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Edmund G. Brown Jr.
Governor

August 29, 2011

TO: ATTACHED MAILING LIST

PROPOSED SCOPE OF WORK AND DEVELOPMENT OF A SALT AND NUTRIENT MANAGEMENT PLAN FOR THE ANTELOPE VALLEY, ANTELOPE VALLEY REGIONAL WATER MANAGEMENT GROUP, LOS ANGELES AND KERN COUNTIES

Enclosed is draft Scope of Work for the above referenced subject.

The California Regional Water Quality Control Board requests that you review the enclosed documents and provide us with your written comments no later than **September 23, 2011**. Comments received after that date may not be given full consideration in preparation of the item to be presented to the Regional Board for consideration at the meeting scheduled for October 12, 2011.

If you need further information regarding this packet, please contact our office.

Sincerely,

Rebecca Phillips
Office Technician

Enclosures: Information Sheet
Comment form

cc: Mailing List



Notice

Submittal of Written Material for Regional Board Consideration

In order to ensure that the State of California Lahontan Regional Water Quality Control Board has the opportunity to fully study and consider written material, it is necessary to submit it at least ten (10) days before the Regional Board Meeting. Pursuant to Title 23 of the California Code of Regulations, Section 648.2, the Regional Board may refuse to admit written testimony into evidence unless the proponent can demonstrate why he or she was unable to submit the material on time or that compliance with the deadline would otherwise create a hardship. If any other party demonstrates prejudice resulting from admission of the written testimony, the Regional Board may refuse to admit it.

COMPLETE FORM AND RETURN

To: CA Regional Water Quality Control Board, Lahontan Region
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ATTN: Jan Zimmerman

Comments on Amended Waste Discharge Requirements for WASTE MANAGEMENT OF CALIFORNIA, INC. LANCASTER LANDFILL AND RECYCLING CENTER AND GROUNDWATER TREATMENT DISCHARGE

_____ We concur with proposed requirements

_____ We concur; comments attached

_____ We do not concur; comments attached

_____(Sign)

_____(Type or print name)

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**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

**MEETING OF OCTOBER 12, 2011
VICTORVILLE, CALIFORNIA**

ITEM: [TBA]

**SUBJECT: PROPOSED SCOPE OF WORK AND DEVELOPMENT OF A
SALT AND NUTRIENT MANAGEMENT PLAN FOR THE
ANTELOPE VALLEY, ANTELOPE VALLEY REGIONAL WATER
MANAGEMENT GROUP, LOS ANGELES AND KERN COUNTIES**

ISSUE: To provide the Water Board an opportunity to provide input on the content and organization of a regional Salt and Nutrient Management Plan (SMP) to manage salts and nutrients within the Antelope Valley basin. The final SMP will likely be adopted as a Basin Plan amendment at a later date.

DISCUSSION: Since May 2006, member agencies of the Antelope Valley Regional Water Management Group (Group) have met and developed an Integrated Regional Water Management Plan (IRWMP). The purpose of the IRWMP is to provide a watershed-based approach for addressing water supply, water quality, flood control, land use, and environmental resource management within the Antelope Valley basin. All member agencies separately adopted the final IRWMP during public meetings held between December 2007 and January 2008.

On February 3, 2009, the State Board adopted a Recycled Water Policy that establishes goals to manage a sustainable water supply through increased use of recycled water, enhanced stormwater management, and improved water conservation efforts. One of the key elements of the policy is the development of a SMP for every groundwater basin within California by 2014. The purpose of the SMP is to protect groundwater from accumulating salts and nutrients at concentrations that would degrade the quality of groundwater and limit its beneficial uses. The development of the SMP is to be driven, controlled, and funded by local stakeholders, like the Antelope Valley Group, with participation by the Regional Water Boards. Ultimately, the Regional Water Boards will incorporate the various SMPs into their Basin Plans. We envision this process to occur through the adoption of a Basin Plan amendment.

In the Lahontan Region, the Antelope Valley Group has made the most progress towards developing a SMP and intends to incorporate the plan as an appendix to the IRWMP. The objectives

of the Antelope Valley SMP is to: 1) gather available water quality data to evaluate the quality of surface water and groundwater at the watershed and sub-basin level within the basin; 2) identify all potential source waters and quantify to the extent feasible for salinity and nutrients, both natural and manmade; 3) determine assimilative capacity of the groundwater based on site-specific characteristics and source water quality for individual sub-basins; 4) develop a water quality monitoring and reporting plan that is designed to evaluate and track the long-term impacts to groundwater quality resulting from past, current, future, and transitioning land uses; 5) identify and recommend most appropriate methods and best management practices for reducing and/or maintaining salt and nutrient loadings; and 6) demonstrate that implementation of the SMP will satisfy the requirements of the State Antidegradation Policy, Resolution No. 68-16 and the Recycled Water Policy. The scope of work for the Antelope Valley basin SMP incorporates draft guidance provided by the State Board, as well incorporates comments from Water Board staff.

Water Board staff has solicited comments from the Group and interested parties regarding this agenda item.

RECOMMENDATION:

This is an informational item only. Water Board may provide direction and input on the proposed scope of work and content of the regional SMP for the Antelope Valley basin.

Enclosures:

1. Proposed Scope of Work (Antelope Valley Group)
2. Timeline of Tasks
3. Suggested Elements of a SMP (State Board Draft Guidance)

ENCLOSURE 1

DRAFT SCOPE OF WORK
Salt/Nutrient Management Plan
Prepared by Antelope Valley IRWMP Group

PURPOSE

To develop a regional Salt/Nutrient Management Plan (SMP) for the Antelope Valley to manage salts and nutrients (and possibly other constituents of concern) from all sources within the basin to maintain water quality objectives and support beneficial uses. The intention is to involve all surface water and groundwater users and wastewater dischargers in the Antelope Valley basin to participate in efforts to protect these waters from accumulating concentrations of salt and nutrients that would degrade the quality of water supplies in the Antelope Valley to the extent that it may limit their use.

BACKGROUND

On February 3, 2009, the State Water Resources Control Board (SWRCB) adopted a Recycled Water Policy (Policy) that addresses the concern for protecting the quality of California's groundwater basins. In response to this Policy, Los Angeles County Waterworks Districts and Sanitation Districts of Los Angeles County have, with support of the Lahontan Regional Water Quality Control Board (Lahontan Water Board) staff, initiated efforts to organize a group to develop a regional SMP for the Antelope Valley.

Activities, such as irrigation using imported water, groundwater or recycled water can potentially add salts, typically measured as total dissolved solids (TDS), and nutrients to groundwater basins. Other sources of salts/nutrients can include natural soil conditions, discharges of waste, soil amendments and water supply augmentation using surface water or recycled water.

The SMP shall be completed and proposed to the Lahontan Water Board by May 14, 2014, unless the Lahontan Water Board finds that the stakeholders are making substantial progress toward completion of the plan. In no case shall the period for the completion of the plan exceed seven years.

GOALS

One goal is to address salt/nutrient loading in the region through the development of a management plan by the collaborative stakeholder process rather than the regional regulating agency imposing requirements on individual water projects. The process shall involve participation by Lahontan Water Board staff and be in compliance with California Environmental Quality Act (CEQA) regulations. The involvement of local agencies in a SMP may lead to more cost-effective means of protecting and enhancing groundwater quality, quantity, and availability.

Another goal is to assess impacts resulting from all activities with potential long-term basin-wide effects on groundwater quality, such as surface water, groundwater,

imported water, and recycled water irrigation projects and groundwater recharge projects, as well as other salt/nutrient contributing activities through regional groundwater monitoring.

The design and implementation of a regional groundwater monitoring program must involve all stakeholders, including, but not limited to, water importers, purveyors, stormwater management agencies, wastewater agencies, Lahontan Water Board, and other significant salinity/nutrient contributors, in addition to the recycled water stakeholders.

The completion of the SMP may lead to the potential for enhanced partnering opportunities and potential project funding between water and wastewater agencies, or other stakeholders, for developing and protecting water supplies.

PLAN REQUIREMENTS

Data Collection and Assessment

1. Stakeholder Participation
 - a. Outreach to the Lahontan Water Board staff and the stakeholders.
 - b. Convene stakeholder meetings.
 - c. Receive and review stakeholder input.
2. Determine SMP Area Boundaries
 - a. The current scope includes the Lancaster, Buttes, and Pearland sub-basins. Additional sub-basins may be included in the scope depending on the willingness of users, purveyors, wastewater agencies, regulators, significant salt/nutrient contributors, and other stakeholders to participate and provide data.
 - b. Within the determined scope, identify surface water, groundwater, and sub-basin locations, aquifers, and wells.
3. Understand Current and Future Basin Uses
 - a. Create a database of current land uses contributing to potential salt/nutrient impacts.
 - b. Identify existing surface/groundwater data collection efforts throughout the region.
 - c. Create a map with land uses, including: irrigation sites; wastewater disposal sites; large water recycling sites; groundwater augmentation sites; and other potential sources of salinity/nutrient contributions to the groundwater supply.
4. Create Groundwater Quality Database for Sub-basin
 - a. Determine groundwater characteristics, recharge areas, and background water quality.

- b. Compile data and determine existing water quality, defined as the average concentration of salts/nutrients and other constituents of concern measured at each well.

5. Data Analysis

- a. Conduct a regional analysis of available groundwater quality databases to determine whether sufficient data and ongoing monitoring is available for the sub-basin.
- b. If necessary, chose an appropriate model for data analysis and run the model. Calibrate the model used to analyze the data (including debugging of the chosen model) and verify the input data. Compare various model runs to observed values for each basin, as applicable.

Characterization of Basin

6. Salt and Nutrient Characterization

- a. Identify the current and projected sources and loadings of salts/nutrients.
- b. Determine the basin's assimilative capacity of salts/nutrients.
- c. Determine the fate and transport of salt/nutrients.
- d. Include other constituents of concern as necessary and appropriate.
- e. Identify potential salt sinks
- f. Develop future planning scenarios for future users/uses that would include expected requests for projected recycled water production, reuse, discharges to Antelope Valley basins, and expected quality for each wastewater treatment facility (existing and projected). Planning scenarios could include appropriate planning spans, including, for example, a 5-year plan, 10-year plan, 25-year plan and a 50-year projected plan, or some combination as determined by the stakeholders.
- g. Prepare a draft report to the stakeholders to present the data collected during basin characterization and the results for assimilative capacity (by sub-basin).

Monitoring

7. Develop a Monitoring Plan

- a. Define the scale of the monitoring plan component, dependent on site-specific conditions.
- b. Monitor for salts, nutrients, and other constituents of concern that potentially could adversely affect the water quality of the basin.
- c. Determine appropriate monitoring by targeting basin water quality at existing water supply and monitoring wells and areas proximate to large water recycling projects, and groundwater recharge projects.
- d. The monitoring plan should be designed to evaluate the long-term impacts to groundwater quality resulting from current and future land uses.
- e. Identify stakeholders responsible for conducting, compiling, and reporting the monitoring data.

8. Monitoring Implementation

- a. Monitor each location at a determined frequency to assess impacts and take into account changes in all significant sources.
- b. Establish criteria for concentrations above ambient conditions based on statistical evaluation of data to trigger additional investigations.
- c. Conduct monitoring of constituents of concern, as recommended by the "blue-ribbon" Advisory Panel and approved by the SWRCB.
- d. Report data to the Lahontan Water Board staff every 3 years.

Implementation Measures

9. Manage Salt/Nutrient Loadings on a Sustainable Basis

- a. Identify potential methods and best management practices to reduce and/or maintain salt and nutrient loadings—such as disposal and/or reducing methods.
- b. Recommend most appropriate methods and best management practices for reducing and/or maintaining salt and nutrient loadings.

10. Water Recycling and Stormwater Use/Recharge

- a. Identify goals and objectives.

Antidegradation

11. Analysis

- a. Demonstrate that the projects included in the SMP will satisfy the requirements of the State Antidegradation Policy (Resolution No. 68-16).

Proposed Schedule

Task	Description	Estimated Completion Date
1	Outreach to RWQCB and Stakeholders	July 2009
2	Convene Initial S/N Management Plan Meeting	August 2009
3	Data Collection	July 2010
4	Data Assessment	October 2010
5	Initial Characterization of Basin	January 2011
6	Develop Monitoring Plan	July 2011
7	Identify Implementation Measures	November 2011
8	Antidegradation Analysis	January 2012
9	Draft S/N Management Plan	July 2012
10	Completion of Draft CEQA Documents	January 2013
11	Final S/N Management Plan Submitted to RWQCB	October 2013

ENCLOSURE 2

**TIMELINE FOR TASKS ASSOCIATED WITH THE DEVELOPMENT OF
A SALT AND NUTRIENT MANAGEMENT PLAN FOR THE ANTELOPE VALLEY**

**COMPLETED
TASKS:**

May 2006	Memorandum of Understanding establishing member agencies of the Antelope Valley Regional Water Management Group (Group)
December 2007/ January 2008	Antelope Valley Integrated Regional Water Management Plan (IRWMP) adopted by member agencies of the Group
February 2009	Recycled Water Policy Adopted by State Water Resources Control Board (State Board)
February 2011	CA Department of Water Resources (DWR) awarded a grant of \$471,919 to the Group for the purpose of updating its IRWMP. Of the total grant amount, \$27,707 (combined with a match amount of \$270,500) will be used to complete a draft Antelope Valley Salt and Nutrient Management Plan (SMP) by July 2012. (Regional Board staff coordinated with DWR staff on review of the grant application prior to the award)

**SCHEDULE FOR
UPCOMING
TASKS:**

July 2012	Draft Antelope Valley Salt/Nutrient Management Plan (SMP) available for review
January 2013	Draft California Environmental Quality Act documentation for Antelope Valley SMP available for review
2013/2014	Final Antelope Valley SMP presented to Water Board for adoption as a Basin Plan Amendment
2014/2016	Compliance with statewide requirement to develop SMP for all groundwater basins (State Board may grant a two year extension if there is substantial progress towards completion of a plan)

ENCLOSURE 3

DRAFT
SALT/NUTRIENT MANAGEMENT PLANS
— SUGGESTED ELEMENTS —

I. BACKGROUND
<ul style="list-style-type: none"> • Purpose <ul style="list-style-type: none"> • Protection of Beneficial Use • Sustainability of Water Resources • Problem Statement • Salt/Nutrient Management Objectives • Regulatory Framework • Groundwater Beneficial Uses • Stakeholder Roles and Responsibilities • Process to Develop Salt/Nutrient Management Plan
II. GROUNDWATER BASIN CHARACTERISTICS
1. GROUNDWATER BASIN OVERVIEW
<ul style="list-style-type: none"> • Physiographic Description • Groundwater Basin and/or Sub-Basin Boundaries • Watershed Boundaries • Geology • Hydrogeology/Hydrology • Aquifers • Recharge Areas • Hydrologic Areas Tributary to the Groundwater Basin • Climate • Land Cover and Land Use • Water Sources
2. GROUNDWATER INVENTORY
<ul style="list-style-type: none"> • Groundwater Levels <ul style="list-style-type: none"> • Historical, Existing, Regional Changes • Groundwater Storage <ul style="list-style-type: none"> • Historical, Existing, Changes • Groundwater Production <ul style="list-style-type: none"> • Historical, Existing, Spatial and Temporal Changes, Safe Yield • Groundwater Mixing and Movement <ul style="list-style-type: none"> • Subsurface Inflow/Outflow • Horizontal and Vertical Movement and Mixing
3. <i>BASIN WATER QUALITY</i>
<ul style="list-style-type: none"> • Groundwater Quality <ul style="list-style-type: none"> • Background, Historical, Existing • Water Quality Objectives • Surface Water Quality • Delivered Water Quality • Imported Water Quality • Recycled Water Quality

Bold = Required by the Recycled Water Policy

DRAFT
SALT/NUTRIENT MANAGEMENT PLANS
— SUGGESTED ELEMENTS —

III. BASIN EVALUATION
1. WATER BALANCE
<ul style="list-style-type: none"> • Conceptual Model • Basin Inflow/Outflow • Groundwater, Surface Water, Imported Water, Water Transfers, Recycled Water Irrigation, Waste Water Discharges, Agricultural Runoff, Stormwater Runoff (Urban, Agriculture, Open Space), Precipitation • Infiltration, Evaporation, Evapotranspiration, Recharge, Surface Water and Groundwater Connectivity
2. SALT AND NUTRIENT BALANCE
<ul style="list-style-type: none"> • Conceptual Model • Salt and Nutrient Source Identification • Salt and Nutrient Loading Estimates <ul style="list-style-type: none"> • Historical, Existing, Projected • Import/Export • Basin/Sub-Basin Assimilative Capacity for Salt and Nutrients • Fate and Transport of Salt and Nutrients
3. CONSTITUENTS OF EMERGING CONCERNS (CECs)*
<p>* - Requirements for monitoring CECs will be determined following State Water Board review of the CEC Advisory Panel's report due in June 2010.</p> <ul style="list-style-type: none"> • Constituents • CEC Source Identification
4. PROJECTED WATER QUALITY
IV. SALT AND NUTRIENT MANAGEMENT STRATEGIES
<ul style="list-style-type: none"> • Load Reduction Goals • Future Land Development and Use • Salt/Nutrient Management Options • Salt/Nutrient Management Strategies and Modeling <ul style="list-style-type: none"> • Management Strategy Model Results • Feasibility • Cost
V. BASIN MANAGEMENT PLAN ELEMENTS
1. GROUNDWATER MANAGEMENT GOALS
<ul style="list-style-type: none"> • Groundwater Management Goals • Recycled Water and Stormwater Use/Recharge Goals and Objectives
2. BASIN MONITORING PROGRAMS
<ul style="list-style-type: none"> • Identify Responsible Stakeholder(s) Implementing the Monitoring • Monitoring Program Goals • Sampling Locations • Water Quality Parameters • Sampling Frequency • Quality Assurance/Quality Control • Database Management

Bold = Required by the Recycled Water Policy

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SALT/NUTRIENT MANAGEMENT PLANS
— SUGGESTED ELEMENTS —

<ul style="list-style-type: none"> • Data Analysis and Reporting • Groundwater Level Monitoring • Basin Water Quality Monitoring • Groundwater Quality Monitoring <ul style="list-style-type: none"> • Areas of Surface Water and Groundwater Connectivity • Areas of Large Recycled Water Projects • Recycled Water Recharge Areas • Surface Water Quality Monitoring • Stormwater Monitoring • Wastewater Discharge Monitoring • Recycled Water Quality Monitoring • Salt and Nutrient Source Loading Monitoring • Other Constituents of Concern • Water Balance Monitoring <ul style="list-style-type: none"> • Climatological Monitoring • Surface Water Flow Monitoring • Groundwater Production Monitoring
3. SALT AND NUTRIENT LOAD ALLOCATIONS
VI. CEQA ANALYSIS
VII. ANTIDegradation ANALYSIS
VIII. PLAN IMPLEMENTATION
1. SALT AND NUTRIENT MANAGEMENT PROGRAM
<ul style="list-style-type: none"> • Organizational Structure • Stakeholder Responsibilities • Implementation Measures to Manage Salt and Nutrient Loading • Salt/Nutrient Management <ul style="list-style-type: none"> • Water Supply Quality • Regulations of Salt/Nutrients • Load Allocations • Salt and Nutrient Source Control • CEC Source Control • Site Specific Requirements • Groundwater Resource Protection • Additional Studies
2. PERIODIC REVIEW OF SALT/NUTRIENT MANAGEMENT PLAN
<ul style="list-style-type: none"> • Adaptive Management Plan • Performance Measures • Performance Evaluation
3. COST ANALYSIS
<ul style="list-style-type: none"> • CWC § 13141, "...prior to implementation of any agricultural water quality control program, an estimate of the total cost of such a program, together with an identification of potential sources of funding, shall be indicated in any regional water quality control plan."
4. IMPLEMENTATION SCHEDULE

Bold = Required by the Recycled Water Policy

DRAFT
SALT/NUTRIENT MANAGEMENT PLANS
— SUGGESTED ELEMENTS —

5. PUBLIC HEARING AND ADOPTION

Bold = Required by the Recycled Water Policy