

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

**Response to Written Comments on Tentative Addendum No. 1 to Order No.  
R9-2009-0072**

**An Addendum Modifying Waste Discharge Requirements for the San Diego  
County Sanitation District, San Pasqual Academy Water Pollution Control  
Facility San Diego County**

The following are in response to The City of San Diego's (City) comment letter, dated July 13, 2015:

**Comment 1:** In Tentative Addendum No. 1, Item 4-C, it states that "changing the annual average TDS discharge specification from 800 to 1,000 mg/L is consistent with maximum benefit to the people of the state." Allowing increased limits of TDS to be discharged into San Pasqual Basin will not benefit the City, residents and leaseholders in the Basin who rely on groundwater for their domestic and agricultural water needs.

**Response:** Changing the TDS discharge specification from 800 to 1,000 mg/L will not cause an actual increase in the amount of Total Dissolved Solids (TDS) discharged from the San Pasqual Academy Water Pollution Control Facility (San Pasqual Academy WPCF). The Discharger (San Diego County Sanitation District or "County") does not propose to change the method of operation or treatment processes at the San Pasqual Academy WPCF as a result of Tentative Addendum No. 1 to Order No. R9-2009-0072 (Tentative Addendum). The treatment process utilized by the County does not remove TDS and changing the discharge specification to the designated water quality objective at 1,000 mg/L will ensure consistent compliance with Order No. R9-2009-0072, as the County can comply with a discharge specification of 1,000 mg/L without installing supplemental treatment systems to remove TDS. The Tentative Addendum also reduces the permitted average monthly flow rate from 0.05 to 0.025 million gallons per day (mgd)<sup>1</sup>, and establishes a permitted annual average flow rate of 0.020 mgd, which maintains the existing maximum TDS mass loading to groundwater from the discharge. In order to comply with the existing TDS discharge specification of 800 mg/L during all years, the County would need to construct and implement demineralization treatment at the San Pasqual Academy WPCF, construct onsite brine handling facilities, and implement brine hauling and disposal. Operation of demineralization/brine disposal facilities would only be required on a periodic basis, and facilities would sit idle during times when the County is confident the discharge will conform with the existing discharge specification for TDS at 800 mg/L. As a result, the County would incur

significant costs in constructing the facilities, maintaining the facilities during idle periods, and funding demineralization treatment and brine disposal operations during times when the supplemental treatment facilities are required to operate.

According to the San Pasqual Groundwater Basin Salt & Nutrient Management Plan, the discharge from, the San Pasqual Academy WPCF comprises only 0.06 percent of the total TDS loading to groundwater in the San Pasqual Basin. As a result, installing supplemental treatment facilities at the San Pasqual Academy WPCF will only result in very minimal, if any, improvement to groundwater quality.

**Comment 2:** For a 13-year period from 2001 to 2014, the average concentration of TDS discharge from the Academy exceeded 1,000 mg/L in only 1 of 111 effluent samples collected (Information Sheet, Tentative Addendum No.1 to Order No. R9-2009-0072, Section IV, Item A). This number is minimal and does not appear to justify the need to increase allowable TDS levels to 1,000 mg/L.

**Response:** The City appears to have a misunderstanding of the data presented in the Information Sheet. Section IV, Item A of the Information Sheet states that the effluent TDS concentration exceeded 1,000 mg/L in only 1 of 111 samples collected, however, the average effluent TDS exceeded 800 mg/L four individual years between 2001 and 2014. Changing the discharge specification from 800 to 1,000 mg/L will prevent future violations of Order No. R9-2009-0072 without causing groundwater to exceed the TDS groundwater quality objective of 1,000 mg/L. Also, please see response to Comment 1 above.

**Comment 3:** In the same 13-year period from 2001 to 2014, the average effluent TDS concentration collected was 788 mg/L, which is below the limit of 800 mg/L (Information Sheet, Tentative Addendum No.1 to Order No. R9-2009-0072, Section II, Table 2). The request to increase allowable TDS levels to 1,000 mg/L does not appear to be justified.

**Response:** Although the average effluent TDS concentration from 2001 to 2014 was 788 mg/L, the average effluent TDS concentration exceeded 800 mg/L four individual years between 2001 and 2014. Changing the discharge specification from 800 to 1,000 mg/L will help the County comply with of Order No. R9-2009-0072 without causing groundwater to exceed the TDS groundwater quality objective of 1,000 mg/L. Also, please see response to Comment 1 above.

**Comment 4:** The Academy is permitted to discharge up to 50,000 gallons per day (gpd). Because the average wastewater flows from the Academy between 2009 and 2014 varied from 3,928 gpd to 4,858 gpd (Information Sheet, Tentative Addendum No.1 to Order No. R9-2009-0072, Section II, Item A), with an average annual flow of

4,189 gpd, the discharges are not significant and again do not appear to justify the need to increase allowable TDS levels to 1,000 mg/L.

**Response:** The San Diego Water Board agrees with the assertion that the annual wastewater flows (and the TDS contained therein) from the San Pasqual Academy are not significant, when considered with the other sources of TDS from other sources in the Basin (please see response Comment nos. 5 and 6 below).

Nonetheless, the average effluent TDS concentration exceeded 800 mg/L for 4 individual years between 2001 and 2014. Changing the discharge specification from 800 to 1,000 mg/L will prevent future violations of Order No. R9-2009-0072 without causing groundwater to exceed the TDS groundwater quality objective of 1,000 mg/L.

**Comment 5:** The Basin Plan Groundwater Water Quality Objectives (Information Sheet, Tentative Addendum No.1 to Order No. R9-2009-0072, Section III, Table 4), indicates maximum TDS concentrations of 1,000 mg/L for the San Pasqual Hydrologic Area. Average TDS concentrations in the Academy wells (Information Sheet, Tentative Addendum No.1 to Order No. R9-2009-0072, Section II, Table 3) were 520 mg/L in Well No.2 and 544 mg/L in Well No.5. However, groundwater quality in the eastern portion of the Basin where the Academy is located is consistently lower than other parts of the Basin. Water quality deteriorates as the groundwater moves westward, with TDS concentrations well above 1,000 mg/L in the central portion of the basin and 2,000 mg/L and above at the western portion. These concentrations are already well above the State's Water Quality Objectives, and allowing the Academy to discharge TDS at higher concentrations can further deteriorate the overall groundwater quality in the Basin.

**Response:** According to other available sources of information from the USGS<sup>2</sup> and City of San Diego,<sup>3</sup> other significant sources of TDS exist within the San Pasqual Basin, including: surface water flows from Santa Ysabel, Guejito and Santa Maria Creeks; irrigation return flows from Cloverdale Creek, and increased uses of imported water (estimated recharge of 1,160 acre-ft/year in 1980) to support agriculture and confined animal operations (City of San Diego – 2007, Table 2-2,<sup>2</sup> estimated at over 2,400 acres). The San Pasqual Groundwater Basin Salt & Nutrient Management Plan (San Pasqual Basin SNMP) concludes that salt loads associated with the discharges from the San Pasqual Academy WPCF make up less than 0.06 percent of the total salt load into the San Pasqual Groundwater Basin. Reducing (or even eliminating) the small San Pasqual Academy WPCF salt loads would not discernibly improve groundwater quality

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<sup>2</sup> Isbicki, J.A., 1983, Evaluation of the San Dieguito, San Elijo and San Pasqual hydrologic subareas for reclaimed water use, San Diego County California: U.S. Geological Survey Water-Resources Investigations 83-4044, 138p. <http://pubs.er.usgs.gov/publication/wri834044>

<sup>3</sup> City of San Diego, 2007, San Pasqual Basin Groundwater Management Plan, adopted November 2007. <http://www.sandiego.gov/water/pdf/gmp.pdf>

for the basin. Changing the TDS discharge specification from 800 to 1,000 mg/L will not cause an actual increase in the amount of TDS discharged from the San Pasqual WPCF as no changes are being proposed to the method of operation or treatment processes at the San Pasqual Academy WPCF.

**Comment 6:** The City believes that the Academy can continue with their current discharge average of 788 mg/L without the need to install reverse osmosis treatment system equipment, thereby avoiding significant costs in constructing, operating, and maintaining supplemental treatment and disposal facilities. Relaxing maximum TDS levels from 800 mg/L to 1,000 mg/L will result in an overall increase in average TDS from the current average of 788 mg/L to amounts well above 800 mg/L, and will further contribute to the deterioration of the groundwater quality in the Basin. Increases of TDS levels in the Basin are not conducive to the *San Pasqual Valley Groundwater Basin Salt and Nutrient Management Plan* (SNMP) (CH2M Hill, 2014).

**Response:** Although the average effluent TDS concentration from 2001 to 2014 was 788 mg/L, the average effluent TDS concentration exceeded 800 mg/L for 4 individual years between 2001 and 2014. Changing the discharge specification from 800 to 1,000 mg/L will prevent future violations of Order No. R9-2009-0072 without causing groundwater to exceed the TDS groundwater quality objective. Also, please see response to Comment 1 above.

The San Pasqual Basin SNMP documents<sup>4</sup> that salt loads associated with the discharges from the San Pasqual Academy WPCF make up less than 0.06 percent of the total salt load into the San Pasqual Groundwater Basin. Reducing (or even eliminating) the small San Pasqual Academy WPCF salt loads would not discernibly improve groundwater quality for the basin. Changing the TDS discharge specification from 800 to 1,000 mg/L will not cause an actual increase in the amount of TDS discharged from the San Pasqual WPCF as no changes are being proposed to the method of operation or treatment processes at the San Pasqual WPCF.

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<sup>4</sup> From the San Pasqual Valley Groundwater Basin, Salt and Nutrient Management Plan, Table 3-8, total salt load from all identified sources estimated at 26,175,100 lbs/year. Other sources from agriculture, dairies, the Safari Park, septic systems, nursery fertilizer use, evapoconcentration from Irrigation, and “all other crop and landscape fertilizer uses” were listed as accounting for 83% of the total salt load in the San Pasqual Groundwater Basin.