UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

DEC 0 2 2008

Ms. Dorothy Rice
Executive Director
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100

Dear Ms. Rice:

Thank you for submitting the total maximum daily loads (TMDLs) to address boron, chloride, sulfate and total dissolved solids in ten waterbodies in the Los Angeles region. The submittal was dated June 17, 2008, and supplemental information was provided on November 17, 2008. California adopted these TMDLs to address the following waterbody-pollutant combinations identified on the State's 2006 Clean Water Act Section 303(d) list:

- Calleguas Creek Reach 3 (at Potrero Rd) - chloride, TDS
- Calleguas Creek Reach 6 (Arroyo Las Posas) - chloride, sulfates, TDS
- Calleguas Creek Reach 7 (Arroyo Simi) - boron, chloride, sulfates, TDS
- Calleguas Creek Reach 8 (Tapo Canyon Reach 1) - boron, chloride, sulfates, TDS
- Calleguas Creek Reach 9A (Conejo Creek) - sulfates, TDS
- Calleguas Creek Reach 9B (Conejo Creek mainstem) - chloride, sulfates, TDS
- Calleguas Creek Reach 10 (Conejo Creek, Hill Canyon) - chloride, sulfates, TDS
- Calleguas Creek Reach 11 (Arroyo Santa Rosa) - sulfates, TDS
- Calleguas Creek Reach 12 (Conejo Creek, North Fork) - sulfates, TDS
- Calleguas Creek Reach 13 (Conejo Creek, South Fork) - chloride, sulfates, TDS

Based on EPA's review of the TMDL submittal, I have concluded the TMDLs adequately address the pollutants of concern, and will, upon implementation, result in attainment of applicable water quality standards. The TMDLs include allocations as needed, take into consideration seasonal variations and critical conditions, and provide an adequate margin of safety. The State provided adequate opportunities for the public to review and comment on the TMDLs. All required elements are adequately addressed; therefore, the TMDLs are hereby approved pursuant to Clean Water Act Section 303(d)(2).

The State's submittal also contains a detailed plan for implementing the TMDLs. Current federal regulations do not define TMDLs as containing implementation plans; therefore, EPA is not taking action on the implementation plan provided with the TMDLs. However, EPA generally concurs with the State's proposed implementation approaches.

The enclosed review discusses the basis for this approval decision. We appreciate the State and Regional Boards' work to complete and adopt these TMDLs and look forward to our continuing partnership in TMDL development. If you have questions concerning this approval, please call me at (415) 972-3572 or Peter Kozelka at (415) 972-3448.

Sincerely yours,

12/2/08

for Alexis Strauss,
Director, Water Division

Enclosure

cc: Tracy Egoscue, Los Angeles RWQCB

TMDL Review Checklist

State: **California**

Waterbodies: **Calleguas Creek watershed**

Pollutant(s): **boron, chloride, sulfates, total dissolved solids (TDS)**

Date of Initial Submission: **June 17, 2008**

Date Received By EPA: **June 24, 2008**

Dates of Supplemental Submission(s): **November 17, 2008**

EPA Reviewers: **Peter Kozelka**

1. Submittal Letter:
State submittal letter indicates final TMDL(s) for specific water(s)/pollutant(s) were adopted by state and submitted to EPA for approval under 303(d). Acknowledge if any supplemental material was provided and receipt date.

Submittal letter from Elizabeth Haven to Alexis Strauss, dated June 17, 2008. State process completed November 6, 2008.
The Los Angeles Regional Water Quality Control Board (RWQCB) adopted the trash TMDLs for twelve waterbodies within the region on October 4, 2007 (RWQCB Basin Plan Amendment Resolution # R4-2007-016, including Attachment A). The State Water Resources Control Board (SWRCB) approved these TMDLs on May 20, 2008 (SWRCB Resolution # 2008-0033). The State Office of Administrative Law approved these TMDLs on November 6, 2008 (OAL File #2008-0925-02 SR). The submittal addresses impairments due to boron, chloride, sulfates and TDS in Calleguas Creek and its tributaries, as identified on the State's 2002 and 2006 CWA Section 303(d) list. Supplemental information was provided to EPA on November 17, 2008.

The submittal also contained the RWQCB TMDL staff report (Sept. 18, 2007), the Calleguas Creek Watershed Technical Report (June 2007) and other relevant documents.

EPA finds the State's analysis concerning water body impairment associated with elevated boron, chloride, sulfates and total dissolved solids (TDS) in the Calleguas Creek watershed is reasonable and consistent with the requirements of Section 303(d).

2. TMDLs Included:
The submittal clearly identifies the water segments and pollutants or stressors for which TMDLs were developed. The submittal should include the water segment identifier (e.g., NHD code) for each segment addressed. The submittal should clearly identify the TMDLs adopted for currently 303(d) listed waterbody-pollutant combinations. It should also clarify if TMDLs were adopted for new impairment findings (by waterbody-pollutant combinations) that do not exist on the current 303(d list. If appropriate, the submittal should describe any assessment decisions that may have resulted in non-impairment status for water/pollutant combinations that exist on State's most current 303(d) list.

(Basin Plan Amendment, Attachment A, pp. 2, Technical Report, pp. 13-15.)

The submittal addresses the following waterbody-pollutant listings on State's 2002 and 2006 303d list.

- Calleguas Creek Reach 3 = Potrero Rd. - chloride, TDS
- Calleguas Creek Reach 6 = Arroyo Las Posas - chloride, sulfates, TDS
- Calleguas Creek Reach 7 = Arroyo Simi - boron, chloride, sulfates, TDS
- Calleguas Creek Reach 8 = Tapo Canyon R1 - boron, chloride, sulfates, TDS
- Calleguas Creek Reach 9A = Conejo Creek - sulfates, TDS
- Calleguas Creek Reach 9B = Conejo Creek mainstem - chloride, sulfates, TDS
- Calleguas Creek Reach 10 = Conejo Creek, Hill Canyon - chloride, sulfates, TDS
- Calleguas Creek Reach 11 = Arroyo Santa Rosa - sulfates, TDS
- Calleguas Creek Reach 12 = Conejo Creek, North Fork - sulfates, TDS
- Calleguas Creek Reach 13 = Conejo Creek, South Fork – chloride, sulfates, TDS

These TMDLs address waters identified in Analytical Units 3 & 4 of the consent decree (*Heal the Bay v. Browner*, 1999)

The State reasonably concluded that implementation of the TMDLs, load allocations, and waste load allocations will result in elimination of the adverse effects associated with elevated concentrations of boron, chloride, sulfates and TDS and will bring about attainment of the applicable standards for these pollutants in water.

3. Water Quality Standards Attainment:
TMDL and associated allocations are set at levels adequate to result in attainment of applicable water quality standards.

(Basin Plan Amendment, pp. 2-3.)
These TMDLs are designed to implement the existing water quality objectives for boron, chloride, sulfates and TDS that apply in Calleguas Creek and its tributaries. The Regional Board's goal is to protect the agriculture irrigation beneficial uses in surface waters and to achieve numeric and narrative water quality objectives related to those uses.

The State's approach is a reasonable and environmentally protective approach for applying applicable numeric criteria to derive numeric targets. The State reasonably concluded that attainment of the numeric targets and associated TMDLs, wasteload allocations, and load allocations will result in attainment of the applicable narrative water quality objectives.

4. Numeric Target(s):
Submission describes applicable water quality standards, including beneficial uses, applicable numeric and/or narrative criteria. Numeric water quality target(s) for TMDL identified, and adequate basis for target(s) as interpretation of water quality standards is provided.

(Basin Plan Amendment, pp. 2-3.)
The submittal identifies numeric targets for boron, chloride, sulfates and TDS in the Calleguas watershed and are applicable upstream of Potrero Road. Site-specific objectives have not been determined for the Creek below Potrero Road because it is tidally influenced. (BPA Appdx.A, p. 2)

The State's approach is a reasonable and environmentally protective approach for applying applicable numeric criteria to derive numeric targets.

5. Source Analysis:
Point, non-point, and background sources of pollutants of concern are described, including the magnitude and location of sources. Submittal demonstrates all significant sources have been considered. Point, nonpoint, and background sources of pollutants of concern are described, including the magnitude and location of sources. The submittal demonstrates all significant sources have been considered.

(Basin Plan Amendment, Attachment A. p. 3.)
The TMDL submittal summarizes several sources of salts in the watershed: water supply, atmospheric deposition, pesticides, fertilizers and indirect sources such as water softeners, cleansers, food, etc. Water supply consists of water imported via State Water project and deep aquifer groundwater pumping. The indirect sources, such as water softeners, contribute via publicly owned treatment works discharges into the creek. The submittal recognizes that salts may become transported to surface waters or may percolate into shallow groundwater and become trapped in the watershed soils. The only export of salts from the watershed is surface water transport to the ocean. Imported water supply is believed to be the greatest source of salts in the watershed. (Technical Report, p. 57)

The submittal adequately considered all significant sources of salts.

6. Loading Capacity Linkage Analysis:
Submittal describes relationship between numeric target(s) and identified pollutant sources. Submittal clearly identifies loading capacity. For each pollutant, describes analytical basis for conclusion that sum of allocations and margin of safety does not exceed the loading capacity of the receiving water(s).

(Basin Plan Amendment, p. 4. Technical Report pp.59-62.)
The State used water quality modeling to establish the linkage between sources of salts and surface water quality. This mass balance-based model used existing chloride data and was modified to address the other salts. The model was developed to quantify the various salt sources, the influence of wet weather which appears to dilute surface water salt concentrations and the removal of salts (groundwater interactions). One goal of the modeling system is to prevent additional build-up of salts in any medium in the watershed.

7. TMDL and Allocations:
TMDL—Submittal identifies the total allowable load, which is set equal to or less than the loading capacity. TMDL is expressed in terms of mass-based, concentration-based or other equivalent approaches that are consistent with federal requirements. If TMDL has seasonal features then please describe. TMDLs and allocations should be expressed in terms of daily time steps. If the TMDL and/or allocations are also expressed in terms other than mass loads per day, the submittal explains why it is reasonable and appropriate to express the TMDL in those terms.

(Basin Plan Amendment, Attachment A pg. 3, TMDL Technical Report pg. 64-65)
The submittal defines the loading capacity (or the total allowable load allocated for all point and nonpoint sources) is equivalent to the product of stream flow rate and the pollutant-specific water quality objective. The TMDLs apply only during the dry weather when flows are below the 86th percentile flow in the stream. The submittal acknowledges that dry season stream flows are often dominated by water treatment plant discharges.

Allocations—Submittal identifies appropriate waste load allocations for all point sources and load allocations for all non-point sources. Allocations are expressed in terms of mass-based, concentration-based or other equivalent approaches, the submittal explains why it is reasonable and appropriate to express in those terms. If point sources are present, submittal identifies existing NPDES permits by name and number. More discussion of point sources in watershed. If no point sources are present, waste load allocations are zero. More discussion of non-point sources. If no non-point sources are present, then load allocations are zero.

Wasteload Allocations
(Basin Plan Amendment, Attachment A pp. 3, 6 and 7 and Final TMDL Staff Report pg. 12-16)
The submittal provides mass-based wasteload allocations (WLAs) for most point sources. The submittal

identifies the existing responsible parties for WLAs. The submittal provides an adjustment factor that is used to link publicly owned treatment works (POTW) allocations to required load reductions in background loads. The adjustment factor allows for additional POTW loading only when the water quality objectives are met in the receiving waters. The submittal identifies the specific conditions during which the adjustment factors apply to the assigned POTWs.

WLAs are defined for five wastewater treatment facilities operating in the watershed, as identified by the following existing NPDES permits:

Camarillo WRP Permit NPDES No. CAS0053597
Camrosa WRF Permit NPDES No. CAS0059501
Hill Canyon WWTP Permit NPDES No. CAS0056294
Moorpark WWTP Permit NPDES No. CAS0063274
Simi Valley WQCP Permit NPDES CAS0055221

Stormwater dischargers were assigned only dry weather wasteload allocations and are identified by these MS4 permits: County of Ventura NPDES No. CAS0040002, general statewide industrial NPDES permit No. CAS000001, and general statewide construction NPDES permit No. CAS000002.

Other individual NPDES dischargers, including but not limited to permitted groundwater cleanup projects, are assigned concentration-based WLAs.

Load Allocations
(Basin Plan Amendment, Attachment A pg. 9, TMDL Staff Report, pp. 16-17)
The submittal describes dry weather load allocations assigned as a group allocation to irrigated agricultural discharges. Load allocations apply in the receiving water at the base of each subwatershed.

The submittal also describes that population growth is expected within the watershed; if increased salts occur through additional water imports, then a larger volume of salts will be exported out to maintain the balance. (BPA Attachment A, p. 10)

EPA concludes these TMDLs include the loading capacity, wasteload and load allocations that are consistent with the provisions of the CWA and federal regulations.

8. Margin of Safety:
Submission describes explicit and/or implicit margin of safety for each pollutant.

(Basin Plan Amendment, Attachment A pg. 9-10 and Final TMDL Staff Report p. 20)
The submittal provides for an explicit margin of safety (10%) that is specifically applied to adjustment factors for the POTWs to account for uncertainties in the analysis.

EPA considers this an appropriate approach for dealing with uncertainty concerning the relationship between TMDL, allocations, and water quality conditions.

9. Seasonal Variations and Critical Conditions:
Submission describes method for accounting for seasonal variations and critical conditions in the TMDL(s).

(Basin Plan Amendment, Attachment A pg. 11, Technical Report pp. 64-65)
The submittal describes the critical condition for salts is during dry weather periods. Dry weather, defined as days with flows lower than the 86th percentile flow and no measurable precipitation, is a critical condition regardless of the dry weather flows in the stream. During wet weather, stormwater flows dilute the salt discharges and receiving water concentrations are significantly lower than numeric

water quality objectives.

The State's analysis adequately accounts for seasonal variations and critical conditions.

10. Public Participation:
Submission documents provision of public notice and public comment opportunity; and explains how public comments were considered in the final TMDL(s).

The Los Angeles Regional Water Board adequately held public meetings and responded to written and oral comments from the public. The Los Angeles Regional Water Board's public hearings were held on October 4, 2007 for the purpose of receiving testimony on the proposed basin plan amendment. California SWRCB also held a public hearing on May 20, 2008 for approval of these TMDLs. Stakeholder comments were addressed in these workshops and hearings.

The State demonstrated that it provided sufficient opportunities for public comments and considered public comments in its final decision by providing reasonably detailed responsiveness summaries.

11. Technical Analysis:
Submission provides appropriate level of technical analysis supporting TMDL elements.

(Basin Plan Amendment, Attachment A pg. 5, Final TMDL Staff Report pp. 17-21, 6-7.)
The technical analysis supporting the TMDLs included considerations of available water quality data and detailed descriptions of watershed sub-basins and sources. It utilized a reasonable methodology for calculating salt input and removal rates and their relationship to point sources.

The TMDL analysis provides an acceptable review and summary of available information about salts in the watershed, and a sufficiently clear discussion of methods to support the TMDL elements.

12. Reasonable Assurances:
If waste load allocations are made less stringent based on inclusion of load allocations that reflect nonpoint source reductions, submittal describes how there are reasonable assurances necessary nonpoint source reductions will occur.

(Technical Report, pp. 68-69.)

Reductions in background loads of salts in groundwater are assigned in these TMDL to meet the loading capacity in the stream. An adjustment factor is used to link POTW allocations to the required reductions in background loads. This adjustment factor is contingent upon ability of various point sources to remove salts from background sources. Briefly, if the background load reductions are not achieved, then POTWs will be responsible for providing additional load reductions in effluent discharges to achieve water quality standards in Calleguas Creek.

13. Other:
Table for clarifying submittal for TMDL waterbody-combinations for corresponding 303(d) listing, new impairment findings or non-impairment findings, or other information.

TMDLs for waterbody-pollutant listings on the State's 2002 and 2006 303d list. The submittal clarifies these listings were consistent for both the 2002 and 2006 list.

Calleguas Creek R3 = Potrero Rd. - chloride, TDS
Calleguas Creek R6 = Arroyo Las Posas - chloride, sulfates, TDS
Calleguas Creek R7 = Arroyo Simi - boron, chloride, sulfates, TDS
Calleguas Creek R8 = Tapo Cyn R1 - boron, chloride, sulfates, TDS
Calleguas Creek R9A = Conejo Creek - sulfates, TDS

Calleguas Creek R9B = Conejo Creek mainstem - chloride, sulfates, TDS
Calleguas Creek R10 = Conejo Creek, Hill Canyon - chloride, sulfates, TDS
Calleguas Creek R11 = Arroyo Santa Rosa - sulfates, TDS
Calleguas Creek R12 = Conejo Creek, North Fork - sulfates, TDS
Calleguas Creek R13 = Conejo Creek, South Fork – chloride, sulfates, TDS

This approval applies to each waterbody-pollutant combination identified above. Calleguas Creek Reach 6 includes Fox/Barranca Channel.

New impairment finding:
Not applicable.

Non-impairment finding:
The submittal concluded one segment of Calleaguas Creek (below Laguna Road) was not impaired due to boron, sulfates, TDS. This corresponds to Calleguas Creek Reach 4 (Revelon Slough) which is identified on the State's 2006 303(d) list.