The existing effluent limits for TIN and TDS in the current NPDES permits can be reauthorized without amending the Basin Plan to adopt a new wasteload allocation.

1. In 2004, the Santa Ana Regional Water Quality Control Board established wasteload allocations for TIN and TDS using a sophisticated computer simulation program called the Wasteload Allocation Model (WLAM).[1] Pursuant to federal regulations, the Regional Board subsequently adopted effluent limits that were consistent with the assumptions and requirements of the approved wasteload allocation.[2]

2. The 2004 Wasteload Allocation Model (WLAM) was calibrated for land use and discharge conditions expected to occur through the year 2010. The WLAM was recently recalibrated and re-run to evaluate the validity of current effluent limits under land use and discharge conditions expected to occur through the year 2020.[3]

3. Results from the re-calibrated WLAM confirm that continued imposition of the current effluent limits for TIN and TDS will ensure that discharging treated wastewater to the Santa Ana River and its major tributaries will not cause or contribute to an exceedance of applicable water quality objectives or result in any long-term deleterious effects on water quality.[4] Thus, the current effluent limits for TIN and TDS remain consistent with the assumptions and requirements of the previously approved wasteload allocation. No Basin Plan amendment is required in order to reauthorize NPDES permits with similar limits.

4. Results from the re-calibrated WLAM show that there several POTWs contribute wastewater flow to Reach 3 of the Santa Ana River and that, under certain conditions, this stream segment may exceed the baseflow objective for TDS (700 mg/L). Since there is no assimilative capacity available in the river, all permits for discharges to Reach 3 must contain effluent limits for TDS that are no higher than the applicable objective. The Regional Board has already imposed this permit requirement. In addition, supplemental studies and analyses, developed by the Basin Monitoring Program Task Force in 2015, confirm that wastewater discharges from the permitted POTWs are not causing or contributing to the TDS exceedances occurring during August and September below Prado Dam.[5]

5. The Basin Monitoring Program Task Force, in cooperation with Regional Board staff, is in the process of updating the wasteload allocation for the 2020-2040 planning period. The new WLAM will use the HSPF software tool developed and endorsed by USEPA and USGS. The new WLAM will be expanded to include Reach 2 of the Santa Ana River and the Orange County groundwater basin. It will also account for significant sources of wastewater recharging to groundwater from off-channel percolation ponds. The new model will be substantially complete by the end of 2017 and will be submitted for Regional Board review in 2018. The current wasteload allocation for POTW discharges to the Santa Ana River system remains valid until the Regional Board adopts a new WLAM sometime in 2018-19.

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[1] R8-2004-0001 (January 22, 2004)

[2] 40 CFR 122.44[d][vii][B]

[3] Wildermuth Environmental, Inc. Addendum to the 2008 Santa Ana River Wasteload Allocation Model Report: Scenario 8 - Final Memorandum. January 5, 2015.

[4] Assumes that Regional Board Resolution No. R8-2017-0036 (Aug. 4, 2017) revising the nitrate-nitrogen objective for the Chino-South Groundwater Management Zone is approved by SWRCB and OAL.

[5] Wildermuth Environmental, Inc. (WEI) Investigation and Characterization of the Cause(s) of Recent Exceedances of the TDS Concentration Objective for Reach 3 of the Santa Ana River; February 11, 2015. See, also, WEI. Volume-weighted TDS Concentration of POTW Discharge Above Prado Dam During August and September. June 15, 2015.

No allocation of assimilative capacity is required in order to reauthorize the existing effluent limits for TIN and TDS in the current NPDES permits issued to Rialto and RIX.

WATER QUALITY METRIC	TIN	TDS
Surface Water Objective for SAR-Reach 3	10 mg/L	700 mg/L
Groundwater Objective for Riverside-A GMZ	6.2 mg/L	560 mg/L
Current Ambient Quality (1996-2015)	5.6 mg/L	440 mg/L
Long-Term Avg. Recharge Concentration	5.5 mg/L	417 mg/L
Highest 10-year Avg. Concentration	6.2 mg/L	458 mg/L
City of Rialto Effluent Limits	10 mg/L	490 mg/L
RIX Effluent Limits	10 mg/L	550 mg/L

1) Wastewater discharged from Rialto and RIX complies with the water quality objectives established for TIN and TDS in Reach 3 of the Santa Ana River.

2) During critical low flow conditions (e.g. 10-year periods with below normal precipitation), the average TDS and TIN concentrations in surface water percolating to groundwater from Reach 3 of the Santa Ana River does not exceed the applicable water quality objectives for the Riverside-A management zone.

3) Over the long-term, the average TDS and TIN concentrations in surface water percolating to groundwater from Reach 3 of the Santa Ana River is expected to improve, not degrade, existing water quality in the Riverside-A groundwater management zone.

4) During prolonged periods of below normal precipitation, average TIN and TDS concentrations in surface water percolating from Reach 3 of the Santa Ana River to groundwater may be slightly higher than the average concentration of TIN and TDS in the Riverside-A management zone. In such cases, the *"Regional Board may determine that it is not necessary to do a complete antidegradation analysis. The Regional Board may reach this determination if, using its best professional judgement and all available pertinent information, the Regional Board decides that the discharge will not be adverse to the intent and purpose of the State and Federal antidegradation policies. Based on information available to the Regional Board a complete antidegradation analysis will not be required if … 2) the Regional Board determines the reduction in water quality is temporally limited and will not result in any long-term deleterious effects on water quality… or 3) the Regional Board determines that the proposed action will produce minor effects which will not result in a significant reduction in water quality…"*[6] Reauthorizing the existing TIN and TDS effluent limits in the current NPDES permits issued to Rialto and RIX will not cause any significant or long-term degradation of water quality in the Riverside-A groundwater management zone. Therefore, in this instance, no allocation of assimilative capacity or maximum benefit demonstration is necessary. The Regional Board must document these findings in the Fact Sheet when major NPDES permits are reissued.

[6] State Water Resources Control Board. Antidegradation Policy Implementation for NPDES Permitting. Administrative Procedures Update 90-004 (May, 1990); pgs. 2 & 3.