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

RESOLUTION NO. R02-018

October 24, 2002

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, the California Regional Water Quality Control Board, Los Angeles Region, finds that:

1. The federal Clean Water Act (CWA) requires the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) to develop water quality standards which include beneficial use designations and criteria to protect beneficial uses for each water body found within its region.

   The Regional Board carries out its CWA responsibilities through California's Porter-Cologne Water Quality Control Act and establishes water quality objectives designed to protect beneficial uses contained in the Water Quality Control Plan for the Los Angeles Region (Basin Plan).

3. Section 303(d) of the CWA 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.

4. The Upper Santa Clara River was listed on California's 1998 section 303(d) list, due to impairment for chloride, which is present at levels that exceed the water quality standard and do not protect the most sensitive beneficial uses of the water body.

5. A consent decree between the U.S. Environmental Protection Agency (USEPA), Heal the Bay, Inc. and BayKeeper, Inc. was approved on March 22, 1999. This court order directs the USEPA to complete TMDLs for all the Los Angeles Region's impaired waters within 13 years.

6. The elements of a TMDL are described in 40 CFR 130.2 and 130.7 and section 303(d) of the CWA, as well as in USEPA guidance documents (e.g., USEPA, 1991). A TMDL is defined as "the sum of the individual waste load allocations for point sources and load allocations for nonpoint sources and natural background" (40 CFR 130.2). Regulations further stipulate that TMDLs must be set at "levels necessary to attain and maintain the applicable narrative and numeric water quality standards with seasonal variations and a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations

and water quality" (40 CFR 130.7(c)(1)). The provisions in 40 CFR 130.7 also state that TMDLs shall take into account critical conditions for stream flow, loading and water quality parameters.

7. Upon establishment of TMDLs by the State or USEPA, the State is required to incorporate the TMDLs along with appropriate implementation measures into the State Water Quality Management Plan (40 CFR 130.6(c)(1), 130.7). The Basin Plan and applicable statewide plans serve as the State Water Quality Management Plans governing the watersheds under the jurisdiction of the Regional Board.

8. The Santa Clara River is located in Los Angeles and Ventura Counties, California. The proposed TMDL addresses documented chloride water quality impairments in Reach 5 (EPA 303(d) list Reach 7) and Reach 6 (EPA303(d) list Reach 8) of the Santa Clara River that are located upstream of the United States Geological Survey Blue Cut Gauging Station near the Los Angeles/Ventura County line.

9. The Regional Board's goal in establishing the above-mentioned TMDL is to restore and maintain the agricultural supply (AGR) and groundwater recharge (GWR) beneficial uses of the Santa Clara River as established in the Basin Plan. Literature studies have documented a relationship between agricultural supply water quality and chloride concentration. At a public hearing on December 7, 2000, the Regional Board considered modifying the water quality objective for chloride of 100 milligrams per liter (mg/L) above the Blue Cut Gauging Station in Reach 5 (EPA 303(d) list Reach 7) and Reach 6 (EPA303(d) list Reach 8). The Regional Board maintained the water quality objective of 100 mg/L (measured instantaneously).

10. Interested persons and the public have had reasonable opportunity to participate in review of the amendment to the Basin Plan. Efforts to solicit public review and comment include twelve public workshops held between January 1999 and September 2002; public notification 45 days preceding the Board hearing; and responses from the Regional Board staff to oral and written comments received from the public. Additionally, Regional Board staff distributed a preliminary draft of the Staff Report for the Upper Santa Clara River Chloride TMDL on July 19, 2002 to interested parties. A public meeting was held in Santa Clarita on August 1, 2002, where staff received comments on the preliminary draft and answered questions for interested parties and the public. A final draft of the Upper Santa Clara River Chloride TMDL along with a Notice of Hearing and Notice of Filing were published and circulated 45 days preceding Board action; Regional Board staff responded to oral and written comments received from the public; and the Regional Board held a public hearing on October 24, 2002 to consider adoption of the Upper Santa Clara River Chloride TMDL.

11. The amendment is consistent with the State Antidegradation Policy (State Board Resolution No. 68-16), in that the changes to water quality objectives (i) consider maximum benefits to the people of the state, (ii) will not unreasonably affect present and anticipated beneficial use of waters, and (iii) will not result in water quality less than that prescribed in policies. Likewise, the amendment is consistent with the federal Antidegradation Policy (40 CFR 131.12).

12. The basin planning process has been certified as functionally equivalent to the California Environmental Quality Act (CEQA) requirements for preparing environmental documents

(Public Resources Code, section 21000 et seq.) and as such, the required environmental documentation and CEQA environmental checklist have been prepared.

13. The proposed amendment results in no potential for adverse effect (de minimis finding), either individually or cumulatively, on wildlife.

14. The regulatory action meets the "Necessity" standard of the Administrative Procedures Act, Government Code section 11353, subdivision (b).

15. The Basin Plan amendment incorporating a TMDL for chloride at the Upper Santa Clara River must be submitted for review and approval by the State Water Resources Control Board (State Board), the State Office of Administrative Law (OAL), and the USEPA. The Basin Plan amendment will become effective upon approval by OAL and USEPA. A Notice of Decision will be filed.

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:

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

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 October 24, 2002.

Dennis A. Dickerson
Executive Officer

California Regional Water Quality Control Board

Los Angeles Region

Over 50 Years Serving Coastal Los Angeles and Ventura Counties
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Winston H. Hickox
Secretary for Environmental Protection

Gray Davis
Governor

TO: Stan Martinson, Chief
Division of Water Quality
State Water Resources Control Board

FROM: Dennis A. Dickerson
Executive Officer

DATE: January 16, 2003

SUBJECT: MINOR MODIFICATIONS TO THE BASIN PLAN AMENDMENT INCORPORATING A TOTAL MAXIMUM DAILY LOAD FOR CHLORIDE IN THE UPPER SANTA CLARA RIVER

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) has received comments from your staff concerning issues of clarity in the above-referenced basin planning action. Pursuant to Regional Board Resolution No. R02-018, I make the following non-substantive changes as detailed below to the amendment language for clarity and ask that the State Water Resources Control Board and the Office of Administrative Law incorporate these changes into the administrative record for this basin plan amendment.

1. Page 5. The statement "The following table summarizes the key elements of this TMDL" lacks clarity in that it indicates that additional unspecified regulatory requirements exist in another document. The statement should be deleted.

The statement is deleted to provide clarity.

2. Page 5, Table 7-6.1, Numeric Target. The actual numeric target was omitted from this section.

The numeric target is added to provide clarity.

3. Page 5, Table 7-6.1, Numeric Target. The initialization "CSDLAC" should be spelled out.

CSDLAC is "County Sanitation Districts of Los Angeles County." CSDLAC is spelled out for clarity.

4. Page 8, Table 7-6.2, Implementation Tasks. The following sentence lacks clarity: "a) Should the monthly average in-river concentration at Blue Cut, the reach boundary, exceed the water

quality objective of 100 mg/L, measured as a rolling twelve month average, for three months of any 12 months, the discharger will be responsible for providing an alternative water supply that meets the irrigation requirements of Camulos Ranch and/or other impacted agricultural diversions. . .". Elsewhere in this amendment the 100 mg/L water quality objective is declared an "instantaneous maximum".

4.1 As written, the above implementation language (100 mg/L, as a rolling twelve month average) is not consistent with the objective.

This inconsistency is addressed by inserting the phrase "for the purposes of this TMDL " after the word "measured".

4.2 The amendment indicates that there are two wastewater treatment plants discharging to the river. The above language lacks clarity in that it does not state how the responsible discharger will be identified and when the alternative supply is to be provided.

This statement is changed by adding the phrase "identified by the Regional Board Executive Officer" after the word "discharger".

4.3 The phrase "and/or" allows the discharger the choice of supplying water to the specified ranch or to an alternative ranch. There is no requirement that the affected ranch be supplied with the alternative supply.

The intent of the requirement is clarified by deleting the words "of Camulos Ranch and/or other" so that the phrase reads: " . . . an alternative water supply that meets the irrigation requirements of impacted agricultural diverters . . .".

5. Page 8, Table 7-6.2, Implementation Tasks. The following sentence lacks clarity: "b) should the instream concentration ~ exceed 230 mg/L more than two times in a three year period, the discharger shall be required to submit a work plan within ninety days for an accelerated schedule to reduce chloride discharge."

The amendment is clarified by inserting the phrase "identified by the Regional Board Executive Officer", after the word "discharger" and modifying the final phrase to read "shall be required to submit a work plan for an accelerated schedule to reduce chloride discharge within ninety days of a request by the Regional Board Executive Officer." The above changes are made to the amendment for clarity.

6. Page 8, Table 7-6.2, Implementation Tasks. The following sentence lacks clarity: "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 purpose or subject of the proposal, data collection, etc. is not given. We suggest that a sentence is added regarding the model's purpose.

The following sentence is added for clarity: "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."

7. Page 8, Table 7-6.2, Implementation Tasks, Task 3. The following sentence lacks clarity: "The impact of source waters and reclaimed water plans on the WQO and beneficial uses…"

The sentence has been replaced with the following sentence. "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 chloride management in the watershed will be developed for Regional Board consideration."

The changes discussed in this memorandum appear in the revised basin plan amendment provided in Attachment A hereto. These changes are not substantive and are included to provide clarity.

If you have any questions or require additional information, please call me at (213) 576-6605

Attachments: Attachment A to Resolution R02-018

cc: Regional Board Members
Joanne Cox, State Water Resources Control Board
Michael Lauffer, Office of Chief Counsel, State Water Resources Control Board

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 October 24, 2002.

Amendments

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List of Figures, Tables, and Inserts
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Chapter 7. Total Maximum Daily Loads (TMDLs)
Tables
7-6 Upper Santa Clara River Chloride TMDL
7-6.1. Upper Santa Clara River Chloride TMDL: Elements
7-6.2. Upper Santa Clara River Chloride TMDL: Implementation Schedule

Chapter 7. Total Maximum Daily Loads (TMDLs) Summaries
Upper Santa Clara River TMDL

This TMDL was adopted by:

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

This TMDL was approved by:
The State Water Resources Control Board on [Insert Date].
The Office of Administrative Law on [Insert Date].
The U.S. Environmental Protection Agency on [Insert Date].

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.
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

Element	Table 7-6.1. Upper Santa Clara River Chloride TMDL: Elements Santa Clara River Chloride
	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 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 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

Element	Table 7-6.1. Upper Santa Clara River Chloride TMDL: Elements Santa Clara River Chloride
	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 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, 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 diverters, 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, 5 and 6.	Effective Date of TMDL
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 chloride management in the watershed 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	2 years after Effective Date of TMDL

Table 7-6.2. Upper Santa Clara River Chloride TMDL: Implementation Implementation Tasks	Completion Date
reduction/pollution prevention and outreach program, and report results. 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 assessment, execute methodology, and report results. 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
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. 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
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
11.Reconsideration of the Chloride TMDL for the Upper Santa Clara River by the Regional Board.	4 years after Effective Date of TMDL
12.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 7.	5 years after Effective Date of TMDL
13. Planning, Design, Construction of Advanced Treatment Facilities: CSDLAC will prepare CEQA documents, obtain permits, acquire easements, design system, and construct.	13 years after Effective Date of TMDL

Table 7-6.2. Upper Santa Clara River Chloride TMDL: Implementation Implementation Tasks	Completion Date
14. Water Quality Objective for chloride in the Upper Santa Clara River shall be achieved.	2.5 years after Effective Date of TMDL or as directed by the Regional Board based on review of Tasks 1-6.