



UPPER SANTA CLARA RIVER

Integrated Regional Water Management

Los Angeles County Flood Control District
Castaic Lake Water Agency
City of Santa Clarita
Santa Clarita Valley Sanitation District
Newhall County Water District
Valencia Water Company
Castaic Lake Water Agency, Santa Clarita
Water Division
San Gabriel and Los Angeles Rivers and
Mountains Conservancy

October 12, 2016

Dr. Ginachi Amah
State of California, Regional Water Quality Control Board
Los Angeles Region
320 W. Fourth Street, Suite 200
Los Angeles, CA 90013

RE: Comments on the Proposed Basin Plan Amendment for the Upper Santa Clara River
Salt and Nutrient Management Plan

Dear Dr. Amah:

Thank you for the opportunity to comment on the proposed Basin Plan Amendment for the Upper Santa Clara River Salt and Nutrient Management Plan (SNMP). The Castaic Lake Water Agency (CLWA) submits this comment letter on behalf of the Upper Santa Clara River Integrated Regional Water Management Group (RWMG). The RWMG has been a part of the process of preparing the SNMP since it began in 2010.

Since the publication of the draft SNMP, we have noted that the level of chloride in the effluent of the two treatment plants in the region has crept upward to the point that the RWMG feels additional information needs to be included in the SNMP. Due to the current historic drought, imported water into the Santa Clara Valley has increased significantly in chloride concentration. This has resulted in the effluent of both the Valencia and Saugus Water Reclamation Plants' (WRPs) chloride concentrations also increasing. In the SNMP, the evaluation of recycled water projects that would use water from the two plants was modeled at a chloride concentration of 125 mg/l. Both plants are currently above that chloride effluent concentration.

The State Water Resource Control Board has provided direction that future uses of recycled water be permitted under the Recycled Water General Order (State Water Resources Control Board, Order WQ 2016-0068-DDW, Water Reclamation Requirements for Recycled Water Use). To beneficially use recycled water from the two plants under the Recycled Water General Order, the treated wastewater must be in compliance with the applicable SNMP. Since the SNMP only considered a maximum chloride concentration of 125 mg/L in recycled water, use of recycled water with average annual chloride concentrations above 125 mg/L may not be considered consistent with the plan. As a result, deliveries of recycled water would have to stop as it is cost prohibitive to provide additional treatment for these uses. As the increases in chloride concentrations are directly correlated to impacts of the drought, it would cause a further impact to water resources during periods when water resources are already strained.

In order to account for this change, the consultant preparing the SNMP was asked to prepare a Sensitivity Analysis for future recycled water projects with average annual chloride levels at 156 mg/l. This was done to reflect the level of chloride that might occur in recycled water supplied by the two WRPs under severe drought conditions. The results of the Sensitivity Analysis (which are attached to this letter) indicate only nominal losses in chloride assimilative capacity of 0.5 and 1.3 mg/l in the affected water management zones, measured against a chloride Basin Objective of 100 mg/l.

On the basis of these findings, we respectfully ask that the Regional Water Board allow the amendment to the SNMP to include the Sensitivity Analysis to avoid the necessity for a subsequent Basin Plan amendment to use recycled water that has chloride concentrations higher than 125 mg/L. The higher recycled water chloride level does not apply to the required compliance with the chloride TMDL limit for discharge to the Upper Santa Clara River (USCR).

CLWA and the RWMG appreciate your careful consideration of this comment. We look forward to working with Regional Water Board staff through the adoption process. For additional clarification and/or comments, please have your staff contact Cathy Z. Hollomon, Water Resources Planner for the Castaic Lake Water Agency at (661) 513-1282.

Sincerely,



Dirk Marks
Water Resources Manager
Castaic Lake Water Agency

Cc: USCR IRWM RWMG

Attachment

CHLORIDE CONCENTRATIONS IN DISCHARGE – CHLORIDE CONCENTRATION SENSITIVITY ANALYSIS

Predictive modeling for the CLWA Recycled Water Master Plan assumed that chloride concentration in the recycled water for irrigation will be 125 mg/L. The 125 mg/L concentration was calculated as follows: The average chloride concentration for State Water Project water since 2000 is 70 mg/L with a median of 73 mg/L. The added increment varies significantly before it reaches the WRPs. Review of the data, indicates that an additional 45 mg/L is reasonable for assuming chloride concentration in the treated effluent discharge through 2013. However, the 45 mg/L increment is lower than that experienced since 2010 (mean=55 mg/L, median=54 mg/L). Taking the two averages results in an anticipated chloride concentration of about 125 mg/L for the anticipated recycled water.

In consideration of future chloride concentration variations and peaks in State Water Project water specifically during dry weather and dry hydrologic conditions, a sensitivity analysis using recycled water at a chloride concentration of 156 mg/L for irrigation application was conducted. The 156 mg/L concentration represents the average chloride concentration in the Valencia Wastewater Treatment Plant during the base period 2001-2011. The average Valencia Plant effluent chloride concentration is higher than the Saugus Plant effluent chloride concentration (average of over the base period). However, it should be noted that chloride concentrations may rise during some periods above those anticipated herein.

Table 9-8 compares the changes in assimilative capacity between current model and sensitivity run as a result of CLWA Recycled Water Master Plan. The concentrations shown in columns [1] and [2] are the resulting average concentrations for the initial model and sensitivity run respectively for Management Zone 3 and Management Zone 4. The assimilative capacity for the initial run and sensitivity run are reported in columns [3] and [4] respectively. Column [5] reports the change in assimilative capacity between the initial run and the sensitivity run for Management Zone 3 and Management Zone 4. As shown, a higher chloride concentration will result in a decline of assimilative capacity from 17.2 mg/L to 15.9 mg/L in Management Zone 3, while in Management Zone 4 results in a decline from 5.2 mg/L to 4.7 mg/L. The supporting tables for the sensitivity analysis are provided in Appendix J of the Salt and Nutrient Management Plan. Tables J-2 through J-4 provide a summary of the anticipated water quality change from the sensitivity analysis for the CLWA Recycled Water Master Plan for Management Zones 3, 4 and 6, respectively. Tables J-5 through J-7 provide a summary of the anticipated water quality change from the sensitivity analysis for the CLWA Recycled Water Master Plan along with “All Projects for Management Zones 3, 4 and 6, respectively. The anticipated water quality changes in the management zones as a result of the increased chloride concentration sensitivity analysis are shown in the spreadsheets. The sensitivity analysis indicates that the decline in assimilative capacity is insignificant at the higher chloride concentration used in the sensitivity analysis for both the single project and “All Projects” as shown in the table below:

Table 9-8 Summary of Sensitivity Analysis

Project	Management Zone	Average Chloride Concentration, mg/L		Assimilative Capacity, mg/L		Changes in Assimilative Capacity, mg/L
		[1]	[2]	[3]	[4]	[5]
		Current Model	Sensitivity Run	Current Model	Sensitivity Run	
CLWA Recycled Water Master Plan with Sensitivity Analysis	Management Zone 3	82.8	84.1	17.2	15.9	-1.3
	Management Zone 4	94.8	95.3	5.2	4.7	-0.5
All Projects with Sensitivity Analysis	Management Zone 3	80.7	82.0	19.3	18	-1.3
	Management Zone 4	88.3	88.8	11.7	11.2	-0.5