State of California
California Regional Water Quality Control Board, Los Angeles Region

RESOLUTION NO. R03-0XX

June 5, 2003

Amendment to the Water Quality Control Plan (Basin Plan) for the Los Angeles Region to Incorporate a Total Maximum Daily Load for Chloride in the Upper Santa Clara River

WHEREAS:

1. The California Regional Water Quality Control Board Los Angeles Region (Regional Board) adopted a revised Basin Plan for the Los Angeles Region on June 13, 1994 which was approved by the State Water Resources Control Board (SWRCB) on November 17, 1994 and by the Office of Administrative Law (OAL) on February 23, 1995.

2. Section 303(d) of the Clean Water Act requires states to identify and to prepare a list of water bodies that do not meet water quality standards and then to establish load and waste load allocations, or a total maximum daily load (TMDL), for each water body that will ensure attainment of water quality standards and then to incorporate those allocations into their water quality control plans. Two reaches of the Santa Clara River near the City of Santa Clarita ("Upper Santa Clara River") were listed on California's 1998 section 303(d) list, due to impairment by chloride, which is present at levels that exceed the water quality objective.

3. Regional Board staff prepared a TMDL analysis and the associated documents to address the chloride impairment of the Upper Santa Clara River. The documents were issued for peer and public review. At a public hearing on October 24, 2002, the Regional Board adopted Resolution No. R02-018 amending the Basin Plan to incorporate a TMDL for chloride in the Upper Santa Clara River.

4. A Basin Plan amendment does not become effective until approved by the SWRCB and until the regulatory provisions are approved by the OAL.

5. On February 19, 2003, the SWRCB adopted SWRCB Resolution 2003-0014 (the "Remand Resolution") finding that the Regional Board staff prepared the documents and followed procedures satisfying environmental documentation requirements in accordance with the California Environmental Quality Act, scientific peer review, and other State laws and regulations to develop a TMDL.

6. In the Remand Resolution, the SWRCB also found that provisions of the amendment as adopted by the Regional Board warranted minor clarification of the language of various provisions. Regional Board Resolution No. R02-018 delegates to the Regional Board Executive Officer authority to make minor, non-substantive corrections to the adopted amendment if needed for clarity or consistency. The Regional Board Executive Officer made the necessary corrections to the amendment.

7. In the Remand Resolution, the SWRCB further found that the amendment as corrected does not adequately resolve issues regarding the appropriateness of the compliance time schedules for implementation tasks. Consequently, the SWRCB remanded to the Regional Board the amendment to the Basin Plan to incorporate a TMDL for chloride for the Upper Santa Clara River.

8. The Remand Resolution directed the Regional Board to consider:

   a. Expansion of the current phased TMDL approach so that County Sanitation Districts of Los Angeles County can complete their implementation tasks by Regional Board-specified dates sequentially and within 13 years of the effective date of the TMDL. If advanced treatment facilities and disposal facilities are found to be necessary for compliance with the TMDL, the Regional Board may consider extending the implementation schedule as necessary to account for events beyond the control of the County Sanitation Districts of Los Angeles County.

   b. Extension of the interim effluent limits beyond the currently proposed 2½ years so that these limits may remain in effect during the planning construction and execution portions of the TMDL's implementation tasks.

   c. Whether provision of a long-term alternate water supply to agricultural diverters of surface water by the County Sanitation Districts of Los Angeles County would be appropriate; and consider re-evaluation of the agricultural water quality objective and the agricultural beneficial use designation if such alternate supply is provided. The re-evaluation of the alternative water supply should consider re-examining and modifying the trigger and compliance schedule for providing the alternative water supply. The Regional Board's re-evaluation of the objective should consider accounting for the beneficial use(s) to be protected, the quality of the imported water supply to the Upper Santa Clara River watershed and the impacts of periods of drought or low rainfall.

   d. An integrated solution, which may be a single comprehensive TMDL, for all water quality pollutants in the Santa Clara River basin listed on the Clean Water Act section 303(d) list.

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9. Regional Board staff considered the State Board recommendations contained in the Remand Resolution and evaluated options for amending the Implementation Plan in consideration of the remand. The evaluations and recommendations of Regional Board staff are provided in a memo to file entitled, "Options Considered for Revision of Remanded Upper Santa Clara River Chloride TMDL" dated March 27, 2003. The results of Regional Board staff evaluation are shown in the redline version of Attachment A.

10. Since adoption of the Upper Santa Clara Chloride TMDL, the Regional Board, County Sanitation Districts of Los Angeles County, and the City of Santa Clarita have been proactively pursuing chloride source reduction. Specifically, the agencies have conducted extensive public outreach and County Sanitation Districts of Los Angeles County has enacted an ordinance banning the installation of self-regenerating water softeners.

11. At a public hearing on June 5, 2003, the Regional Board reconsidered Resolution No. R02-018 in light of the Remand Resolution.

    a. The Regional Board expanded the phased-TMDL approach adopted by the Regional Board in Resolution R02-018 to allow County Sanitation Districts of Los Angles County (CSDLAC) to complete the implementation tasks sequentially and within 13 years. Specifically, the due date of Task 9, (Evaluation of Alternative Water Supplies for Agricultural Beneficial Uses) is extended to 4 years after the effective date of the TMDL. This will allow the results of studies to be conducted under tasks 3, 4 and 5 of the Implementation Plan (Ground/Surface Water Interaction Model, Chloride Source Identification/Reduction Pollution Prevention and Public Outreach Plan, and Evaluation of Appropriate Chloride Threshold for the Protection of Sensitive Agricultural Supply Use and Endangered Species Protection) to be considered before Task 9 is completed. The issues of beneficial uses, quality of imported water and impacts of periods of drought or low rainfall will be analyzed in Tasks 3, 4 and 5, which are due two years after the effective date of the TMDL. Table 7-6.2 was revised to reflect these schedule modifications.

    b. The Regional Board extended the currently proposed 2-1/2 years period for interim effluent limits so that the interim limits may remain in effect during the planning, construction, and execution portions of the TMDL's implementation tasks. Further, the Regional Board evaluated recent discharge data and a revision of the interim limit proposed by CSDLA, but did not find sufficient change in the performance data to justify a revision of the interim limit value. Table 7-6.1 was revised to explicitly state that the interim limit remains in effect during the planning, construction, and execution portion of the TMDL's implementation tasks, a period not to extend beyond 13 years from the effective date of the TMDL. Table 7-6.2, was modified to remove the 2-1/2 year period for interim effluent limits.

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c. The Regional Board considered whether a long-term alternate water supply to agricultural diverters would be appropriate. The Regional Board modified the task for Evaluation of Alternative Water Supplies for Agricultural Beneficial Uses to include this assessment. Task 9 of Table 7-6.2 has been modified to reflect this additional analysis.

d. The Regional Board chose not to incorporate the chloride TMDL into a single comprehensive TMDL addressing all water quality impairments of the Santa Clara River on the 303(d) list. The forthcoming nutrient TMDL for the Santa Clara River has undergone extensive development work and is scheduled to be finalized in 2003. The chloride and forthcoming nitrogen TMDLs address most of the water quality impairments on the 303(d) list for the Santa Clara River.

12. In all other respects, the findings and provisions of Regional Board Resolution R02-018 remain valid and are carried forward. The revisions to the Basin Plan Amendment to incorporate a TMDL for chloride in the Upper Santa Clara River adopted by Resolution R02-018 are shown in attachment A.

13. The revisions proposed to address the Remand Resolution do not alter the environmental analysis, necessity conclusion, and de minimis findings of Regional Board Resolution R02-018.

THEREFORE, be it resolved that pursuant to sections 13240 and 13242 of the Water Code, the Regional Board hereby amends the Basin Plan as follows:

1. Pursuant to sections 13240 and 13242 of the California Water Code, the Regional Board, after considering the entire record, including oral testimony at the hearing, hereby adopts the amendment to Chapter 7 of the Water Quality Control Plan for the Los Angeles Region to incorporate the elements of the Upper Santa Clara River Chloride TMDL as set forth in Attachment A hereto.

2. The Executive Officer is directed to forward copies of the Basin Plan amendment to the State Board in accordance with the requirements of section 13245 of the California Water Code.

3. The Regional Board requests that the State Board approve the Basin Plan amendment in accordance with the requirements of sections 13245 and 13246 of the California Water Code and forward it to OAL and the USEPA.

4. If during its approval process the State Board or OAL determines that minor, non-substantive corrections to the language of the amendment are needed for clarity or

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consistency, the Executive Officer may make such changes, and shall inform the Board of any such changes.

5. The Executive Officer is authorized to sign a Certificate of Fee Exemption.

I, Dennis A. Dickerson, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a resolution adopted by the California Regional Water Quality Control Board, Los Angeles Region, on June 5, 2003.

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Dennis A. Dickerson
Executive Officer

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Attachment A to Resolution No. R02-018

Amendment to the Water Quality Control Plan (Basin Plan) for the Los Angeles Region

To Incorporate a Total Maximum Daily Load for Chloride in the

Upper Santa Clara River

Proposed for adoption by the California Regional Water Quality Control Board, Los Angeles Region on June 5, 2003.

Amendments

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Add:

Chapter 7. Total Maximum Daily Loads (TMDLs)

List of Figures, Tables, and Inserts

Add:

Chapter 7. Total Maximum Daily Loads (TMDLs)

Tables

Chapter 7. Total Maximum Daily Loads (TMDLs)

Upper Santa Clara River TMDL

This TMDL was adopted by:

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The Regional Water Quality Control Board on October 24, 2002.

This TMDL was remanded by:
The State Water Resources Control Board on February 19, 2003
This TMDL was adopted by: The Regional Water Quality Control Board on June 5, 2003
This TMDL was approved by: The State Water Resource Control Board on [Insert Date]
The Office of Administrative Law on [Insert Date].
The U.S. Environmental Protection Agency on [Insert Date].

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Element	Table 7-6.1. Upper Santa Clara River Chloride TMDL: Elements Santa Clara River Chloride
Problem Statement	Elevated chloride concentrations are causing impairments of the water quality objective in Reach 5 (EPA 303(d) list Reach 7) and Reach 6 (EPA 303(d) list Reach 8) of the Santa Clara River. This objective was set to protect all beneficial uses; agricultural beneficial uses have been determined to be most sensitive and are not currently attained at the downstream end of Reach 5 (EPA 303(d) list Reach 7) and Reach 6 (EPA 303(d) list Reach 8) in the Upper Santa Clara River. Irrigation of salt sensitive crops such as avocados and strawberries with water containing elevated levels of chloride results in reduced crop yields. Chloride levels in groundwater are also rising.
Numeric Target *(Interpretation of the numeric water quality objective, used to calculate the load allocations)*	This TMDL has a numeric target of 100 mg/L, measured instantaneously and expressed as a chloride concentration, required to attain the water quality objective and protect agricultural supply beneficial use. These objectives are set forth in Chapter 3 of the Basin Plan. The numeric target for this TMDL pertains to Reaches 5 and 6 of the Santa Clara River and is based on achieving the existing water quality objective of 100 mg/L, measured instantaneously, throughout the impaired reaches. A subsequent Basin Plan amendment will be considered by the Regional Board to adjust the chloride objective based on technical studies about the chloride levels, including levels that are protective of salt sensitive crops, chloride source identification, and the magnitude of assimilative capacity in the upper reaches of the Santa Clara River, provided that County Sanitation Districts of Los Angeles County choose to submit timely and complete studies in accordance with tasks 2 through 6 of Table 7.6.2.
Source Analysis	The principal source of chloride into Reaches 5 and 6 of the Santa Clara River is discharges from the Saugus Water Reclamation Plant (WRP) and Valencia WRP, which are estimated to contribute 70% of the chloride load in Reaches 5 and 6.

Element	Table 7-6.1. Upper Santa Clara River Chloride TMDL: Elements Santa Clara River Chloride
Linkage Analysis	Linkage between chloride sources and the in-stream water quality was established through a statistical analysis of the WRP effluent and water quality data at Blue Cut and Highway 99. The analysis shows that additional assimilative capacity is usually added to Reaches 5 and 6 from groundwater discharge, but the magnitude of the assimilative capacity is not well quantified. Consequently, the Implementation Plan includes a hydrological study (Surface Water/Groundwater Interaction) of the upper reaches of the Santa Clara River.
Waste Load Allocations*(for point sources)*	The numeric target is based on the water quality objective for chloride. The proposed waste load allocations (WLAs) are 100 mg/L for Valencia WRP and 100 mg/L for Saugus WRP. The waste load allocations are expressed as a concentration limit derived from the existing WQO, thereby accommodating future growth. Other NPDES discharges contribute a minor chloride load. The waste load allocation for these point sources is 100 mg/L.
Load Allocation *(for non point sources)*	The source analysis indicates nonpoint sources are not a major source of chloride. The load allocations for these nonpoint sources is 100 mg/L.
Implementation	Refer to Table 7-6.2. The implementation plan proposes that during the period of TMDL implementation, compliance for the WRP effluent will be evaluated in accordance with interim limits based on 2000 ~~-~~ – 2001 performance (*i.e.* effluent chloride concentration at the ~~Valenica~~Valencia and Saugus WRPs). Using the USEPA protocol described in Table 5-1 of the Technical Support Document for Water Quality-based Toxics Control (USEPA, 1991), the average monthly interim limits are 200 mg/L and 187 mg/L, and the maximum daily limits are 218 mg/L and 196mg/L for the Saugus and Valencia WRPs, respectively~~.~~ ~~Notwithstanding anything to the contrary contained in this Basin Plan Amendment, the foregoing monthly and daily interim limits for chloride shall expire 2-1/2 years from the effective date of this Basin Plan Amendment, whereupon the existing water quality objective of 100 mg/L shall continue in effect. At its discretion, the Regional Board can review the~~

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Element	Table 7-6.1. Upper Santa Clara River Chloride TMDL: Elements Santa Clara River Chloride
	~~results from Tasks 2 through 6 after 2 and 1/2 years from the effective date of the TMDL and consider reissuing interim limits.~~
Margin of Safety	An implicit margin of safety is incorporated through conservative model assumptions and statistical analysis.
Seasonal Variations and Critical Conditions	Three critical conditions are identified for this TMDL. The driest six months of the year is the first critical condition for chloride because less surface flow is available to dilute effluent discharge, pumping rates for agricultural purposes are higher, groundwater discharge is less, poorer quality groundwater may be drawn into the aquifer and evapotranspiration effects are greater in warm weather. During drought, the second critical condition, reduced surface flow and increased groundwater extraction continues through several seasons with greater impact on groundwater resource and discharge. The third critical condition is based on the recent instream chloride concentration increases such as those that occurred in 1999, a year of average flow, when 9 of 12 monthly averages exceeded the objective. Data from all three critical conditions were used in the statistical model described. Hydrological modeling will be completed to evaluate whether additional loading will impact the WQO or beneficial uses during non-critical conditions.

Table 7-6.2. Upper Santa Clara River Chloride TMDL: Implementation Implementation Tasks	Completion Date
1.Alternative Water Supply a) Should (1) the monthly average in-river concentration at Blue Cut, the reach boundary, exceed the water quality objective of 100 mg/L, measured for the purposes of this TMDL as a rolling twelve month average, for three months of any 12 months, (2) each agricultural diverter provides records of the diversion dates and amounts to the Regional Board and CSDLAC for at least 2 years after the effective date of the TMDL and (3) each agricultural diverter has provided photographic evidence that diverted water is applied to avocado,	Effective Date of TMDL

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Table 7-6.2. Upper Santa Clara River Chloride TMDL: -Implementation Implementation Tasks	Completion Date
strawberry or other chloride sensitive drop and evidence of a water right to divert, then CSDLA will be responsible for providing an alternative water supply, negotiating the delivery of alternative water by a third party, or providing fiscal remediation to be quantified in negotiations between CSDLAC and the agricultural diverter at the direction of the Regional Water Quality Control Board until such time as the in-river chloride concentrations do not exceed the water quality objective. ~~The discharger identified by the Regional Board Executive Officer will be responsible for providing an alternative water supply that meets the irrigation requirements of impacted agricultural diversions which may be identified during Task III of the implementation plan until such time as the in-river values do not exceed the water quality objective.~~ b) Should the instream concentration exceed 230 mg/L more than two times in a three year period, the discharger identified by the Regional Board Executive Officer shall be required to submit a work plan for an accelerated schedule to reduce chloride discharges within ninety days of a request by the Regional Board Executive Officer. 2.Progress reports will be submitted by CSDLAC and Regional Board staff on a semiannual basis from the effective date of the TMDL for tasks 3,4,5and 6.	
3.Groundwater/Surface Water Interaction Model: County Sanitation Districts of Los Angeles (CSDLAC) will solicit proposals, collect data, develop a model in cooperation with the Regional Board, obtain peer review, and report results. The impact of source waters and reclaimed water plans on achieving the water quality objective and protecting beneficial uses, including impacts on underlying groundwater quality, will also be assessed and specific recommendations for management developed for Regional Board consideration. The purpose of the modeling and sampling effort is to determine the interaction between surface water and groundwater as it may affect the loading of chloride from groundwater and its linkage to surface water quality. 4.Chloride Source Identification/Reduction, Pollution Prevention and Public Outreach Plan: CSDLAC will quantify sources, execute pilot outreach programs, assess pilots, develop and implement source reduction/pollution prevention and outreach program, and report results. Chloride sources from imported water supplies will be assessed. The assessment will include conditions of drought and low rainfall and will analyze the alternatives for reducing this source. 5.Evaluation of Appropriate Chloride Threshold for the Protection of Sensitive Agricultural Supply Use and Endangered Species Protection: CSDLAC will convene a technical advisory committee in cooperation with the Regional Board, review literature, develop methodology for	2 years after Effective Date of TMDL

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Table 7-6.2. Upper Santa Clara River Chloride TMDL: ~~-~~Implementation Implementation Tasks	Completion Date
assessment, execute methodology, and report results. In addition, the study shall determine the impact of drought and low rainfall conditions and the associated increased in imported water concentrations on downstream crops utilizing the results of Task 3. ~~6.Evaluation of Alternative Water Supplies for Agricultural Beneficial Uses: CSDLAC will quantify water needs, identify alternative water supplies, evaluate necessary facilities, and report results~~	
~~7.Reconsideration of Interim Limit for the Chloride TMDL for the Upper Santa Clara River by the Regional Board at Regional Board discretion.~~	~~2.5 years after Effective date of TMDL~~
6~~8~~.Develop Site Specific Objectives (SSO) for Chloride for Sensitive Agriculture: CSDLAC will solicit proposals and develop technical analyses upon which the Regional Board may base a Basin Plan amendment. 7~~9~~.Develop Anti-Degradation Analysis for Revision of Chloride Objective by SSO: CSDLAC will solicit proposals and develop draft anti-degradation analysis for Regional Board consideration.	3 years after Effective Date of TMDL
8~~10~~.Preparation and Consideration of a Basin Plan Amendment (BPA) to revise the chloride objective by the Regional Board.	3.5 years after Effective Date of TMDL
9.Evaluation of Alternative Water Supplies for Agricultural Beneficial Uses: CSDLAC will quantify water needs, identify alternative water supplies, evaluate necessary facilities, and report results, including the long-term application of this remedy	4 years after Effective Date of TMDL
10~~1~~.Reconsideration of the Chloride TMDL for the Upper Santa Clara River by the Regional Board.	4.5 years after Effective Date of TMDL
11~~2~~.Analysis of Feasible Compliance Measures to Meet Load Allocations from Revised TMDL, if necessary. CSDLAC will assess and report on feasible implementation actions to meet the chloride objective in place after Task 10.~~7~~.	5 years after Effective Date of TMDL
12~~3~~. Planning, Design, Construction of Advanced Treatment Facilities: CSDLAC will prepare CEQA documents, obtain permits, acquire easements, design system, and construct. The Regional Board may consider extending the duration of this task as necessary to account for events beyond the control of the CSDLAC.	13 years after Effective Date of TMDL

Table 7-6.2. Upper Santa Clara River Chloride TMDL: Implementation Implementation Tasks	Completion Date
13. The interim effluent limit for chloride shall remain in effect for no more than 13 years after the effective date of the TMDL.	13 years after Effective Date of TMDL.
14. Water Quality Objective for chloride in the Upper Santa Clara River shall be achieved.	13~~2.5~~ years after Effective Date of TMDL or as directed by the Regional Board based on review of Tasks 1-9~~6~~.

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