


Los Angeles Regional Water Quality Control Board

TO: Interested Persons

FROM: Ginachi Amah, D.Env. 
Basin Planning Program

DATE: November 12, 2015

SUBJECT: Notice of California Environmental Quality Act (CEQA) Scoping Meeting for a Proposed Amendment to the Water Quality Control Plan for the Los Angeles Region (Basin Plan) to adopt a Program of Implementation for Management of Salts and Nutrients in the Upper Santa Clara River Groundwater Basins.

Notice is hereby given that the California Regional Water Quality Control Board, Los Angeles Region (Regional Water Board), in conjunction with the stakeholders of the Upper Santa Clara River (USCR) Groundwater Basins (also referred to as the USCR East Sub-basin), will hold a CEQA Scoping Meeting. Pursuant to California Public Resources Code Section 21083.9, the purpose of this meeting is to receive comments on the appropriate scope and content of the substitute environmental document (SED) supporting a Basin Plan amendment that would adopt implementation strategies for the management of salts, nutrients, and other related constituents of concern in the USCR East Sub-basin. The substitute environmental document will be prepared pursuant to Public Resources Code Section 21080.5, and the State Water Resources Control Board's (State Water Board's) regulations related to its Certified Regulatory Program (23 C.C.R. § 3775 et seq.). The substitute environmental document is intended to serve as a program level environmental document, consistent with Public Resources Code Section 21159.

BACKGROUND

Salt and Nutrient Management Plans (SNMPs) are required for each basin/sub-basin in California in accordance with the SWRCB's Recycled Water Policy (Policy), which was adopted by the State Water Board through Resolution No. 2009-0011 on February 3, 2009, and became effective on May 14, 2009. This Policy was amended in 2013 through Resolution No. 2013-0003. Per the Policy, SNMPs are developed by local water and wastewater entities, together with local salt/nutrient contributing stakeholders, through a locally-driven and controlled, collaborative process. All SNMPs should be submitted to the Regional Water Board by May 2016.

The Policy encourages increased use of recycled water and stormwater as safe, local, drought-proof water sources. It is the intent of the Policy that salts and nutrients from all sources be

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managed on a basin-wide or watershed-wide basis in a manner that ensures attainment of water quality objectives and protection of groundwater's beneficial uses. The State Water Board finds that the appropriate way to address salt and nutrient issues is through the development of regional or sub-regional SNMPs rather than through imposing requirements solely on individual recycled water projects. The State Water Board's Resolution, Policy, Policy amendments, and other related information can be found at:

http://www.swrcb.ca.gov/water_issues/programs/water_recycling_policy/

The Policy defines essential elements of the SNMPs, including: 1) a basin-wide monitoring plan; 2) a provision for annual monitoring of constituents of emerging concern (CECs) for basins with recycled water recharge projects; 3) water recycling and stormwater recharge/use goals and objectives; 4) salt and nutrient source identification, basin assimilative capacity analysis, and loading estimates, together with fate and transport of salts and nutrients; 5) implementation measures to manage salt and nutrient loading on a sustainable basis; and 6) an anti-degradation analysis demonstrating that the projects described in the SNMP will, collectively, satisfy the requirements of State Water Board Resolution No. 68-16.

BRIEF PROJECT DESCRIPTION

The Santa Clara River Valley East Sub-basin lies within the USCR watershed within Los Angeles County, and small portions of Ventura County and Kern County. The East Sub-basin is part of the larger Santa Clara River Valley Groundwater Basin that encompasses approximately 66,200 acres in the northwestern portion of Los Angeles County. The Sub-basin underlies the City of Santa Clarita, as well as unincorporated communities of Los Angeles County, including Stevenson Ranch, Val Verde, and Castaic. The predominant land uses overlying the East Sub-basin are urban residential and open space. Other existing land use categories identified within the East Sub-basin include among others agriculture, commercial; industrial; public facilities, and parks.

Groundwater in the region is currently used for municipal and residential water supply and, in a typical year, makes up approximately 40% of the overall water use in the basin. Likewise, imported water provided by the Castaic Lake Water Agency (Agency) makes up the other 59%, with current recycled water supply at about 1%. The Agency is currently updating its Recycled Water Master Plan which will identify the supply and demand for recycled water use within the basin through the year 2050. Currently, only about 400 acre-feet per year (AFY) of recycled water is used within the service area. Two water reclamation plants (WRPs) reside in the basin treating water to a tertiary level, with plans for advanced treatment at one of the two plants. Two additional WRPs from future development, Newhall Ranch and Vista Canyon, will also contribute to recycled water production in the basin. By utilizing the recycled water from these WRPs for irrigation and other purposes, the Agency can more efficiently allocate its potable water and increase the reliability of supplies in the Santa Clarita Valley.

The groundwater quality within the East Sub-basin is primarily the result of the quality of recharge water. Therefore, the natural surface run-off, stormwater and dry weather flows from

urban development, septic system leakage, return flow from agricultural practices, underflow from Castaic Dam, discharged treated wastewater into the Santa Clara River and applied recycled water as irrigation will contribute to the quality of ground water in the East Sub-basin. To an extent, the quality of groundwater flowing from outside the East Sub-basin and from re-entrant canyon areas will also contribute to the quality of groundwater within the East Sub-basin.

Based on the analysis of historical and projected mass loading, the SNMP analysis indicates that the average groundwater concentrations are generally lower than the basin objectives with the exception of TDS and sulfate in the Santa Clarita-Mint Canyon region. Some areas are also deficient in water quality data. Therefore, the SNMP includes a monitoring program for new and on-going data gathering which may show future water quality conditions to be better than currently projected. A map of the region and the areas evaluated (called Management Zones) is provided with this scoping notice.

The initial SNMP findings and implementation measures are described in more detail in the attached Project Summary. Various SNMP documents and other related materials are available at: <http://www.ladpw.org/wmd/scr/index.cfm?fuseaction=documents>

The Regional Water Board proposes to adopt a program of implementation based on the implementation strategies contained in the SNMP for the USCR East Sub-basin. This SNMP is being developed with co-equal priorities of protecting groundwater quality and permitting recycled water use, which is strongly encouraged by the Recycled Water Policy as a means of ensuring sustainable local water supply in the future. Per the State's policy, implementation strategies contained in the SNMPs must be consistent with the State's Policy with Respect to Maintaining High Quality of Waters in California (Anti-degradation Policy, State Water Board Resolution 68-16). The purpose of the CEQA Scoping Meeting is to present the foreseeable management alternatives and to determine if these strategies would result in significant adverse impacts to the environment. Some of the proposed strategies are an expansion of already existing effective programs; others are yet to be implemented. All will be fully examined in subsequent substitute environmental documents.

Interested persons are specifically requested to provide the following information:

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- Other reasonably foreseeable strategies for management of salts, nutrients and CECs, not included in the Project Summary.
- The reasonably foreseeable significant adverse environmental impacts associated with the strategies provided.
- Specific evidence supporting that such impacts are reasonably foreseeable and describing the magnitude (significance level) of the impacts.
- Reasonable alternative management strategies resulting in less significant environmental impacts.
- Reasonable mitigation measures that would minimize any unavoidable significant adverse environmental impacts associated with the proposed implementation strategies.

The proposed information and resulting analysis will be incorporated into the Draft Substitute Environmental Document. The CEQA Scoping Meeting will be held at:

1:00pm, Tuesday, December 8, 2015
Newhall County Water District
23780 Pine Street
Newhall, CA 91321

QUESTIONS AND ADDITIONAL INFORMATION

General questions concerning this notice may be directed to Dr. Ginachi Amah at (213) 576-6685 or e-mail Ginachi.Amah@waterboards.ca.gov, or Dr. Celine Gallon at (213) 576-6784 or Celine.Gallon@waterboards.ca.gov. You may also contact Cathy Hollomon at 661-513-1282 or chollomon@clwa.org. Please bring the foregoing to the attention of any persons known to you who would be interested in this matter.

cc: Michael Lauffer, Office of Chief Counsel, State Water Resources Control Board
Frances McChesney, Office of Chief Counsel, State Water Resources Control Board

DETAILED PROJECT SUMMARY

REQUIREMENT FOR A SALT & NUTRIENT MANAGEMENT PLAN

In February 2009, the State Water Resources Control Board (SWRCB) established a statewide Recycled Water Policy (Policy) to encourage increased use of recycled municipal wastewater as a safe, local, drought proof, and highly reliable source of water supply. The Policy also required local water and wastewater entities (stakeholders) to develop a Salt & Nutrient Management Plan (SNMP) for each groundwater basin in California, including the Upper Santa Clara River (USCR) East Sub-basin. The purpose of the SNMP is to identify all sources of salts and nutrients in groundwater basins and manage those salts and nutrients in a manner that preserves and enhances the quality of groundwater for designated beneficial uses.

AREA COVERED BY THE SALT AND NUTRIENT MANAGEMENT PLAN

The USCR East Sub-basin lies within the USCR watershed, which encompasses approximately 786 square miles within Los Angeles County, approximately 243 square miles within Ventura County, and one square mile within Kern County. Elevations range from approximately 800 feet above mean sea level (msl) on the valley floor, to approximately 6,500 feet above msl in the San Gabriel Mountains. The headwaters of the Santa Clara River are at an elevation of approximately 3,200 feet above msl at the divide that separates the USCR watershed from the Antelope Valley to the east. The Santa Clara River flows westward, towards the Pacific Ocean. It is one of the few natural river systems remaining in Southern California.

The East Sub-basin is part of the larger Santa Clara River Valley Groundwater Basin and encompasses approximately 66,200 acres in the northwestern portion of Los Angeles County. It is bound to the north by the Piru Mountains, to the south by the Santa Susana Mountains, to the south and east by the San Gabriel Mountains, and to the west by the outcrops consisting of the Modelo and Saugus formations. The main surface drainage features include the Santa Clara River, Bouquet Creek, and Castaic Creek.

EXISTING SALT AND NUTRIENT GROUNDWATER QUALITY

The groundwater quality within the East Sub-basin is primarily the result of the quality of recharge water. Therefore, the natural surface run-off, stormwater and dry weather flows from urban development, septic system leakage, return flow from agricultural practices, underflow from Castaic Dam, discharged treated wastewater into the Santa Clara River and applied recycled water as irrigation will contribute to the quality of ground water in the Alluvium and Saugus Formation. To an extent, the quality of groundwater flowing from outside the East Sub-basin and from re-entrant canyon areas will also contribute to the quality of groundwater within the East Sub-basin.

For the SNMP, the available assimilative capacity of the groundwater basin (i.e., the difference between the existing water quality and the water quality objectives set to support the most sensitive beneficial uses of the basin) has been calculated based on the water quality objectives identified in the Basin Plan and on available data regarding groundwater quality conditions.

The SNMP also includes salt and nutrient source identification, analysis of fate and transport of the identified salt and nutrients, and projections of future water quality. Projections of salt and nutrient loading were conducted through 2035 using the average annual water balance terms for both inflow and outflow parameters and then calculating the change in mass and concentration of salts and nutrients through the projection period.

During the SNMP analysis, ambient concentrations and assimilative capacities for Total Dissolved Solids (TDS), chloride, nitrate, and sulfate were established for all six management zones (MZ) that comprise the East Sub-basin (see the attached Figure 3): MZ-1 (Santa Clara-Mint Canyon), MZ-2 (Placerita Canyon), MZ-3 (South Fork), MZ-4 (Santa Clara-Bouquet and San Francisquito Canyons), MZ-5 (Castaic Subunit) and MZ-6 (Saugus Formation). Each of the management zones (with the exception of MZ 6) has established Basin Objectives (BOs) for TDS, chloride, nitrate, and sulfate. For MZ 6, the Regional Water Board recommended the interim use of the most conservative BO of the alluvial management zones for the calculation of assimilative capacity for TDS, chloride and nitrate. However, due to the lack of supporting historical data for sulfate, no decision has been made in regards to the BO for sulfate in MZ 6. In addition, after consulting with the Regional Water Board, MZ 1 was split into two zones (MZ1 and MZ 1b) in order to isolate a localized area that is associated with point source sulfate contamination. Average groundwater concentrations and assimilative capacities were calculated for each of these zones separately.

The SNMP analysis indicates that the average groundwater concentrations are generally lower than the basin objectives and assimilative capacity is available for all constituents for all management zones with the exception of TDS for MZ 1b and MZ 4 and sulfate for MZ 1b. MZ 2 and MZ 3 have no data set to compare with the basin objectives and, as mentioned previously, no BO has been set for MZ 6 sulfate.

SALT & NUTRIENT GROUNDWATER MODELING

A spreadsheet model for the USCR SNMP was used to calculate the historical and future salt loads in the management zones, which is based on the equation of hydrologic equilibrium (i.e., $\text{Inflow} = \text{Outflow} \pm \text{Change in Storage}$). A water balance, which takes into account all of the quantifiable hydrologic variables that affect the water resources within the East Sub-basin, was established for all inflow and outflow terms.

Water balance terms and their respective volumes were obtained as was the loading of salt and nutrients in the East Sub-basin that come from both natural and anthropogenic sources. The quantification of salt and nutrient loading was developed by determining the potential volume of water coming from each source and applying an appropriate loading factor based on water quality sampling data and the distribution of potential salt loads by land use. The salt and nutrient loads were applied to the annual water balances for each management zone to evaluate the annual and overall changes in salt and nutrient concentrations for the study period.

The spreadsheet model was used to predict future groundwater quality and trends, as well as the percentage of the assimilative capacity to be used by implementation of individual projects and all projects combined, for the period from 2012 through 2035. This 24-year period was selected

by the Regional Water Management Group. There is a good hydrologic record for an equivalent 24-year period to be used for modeling purposes, and the time period in which planned projects will be implemented or will be in the process of implementation.

In order to evaluate the impacts of proposed projects and implementation measures or strategies, the simulated results were compared to baseline results. The baseline model run represents a predictive scenario for salt and nutrient loading and parameter concentrations under existing conditions ("Land Use Build-Out" conditions) projected into the future. Future hydrologic conditions were simulated using the hydrologic conditions from 1980 through 2003. Future land use changes in the Santa Clarita Valley were also taken into account by using the combined land use planning projected by the 2011 City of Santa Clarita General Plan and the 2012 Santa Clarita Valley Plan - "One Valley One Vision" (OVOV) which plans future land uses in both the City of Santa Clarita and unincorporated Los Angeles County. In addition to the change in land use, the appropriate water use factors were also input into the model annually for each management zone to simulate the change in water use with change in land use.

SNMP RESULTS

The impacts of the proposed projects were evaluated by determining the water quality changes that will occur as a result of implementing the project for the management zone(s) in which the water quality change will occur. The anti-degradation analysis shows that in the absence of projects, water quality changes will occur with the resulting concentrations above the ambient plus 10% assimilative capacity concentration threshold at 2035. The implementation of single projects and the combined projects in general will increase assimilative capacity of salt and nutrient concentrations. However, where assimilative capacity is decreased and concentrations are above the ambient plus 10% assimilative capacity concentration for single projects and the ambient plus 20% assimilative capacity concentration for the combined projects the decrease is similar to those resulting from Land Use Build-Out only concentrations.

Therefore, although single projects and the all projects scenario can result in an increase in assimilative capacity as compared to current ambient water quality, if no projects are implemented, assimilative capacity will exceed thresholds established in the Recycled Water Policy set forth to evaluate recycled water projects.

IMPLEMENTATION MEASURES

The region has long been concerned about salinity and nutrient discharges in order to, among other things, allow for the use of recycled water. In the Santa Clarita Valley, the principle sources of chloride to the sewerage system include potable water supply, self-regenerating water softeners, treatment plant disinfection using chlorine, and other miscellaneous residential, commercial and industrial sources. Due to the importance of the East Sub-basin as a water supply source, projects have been implemented over the years to manage salt and nutrient concentrations in the groundwater. Historic aggressive activities conducted to reduce salt and nutrient loads in the East Sub-basin have included restrictions on brine discharges from water softeners into sewage systems, prohibition of installation of new residential self-regenerating water softeners, water softener removal rebate programs, chlorine discharge limits,

implementation of total maximum daily loads for nitrogen compounds in the Santa Clara River, water reclamation plant upgrades, and a large-scale water softening treatment for drinking water.

Implementation measures are classified as existing or conceivable. Additionally, specific projects planned for implementation in the near future were identified and specifically modelled for the purposes of the SNMP to evaluate water quality impacts over time. As reported in the SNMP, all of the projects proposed in the SNMP will have a beneficial impact on the Basin, as compared to conditions that will result from on-going and approved changes in land use.

Existing and Conceivable Implementation Measures

A brief description of the existing and conceivable implementation measures as provided in the SNMP is provided below.

Stormwater/Runoff Management:

- Municipal Storm Water Permitting Program: Regulates storm water discharges from municipal separate storm sewer systems through permits issued by the Regional Water Board.
- SWRCB Statewide NPDES for Community Water Systems: State Division of Drinking Water regulation of small potable water suppliers.

Wastewater Salinity/Nutrient Source Control:

- Treatment Process Upgrades at the Valencia and Saugus WRPs: Upgrades include nitrification/denitrification. As a result, nutrient concentrations in the effluent have decreased.
- Industrial Wastewater Source Control Programs: Ongoing source control programs that allow WRPs to achieve NPDES permit compliance.
- Santa Clarita Valley Sanitation District Automatic Water Softener Rebate Program: Also a Public Education/Outreach program that provides reimbursement to Self-Regenerating Water Softener (SWRS) owners for their removal.

Source Water Salinity Control:

- LACDPW Stormwater "First Flush" Policy: Low Impact Development Guide that lists requirements for infiltration and other stormwater quality.
- Brine Line to Ventura County: Proposed Brine Line in the lower sections of the Santa Clara River Valley that could be extended to Los Angeles County.

Institutional:

- SCVSD Ordinance (1999) Prohibiting Installation of New Residential SWRSs: Ordinance that took effect in March 2003 and prohibits the installation of new SRWSs.
- SCVSD Measure S: Measure on the November, 2008 ballot that requires the removal and disposal of all remaining active SRWSs connected to SCVSD's sewerage system.
- SCVSD Commercial and Industrial Sector Regulations: Program added to the source control program for NPDES permit compliance.

Regulatory/Non-Regulatory:

- Wastewater, Recycled Water, Surface Water/Stormwater, Imported Water and Groundwater Monitoring: Compliance with requirements of SB7X-6, CASGEM monitoring and the Sustainable Groundwater Management Act.
- State Regulations for Groundwater Replenishment Using Recycled Water: Facilitation of artificial recharge for purposes of groundwater recovery to supplement Eastside wells.
- Regional Water Board Permits for Groundwater Recharge: Facilitation of artificial recharge for purposes of groundwater recovery.
- Recycled Water Non-Potable Reuse Regulations, Guidelines and Permits: Facilitation of non-potable reuse by defining limits of human contact and streamlining permitting for projects.
- SNMP Monitoring: Increased groundwater level and water quality monitoring as recommended by the SNMP. The monitoring program data will allow preparation of updated ambient water quality for the management zones every three years.

Land Use Regulation:

- City/County Model Water Efficient Landscape Ordinance: Ordinances requiring new development to minimize exterior water use and implemented by land use planning agencies and local water retailers.

Conservation:

- Water Conservation Act of 2009 (Senate Bill X7-7): Requires all water providers above a minimum size to increase water use efficiency by demonstrating a 10% reduction in potable water demand by 2015 and 20% reduction by 2020.
- Emergency Drought Mandates: Emergency measures to reduce water use and minimize drought impacts on customers while conforming to statewide drought mandates. Includes a list of prohibitive activities.

TMDLs:

- TMDLs for chloride, bacteria and nitrogen: Requires the review of all sources of pollution and all aspects of a watershed's drainage system be reviewed to help manage water quality within applicable water quality standards.

Groundwater Recharge:

- Aquifer storage and recovery in Saugus Formation: Recharge in the Saugus formation using imported water during wet years with enhanced recovery during dry years.
- Projects from Reconnaissance Study: Includes possible rubber dams and moving up to 10,000 AFY of Saugus WRP and Valencia WRP water to discharge points in the eastern part of the Sub-basin for groundwater recharge.
- City/County MS4 Stormwater Infiltration Basins: Also a Regulatory/Non-Regulatory project that would provide basins needed to implement the MS4 permit requirements.

Planned Projects Modeled for the SNMP

In addition to the existing and conceivable implementation measures, the following projects are planned to be implemented in the near future. These are modeled individually for the purposes of the SNMP and described in more detail in the SNMP. The SNMP also models the collective effects of all of the projects.

- Vista Canyon WRP: Project will generate 439 AFY of treated wastewater that will be used for landscape irrigation or placed into percolation ponds near the Santa Clara River.
- Newhall Ranch WRP: WRP to service development in the Newhall Ranch Specific Plan and Westside communities, thereby also serving as a Wastewater Salinity/Nutrient Source Control program. It will also provide water for landscape irrigation.
- SCVSD Wastewater Treatment Plant Chloride Reduction Program: Further treatment and blending of recycled water so that all discharged effluent will have a chloride concentration of no greater than 100 mg/L.
- Santa Clarita Water Division (SCWD) Water Use Efficiency Programs: Ten programs designed to conserve water and reduce residential and urban use, run-off and sewage flows.
- Santa Clarita Valley Water Use Efficiency Programs: Suite of water conservation programs/projects to be implemented from the updated Santa Clarita Valley Water Use Efficiency Plan (2015).

- CLWA Recycled Water Master Plan: Plans to incorporate additional recycled water for use in landscape irrigation.

RECYCLED WATER PROJECT EVALUATION

As mentioned previously, only about 400 AFY of recycled water is used within the basin. Upon completion of the Agency's Recycled Water Master Plan and implementation of individual recycled water projects with the service area, that demand is projected to increase to a minimum of 12,000 AFY.

Implementation of the proposed projects and implementation measures identified in the USCR East Sub-basin SNMP represent a "maximum benefit" to the people of the State by providing beneficial uses for recycled water decreasing the use of assimilative capacity as compared to not adding planned projects to the East Sub-basin. Implementation measures will serve to lower ambient concentrations of salts and nutrients though the amount of decrease is unknown pending further design of the implementation measures. With some or all of the measures in place the assimilate capacity of all of the water MZs, all other things being equal, would increase, allowing for the future implementation of additional recycled water projects.

NEXT STEPS

A CEQA Scoping Meeting will be held on December 8, 2015 to describe the SNMP findings and implementation measures and elicit public comments on the environmental analysis. A Draft SNMP and Draft Substitute Environmental Document (SED) are expected to be submitted to the Regional Water Board for review in January 2016. A Final SNMP is expected to be submitted to the Regional Water Board by April 2016.

HOW CAN I GET MORE INFORMATION REGARDING THE SNMP FOR THE USCR EAST SUB-BASIN?

Please refer to the website below for additional information regarding the SNMP.

<http://www.ladpw.org/wmd/scr/index.cfm?fuseaction=documents>

General questions concerning this notice may be directed to Gr. Ginachi Amah at (213) 576-6685 or Ginachi.Amah@waterboards.ca.gov, or Dr. Celine Gallon at (213) 576-6784 or Celine.Gallon@waterboards.ca.gov. You may also email Cathy Hollomon at chollomon@clwa.org if you have any questions/comments or would like to join the USCR Basin SNMP mailing list. Please bring the foregoing to the attention of any persons known to you who would be interested in this matter.

