

The Orange County Water District, San Bernardino Valley Water Conservation District and other agencies in the Region operate extensive facilities designed to enhance the capture and recharge of high-quality storm water. More such facilities are planned as part of "maximum benefit" proposals by the Chino Basin Watermaster/Inland Empire Utilities Agency, and agencies implementing the maximum benefit programs in the San Timoteo watershed (Section VI., Maximum Benefit Implementation Plans for Salt Management). These proposals also include efforts to import and recharge high quality State Water Project water, when it is available. These activities increase both the quantity and quality of available groundwater resources.

D. Sea Water Intrusion Barriers

The Orange County Water District operates advanced facilities designed to provide significantly enhanced tertiary treatment of secondary treated municipal wastewater from the Orange County Sanitation District's (Sanitation District) Fountain Valley Reclamation Plant No. 1. The recycled water is injected into a series of wells located along Ellis Avenue in the City of Fountain Valley to maintain the Talbert Gap Seawater Intrusion Barrier. The treatment facility, the Groundwater Replenishment System (GWRS) was constructed jointly by Orange County Water District and the Sanitation District (see preceding section on wastewater reclamation).

V. Salt Management Plan -- Monitoring Program Requirements

California Water Code Section 13242 specifies that Basin Plan implementation plans must contain a description of the monitoring and surveillance programs to be undertaken to determine compliance with water quality objectives. The adoption of ~~new~~ groundwater TDS and nitrate-nitrogen water quality objectives (Chapter 4) in response to the studies sponsored by the N/TDS Task Force triggered the need to develop and implement a ~~new~~, watershed-wide nitrogen/TDS monitoring program. The Task Force provided additional impetus for this comprehensive monitoring program. The Task Force recommended that future review and update of the salt management plan, including findings of assimilative capacity, appropriate changes to the wasteload allocations, etc., should be based on real-time data obtained through a rigorous monitoring program, rather than on model projections. As discussed earlier (see Section II., Update of the Total Dissolved Solids/Nitrogen Management Plan), the Task Force concluded that the development of new, workable modeling tools to assist in this review was beyond the scope and financial capability of the Task Force.

The monitoring program, approved by the Regional Board in 2005 (Resolution R8-2005-0063), must consist of both surface water and groundwater components. Some of these are already being implemented, including the annual sampling of the Santa Ana River, Reach 3 at Prado Dam by Regional Board staff (see Chapter 4 and below). Certain agencies have also committed to conduct monitoring of specific water bodies as part of their "maximum benefit" proposals (see Section VI., Maximum Benefit Implementation Plans for Salt Management, below). The N/TDS Task Force members, and other parties as appropriate, are will be required to implement these approved propose a comprehensive monitoring programs, that would integrate these existing commitments with other monitoring recommendations. These parties will be required to implement this program upon approval by the Regional Board.

A. Surface Water Monitoring Program Requirements for TDS and Nitrogen

Implementation of a surface water monitoring program is needed to determine

compliance with the nitrogen and TDS objectives of the Santa Ana River, and thereby, the effectiveness of the wasteload allocations. It is also needed to provide data required to evaluate the effects of surface water discharges on affected groundwater management zones. ~~In particular, data are needed to confirm the validity of the 50% nitrogen loss coefficient that will be applied in regulating discharges to that part of Reach 3 of the River that overlies the Chino South groundwater management zone (see Section III.B.3., Nitrogen loss coefficients).~~

As discussed in Chapter 4, the Basin Plan specifies baseflow TDS and total nitrogen objectives for Reach 3 of the River. For Reach 2, a TDS objective based on a five- year moving average of the annual TDS concentration is specified. Use of this moving average allows the effects of wet and dry years to be integrated over the five- year period and reflects the actual long-term quality of water recharged by Orange County Water District downstream of Prado Dam.

The Basin Plan specifies a monitoring program to determine compliance with the Reach 3 baseflow objectives at Prado Dam (see Chapter 4). As noted above, Regional Board staff ~~undertakes and supervises~~ conducts this program on an annual basis. Measurement of baseflow quality at below Prado Dam, rather than the quality of flows in Reach 2, has long been used to indicate the effects of recharge of Santa Ana River flows on Orange County groundwater. The efficacy of this approach was evaluated as part of the 2004 update of the TDS/nitrogen management plan in the Basin Plan. At that time, ~~insufficient data were available to draw a direct correlation between the long-term TDS and nitrogen quality of River flows at Prado Dam and that of affected Orange County groundwater. However, the conclusion drawn was that reliance on the Reach 3 baseflow objectives to protect Orange County groundwater, and the existing monitoring program designed to measure compliance, is adequate~~ unless the Regional Board elects to adopt a different approach if and when better data becomes available.

In addition to this baseflow sampling program and the surface water monitoring commitments associated with certain agencies' "maximum benefit" programs, the comprehensive monitoring program ~~to be proposed and~~ implemented by the Task Force members, and other agencies as appropriate, ~~must include~~ is an evaluation of compliance with the TDS and nitrogen objectives for Reaches 2, 3, 4 and 5 of the Santa Ana River. Compliance with these Reach 2 TDS objectives ~~is can be~~ determined by evaluation of data collected by the Regional Board staff, Santa Ana River Watermaster, Orange County Water District, the United States Geological Survey, and others.

Surface water monitoring program requirements for TDS and nitrogen are as follows:

~~1. —~~ No later than August 1, 2022, ~~March 23, 2005,~~ Orange County Water District, Inland Empire Utilities Agency, Chino Basin Watermaster, City of Riverside, City of Corona, Elsinore Valley Municipal Water District, Eastern Municipal Water District, ~~City of Colton, City of San Bernardino Municipal Water Department, Colton/San Bernardino Regional Tertiary Treatment & Wastewater Reclamation Authority,~~ Jurupa Community Services District, Western Riverside County Regional Wastewater Authority, Temescal Valley Lee Lake Water District, Yucaipa Valley Water District, City of Beaumont, the San Timoteo Watershed Management Authority, City of Banning, Beaumont Cherry Valley Water District, San Geronio Pass Water Agency, and the City of Rialto shall

submit to the Regional Board for approval, ~~a proposed~~ an updated surface water TDS and nitrogen monitoring program that will provide an evaluation of compliance with the TDS and nitrogen objectives for Reaches 2, 3, 4 and 5 of the Santa Ana River.

In lieu of this coordinated monitoring plan, one or more of the parties identified in the preceding paragraph may submit an individual or group monitoring plan. Any such individual or group monitoring plan shall also be submitted no later than August 1, 2022. ~~March 23, 2005.~~

2-1. By August 1st of each year, the Orange County Water District, Inland Empire Utilities Agency, City of Riverside, City of Corona, Elsinore Valley Municipal Water District, Eastern Municipal Water District, Temescal Valley Lee Lake Water District, City of Colton, City of San Bernardino Municipal Water Department, Colton/San Bernardino Regional Tertiary Treatment & Wastewater Reclamation Authority, Jurupa Community Services District, Western Riverside County Regional Wastewater Authority, Yucaipa Valley Water District, City of Beaumont, City of Banning, Beaumont Cherry Valley Water District, San Geronimo Pass Water Agency, Chino Basin Watermaster, and the City of Rialto, shall submit an annual report of surface Santa Ana River, Reach 2, 4 and 5 water quality for the stream segments identified above. Data evaluated shall include that collected by the Regional Board staff, Santa Ana River Watermaster, Orange County Water District, and the US Geologic Survey, at a minimum.

In lieu of this coordinated annual report, one or more of the parties identified in the preceding paragraph may submit an individual or group annual report. Any such individual or group report shall also be submitted by August 1st 5th of each year.

Additional surface water monitoring programs may be specified by the Regional Board depending upon watershed conditions, waste discharge specifications and/or any special studies related to TDS and nitrogen. In addition, the Executive Office may require other dischargers to comply with the monitoring and reporting obligations described above by issuing an order pursuant to Section 13267 of the California Water Code.

B. Groundwater Monitoring Program for TDS and Nitrogen

Implementation of a watershed-wide TDS/nitrogen groundwater monitoring program is necessary to assess current water quality, to determine whether TDS and nitrate-nitrogen water quality objectives for management zones are being met or exceeded, and to update assimilative capacity findings. Groundwater monitoring is also needed to fill data gaps for those management zones with insufficient data to calculate TDS and nitrate-nitrogen historical quality and current quality. Finally, groundwater monitoring is needed to assess the effects of POTW discharges to surface waters on affected groundwater management zones. Groundwater monitoring requirements for TDS and nitrogen are as follows:

No later than August 1, 2022 ~~2323, 2005~~, Orange County Water District, Irvine Ranch Water District, Inland Empire Utilities Agency, Chino Basin Watermaster, City of Riverside, City of Corona, Elsinore Valley Municipal Water District, Eastern Municipal

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Water District, City of Colton, City of San Bernardino Municipal Water Department, [Colton/San Bernardino Regional Tertiary Treatment & Wastewater Reclamation Authority](#), City of Redlands, Jurupa Community Services District, Western Riverside County Regional Wastewater Authority, [Temescal Valley Lee Lake](#) Water District, Yucaipa Valley Water District, City of Beaumont, [San Geronio Pass Water Agency](#), [City of Banning](#), [Beaumont Cherry Valley Water District](#), [the San Timoteo Watershed Management Authority](#) and the City of Rialto shall submit to the Regional Board for approval, ~~a proposed an updated~~ watershed-wide TDS and nitrogen monitoring program that will provide data necessary to ~~implement review and update~~ the TDS/nitrogen management plan. Data to be collected and analyzed shall address, at a minimum: (1) determination of current ambient quality in groundwater management zones; (2) determination of compliance with TDS and nitrate- nitrogen objectives for the management zones; (3) evaluation of assimilative capacity findings for groundwater management zones; ~~and~~ (4) assessment of the effects of recharge of surface water POTW discharges on the quality of affected groundwater management zones; ~~and~~ (5) ~~any other additional requirements specified in the State Board's Recycled Water Policy (Resolution No. 2018-0057)~~. The determination of current ambient quality ~~shall can~~ be accomplished using methodology consistent with that employed by the Nitrogen/TDS Task Force (20-year running averages) to develop the TDS and nitrogen water quality objectives included in this Basin Plan- [Ref. 1], ~~or an alternative method approved by the Executive Officer of the Regional Board~~. The determination of current ambient groundwater quality ~~throughout the watershed~~ must be reported by ~~October 1, 2023~~ ~~July 1, 2005~~, and, at a minimum, every ~~three five~~ years thereafter ~~unless the Regional Board revises this schedule consistent with the monitoring and reporting requirements set forth in the Recycled Water Policy~~.

In lieu of this coordinated monitoring plan, one or more of the parties identified in the preceding paragraph may submit an individual or group monitoring plan. Any such individual or group monitoring plan shall also be due no later than ~~August 1, 2023~~ ~~June 1, 2023~~, 2005. Details to be included in the proposed monitoring program shall include, but not be limited to, the following:

- monitoring program goals
- responsible agencies
- groundwater water sampling locations
- surface water sampling locations (if appropriate)
- water quality parameters
- sampling frequency
- quality assurance/quality control
- database management
- data analysis and reporting

Within 30 days of Regional Board approval of the proposed monitoring plan, the updated monitoring plan must be implemented.

Additional groundwater monitoring programs may be specified by the Regional Board depending upon watershed conditions, waste discharge specifications and/or any special studies related to TDS and nitrogen. [In addition, the Executive Office may require other dischargers to comply with the monitoring and reporting obligations](#)

[described above by issuing an order pursuant to Section 13267 of the California Water Code.](#)

Basin Monitoring Program Task Force

Subsequent to the approval of the Region's Salt and Nutrient Management Plan in 2004, a new task force, the "Basin Monitoring Program Task Force" (BMPTF) was formed to implement the requisite nitrogen/TDS monitoring and analyses programs described previously. SAWPA serves as the administrator for the BMPTF. The Task Force [currently](#) includes the following agencies:

- Eastern Municipal Water District
- Inland Empire Utilities Agency
- Orange County Water District
- [Temescal Valley Lee Lake Water District](#)
- Elsinore Valley Municipal Water District
- Irvine Ranch Water District
- Yucaipa Valley Water District
- Jurupa Community Services District
- Western Riverside Co. Regional Wastewater Authority
- [Chino Basin Watermaster](#)
- [San Bernardino Valley Municipal Water District](#)
- City of Riverside
- City of Beaumont
- City of Corona
- City of Redlands
- City of Rialto
- [City of Banning](#)
- Colton/San Bernardino Regional Tertiary Treatment & Wastewater Reclamation Authority
- [Beaumont Cherry Valley Water Dist.](#)
- [San Geronio Pass Water Agency](#)

Declaration of Conformance

Another major activity [completed by that](#) the BMPTF ~~completed in March 2010~~ was the development of a "Declaration of Conformance" [that was approved for approval](#) by the Regional Board [on March 18, 2010 \(Resolution No. R8-2010-0012\)](#) and [subsequently transmitted to the State Water Resources Control Board on April 12, 2010.](#) With the Declaration, the Task Force and Regional Board declared conformance with the then-new State ~~Water~~ Board Recycled Water Policy requirements for the completion of a salt and nutrient management plan for the Santa Ana Region, and other requirements of this Policy. This finding of conformance was based on the work of the Nitrogen/TDS Task Force. That work resulted in the 2004 adoption of Basin Plan amendments to incorporate a revised Salt and Nutrient Management Plan for the Region (Resolution No. R8-2004-0001).

Further, the Declaration documented conformance with the emerging constituents monitoring requirements in the Policy through the "Emerging Constituents Sampling and Investigation Program", submitted to the Regional Board [on an annual basis](#) by the Emerging Constituents Program Task Force. The [EC](#) Sampling and Investigation Program ~~is~~ [will be](#) reviewed [periodically annually](#) and revised as necessary [to and will](#) integrate the State Board's recommendations when they become available. Finally, the Declaration of Conformance documents the analyses and procedures that will be used to streamline the permitting process for recycled water projects, as required by the Policy.

[The Declaration of Conformance was formally adopted by resolution of the Regional Board on March 18, 2010 \(Resolution No. R8-2010-0012\) and formally submitted to the State Board on April 12, 2010.](#)

Salt Monitoring Cooperative Agreement

In January 2008, the Regional Board entered into a Cooperative Agreement with several water and wastewater agencies in the Santa Ana River Watershed to analyze and report the amount of salt and nitrates entering local groundwater aquifers as a consequence of recharging imported water in the region. The "Cooperative Agreement to Protect Water Quality and Encourage the Conjunctive Use of Imported Water in the Santa Ana River Basin" is Attachment A to Resolution No. R8-2008-0019.

As with the BMPTF effort underwritten by local stakeholders, the Cooperative Agreement obligates signatories to assess current groundwater quality every three years. In addition, the signatories have agreed to estimate every six years the changes that are likely to occur in groundwater quality as a result of on-going and expected projects that recharge imported water. By emphasizing the use of "real-time" monitoring, rather than complex fate and transport models, the Regional Board is better able to evaluate the effects of these recharge projects.

The parties of the Cooperative Agreement execute the terms of the agreement through a workgroup of the Basin Monitoring Program Task Force that meets regularly under the administration of SAWPA. As the Task Force ~~informal~~ administrator, SAWPA assists in coordination among the signatories of the necessary basin salinity monitoring and modeling reports, along with final compilation and submittal of the reports to the Regional Board by the deadlines defined in the Cooperative Agreement. On March 3, 2021, the first Amendment to the Cooperative Agreement was executed by the Regional Board Executive Officer and the signatory agency representatives.