective of 45 mg/L.

<sup>3</sup> Note that the General Permit for Landscape Irrigation Uses of Municipal Recycled Water (SWRCB Order No. 2009.006-DWQ) exempts applicants from its monitoring and reporting requirements where the Regional Board has adopted a SNMP:

"For basins where the Regional Water Board has adopted a Salt and Nutrient Management Plan, compliance with any monitoring and reporting requirements of the Salt and Nutrient Management Plan is to be used in lieu of the monitoring schedule below."

Establishing total nitrogen effluent limits of 10 mg/L in Recycled Water Waste Discharge Requirement Orders is wholly unnecessary given that the nitrogen in recycled water is assimilated by plant life in the first few feet of soil, well before it reaches groundwater. As discussed above, the total nitrogen in local groundwater is well below drinking water standards. Furthermore, even if recycled water agencies could meet this effluent limit (at a tremendous cost), Use Site operators would make up for the lower nitrogen content in recycled water by simply applying more fertilizer to meet the vegetative nutrient demand. As such, imposing such stringent nitrogen effluent limit would not result in any discernible water quality improvement.

In summary, we believe that the outreach and training that is already being implemented by our agencies coupled with our existing Monitoring and Assessment Plan pursuant to our SNMP have been extremely effective in reducing nitrogen in groundwater and surface water. As currently written, the Proposed Amendments will add unnecessary and expensive hurdles that will almost certainly constrain overall production and use of recycled water in contradiction of the State Water Resources Control Board's Recycled Water Policy goals. As such, we respectfully ask that you reconsider the Proposed Amendments and adopt the changes proposed by San Diego County Water Authority and its member agencies.

Should you have any questions concerning our comments, please feel free to contact Brennon Flahive, Director of Environmental Compliance at SOCWA, at (949) 234-5419 or [bflahive@socwa.com](mailto:bflahive@socwa.com).

Very truly yours,



Betty Burnett  
General Manager  
South Orange County Wastewater Authority



Andrew Brunhart  
General Manager  
South Coast Water District



Hector Ruiz  
General Manger  
Trabuco Canyon Water District



Joone Lopez  
General Manager  
Moulton Niguel Water District

Mr. Fisayo Osibodu  
February 12, 2015

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Paul A. Cook, General Manager  
Irvine Ranch Water District



Robert R. Hill  
General Manager  
El Toro Water District



Daniel R. Ferons  
General Manager  
Santa Margarita Water District



James Makshanoff  
City Manager  
City of San Clemente

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South Orange County Wastewater Authority

OSWT Basin Plan Amendment Letter

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Attachment 1

## 8.0 Salt and Nutrient Management Plan Implementation

2. What is the impact to the constituent concentrations in stormwater recharged in the lower watershed HSAs caused by increasing recycled water reuse in the upper watershed HSAs?
  - a) What is the volume and quality of stormwater flowing over and recharging groundwater in the lower watershed HSAs? (requires monitoring)
3. What is the impact to the constituent concentrations in groundwater in the lower watershed HSAs caused by recycled water reuse for irrigation and recharge?
  - a) What is the change in groundwater quality over time? (requires monitoring)
  - b) Where in the basin is recycled water applied (parcel-level analysis)? (data provided by water agencies)
  - c) What is the volume and quality of recycled water used for irrigation in the lower watershed HSAs? (data provided by water agencies)
  - d) What is the volume and quality of other water used for irrigation in the lower watershed HSAs? (monitoring provided by water agencies and subsequent calculations)
  - e) What is the relative impact of recycled and other waters used for irrigation in the lower watershed HSAs? (calculation based on monitoring data)
  - f) What is the volume and quality of recycled water recharged in the lower watershed HSAs? (requires monitoring)
4. What is the impact to the constituent concentrations of groundwater in the lower watershed HSAs caused by leaching from natural aquifer materials?
  - a) What is the volume and quality of each recharge component to the basin? (new monitoring, existing monitoring provided by water agencies and subsequent calculations)
  - b) What is the change in groundwater quality over time? (requires monitoring)
5. Are the CECs identified by the California Department of Public Health's (CDPH's) Blue Ribbon Panel present in detectible concentrations in the San Juan Watershed?

### 8.3.2 General Monitoring Program and Data Collection Components

The complete monitoring program will be developed during the first few tasks of SNMP implementation (see Section 8.4). The following bullets describe the type of data that will be collected and the minimum frequency of monitoring during initial program implementation.

- *Recycled water use*: develop a GIS database of recycled water reuse sites, water sources, water volume served, and water quality.
- *Other water use*: develop a database of water sources, supply volumes, and water quality in the San Juan Watershed.
- *Surface water (non-storm flow)*: quarterly sampling during non-storm periods for the first two years and potentially reduced frequency sampling thereafter based on chemical constituent variability and amounts of recycled water used in the watershed tributary to the measuring point. CEC's will be sampled at least once per year.
- *Surface water (storm flow)*: two to three storm events per drainage area (Oso, Arroyo Trabuco, San Juan, Horno, Chiquita, Gobernadora, Bell Canyon, Cristianitos); target 2 to 3 drainage areas per year. Modify stormwater monitoring frequency after all drainage areas evaluated based on chemical constituent variability and amounts of recycled water used in the drainage area.

## 8.0 Salt and Nutrient Management Plan Implementation

- *Groundwater*: quarterly sampling at wells for the first two years and potentially reduced frequency thereafter based on chemical constituent variability and amounts of recycled water used in the watershed tributary to the well. CEC's will be sampled at least once per year.

### 8.4 SALT AND NUTRIENT MANAGEMENT IMPLEMENTATION PLAN AND SCHEDULE

The SNMP implementation steps are described below and include an annotation of the stakeholder responsible for implementing the task, the estimated duration of the task, and when the task would be completed relative to notice to proceed with the implementation plan. **Figure 8-1** is a graphical representation of the proposed components of the implementation plan and schedule.

#### **Continued compliance with Recycled Water Limitations in Order 97-52, and subsequent revisions.**

**Middle Trabuco Basin Plan Amendment.** Provide assistance and prepare the necessary documentation to support the Regional Board in amending the Basin Plan to raise the TDS objective in the Middle Trabuco HSA. This task will be implemented by the SJBA, whose member agencies represent the majority of recycled water users in the Middle Trabuco HSA (CSJC, MNWD, and SMWD). The SJBA will work with the additional recycled water users (TCWD), as necessary, to implement this task. Duration: up-to one year from the submittal of the SNMP to the Regional Board.

**Middle San Juan Analysis.** Work with private entities to obtain existing groundwater data and perform a salt loading and antidegradation analysis in support of permitting recycled water use in the Middle San Juan HSA. This task will be implemented by the SMWD, whose service area encompasses the entire HSA and will serve recycled water to the private entities. Duration: the timing of this task will be coordinated with plans for recycled water use in the area.

#### **Continue to implement individual groundwater and surface water monitoring programs.**

During the year it will take to develop the cooperative, watershed-wide monitoring program, each individual agency will continue to implement their individual monitoring programs. Duration: until new monitoring program is complete and being implemented (see following steps).

##### **Monitoring Program Development**

**Step 1.** Perform comprehensive survey of existing groundwater and surface water monitoring efforts in the entire watershed. This task will be implemented by the SJBA. Duration: three months.

**Step 2.** Develop a GIS database of recycled water reuse sites in the SNMP study area. This task will be implemented by the SJBA. Duration: three months.

**Step 3.** Identify spatial and temporal data gaps and canvass the watershed for sites that should be monitored, but that are not currently a part of an existing monitoring program. This task will be implemented by the SJBA. Duration: two months, after development steps (1) and (2) completed; cumulatively five months from notice to proceed.

**Step 4.** Recommend a comprehensive monitoring plan that answers the SNMP questions and that does not duplicate efforts of other agencies. This may include recommendations to add new surface water monitoring locations or construct new groundwater monitoring wells. Submit the plan to the Regional Board for approval. This task will be implemented by the SJBA. Duration: two months, after development step (3) completed; cumulatively seven months from notice to proceed.

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OSWT Basin Plan Amendment Letter

February 12, 2015

Attachment 2

## 6.0 Lower San Juan Groundwater Basin Evaluation

developed herein as the spatial distribution of the point nitrate-N statistics was judged to be insufficient to scientifically characterize the spatial distribution of nitrate-N.

**Compute volume-weighted ambient concentration.** The 15x15 meter grids were draped over the basin and TDS concentrations were estimated for each grid cell using a topo-to-raster interpolation scheme in the Geospatial Analyst extension to ArcGIS. **Figure 6-2** is map showing the interpolated TDS concentrations of groundwater across the storage area. Ambient water quality was then calculated using the following formula:

$$C_{avg} = \left( \frac{1}{V_T} \right) \cdot \sum C_i \cdot V_i$$

where,

$C_{avg}$  = the ambient concentration of TDS in the Lower San Juan Basin

$V_T$  = the total volume of groundwater within the Lower San Juan Basin ( $\sum V_i$ )

$C_i$  = the concentration in grid cell  $i$

$V_i$  = the volume of water stored in grid cell  $i$

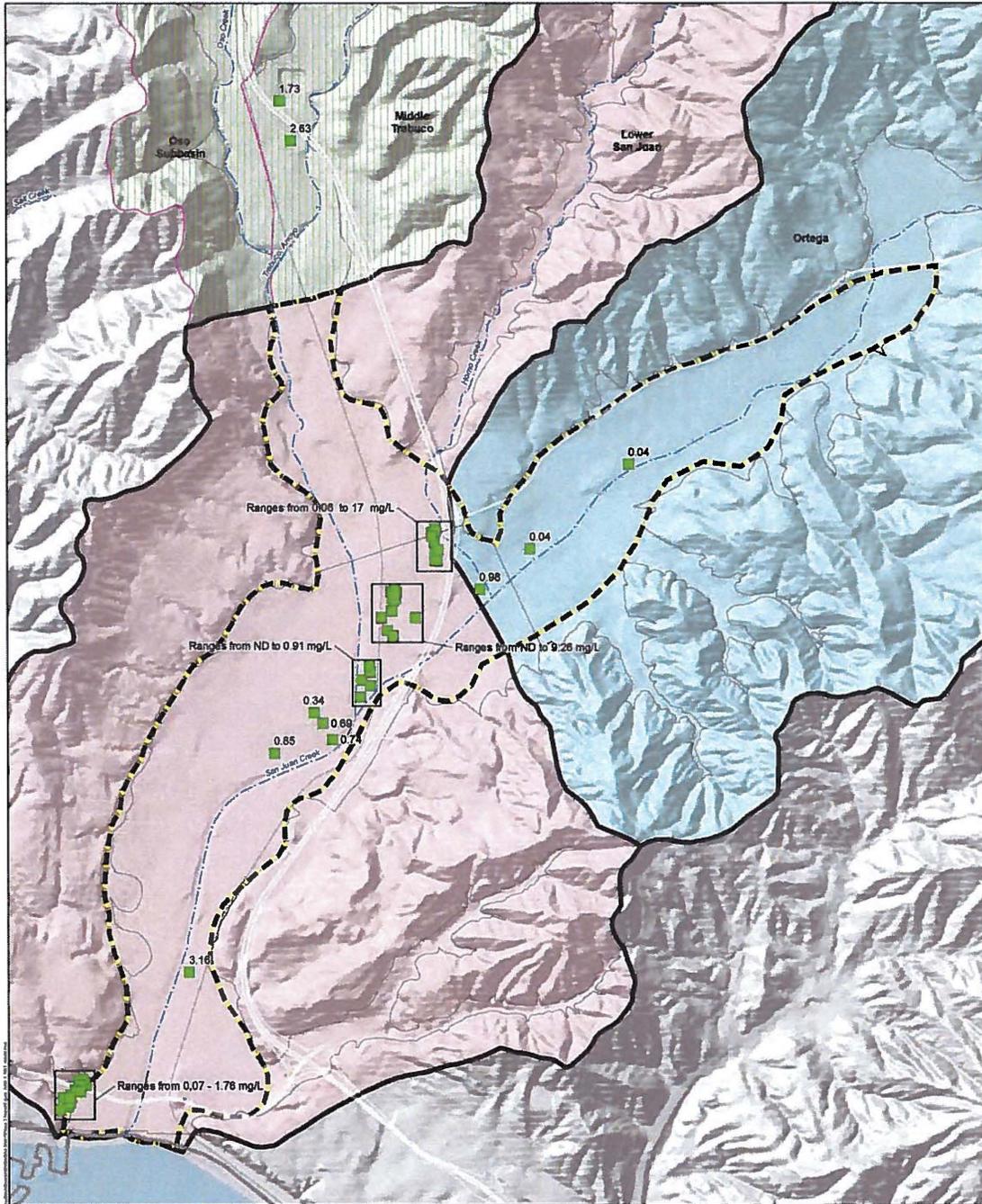
### Results

**Total Dissolved Solids.** The 2011 ambient TDS concentration of the entire Lower San Juan Basin averages about 1,600 mg/L. The storage area was further broken down by HSA to compare the volume-weighted ambient TDS concentration with the water quality objectives of the Basin Plan (see **Figure 6-2**).

**Lower San Juan HSA.** The water quality objective of the Lower San Juan HSA is 1,200 mg/L. The ambient TDS concentration of groundwater in the Lower San Juan HSA is about 1,700 mg/L. Thus, there is no assimilative capacity for TDS.

**Ortega HSA.** The water quality objective of the Ortega HSA is 1,100 mg/L. The ambient TDS concentration of groundwater in the Ortega HSA is about 1,400 mg/L. Thus, there is no assimilative capacity for TDS.

**Nitrate as Nitrogen.** There was an insufficient distribution of wells with nitrate-n statistics to draw isoconcentration contours of nitrate-N in the Lower San Juan Basin as was done for TDS. Thus, no HSA-wide ambient nitrate-N concentration was computed. The 2011 nitrate-N statistic values at wells ranged between 0.04 mg/L and 17 mg/L and the median value is 0.57 mg/L. Only 1 well exceeded the Basin Plan objective of 10 mg/L. This well was associated with a leading underground storage tank (LUST) contamination site and may have been influenced by conditions at the LUST. The spatial distribution of the nitrate-N statistics at wells suggests that the ambient concentration is much less than the nitrate-N objective of 10 mg/L and therefore there is assimilative capacity for nitrate-N in the Lower San Juan Basin.



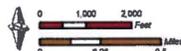
- Main Features**
- Well with NO3 Statistic
  - Level of SNMP Analytical Focus
    - Level 3
    - Level 4
  - San Juan Basin
  - ~ Streams and Creeks
  - ⎓ Level 4 Groundwater Storage Area



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Author: LBB  
 Date: 20130904  
 File: TDS\_contours.mxd



**SOCWA**  
 South Orange County Water Authority  
 2013 Salt and Nutrient  
 Management Plan

**Nitrate - Nitrogen Statistics**

**Figure 6-3**

**Board of Directors**  
Edmund K. Sprague, President  
Robert F. Topolovac, Vice President  
Lawrence A. Watt, Treasurer  
Christy Guerin, Secretary  
Gerald E. Varty, Director



**General Manager**  
Kimberly A. Thorner, Esq.  
**General Counsel**  
Alfred Smith, Esq.

February 12, 2015

Regional Water Quality Control Board  
San Diego Region  
Ms. Jody Ebsen  
2735 Northside Drive, Suite 100  
San Diego, CA 92108-2700

**Subject:** Comments on Proposed Basin Plan Amendments Modification of Groundwater Nitrate Objectives and Incorporation of the State Onsite Wastewater Treatment System (OWTS) Policy

Dear Ms. Ebsen,

Olivenhain Municipal Water District has reviewed and discussed the proposed Basin Plan modifications with our fellow Region 9 recycled water agencies. In concurrence, we support the Water Board's intent to modify the Basin Plan to address the 2012 State Water Resources Control Board Onsite Wastewater Treatment System (OWTS) Policy and the 2009 Recycled Water Policy.

However, please note, we agree with all comments regarding language changes to the currently proposed "Landscape Irrigation with Recycled Water" section of Chapter 4 (Implementation) as stated in the attachment, "Recycled Water Agency Comments on OWTS Basin Plan Revisions – Feb 12 2015 FINAL".

Thank you for the opportunity to comment on the proposed Basin Plan modifications.

Sincerely,

A handwritten signature in black ink, appearing to read "Joey Randall".

Joey Randall  
Customer Services Manager

Attachment (1): Recycled Water Agency Comments on OWTS Basin Plan Revisions – Feb 12 2015 FINAL



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## San Diego County Water Authority

4677 Overland Avenue • San Diego, California 92123-1233  
(858) 522-6600 FAX (858) 522-6568 www.sdcwa.org

February 12, 2015

### Regional Water Quality Control Board San Diego Region

Ms. Jody Ebsen  
2735 Northside Drive, Suite 100  
San Diego, CA 92108-2700

**Subject:** Comments on Proposed Basin Plan Amendments Modification of  
Groundwater Nitrate Objectives and Incorporation of the State Onsite  
Wastewater Treatment System (OWTS) Policy

Dear Ms. Ebsen:

The San Diego County Water Authority (Water Authority) and the recycled water agencies in Region 9 that are signatory to this letter have reviewed the proposed Basin Plan modifications which would:

1. Revise Chapter 3 (Water Quality Objectives) to establish the groundwater quality objective for nitrate at 45 mg/l as NO<sub>3</sub> for over 40 basins within the San Diego Region.
2. Revise provisions of Chapter 4 (Implementation) to incorporate the State Water Resources Control Board Onsite Wastewater Treatment System (OWTS) Policy into the Basin Plan and make minor corrections to other sections regarding Waste Discharge Requirements (WDRs).
3. Revise Chapter 4 (Implementation) to add implementation provisions for the nitrate groundwater quality objective to protect surface water quality where groundwater and surface water are interconnected.
4. Revise Chapter 5 (Plans and Policies) to include descriptions of the 2012 State Water Board OWTS Policy and 2009 (as amended in 2013) Recycled Water Policy.
5. Delete the expired conditional waivers of waste discharge requirements from the Basin Plan and make other minor non-substantive changes to the Basin Plan.

We support the Water Board's intent to modify the Basin Plan to address the 2012 OWTS Policy and 2009 Recycled Water Policy. We have significant issues, however, with the proposed Basin Plan language changes within the "Landscape Irrigation with Recycled Water" section of Chapter 4 (Implementation). While proposed modifications to this landscape irrigation section are described within the Basin Plan modification public notice as "minor corrections to other sections regarding Waste Discharge

#### 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

Oliverhoin  
Municipal Water District

Clay Water District

Padre Dam  
Municipal Water District

Camp Pendleton  
Marine Corps Base

Rainbow  
Municipal Water District

Romano  
Municipal Water District

Rincon del Diablo  
Municipal Water District

San Dieguito Water District

Santa Fe Irrigation District

South Bay Irrigation District

Volcicatos Water District

Valley Center  
Municipal Water District

Vista Irrigation District

Yuima  
Municipal Water District

#### OTHER REPRESENTATIVE

County of San Diego

Regional Water Quality Control Board  
Ms. Jody Ebsen  
February 12, 2015  
Page 3

order to prevent OWTS loads from causing exceedance of a groundwater quality nitrate objective of 45 mg/l as NO<sub>3</sub> (10 mg/l as nitrogen).<sup>2</sup>

Recycled water irrigation represents a much lower threat to groundwater nitrate quality (if any) than OWTS discharges. First, total nitrogen concentrations in recycled water are less than OWTS discharges, and typically range from 10 to 40 mg/l.<sup>3</sup> More importantly, unlike OWTS discharges, recycled water is applied to the land surface, and irrigated nutrient demands of landscape irrigation can be equal or greater than the available nitrogen concentrations in the irrigation supply. As a result, recycled water users (particularly those removing cuttings) typically periodically apply fertilizers to satisfy additional vegetation nutrient demands of the irrigated vegetation. Finally, recycled water users are required to undergo training and are required to implement professional management practices under adopted recycled water agency Rules and Regulations established pursuant to county and Regional Water Board requirements. In accordance with these required practices (and as a result of water conservation guidance and directives issued by the state, county and local governments), recycled water irrigation operations operate at a high irrigation efficiency, resulting in a minimal amount of water and significantly reduced nutrient loads percolating downward to groundwater.

While OWTS dischargers (along with agricultural fertilization) were identified as a primary contributor to basin nutrient loads within San Diego region Salt and Nutrient Management Plans (SNMPs) prepared pursuant to the 2009 Recycled Water Policy, none of the SNMPs identified recycled water irrigation operations as representing a threat to cause exceedance of Basin Plan nitrate groundwater objectives. Furthermore, none of the SNMPs identified any recycled water management strategies or controls (over and above those currently implemented) as being necessary to ensure compliance with Basin Plan nitrate objectives.<sup>4</sup>

These SNMP findings are consistent with a half-century history of recycled water use within the San Diego Region, in which not one instance has occurred where recycled water irrigation has resulted in nitrate exceedance of the 45 mg/l drinking water nitrate objective in a downstream potable supply well. As an example of this lack of significant impact, nitrate concentrations of 2.4 mg/l were reported in 2014 at the Carlton Oaks Golf course, which is immediately downstream and makes use of recycled water discharged from the Padre Dam MWD Santee Lakes project that has been in operation for more than 60 years.<sup>5</sup>

<sup>2</sup> See Table 1 of the *OWTS Policy, Water Quality Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems*, adopted by the State Water Resources Control Board on June 19, 2012.

<sup>3</sup> Typical range of total nitrate in recycled water supplies produced by Water Authority member agencies that produce disinfected tertiary treated recycled water that conforms to criteria established in Title 22, Division 4, Chapter 3 of the *California Code of Regulations*.

<sup>4</sup> Includes SNMPs submitted to the Regional Water Board for the San Juan Creek basin, Temecula basin, lower Santa Margarita River basin, Escondido basin, San Pasqual basin, Gower basin, and Santee basin.

<sup>5</sup> See Chapter 5 of the Santee Basin Salt and Nutrient Management Plan, prepared by Montgomery Watson-Harza and submitted by Padre Dam MWD to the Regional Water Board in 2014.

Regional Water Quality Control Board  
Ms. Jody Ebsen  
February 12, 2015  
Page 5

**Proposed Basin Plan Revisions.** As part of the "minor corrections to other sections" identified in the Regional Water Board "Notice of Public Workshop" for the proposed OWTS Basin Plan amendments, the Regional Water Board staff propose a complete rewrite of the Chapter 4 section entitled "Landscape Irrigation with Recycled Water". To address the above-discussed issues, the Water Authority, its member agencies, and other impacted regional agencies propose an alternative version of the "Landscape Irrigation with Recycled Water" section, with the intent of:

1. Better defining, prioritizing, and reflecting the relative threats that different types of discharges present toward achieving compliance with Basin Plan groundwater nutrient objectives.
2. Establishing the rationale for why professionally operated recycled water irrigation operations do not represent a threat to cause exceedances to Basin Plan groundwater quality objectives for nutrients.
3. Clearly establishing nitrogen management requirements that should be incorporated into WDRs and water reclamation requirements to ensure that recycled water operations are in keeping with protecting groundwater quality and achieving Basin Plan groundwater quality objectives for nutrients.
4. Addressing effects of trace nutrients such as iron and manganese.
5. Establishing the rationale for why it is not necessary for the Regional Water Board to establish numerical effluent concentration limits for nitrogen within recycled water, except in special circumstances.
6. Identifying the special circumstances which may warrant Regional Board attention in regulating sources of nutrients in applied recycled waters.
7. Encouraging the production and use of recycled water in Region 9 in conjunction with stakeholders.

A proposed draft of the "Landscape Irrigation with Recycled Water" section of Chapter 4 (Implementation) is attached for your consideration which addresses these issues and needs. The revisions to the "Landscape Irrigation with Recycled Water" section that we propose herein is necessary to maintain existing recycled water use within the region and to offer opportunities for expanded recycled water use that is consistent with implementing Basin Plan water quality objectives for nutrients. The proposed Basin Plan revisions we propose:

1. Are consistent with implementing goals of the California Water Plan, Recycled Water Policy, and San Diego Water Board Practical Vision.
2. Would promote recycled water use by providing clear and unambiguous direction to Regional Board staff and recycled water agencies on how recycled water irrigation operations are to be regulated.
3. Would ensure that nitrate loads associated with recycled water irrigation operations (which the Regional Board regulates) are not unreasonably restricted to levels below nitrate loads associated with imported or potable water use (which the Regional Water Board does not regulate).

Regional Water Quality Control Board  
Ms. Jody Ebsen  
February 12, 2015  
Page 7

  
Mike Obermiller, P.E.  
Assistant Director of Public Works  
City of Poway

  
James Makshanoff  
City Manager  
City of San Clemente

  
Wendy Chambers General Manager  
Carlsbad Municipal Water District

  
Joone Lopez  
General Manager  
Moulton Niguel Water District

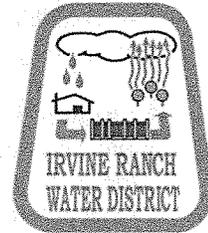
  
Marsi A. Steirer  
Deputy Director  
Long-Range Planning & Water Resources Division

Regional Water Quality Control Board  
Ms. Jody Ebsen  
February 12, 2015  
Page 9

Richard S. Williamson, Assistant General Manager  
Rancho California Water District



Paul A. Cook, General Manager  
Irvine Ranch Water District



Jim Anderson  
Wastewater Operations Superintendent  
Ramona Municipal Water District



Daniel R. Ferons  
General Manager  
Santa Margarita Water District



Robert R. Hill  
General Manager  
El Toro Water District



MM/tp  
Attachment (1): Recommended Basin Plan Revisions - Landscape Irrigation with  
Recycled Water  
by email:

Establishing recycled water nitrogen effluent concentration limits in WDRs that would require a reduction in nutrient concentrations in recycled water supplies would not lead to any discernible groundwater quality improvement because this would lead irrigation users to simply increase fertilizer applications to the site by a commensurate amount in order to satisfy vegetative nutrient demands. Similarly, terminating recycled water operations at the site and substituting potable water as the irrigation supply would not result in any discernible water quality improvement, as fertilizer application rates would be commensurately increased.

Although recycled water nitrate concentration limits would not protect groundwater quality, the professional management of recycled water operations can ensure that recycled water that percolates past the landscape root zone is consistent with achieving applicable Basin Plan groundwater quality objectives. As such, the following requirements shall be used by the Regional Water Board in establishing landscape irrigation requirements within Waste Discharge Requirements, Master Reclamation Permits, and Water Recycling Requirements:

- Recycled water purveying agencies must monitor nutrient levels in their recycled water supplies, and annually notify recycled water users of the nutrient value of recycled water.
- For recycled water use in a basin where a Salt and Nutrient Management Plan has been adopted and incorporated into the Basin Plan by the Regional Board, recycled water purveying agencies will implement any applicable nutrient management requirements mandated within the Salt and Nutrient Management Plan.
- For recycled water use in a basin where a Salt and Nutrient Management Plan has been adopted and incorporated into the Basin Plan by the Regional Board, recycled water purveying agencies shall implement applicable nutrient management requirements that pertain to them as stipulated within the Salt and Nutrient Management Plan. Additionally, the Regional Board shall require other agencies or entities to implement any applicable nutrient management requirements mandated by the Salt and Nutrient Management Plan that pertain to these other agencies or entities.
- Recycled water site supervisors shall be responsible for determining onsite fertilizer needs and shall complete training and education in compliance with recycled water agency rules and regulations to: (1) Minimize the potential for runoff or over-irrigation and, (2) Take into account the nutrient value of the recycled water.

In establishing applicable recycled water landscape irrigation effluent concentration limits for iron and manganese, recycled water permits issued by the Regional Board shall take into account the projected nutrient uptake of the irrigated vegetation and projected iron and manganese loads. Where plant uptake is not adequate to reduce iron and manganese loadings to an insignificant level, the Regional Board shall also consider beneficial uses and local groundwater conditions, including existing groundwater quality and available assimilative capacity.



**CLEAN WATER NOW**

is an innovative, science-based organization committed to solution-oriented collaboration as a means of developing safe, sustainable water supplies and preserving healthy ecosystems.

**Re:**

**Comments on Proposed Basin Plan Amendments Modification of Groundwater Nitrate Objectives and Incorporation of the State Onsite Wastewater Treatment System (OWTS) Policy**

**Agency:** San Diego Regional Water Quality Control Board (SDRWQCB)

**Date:** February 18, 2015 (sent via email)

**Attention:** Ms. Jody Ebsen and Mr. Fisayo Osibodu

Jody & Fisayo:

CWN is pleased to have the opportunity to provide comments to the SDRWQCB proposals listed above. We apologize for the confusion regarding the 2/16/2015 deadline. We erroneously archived 2/19/2015 (see below).

**HISTORY:**

CWN has been attending and tracking these particular subjects with great interest for several years. We not only attended local workshops, but also have been monitoring informational postings by both the San Diego County Water Authority and South OC Wastewater Authority.

SOCWA has been very cooperative, and CWN wishes to personally thank **Mr. Brennon Flahive (Director of Environmental Compliance)** herein. He has been especially attentive, provided us with any and all information we've requested in an expeditious manner.

As expressed in the email to you both, prefacing this submission: **"Fortunately, this unintentional delay allowed CWN to peer review both of the two (2) submissions by the San Diego County Water Authority & South Orange County Wastewater Authority (attached below the CWN submission). These PDFs were forwarded to us during a 3-day holiday weekend, and we are therefore integrating our analyses and conclusions regarding these**



**critical documents by those public agencies entrusted to implement said policy modifications/requirements.”**

All of this stated, after careful consideration, CWN herein concurs with the basic premises and conclusions reached by these two (2) entities.

As a 17 year South Orange County-based NGO with an extensive water quality portfolio, we find great relevance and professional congruency with the SOCWA concerns. We concur with and support the co-joined SDCWA/SOCWA pleadings.

The SDRWQCB’s proposed modifications to us **are** redundant, and only add yet another unnecessary layer to oversight without sensitivity to funding and logistical compliance constraints. We are confident that in our locale SOCWA has and will continue to perform as required regarding the in-place mandated standards and goals, to ones in our region’s residents and ecologies best interests.

We strongly feel that SOCWA’s submission dated 2/12/2015 addresses, i.e., sums up very well all of the issues and future concerns that CWN has in this matter:

In summary, we believe that the outreach and training that is already being implemented by our agencies coupled with our existing Monitoring and Assessment Plan pursuant to our SNMP have been extremely effective in reducing nitrogen in groundwater and surface water. As currently written, the Proposed Amendments will add unnecessary and expensive hurdles that will almost certainly constrain overall production and use of recycled water in contradiction of the State Water Resources Control Board’s Recycled Water Policy goals. As such, we respectfully ask that you reconsider the Proposed Amendments and adopt the changes proposed by San Diego County Water Authority and its member agencies.

Sincerely,

*From the desk of:*

**Roger E. Bütow      Founder & Executive Director**

P.O. Box 4711 Laguna Beach CA 92652  
**Home Office:** (949) 715.1912 (VM/No TM)  
**Cell:** (949) 280.2225 (VM/TM)  
**Email:** [rogerbutow@clean-water-now.org](mailto:rogerbutow@clean-water-now.org)

**CLEAN WATER NOW (est. 1998)** *is an innovative, science-based organization committed to solution-oriented collaboration as a means of developing safe, sustainable water supplies and preserving healthy ecosystems.*



## FARM BUREAU SAN DIEGO COUNTY

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February 12, 2015

Mr. Fisayo Osibodu  
San Diego Regional Water Quality Control Board  
2375 Northside Drive, Suite 100  
San Diego, CA 92108-2700

Re: Basin Plan Amendment Resolution No. R9-2015-0008, Nitrate Objective for Groundwater

Dear Mr. Osibodu:

The San Diego County Farm Bureau appreciates this opportunity to comment. Our organization represents the producers who irrigate crops in Region 9 and would be directly affected by the content of the proposed Basin Plan Amendment to change the nitrate water quality objective for ground waters.

Chapter 4, Implementation, discusses discharges to ground water from agricultural and nursery operations at page 4-9. This section references the Agricultural Expert Panel (Panel) convened by the State Water Board. This section goes on to discuss the work done by the Panel. It is our understanding that while the Panel did submit a report of recommendations; those recommendations were not adopted by the State Water Board and are currently under consideration. The State Water Board has stated that it will, in the near future, convene a public participatory process to review the recommendations before possible adoption. It would be our suggestion to delete any reference to the Panel's recommendations until the State Water Board completes its work, otherwise the San Diego Regional Water Quality Control Board may be out of step with the State Water Board.

That section also includes the statement, "WDRs for agricultural and nursery operations in the San Diego Region should require dischargers to implement appropriate management measures to ensure that their operations do not adversely affect ground water or surface water quality." We agree on the appropriateness of that statement and expect it will serve as a guideline in the development of the General Waste Discharge Requirements for Agricultural and Nursery Operations (GWDR) that the San Diego Regional Water Quality Control Board is expected to adopt. However, following that statement is a collection of management measures preceded by "Management measures may include but are not limited to the following:"

Item 8  
Supporting Document No. 5  
April 15, 2015

We do question the need to include specific management measures in the Basin Plan Amendment, especially when they “may” be included in the GWDR. Our suggestion would be to delete specific reference to management measures and save them for inclusion in the GWDR when their reference will be specific and there will be no confusion in the Basin Plan as to what will or won’t be included.

Again, thank you for accepting our comments.

Sincerely,

A handwritten signature in black ink, appearing to read "E. Larson", written in a cursive style.

Eric Larson  
Executive Director



Fiyaso Osibodu  
Water Resources Control Engineer  
California Regional Water Quality Control Board, San Diego Region  
2375 Northside Drive, Ste. 100  
San Diego, CA 92108  
[oosibodu@waterboards.ca.gov](mailto:oosibodu@waterboards.ca.gov)

August 14, 2014

Re: CEQA Scoping for Basin Plan Amendment Increasing WQO for Nitrate in Groundwater

Dear Mr. Osibodu,

The City of Escondido (City) is pleased to submit the following comments on the proposed Basin Plan Amendment to increase the Water Quality Objective (WQO) for Nitrate in Groundwater (Proposed BPA). These comments address the California Environmental Quality Act (CEQA) Scoping documents and Draft Environmental Checklist (DEC) for the Proposed BPA.

The City is supportive of San Diego Regional Water Quality Control Board (RWQCB) efforts to ease regulatory burdens and encourage statewide consistency to facilitate recycled water use, especially in light of California's extreme drought conditions. The City's wastewater treatment plant, Hale Avenue Resource Recovery Facility (HARRF), recycles approximately 5 million gallons per day (mgd) of wastewater for distribution to golf courses, parks, school grounds, green belts, roadway medians, open spaces and industrial use in the city. Currently to the year 2020, the City is planning to increase the capacity of recycled water product from 9 mgd to 12 mgd. From years 2021-2025 the City plans continued upgrades to the system, including a membrane bioreactor which will significantly reduce nutrient levels in the recycled water.

While the City supports the proposed basin plan amendment to increase the groundwater quality objective for nitrate as  $\text{NO}_3$ , we are concerned about the unintended consequences to surface water quality for which the City is held accountable through its municipal stormwater permit. Groundwater extrusion (springs) is a source of surface water flows. Would higher levels of nitrate in groundwater result in natural surface water concentrations of nitrate as  $\text{NO}_3$  above the Basin Plan concentration of 10 mg/L? What would be the implications for the City under its municipal stormwater permit? Would regulatory relief in one area result in increased burdens in another area? The City would like clarification as to how the RWQCB is planning to handle this discrepancy, since the Escondido Basin groundwater is known to be very shallow and intrudes into storm drain systems and surface waters. Escondido Creek also already exhibits elevated levels of nitrates

The City respectfully submits the following comments on the Proposed BPA:

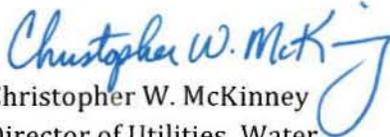
1. The Draft Environmental Checklist discusses Reasonable Methods of Compliance including manure storage, advanced Onsite Wastewater Treatment Systems (OWTS), and regular

inspections of Best Management Practices at various facilities. The City requests clarification as to which agency will ultimately be responsible for inspections and enforcement; how this activity will be funded; and on what basis enforcement action can be taken.

2. Please clarify how the Salt & Nutrient Management Plans (SNMPs) will account for this increased allowed concentration of nitrates in the groundwater system, and how this may impact surface water quality objectives for nitrate and Total N.
3. Please coordinate this decision with the efforts of the Municipal Separate Stormwater Sewer System (MS4) and Water Quality Improvement Plan (WQIP) team at the RWQCB. This group will have to account for this increase in WQO when evaluating surface water monitoring data and municipal stormwater programs' performance in improving surface water quality.
4. The Draft Environmental Checklist assumes no adverse impacts to the environment and thus proposes no alternatives or mitigation. The City disagrees with this interpretation and believes that the RWQCB should assess whether the assumption that groundwater basin concentrations will not attain 45 mg/L nitrate as NO<sub>3</sub> is reasonable. In addition an assessment of impacts to surface water quality is required.

The City will be continuing to follow the process and potential opportunities to provide feedback to the RWQCB. If you have any questions please contact Helen Davies, Environmental Programs Manager, at (760) 839-6315.

Sincerely,



Christopher W. McKinney  
Director of Utilities, Water  
City of Escondido

Cc. Eric Becker, Regional Water Quality Control Board



Item 8  
Supporting Document No. 5  
April 15, 2015

# San Diego County Water Authority

4677 Overland Avenue • San Diego, California 92123-1233  
(858) 522-6600 FAX (858) 522-6568 www.sdcwa.org

August 14, 2014

Mr. Fisayo Osibodu  
California Regional Water Quality Control Board, San Diego Region  
Groundwater Protection Branch  
2375 Northside Drive, Suite 100  
San Diego, CA 92108-2700

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
  - Olay 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
  - Vallejitos Water District
  - Valley Center Municipal Water District
  - Vista Irrigation District
  - Yuma Municipal Water District
- OTHER REPRESENTATIVE
- County of San Diego

**Subject:** Comments on the Draft Environmental Checklist for the Basin Plan Amendment Changing the Nitrate Water Quality Objective for Groundwater

Dear Mr. Osibodu:

The San Diego County Water Authority (Water Authority) has reviewed a copy of the above-referenced document posted on the Regional Board’s website. The Water Authority has examined the relevant portions of the checklist and offers the following comments:

**Comments on Section 9 - Hydrology/Water Quality**

In the Regional Board’s response to the question would the project: a) *Violate any water quality standards of waste discharge requirements?*, the Regional Board concludes that the impact is “less than significant.” However, in the discussion section there is no analysis regarding the impacts from a higher nitrate level in groundwater basins to downstream surface water reservoirs used for drinking water purposes. Avoiding impacts from nutrients in local water supply reservoirs is important to managing water quality for drinking water supplies and preventing algae growth in local reservoirs.

The Substitute Environmental Document (SED) should include an analysis of the change in the groundwater quality objective for nitrate to 45 milligrams per liter as nitrate (mg/L as NO<sub>3</sub>) and its impacts to surface water reservoirs used for drinking water supply downstream of affected groundwater basins. While we recognize that you may not be able to do a full salt and nutrient analysis for all the basins impacted, the SED should include a focused assessment of groundwater basins in the vicinity of surface water reservoirs and their tributary streams and should provide recommended implementation actions in the basin plan update to protect local surface water supplies.

The Water Authority appreciates the opportunity to comment. Please retain the Water Authority on your mailing list to continue receiving information concerning this project. If you have any questions, please contact me directly at (858) 522-6763.

Sincerely,

Kelley Gage, Principal Water Resources Specialist  
Water Resources Department

cc: Toby Roy, Water Resources Manager, SDCWA

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