

2012 CHLORIDE SOURCE
IDENTIFICATION/REDUCTION,
POLLUTION PREVENTION,
AND PUBLIC OUTREACH PLAN



7,700
AUTOMATIC WATER SOFTENERS
REMOVED

NOVEMBER 2012



SANITATION DISTRICTS OF LOS ANGELES COUNTY

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Section 1. Executive Summary

EXECUTIVE SUMMARY

1.1 Introduction

The purpose of this report is to address measures taken and planned to be taken by the Santa Clarita Valley Sanitation District (District) to quantify and control sources of chloride in the Santa Clarita Valley. The District operates two water reclamation plants (WRPs) in the Santa Clarita Valley, the Saugus and Valencia WRPs, along with more than thirty miles of District's operated trunk lines and one pumping plant.

The Saugus and Valencia WRPs discharge treated wastewater into the upper reaches of the Santa Clara River. The District is currently facing significant regulatory challenges regarding the concentration of chloride being discharged to the river from the Saugus and Valencia WRPs. The discharges contain chloride in excess of the water quality objective for the upper Santa Clara River of 100 mg/L, which was established by the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) in 1978 to reflect existing water quality conditions.

To address chloride in the upper reaches of the Santa Clara River, the Regional Board adopted Resolution No. R4-2008-012 on December 11, 2008. This resolution is known as the Upper Santa Clara River Chloride Total Maximum Daily Load (TMDL), and it sets forth a comprehensive Implementation Plan for evaluating and attaining the water quality objective for the upper Santa Clara River. One of the tasks required under the TMDL Implementation Plan, Task 3, requires a plan to be submitted annually addressing measures that have been taken, and are planned, to quantify and control sources of chloride in the District's sewerage system. This report was prepared in accordance with the requirements under Task 3 of the Upper Santa Clara River Chloride TMDL Implementation Plan.

1.2 Sources of Chloride Loadings

This report addresses chloride sources for 2011. Chloride loadings from 2001 to 2010 were fully characterized in previous reports by the District: *Santa Clarita Valley Joint Sewerage System Chloride Source Report, October 2002*; *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2005*; *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2006*; *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2007*; *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2008*; *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2009*; *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2010*; and the *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2011*. In this report data have been updated to reflect the 2011 calendar year. This report builds upon the methodologies established in the previous eight reports. The reader should bear in mind that the data presented herein are, in many cases, estimates based on numerous assumptions and best professional judgment. Many inputs are difficult to quantify and this analysis represents the best available information at this time.

The primary source of chloride in the District's sewerage system is chloride present in potable water served to the community. Potable water in the area is derived from two sources: imported water delivered under the State Water Project (SWP) and local groundwater. The chloride concentration in these two sources varies depending on a number of factors, most notably precipitation patterns. To

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estimate chloride loading in the potable water supply, water quality and quantity data from the local water suppliers were used.

The residential sector also contributes a substantial chloride loading. The flow volume for residential discharges was estimated using a differential method, whereby other known flow volumes were subtracted from the total system flow volume to obtain the residential wastewater flow rate. This method was validated in the *Santa Clarita Valley Joint Sewerage System Chloride Source Report, October 2002*, in which residential flow volumes were determined using both this differential method and a rigorous modeling technique based on extensive field data collection. There was excellent agreement between the two methods. The chloride loading contributed from self-regenerating water softeners (SRWS) was also estimated using a differential method, whereby all other chloride loadings were subtracted from the total chloride loading and the difference was assumed to be contributed by SRWS. Residential non-SRWS chloride contributions were estimated using concentration data taken from the *Santa Clarita Valley Joint Sewerage System Chloride Source Report, October 2002*.

Other sources of chloride in the District's sewerage system include disinfection at the WRPs, the industrial sector, the commercial sector, and hauled waste. Chloride introduced at the Saugus and Valencia WRPs during disinfection of wastewater using sodium hypochlorite was quantified using the District's operational records. Industrial loadings of chloride were estimated using chloride sampling data from industrial dischargers, combined with flow information from District's permit and surcharge records. Commercial loadings of chloride were estimated using concentration data taken from the *Santa Clarita Valley Joint Sewerage System Chloride Source Report, October 2002*, along with flow information taken from the District's service charge records. The contribution of chloride from hauled waste was determined using sample data to characterize concentration and waste manifests to determine volume.

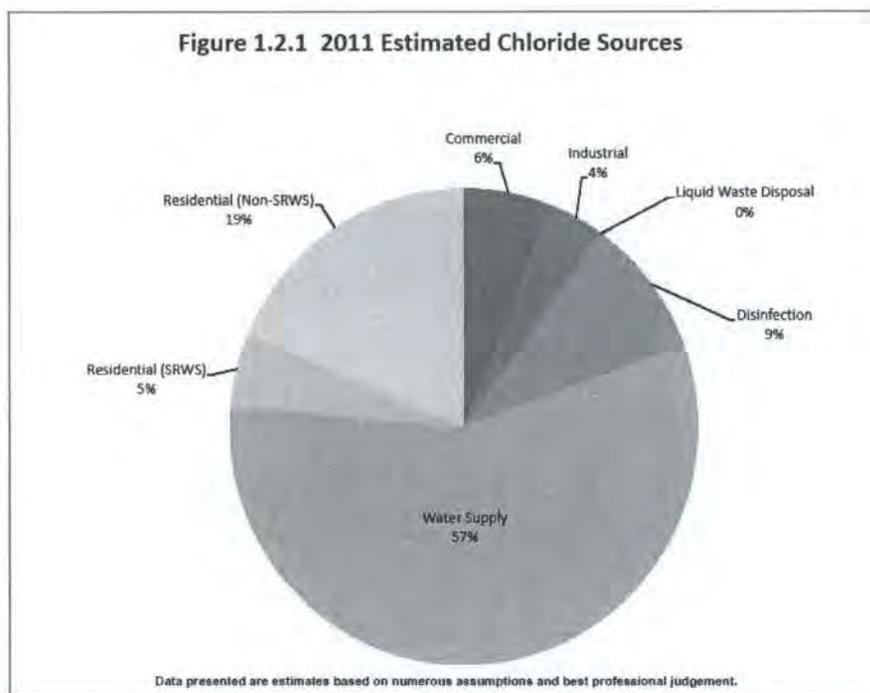
The results of the updated quantification of chloride sources in the District's sewerage system for 2011 indicate that the largest source of chloride in the system continues to be the potable water supply. The estimated chloride from water supply peaked in 2009 at 13,242 pounds per day of chloride, representing 78 mg/L chloride in the system effluent. The 2009 peak coincided with drought conditions in both northern and southern California contributing to high chloride content in the SWP and the Alluvial Aquifer. In 2011, the potable water supply contributed an estimated 11,119 pounds per day of chloride, representing approximately 67 mg/L in the effluent, and 57 percent of the chloride load in the District's sewerage system.

The estimated chloride loading from SRWS peaked in 2003/2004 at about 9,000 pounds per day, representing 59 mg/L in the system effluent. This coincided with enactment of the prohibition on installation of SRWS in the District in 2003. The SRWS contribution maintained a downward trend in 2011, as the Automatic Water Softener Rebate Program – Phase II, Santa Clara River Chloride Reduction Ordinance of 2008 (Ordinance), Ordinance Enforcement Program, and community-wide public education and outreach effort convinced residents to remove existing SRWS. In 2011, the analysis estimates the chloride loading from SRWS at approximately 993 pounds per day, representing about 6 mg/L in the system effluent.

As mentioned previously, the chloride data per source are estimates based on numerous assumptions and best professional judgment. Many inputs are difficult to quantify and this analysis represents the best available information at this time. The District has removed over 7,763 SRWS through the Automatic Water Softener Rebate Program – Phase I and II and the data clearly show a commensurate reduction in chloride loading in the District's effluent.

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A graphical depiction of the breakdown in estimated chloride sources for 2011 is presented in Figure 1.2-1.



The District will continue to monitor and quantify chloride sources on an on-going basis. Continued efforts will include collection of data on industrial chloride concentrations and flowrates, industrial self-monitoring of chloride concentrations, quantification of commercial flowrates, tracking of treatment plant sodium hypochlorite use, tracking of volumes of wastes accepted at the Saugus Liquid Waste Disposal Station, collection of groundwater and SWP water chloride data from local water purveyors, and monitoring of chloride concentrations and flowrates at the Saugus and Valencia WRPs. The District will also continue to conduct influent chloride studies at Saugus and Valencia WRPs and evaluate ways to improve chloride source estimates. An update of the chloride sources will be submitted to the Regional Board each year as part of the annual progress report required under the Upper Santa Clara River Chloride TMDL Implementation Plan, Task 3.

1.3 Chloride Source Control Measures

The District has conducted a ground breaking, nationally recognized source control program for chloride in the Santa Clarita Valley. Because SRWS have been the largest controllable source of chloride, the source control efforts have continued to focus on the removal of these units. However, efforts to reduce chloride sources have also focused on the industrial sector, commercial sector, hauled waste, and treatment plant operations. Chloride in water supply is also being examined.

The District continued the Automatic Water Softener Rebate Program – Phase II and the community-wide public outreach program to encourage residents to remove SRWS. The Ordinance required all residential SRWS to be removed by June 30, 2009. Therefore, the multimedia public education and outreach program was pared down in July 2009. A brief summary of these programs is provided below.

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The Ordinance appeared as Measure S on the November 4, 2008 ballot. Voters overwhelmingly approved Measure S, with almost two-thirds of them voting in favor. Measure S received 55,502 votes, 64 percent, in favor, and 31,192 votes, 36 percent, against. The District is the first agency in California to have adopted such an ordinance.

In accordance with the provisions of Section 116787 of the California Health and Safety Code, the Ordinance took effect on January 1, 2009. The Ordinance required the removal and disposal of all existing SRWS installed in the District's service area by June 30, 2009, 180 days after the effective date of the Ordinance. Violations of the Ordinance following the issuance of a final Administrative Order is a misdemeanor punishable by a fine not to exceed \$1,000.00 or by imprisonment not to exceed thirty days or by both such fine and imprisonment.

The District launched the Automatic Water Softener Rebate Program – Phase II on May 1, 2007. The program provides compensation for the reasonable value of the SRWS and removal and disposal of the SRWS at no cost to the resident if specific plumbers are used (and residents that remove the units themselves receive \$50 for removal). The reasonable value of the SRWS is determined based on the sales price, installation date of the unit, and a 12-year average service life expectancy for a unit. In order to be eligible for a rebate, the SRWS must have been installed prior to the March 27, 2003 effective date of the District's SRWS installation ban ordinance.

On January 1, 2009, the rebate amount was lowered from 100 percent to 75 percent of the reasonable value of the SRWS consistent with terms of the California Health and Safety Code Section 116787 and the Ordinance. In 2011, the District provided rebates of \$206 to \$2,000 for the removal and disposal of SRWS.

From May 1, 2007 to December 31, 2011, the District received 6,825 Automatic Water Softener Rebate Program – Phase II Application Forms and removed 7,328 SRWS from the Santa Clarita Valley.¹ As a result of the Automatic Water Softener Rebate Program – Phase I and II, 7,763 SRWS have been removed from the District's service area from November 30, 2005 to December 31, 2011. Approximately 62 percent of the total SRWS removed were removed between January 1, 2009, the effective date of the Ordinance, and December 31, 2011.

The District conducted a major multimedia community-wide public education and outreach campaign from March 25, 2004 to June 30, 2009. The program consisted of multiple phases and evolved significantly over the 5-year period as a result of the launch of the Automatic Water Softener Rebate Program – Phase I and II, Saltwater Pool Ordinance, and the Ordinance. Since the Ordinance required the removal of all residential SRWS by June 30, 2009, the program was pared down after that date.

In 2009 and 2010, the District worked successfully with local retailers to discontinue the sale of rock salt and potassium chloride. By April 2010, four Albertsons, a Do It Center, a Food 4 Less, two Home Depots, a Kmart, two Lowe's, seven Ralphs, a Sam's Club, the Sand Canyon Paint & Hardware, a Stater Bros. Market, and three Walmarts had removed rock salt and potassium chloride for SRWS from their shelves and committed to not restock the products.

The District also continued to send monthly letters to new homeowners, to update the chloride website with additional alternative water conditioning units and resident reviews, to participate in community events, and to respond to residents' questions on the toll-free chloride hotline and dedicated email address.

¹ Rental SRWS removed under contract with the water softening companies did not require applications forms.

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On October 18, 2010, the District's Board of Directors approved a plan to remove the remaining SRWS in the District's service area. The plan included continued sampling, ongoing public outreach, reduced rebates, voluntary home inspections, and enforcement actions if SRWS are found. Following adoption of the plan, District staff worked to develop the necessary documents, procedures, and public outreach materials for the Ordinance Enforcement Program and sought input on the proposed program from the City of Santa Clarita and County of Los Angeles staff.

On August 3, 2011, the District launched the Ordinance Enforcement Program by mailing approximately 2,500 letters to residents suspected of having illegal SRWS. On August 4, 2011, the District issued a press release announcing the start of the Ordinance Enforcement Program. In addition, the District ran a half-page black and white advertisement on Friday, August 5, 2011, and half-page color advertisements on Sunday, August 14, 2011 and Sunday, September 11, 2011 in *The Signal*.

As a result of the Ordinance Enforcement Program letters, press release, and advertisements, the District received 519 Automatic Water Softener Rebate Program Application Forms and 458 Automatic Water Softener Questionnaires from August 3, 2011 to December 31, 2011, resulting in the removal of 430 SRWS during this timeframe. Due to the higher than expected response to the letters, the District decided to postpone additional Ordinance enforcement actions until 2012 to allow sufficient time to process the application forms and questionnaires and allow residents time to remove their units.

Although many source control efforts have focused on the residential sector, the District has also conducted extensive source control efforts for other sectors. For the industrial sector, the District operates a comprehensive industrial waste source control program that includes permitting, inspections, monitoring, and enforcement. Under this program, industrial dischargers in the Santa Clarita Valley have either been assigned a chloride discharge limit of 100 mg/L or assigned a performance-based chloride limit that reflects implementation of chloride reduction practices to the extent technologically and economically feasible. For the commercial sector, the District is aggressively enforcing the prohibition on the use of SRWS. Numerous notifications about the prohibition have been made to commercial businesses, and thousands of on-site inspections have been conducted to verify compliance. In addition, the District has required implementation of best management practices to reduce chloride discharges from commercial swimming pools. Furthermore, on June 17, 2011, the District's Board of Directors authorized funding for the design, planning, and environmental efforts for UV disinfection facilities for the Saugus and Valencia WRPs which, if constructed, could enable the District to decrease chloride levels in the discharges by up to 10 mg/L.

The District is firmly committed to reducing chloride sources in the sewerage system to the maximum extent technologically and economically feasible, and will continue to explore innovative and effective means to bring about this reduction.

INTRODUCTION

2.1 Purpose

This report has been prepared in accordance with the requirements of the Upper Santa Clara River Chloride Total Maximum Daily Load (TMDL) Resolution No. R4-2008-012 adopted by the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) on December 11, 2008. Task 3 of the TMDL Implementation Plan states:

“Six months after the effective date of the TMDL,¹ the SCVSD will submit a plan to the Regional Board that addresses measures taken and planned to be taken to quantify and control sources of chloride, including but not limited to: execute community-wide outreach programs, which were developed based on the pilot efforts conducted by the SCVSD, assess potential incentive/disincentive programs for residential self-regenerating water softeners, and other measures that may be effective in reducing chloride. The SCVSD shall develop and implement the source reduction/pollution prevention and public outreach program, and report results annually thereafter to the Regional Board. Chloride sources from imported water supplies will be assessed. The assessment will include conditions of drought and low rainfall, and will analyze the alternatives for reducing this source.”

Although Task 3 requires, in part, that the Santa Clarita Valley Sanitation District (District) implement source control measures for chloride, it should be noted that such measures began well before the effective date of the TMDL. The District began source control efforts in the Santa Clarita Valley in 1961 with adoption of a resolution prohibiting the discharge of brines from self-regenerating water softeners (SRWS). The residential source control efforts include passage in February 2003 of a groundbreaking ordinance prohibiting the installation of residential SRWS, launch in March 2004 of a major, multimedia public education program, and implementation of the Automatic Water Softener Rebate Program - Phase 1 from November 2005 to April 2007. The District also proactively created and manages the Automatic Water Softener Rebate Program - Phase II that provides compensation to residents for reasonable value of the SRWS and provides free removal and disposal of the unit if specific plumbers are used. On November 4, 2008, voters adopted the Santa Clara River Chloride Reduction Ordinance of 2008 (Ordinance). The Ordinance required the removal of all residential SRWS in homes connected to the District’s sewerage system effective January 1, 2009 and the District began the Ordinance Enforcement Program in August 2011. As a result of the District’s extensive source control efforts, 7,763 residential SRWS have been removed since 2005 and all SRWS are illegal in the District’s service area. In addition to historical source control efforts, this report addresses current and planned chloride quantification and source control efforts, including assessment of chloride sources from imported water.

2.2 County Sanitation Districts of Los Angeles County

The Sanitation Districts (Districts) are a confederation of independent special districts serving the wastewater and solid waste management needs of about 5.4 million people in Los Angeles County, California. Seventeen of the districts have collectively constructed an extensive regional sewer system

¹ The Upper Santa Clara River Chloride TMDL was originally adopted under Regional Board Resolution No. 04-004 on May 6, 2004. Therefore, the Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan is due annually on November 4th.

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known as the Joint Outfall System, which conveys and treats approximately 400 million gallons per day (MGD) of wastewater from 73 cities and unincorporated county areas. The Joint Outfall System consists of seven treatment plants/water reclamation plants (WRPs) and 1,200 miles of large diameter trunk sewers that form a network connecting the treatment plants and ocean outfalls off White Point on the Palos Verdes Peninsula. The Districts also operate four WRPs in northern Los Angeles County. Two plants serve the City of Santa Clarita and adjacent unincorporated areas in the Santa Clarita Valley. Two other plants serve the cities of Lancaster and Palmdale. The designated beneficial uses of the receiving waters to which the Districts' WRPs discharge are diverse and vary depending on location. These existing and potential use designations include groundwater recharge, agriculture, water recreation, warm fresh water habitat, wildlife habitat, commercial and sport fishing, and rare, threatened or endangered species reproduction and early development. Solid material removed during treatment is digested and dewatered. The resulting biosolids are either beneficially reused or landfilled.

2.3 Santa Clarita Valley Sanitation District

The District² owns and operates two wastewater treatment plants, Saugus and Valencia WRPs, in the Santa Clarita Valley. In addition to these two plants, the District operates more than thirty miles of trunk sewers in the area and one pumping plant. The District's service area consists of the City of Santa Clarita and a portion of unincorporated Los Angeles County in the Santa Clarita Valley. The Saugus WRP has a design capacity of 6.5 MGD and the Valencia WRP has a design capacity of 21.6 MGD (collectively the two WRPs have a design capacity of 28.1 MGD).

The Saugus WRP is a tertiary treatment plant consisting of comminution, grit removal, primary sedimentation, nitrification/denitrification activated sludge biological treatment, secondary sedimentation, coagulation, inert media filtration, chlorination, and dechlorination. No facilities for solids processing are located at the Saugus WRP. Instead, all solids are conveyed by trunk sewer and a waste activated sludge force main to the Valencia WRP for treatment. In 2011, the average effluent discharged from the Saugus WRP was 5.0 MGD. The reclaimed water is discharged from the Saugus WRP to the Santa Clara River. The Castaic Lake Water Agency (CLWA) is in the preliminary stages of evaluating using reclaimed water from Saugus WRP.

The Valencia WRP is a tertiary treatment plant with solids processing facilities. Current treatment consists of comminution, grit removal, primary sedimentation, flow equalization, nitrification/denitrification activated sludge biological treatment, secondary sedimentation, coagulation, inert media filtration, chlorination, and dechlorination. The waste activated sludge from the Saugus and Valencia WRPs is thickened using dissolved air flotation, combined with primary solids, and then anaerobically digested. The digested sludge is dewatered using plate and frame filter presses, and is beneficially reused for agricultural land application. In 2011, 14.9 MGD of reclaimed water was discharged from the Valencia WRP. The majority of the reclaimed water, 14.5 MGD, was discharged to the Santa Clara River, and 0.4 MGD was reused by CLWA.

It is important to point out that, throughout this report, chloride loadings and contributions will be addressed collectively for both the Saugus and Valencia WRPs, rather than for each individual plant.

² The District was historically operated by two independent sanitation districts: County Sanitation District Number 26 of Los Angeles County and County Sanitation District Number 32 of Los Angeles County and referred to as the Santa Clarita Valley Joint Sewerage System. These two districts were merged into a single district, the Santa Clarita Valley Sanitation District of Los Angeles County, as of July 1, 2005. For simplicity in this report, actions taken by the County Sanitation District Number 26 of Los Angeles County and County Sanitation District Number 32 of Los Angeles County prior to the merger will be considered as though they were actions taken by the District.

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This approach is necessary because the plants are physically interconnected to allow for raw sewage from the Saugus service area to be treated at the Valencia WRP, and to allow for the solids generated from wastewater treatment processes at the Saugus WRP to be conveyed to the Valencia WRP for subsequent treatment. Consequently, it is difficult to delineate specific sectors and/or source contributions to the individual WRPs; however, source contributions can be determined jointly for the two plants in the District.

Task 3 of the TMDL Implementation Plan requires an annual update to the Regional Board on the sources of chloride in the District and the District's source reduction, pollution prevention, and public outreach programs. This report describes the sources of chloride in the District's sewerage system and the District's source reduction, pollution prevention, and public outreach programs and discusses additional efforts that will be undertaken in the future.

Section 3. Sources of Chloride Loadings

SOURCES OF CHLORIDE LOADINGS

3.1 Scope

In 2002 the District conducted a detailed investigation into sources of chloride in wastewater in the Santa Clarita Valley. This investigation used the year 2001 as a basis and included collection of thousands of chloride samples to fully characterize chloride loadings from industrial, commercial, residential, liquid waste disposal station, treatment plant operations, and water supply sources. The findings are detailed in the District's *Santa Clarita Valley Joint Sewerage System Chloride Source Report, October 2002*. The thorough investigation was used in support of passage of an ordinance prohibiting the installation of residential SRWS, also known as automatic water softeners, in the Santa Clarita Valley, and was also used to choose targets for further chloride source reduction efforts.

In 2005, 2006, 2007, 2008, 2009, 2010, and 2011, the District utilized the methodologies established in the *Santa Clarita Valley Joint Sewerage System Chloride Source Report, October 2002* to analyze chloride data collected from 2002 to 2010. This analysis provided updated estimates of the chloride loading contributions from industrial, commercial, residential, liquid waste disposal station, treatment plant operations, and water supply sources and characterized the changes in the estimated chloride loading from 2002 to 2010. The estimates of the chloride loading to the District's sewerage system during the years 2002 to 2010 are presented in the *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2011*.

This section of the report addresses the sources of chloride loadings in 2011 and builds upon the methodologies and quantification of sources established in the *Santa Clarita Valley Joint Sewerage System Chloride Source Report, October 2002*; *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2005*; *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2006*; *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2007*; *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2008*; *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2009*; *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2010*; and *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2011*. In this report data have been updated to reflect the 2011 calendar year. The purpose of this section is to provide an update on the changes in estimated chloride loadings over time, so that the effectiveness of chloride source reduction measures can be evaluated and a planning level determination can be made as to how to proceed with further source control efforts. However, the reader should bear in mind that the data presented herein are, in many cases, estimates based on numerous assumptions and best professional judgment. Many inputs are difficult to quantify and this analysis represents the best available information at this time.

3.2 Santa Clarita Valley Potable Water Supplies

Potable water supplied to the community contributes a significant fraction of the chloride loading in the District's sewerage system. This section discusses sources of potable water supplied to the Santa Clarita Valley and provides a quantitative estimate of the amount of chloride present in the water. Water volume and water quality data collected from the local water purveyors in the Santa Clarita Valley were used to estimate the loadings.

Section 3. Sources of Chloride Loadings

3.2.1 Groundwater and Surface Water Volumes

The relative volumes of local groundwater and State Water Project (SWP) water delivered in the Santa Clarita Valley vary by water purveyor and vary from year-to-year. The volume of each type of water served by each of the four local water purveyors, for the period 2002 through 2011, is shown in Table 3.2-1 (see page T-1). The percentage of water supplied by the various sources (i.e., SWP water, Alluvial Aquifer, and Saugus Aquifer) is detailed in Table 3.2-2 (see page T-2) and summarized in Table 3.2-3.

Table 3.2-3 Summary of Santa Clarita Valley Potable Water Supply Sources

| Year | State Water Project | Alluvial Aquifer | Saugus Aquifer |
|------|---------------------|------------------|----------------|
| 2002 | 61.2% | 32.4% | 6.4% |
| 2003 | 65.9% | 28.8% | 5.3% |
| 2004 | 65.7% | 26.4% | 7.9% |
| 2005 | 54.1% | 37.5% | 8.5% |
| 2006 | 55.1% | 36.9% | 8.0% |
| 2007 | 58.9% | 33.3% | 7.9% |
| 2008 | 55.2% | 36.9% | 7.9% |
| 2009 | 55.3% | 35.0% | 9.6% |
| 2010 | 48.0% | 40.8% | 11.2% |
| 2011 | 50.0% | 42.4% | 7.5% |

For the year 2011, the last year for which volume data are available, total potable water production for municipal use was 61,690 acre-feet. SWP water represented 50 percent of the potable water served to the Santa Clarita Valley community. Alluvial Aquifer water comprised 42 percent of water served and the Saugus Aquifer contributed 8 percent of water served, for a total of 50 percent of municipal water supply from local groundwater.

The water requirements in 2011 were basically unchanged from 2010; less than what was estimated in the 2010 Water Report and also lower than the average projection in the 2010 Urban Water Management Plan. The relative lack of change in water use in 2011 is attributed to the ongoing slow growth in the number of new service connections and continued water conservation awareness as a result of statewide dry conditions and outreach by the water purveyors.¹

3.2.2 Groundwater and Surface Water Chloride Concentrations

A variety of data sources were used to characterize source water chloride concentrations. CLWA conducts monthly analyses of the chloride content of the treated SWP water that it supplies to local water purveyors. CLWA data were therefore used to characterize the chloride content of SWP water. Well sampling data from Newhall County Water District (NCWD), the CLWA Santa Clarita Water Division, and the Valencia Water Company (VWC) were used to characterize the chloride content of the local groundwater supply. Typically, these water retailers do not sample all active supply wells for chloride every year, but rather analyze a subset of wells every three years, on a rotating basis. Beginning in mid-2001 VWC began sampling its supply wells for chloride on a monthly basis, so the chloride content of groundwater supplied by VWC is better characterized than the chloride content of groundwater supplied

¹ Luhdorff & Scalmanini Consulting Engineers. *14th Annual Santa Clarita Valley Water Report 2011*. CLWA, CLWA Santa Clarita Water Division, Los Angeles County Waterworks District 36, Newhall County Water District, and Valencia Water Company. June 2012.

Section 3. Sources of Chloride Loadings

by the other water purveyors. Source water chloride concentrations are detailed in Table 3.2-4 (see page T-3) and summarized in Table 3.2-5.

Table 3.2-5 Summary of Santa Clarita Valley Potable Water Supply Chloride Concentrations

| Year | State Water Project (mg/L) | Alluvial Aquifer (mg/L) | Saugus Aquifer (mg/L) |
|------|-------------------------------|----------------------------|--------------------------|
| 2002 | 83 | 87 | 33 |
| 2003 | 80 | 101 | 34 |
| 2004 | 69 | 97 | 34 |
| 2005 | 54 | 59 | 32 |
| 2006 | 51 | 66 | 35 |
| 2007 | 62 | 66 | 38 |
| 2008 | 75 | 85 | 38 |
| 2009 | 79 | 88 | 35 |
| 2010 | 75 | 89 | 37 |
| 2011 | 65 | 75 | 38 |

The chloride concentrations of the various sources of potable supply water varied over the period from 2002 through 2011 reflecting, in part, variations in hydrological conditions in both northern and southern California. The SWP chloride concentration peaked in 2002 at 83 mg/L and decreased steadily through the 2005-2006 season², reflecting precipitation patterns in northern California. The SWP chloride concentration increased from 2006 to 2009 as a result of below normal precipitation in northern California during the 2006-2007, 2007-2008, and 2008-2009 seasons. The 2009-2010 season produced about normal precipitation. The chloride concentration decreased in 2011 due to the wet conditions during the 2010-2011 season. Chloride concentrations in the shallow Alluvial Aquifer peaked in 2003 at 101 mg/L and decreased in 2004. There was a notable decrease in chloride concentrations from 2004 to 2005, reflecting the historic heavy rainfall in southern California during late 2004 and early 2005. Due in part to below normal rainfall in southern California in the 2005-2006, 2006-2007, 2007-2008, and 2008-2009 seasons, chloride concentrations in the Alluvial Aquifer increased from 2005 to 2009. The 2009-2010 season produced about normal rainfall that contributed to the stabilization of chloride levels in the Alluvial Aquifer. The chloride concentration in the Alluvial Aquifer decreased in 2011 in part due to the wet conditions during the 2010-2011 season. Chloride concentrations in the deep Saugus Aquifer are not significantly impacted by rainfall patterns and thus remained relatively constant from 2002 through 2011, at about 32 to 38 mg/L.

3.2.3 Blended Water Supply Chloride Concentration

The concentration of chloride in potable water supplied to the Santa Clarita Valley each year was estimated as a flow-weighted average of the chloride concentrations from each of the four local water purveyors. This blended water supply chloride concentration (C_{BWS}) was calculated using the equation:

$$C_{BWS} = W_{LACWD} * C_{LACWD} + W_{VWC} * C_{VWC} + W_{SCWD} * C_{SCWD} + W_{NCWD} * C_{NCWD} \quad (1)$$

where

- W_{LACWD} , W_{VWC} , W_{SCWD} , W_{NCWD} , and W_{SWP} are the water supply production ratios for Los Angeles County Waterworks District 36 (LACWD), VWC, SCWD, and NCWD (refer to Table 3.2-2 on page T-2), respectively; and

² Water years run from October of one calendar year to September of the following year.

Section 3. Sources of Chloride Loadings

C_{LACWD} , C_{VWC} , C_{SCWD} , C_{NCWD} are calculated chloride concentrations for LACWD, VWC, SCWD, NCWD service areas, as computed using equation (2).

$$C_i = W_{SWP(i)} * C_{SWP(i)} + W_{Alluvial(i)} * C_{Alluvial(i)} + W_{Saugus(i)} * C_{Saugus(i)} \quad (2)$$

where

- i represents the individual water purveyors, LACWD, VWC, SCWD or NCWD;
- $W_{SWP(i)}$, $W_{Alluvial(i)}$, and $W_{Saugus(i)}$ are the fractions of a purveyor's (i) total potable water supply associated with SWP water, the Alluvial Aquifer, and the Saugus Aquifer, respectively; and
- $C_{SWP(i)}$, $C_{Alluvial(i)}$, and $C_{Saugus(i)}$ are yearly average chloride concentrations for each source. The SWP chloride data are the same for all purveyors, and Alluvial Aquifer and Saugus Aquifer data specific to each purveyor were used.^{3,4}

The resulting estimated blended water supply chloride concentrations are presented below in Table 3.2-6. The concentration of chloride in the Santa Clarita Valley water supply peaked in 2003 at approximately 84 mg/L and decreased until 2006. The decrease was likely due to a combination of increased precipitation in northern California contributing to lower chloride concentrations in SWP water and increased local rainfall contributing to lower groundwater chloride concentrations in the shallow Alluvial Aquifer. The increase in estimated blended water supply chloride concentrations from 2006 to 2009 is due to an increase in chloride concentrations in SWP water and the Alluvial Aquifer, likely due to below normal total precipitation received in northern and southern California during the 2006-2007, 2007-2008, and 2008-2009 seasons. The 2010 estimated blended water supply concentration was close to the 2009 estimated concentration likely due to the near normal total precipitation in the 2009-2010 season. In 2011, the estimated blended water supply chloride concentration was 67 mg/L. The decrease was likely due to a combination of increased precipitation in northern California contributing to lower chloride concentrations in SWP water and increased local rainfall contributing to lower groundwater chloride concentrations in the shallow Alluvial Aquifer.

³ For the LACWD chloride concentration in the Alluvial Aquifer, the annual average of the Alluvial Aquifer chloride concentrations from each of the three local water purveyors was used as an estimate since data from LACWD were not available. A straight average of all Alluvial Aquifer chloride data for 2004 results in a chloride concentration of 90 mg/L. However, since the vast majority of the chloride data for this period are from VWC, the 90 mg/L figure is primarily representative of VWC's wells. The 97 mg/L figure is an average of the average Alluvial Aquifer chloride concentration for the three local water purveyors with such data for 2004, and thus better represents the Alluvial Aquifer chloride concentration throughout the area. From 2002 to 2011, LACWD only pumped from the Alluvial Aquifer in 2004 and 2005. During the other time periods, LACWD utilized water from the SWP.

⁴ For 2005, VWC data for the Saugus Aquifer were used as an estimate for the concentrations in the NCWD Saugus Aquifer since data from NCWD were not available.

Section 3. Sources of Chloride Loadings

Table 3.2-6 Santa Clarita Valley Estimated Blended Water Supply Chloride Concentration

| Year | Blended Water Supply Chloride Concentration (mg/L) |
|------|--|
| 2002 | 82.0 |
| 2003 | 84.1 |
| 2004 | 73.4 |
| 2005 | 56.2 |
| 2006 | 55.1 |
| 2007 | 61.9 |
| 2008 | 74.3 |
| 2009 | 77.7 |
| 2010 | 76.3 |
| 2011 | 67.2 |

To estimate the degree of uncertainty in the blended water supply chloride concentration calculation, an alternate method of determining the concentration was used. Under this alternate method, all chloride data for each source of water (e.g., Alluvial Aquifer and Saugus Aquifer) were averaged and combined with information on the fraction of each source of water to the total water supply. If an extensive data set were available to characterize the chloride in each source of water, this calculation method would yield the same result as the previous calculation. However, since much more data are available for VWC's wells than the other water purveyors' wells, the calculated blended water supply chloride concentration using this alternate method will be more heavily influenced by VWC data. If VWC data are representative of other wells in each aquifer, this alternate method is a better calculation method because it allows a heavier weight to the more extensive data set from VWC. However, if the chloride concentrations in the other water purveyors' wells are notably different from the chloride concentrations in VWC's wells, the original method is more accurate. Using the alternate method, the blended water supply chloride concentration is calculated using the following equation:

$$C_{BWS} = W_{SWP} * C_{SWP} + W_{Alluvial} * C_{Alluvial} + W_{Saugus} * C_{Saugus} \quad (3)$$

where

- W_{SWP} , $W_{Alluvial}$, and W_{Saugus} are the fractions of the total potable water supply associated with SWP water, the Alluvial Aquifer, and the Saugus Aquifer, respectively (see Table 3.2-3); and
- C_{SWP} , $C_{Alluvial}$, and C_{Saugus} are yearly average chloride concentrations for SWP water, the Alluvial Aquifer, and the Saugus Aquifer, respectively (see Table 3.2-5).

The results of the alternate calculations are presented in Table 3.2-7. For 2011, the resulting chloride concentration is the same concentration calculated using the original method, indicating that the results are not very sensitive to the calculation method used.

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Table 3.2-7 Santa Clarita Valley Estimated Blended Water Supply Chloride Concentration, Alternate Calculation Method

| Year | Blended Water Supply Chloride Concentration (mg/L) |
|------|--|
| 2002 | 81.3 |
| 2003 | 83.7 |
| 2004 | 73.6 |
| 2005 | 53.9 |
| 2006 | 55.2 |
| 2007 | 61.4 |
| 2008 | 75.6 |
| 2009 | 77.7 |
| 2010 | 76.4 |
| 2011 | 67.2 |

3.3 Infiltration Contribution

In late 2004 and early 2005, the Santa Clarita Valley experienced exceptionally heavy rainfall. For the 2004-2005 water year, running from October 2004 to September 2005, the Los Angeles County Department of Public Works Santa Clarita Valley Rain Gauge 32Z (Newhall-Soledad Division Headquarters, recently renamed to Newhall-Fire Station 73) recorded a rainfall of 50.54 inches, which is the highest seasonal rainfall on record for the area. The heavy rains caused higher than normal flowrates to occur at the Saugus and Valencia WRPs. The flowrates did not return to their expected values after the rains had ceased, suggesting infiltration of groundwater into the District's trunk sewer system and into local collector sewers and private laterals tributary to the District's sewerage system. Infiltration is a term indicating that shallow groundwater enters sewers in joints and cracks. Infiltration is different than inflow; inflow is intrusion of rainwater from flooded areas through manholes. Inflow occurs primarily during, but not following, rainfall events.

Wastewater flowrates in the District's sewerage system for the period 1996 through 2011 were evaluated. The only two years during this period where high flows were seen for extended periods after heavy seasonal rainfall were in 1998, when seasonal rainfall was 35.77 inches, and during 2005, when seasonal rainfall was 50.54 inches.⁵ Increased flows after heavy rain seasons historically have been transitory in nature, gradually abating over a period of months. Flowrates after the 1998 rain season returned to normal within six months of the end of the rainy period. However, the impact of infiltration on the District's sewerage system as a result of the 2004-2005 rainy season was considered until December 2005. The longer time period was used because flowrates to Saugus and Valencia WRPs did not decrease to approximately normal until January 2006. The longer time period for infiltration impacts to dissipate in 2005 as compared to 1998 was probably due to heavier rainfall in 2005 than in 1998.

Estimation of the impact of infiltration on 2005 flows was done by performing a linear regression on District's sewerage system flow data for the calendar years 1999 to 2004. The system was not impacted by heavy rainfalls during this period, so flows during this period reflect expected treated plant flowrates in the absence of significant infiltration. Linear regression returns the best-fit equation to describe the data as:

⁵ In both high rain years, heavy rainfalls did not occur until the middle of rain year. Rain years run from October of one calendar year to September of the following year.

Section 3. Sources of Chloride Loadings

Flowrate = (0.55685 x Year) – 1097.37, where Year is the year expressed in decimal form.

Using this equation, the excess flow due to infiltration for 2005 was estimated as 1.74 MGD. The chloride load contributed to the District's sewerage system by infiltration was then estimated by combining this average infiltration flowrate with an estimate of the chloride content of infiltration water. Because infiltration is intrusion into sewers of shallow groundwater, the chloride concentration of shallow groundwater provides a good estimate of the chloride concentration of infiltration water. Shallow groundwater in the Santa Clarita Valley is part of the Alluvial Aquifer. Averaging the Alluvial Aquifer chloride concentration from each of the three local water purveyors with such data available for 2005 results in a chloride concentration of 59 mg/L.⁶ The corresponding estimated chloride loading from infiltration is 862 pounds per day for 2005. Because infiltration water has a lower chloride concentration than other sources of water entering the District's sewerage system, the presence of infiltration water reduces effluent chloride concentrations in the system.

In 2011 there was no expected contribution of chloride from infiltration. Details on infiltration were included in this report in order to provide context for the 2005 chloride loading estimates.

3.4 Water Reclamation Plant Operation Contribution

The operation of a WRP requires the addition of a variety of chemicals to facilitate operation of the plant, enhance treatment, and provide for disinfection of treated wastewater. When a chemical is chlorine-based, such as sodium hypochlorite, use of the chemical at the WRP results in an increase in chloride concentration in wastewater as it is treated at the plant. This section addresses chloride increases in District's wastewater resulting from operation of the Saugus and Valencia WRPs.

In 2011 sodium hypochlorite was used at the Saugus and Valencia WRPs. The overwhelming majority of the sodium hypochlorite was used for disinfection of treated wastewater to protect public health. Insignificant amounts of sodium hypochlorite were also used at the Valencia WRP for odor control in a flow equalization basin.

Historically, sodium hypochlorite used for disinfection at the WRPs was measured using a level gauge and recorded in the Districts' mainframe computer system as gallons used per day. The Districts recently transitioned to a new computer system, OSI-Pi. Beginning in July 2010, sodium hypochlorite flow meter data in gallons used per day was obtained from OSI-Pi and used in this report. Summaries of treatment plant operation chloride contributions are presented in Tables 3.4-1 and 3.4-2.

⁶ A straight average of all Alluvial Aquifer chloride data for 2005 results in a chloride concentration of 71 mg/L. However, since the vast majority of the chloride data for this period are from the VWC, as discussed in Section 3.2.3, the 71 mg/L figure is primarily representative of VWC's wells. The 59 mg/L figure is an average of the average Alluvial Aquifer chloride concentration for the three local water purveyors with such data for 2005, and thus better represents the Alluvial Aquifer chloride concentration throughout the area.

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Table 3.4-1 Estimated Concentration of Treatment Plant Operation Added Chloride

| Year | Valencia WRP (mg/L) | | | | | Saugus WRP (mg/L) | Flow-Weighted System Average (mg/L) |
|------|---------------------|-----------------|----------|--------------|-------|-------------------|-------------------------------------|
| | Flow Equal. Basin | Raw Sludge Line | Scrubber | Disinfection | Total | Disinfection | |
| 2002 | 0.1 | 0 | 0.3 | 15.5 | 15.9 | 10.6 | 14.2 |
| 2003 | 0.1 | 0 | 0.1 | 13.1 | 13.3 | 13.6 | 13.4 |
| 2004 | 0.0 | 0 | 0 | 13.8 | 13.8 | 17.8 | 14.7 |
| 2005 | 0.2 | 0 | 0 | 11.5 | 11.7 | 15.8 | 12.5 |
| 2006 | 0.2 | 0 | 0 | 12.0 | 12.2 | 10.9 | 11.9 |
| 2007 | 0.1 | 0 | 0 | 12.5 | 12.6 | 11.5 | 12.3 |
| 2008 | 0.1 | 0 | 0 | 11.4 | 11.5 | 11.3 | 11.4 |
| 2009 | 0.1 | 0.2 | 0 | 12.0 | 12.3 | 10.6 | 11.8 |
| 2010 | 0.2 | 0.9 | 0 | 11.1 | 12.2 | 11.3 | 11.9 |
| 2011 | 0.2 | 0 | 0 | 10.4 | 10.6 | 12.3 | 11.0 |

Table 3.4-2 Estimated Treatment Plant Operation Chloride Loading

| Year | Saugus and Valencia WRP Flow (MGD) | Flow-Weighted System Average Chloride Concentration from Plant Operations (mg/L) | Treatment Plant Operation Chloride Loading (pounds per day) |
|------|------------------------------------|--|---|
| 2002 | 17.98 | 14.2 | 2,136 |
| 2003 | 18.12 | 13.4 | 2,018 |
| 2004 | 18.78 | 14.7 | 2,302 |
| 2005 | 21.13 | 12.5 | 2,209 |
| 2006 | 20.83 | 11.9 | 2,068 |
| 2007 | 20.91 | 12.3 | 2,150 |
| 2008 | 20.91 | 11.4 | 1,990 |
| 2009 | 20.44 | 11.8 | 2,014 |
| 2010 | 20.19 | 11.9 | 2,008 |
| 2011 | 19.84 | 11.0 | 1,822 |

Chloride containing chemicals used for wastewater treatment contribute approximately 1,800 pounds per day of chloride to the District's sewerage system. The majority of the chloride is added for wastewater disinfection. A negligible amount of chloride is added from use of sodium hypochlorite to control odors in the flow equalization basin at the Valencia WRP. In 2011, treatment plant operations contributed approximately nine percent of the estimated chloride loading in the final effluent.

3.5 Industrial Sector Contribution

Dischargers to the District's sewerage system can be grouped into three general categories: industrial, commercial, and residential. Industrial dischargers are those facilities that are involved in the production of goods and provision of certain services including chemical manufacturers, metal finishers, hospitals, and municipal pools. These types of facilities are regulated under the District's industrial

Section 3. Sources of Chloride Loadings

source control program, and are issued permits to discharge industrial wastewater. Non-residential facilities that are not issued industrial wastewater discharge permits are considered to be commercial facilities.

3.5.1 Overview of Industrial Sector

The Santa Clarita Valley is primarily a bedroom community hosting only a limited amount of industry. The District currently permits 72 industrial wastewater dischargers in the District's sewerage system including the following types of facilities:

Table 3.5-1 Summary of Industrial Facilities Permitted in the SCVSD

| Type of Industry | Number of Permitted Facilities |
|-------------------------------------|--------------------------------|
| Bottled water manufacturing | 1 |
| Car care product manufacturing | 1 |
| Correctional facilities | 1 |
| Cosmetics manufacturing | 1 |
| Education (colleges) | 2 |
| Energy | 1 |
| Fastener manufacturing | 1 |
| Food manufacturing | 6 |
| Groundwater remediation | 6 |
| Hospital | 1 |
| Laboratory | 2 |
| Mail processing | 1 |
| Metal finishing | 6 |
| Miscellaneous manufacturing | 13 |
| Personal care product manufacturing | 1 |
| Pharmaceutical manufacturing | 3 |
| Photoprocessing | 1 |
| Printing | 2 |
| RV sanitary disposal station | 5 |
| Semiconductor manufacturing | 1 |
| Swimming pools | 7 |
| Theme park | 1 |
| Truck/car wash | 3 |
| Vehicle maintenance | 5 |
| Total | 72 |

The largest industrial discharger on the District's sewerage system is the Peter Pitchess Honor Rancho. This correctional facility is operated by the Los Angeles County Sheriff's Department and houses approximately 8,000 inmates. Wastewater is generated at the facility from toilets, showers, kitchens, cleaning, on-site vehicle maintenance, and a laundry that offers services to other Los Angeles County facilities. The District receives approximately 1.1 million gallons per day of wastewater from this facility, primarily sanitary in nature. Peter Pitchess does operate a large water softener that produces approximately 25,000 gallons per day of brine, but the brines are prohibited from discharge and are instead distilled at an on-site cogeneration facility. Distilled water from this process is reused at the cogeneration facility and the concentrated brine is hauled off-site for disposal.

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The District also accepts wastewater from Magic Mountain, a large amusement park that includes a seasonally operated water park. Magic Mountain discharges wastewater to the sewer through three separate connections. Overall the facility discharges about 120,000 gallons per day of wastewater, consisting primarily of sanitary waste from park employees and visitors. Wastewater is also generated from the water park's sand filters (filter backwash), vehicle maintenance operations, restaurants, and an on-site laundry for employee uniforms.

The other large dischargers in the District are the City of Santa Clarita's Bakerton Pump Station, a groundwater remediation project, and the Henry Mayo Newhall Memorial Hospital, which discharges wastewater from two separate connections. Smaller dischargers include various types of manufacturers, printers, municipal and community pools, educational institutions, and recreational vehicle sanitary disposal stations.

3.5.2 Industrial Sector Chloride Loading

To estimate the chloride loading from the industrial sector, flows and chloride concentrations from all industries in the Santa Clarita Valley were compiled. Chloride concentration data were obtained from two sources, District's sampling data and industrial self-monitoring data. District's sampling data were collected as part of routine sampling and inspection operations. The District's industrial chloride samples were analyzed by the District's Water Quality Laboratory using U.S. EPA Test Method 300.0. All appropriate sample handling and quality assurance/quality control procedures were followed.⁷ Industrial self-monitoring data are data that are collected by industries on their own effluent. The District typically requires self-monitoring for chloride at industries in the Santa Clarita Valley. The District reviews all self-monitoring data as it is received to ensure that samples were analyzed by appropriately certified laboratories.

In some cases, chloride sample data were not available for a particular facility for a particular year. In these cases, the effluent chloride concentration was usually estimated using chloride data for the company for a different year. For certain types of small dischargers, such as municipal swimming pools and recreational vehicle sanitary waste disposal stations, data were transferred from one similar facility to another. Because most facilities for which estimated chloride values were used have low flowrates, the uncertainty introduced by estimating chloride concentrations is relatively small.

To estimate the mass of chloride discharged from each industrial facility it was also necessary to determine the flow from each facility. Flow values were taken from District's surcharge (industrial sewer use fee) database,⁸ where available, and from permitting information when surcharge data were not available. Surcharge flows were determined by either direct measurement or calculated based on water usage information from water bills. Direct measurement was used for the two facilities in the District that discharge the largest volumes of wastewater: Peter Pitchess Honor Rancho and Magic Mountain. These facilities are required by the District to maintain continuous effluent flow monitoring systems that are calibrated annually to ensure a high degree of accuracy in flow data. Smaller facilities that discharge less than 50,000 gallons per day are not usually required to maintain continuous effluent flow monitoring systems. In these cases, the volume of wastewater discharged annually for surcharge purposes is determined based on annual water usage information contained in water bills. Water usage is totaled for each year, then any additions (e.g., additions through processing products) or losses of water (e.g.,

⁷ For a more complete discussion of quality assurance/quality control procedures for chloride analyses, see Appendix 3.5-A in the District's *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2005*.

⁸ This is an annual fee for wastewater collection, treatment and disposal services for industries. All industrial companies discharging more than one million gallons of wastewater during the fiscal year or that have high strength waste are required to pay an annual surcharge fee. The fee is based on flow and wastewater strength.

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evaporation) are taken into consideration. Facilities that discharge less than one million gallons of wastewater per year are not required to perform annual surcharge calculations. For these facilities, flow is calculated on a one-time basis when the permit is issued. These flow calculations are also based on water bill usage adjusted for any additions or losses.

In estimating the loading of chloride from industrial sources, it was necessary to separate the loading of chloride added by industry from the loading of chloride present in the potable water supplied to industries. Potable water concentrations were assumed to be the blended water supply concentrations for the Santa Clarita Valley, as discussed in Section 3.2.

Estimated industrial loadings from 2002 to 2011 are presented in Tables 3.5-2 to 3.5-11 (see pages T-4 to T-13) and are summarized in Table 3.5-12. The estimated industrial chloride loading increased slightly from approximately 1,564 pounds per day in 2002 to 1,581 pounds per day in 2011. The estimated chloride loading added to the system by industries, above chloride present in the water supply, varied from 363 pounds per day to 727 pounds per day during 2002 to 2011 timeframe. In 2011, the estimated industrial chloride loading above water supply was approximately 727 pounds per day. The average estimated chloride concentration discharged by industrial facilities dropped from 133 mg/L in 2002 to 124 mg/L in 2011.

Table 3.5-12 Summary of Estimated Industrial Chloride Loadings

| Year | Industrial Flow (MGD) | Flow-Weighted Average Industrial Chloride Concentration (mg/L) | Total Industrial Chloride Loading (pounds per day) | Industrial Chloride Loading Above Blended Water Supply (pounds per day) |
|------|-----------------------|--|--|---|
| 2002 | 1.41 | 133 | 1,564 | 606 |
| 2003 | 1.25 | 123 | 1,282 | 413 |
| 2004 | 1.16 | 110 | 1,068 | 363 |
| 2005 | 1.19 | 108 | 1,064 | 514 |
| 2006 | 1.30 | 96 | 1,044 | 449 |
| 2007 | 1.56 | 100 | 1,303 | 505 |
| 2008 | 1.78 | 110 | 1,641 | 542 |
| 2009 | 1.75 | 125 | 1,825 | 700 |
| 2010 | 1.61 | 118 | 1,595 | 574 |
| 2011 | 1.53 | 124 | 1,581 | 727 |

3.6 Commercial Sector Contribution

3.6.1 Overview of Commercial Sector

The commercial sector, as the term is used by the District, consists of all non-residential dischargers that do not hold industrial wastewater discharge permits. The commercial sector includes retail stores, restaurants, motels, offices, professional buildings, warehouses, and a number of other types of businesses.

3.6.2 Commercial Sector Flow Volume

To estimate the amount of chloride discharged from the commercial sector it was necessary to identify both the flow volume and chloride concentration of wastewater discharged from this sector.

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Flow volumes were determined using information from internal District's service charge⁹ and connection fee¹⁰ databases. When a commercial business is first connected to the sewer system, the flow volume for the business is determined using a standard usage unit. The usage unit varies based on the type of business. For most business types, the usage unit is 1,000 square feet of occupied area. For motels and hotels the usage unit is the number of rooms on the property. For recreational vehicle parks the usage unit is the number of spaces, and for convalescent homes the usage unit is the number of beds.

A wastewater flowrate is then assigned to the business based on the District's standard business parcel connection fee schedule. The connection fee schedule establishes wastewater discharge rates per unit of usage for specific commercial business sectors based on studies conducted by the District in developing both the service charge and connection fee program. These studies characterized typical discharges for specific business categories. For example, office buildings are assumed to discharge 200 gallons of wastewater per day per unit of usage. The unit of usage for office buildings is 1,000 square feet of occupied area. Therefore, a 10,000 square foot office building would have ten usage units and would be assumed to discharge 2,000 gallons per day of wastewater. In some cases, however, certain commercial dischargers have applied for and received assigned wastewater flowrates lower than the standard usage units, based on reduced water usage. Such reductions were taken into account when estimating the volume of wastewater contributed by commercial facilities.

Summaries of the estimated flowrates from the various commercial business types in the Santa Clarita Valley, for the years 2002 through 2011 are presented in Tables 3.6-1 to 3.6-10 (see pages T-14 to T-23). The overall commercial wastewater flowrate increased from an estimated 2.7 MGD in 2002 to 4.3 MGD in 2011, commensurate with residential growth in the Santa Clarita Valley during this timeframe.

3.6.3 Commercial Sector Chloride Concentrations

Chloride concentrations in wastewater discharged by the commercial sector were taken from the District's *Santa Clarita Valley Joint Sewerage System Chloride Source Report, October 2002*. As part of the District's 2001 chloride source identification study, the District sampled wastewater from a number of commercial business sectors. The sectors were chosen based on the potential for the businesses in the sector to discharge non-sanitary wastes that contained elevated chloride concentrations. Business sectors that only discharged sanitary wastes, such as office buildings, were excluded from sampling. Certain other business types, such as beauty salons and florists, were excluded because inspection and investigation of typical business practices at these facilities indicated that there were no operations that added significant amounts of chloride to their wastewater.

The commercial sectors chosen for sampling were dry cleaners, car washes, dog grooming, hotels/motels, health clubs, restaurants, laundromats, movie theaters, and retail grocery stores. The District selected a single company from each business sector to collect monitoring samples. Companies

⁹ As a special district, the District is permitted to charge an assessment for the services rendered under the applicable state law that allowed its creation. For residential and commercial uses of the District's sewerage system, this assessment is called a service charge. Each fiscal year the District provides the Los Angeles County Auditor-Controller with a listing of the land parcels within its service area and the amounts to be charged to each parcel on the property tax roll.

¹⁰ In 1981, a District-wide Connection Fee Program was implemented to provide funds for future capital expenditures needed to accommodate additional wastewater contributions in the District's sewerage system. This program requires all new users of the sewerage system, as well as existing users who expand their wastewater discharge by more than 25 percent, to pay a connection fee to the District based upon the quantity and the strength of the wastewater discharge. This connection fee applies to residential, commercial, and industrial users of the system.

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within a business category were reviewed based on the following criteria to select an acceptable location:

1. Suitability of the Sampling Point - The wastewater at the sampling location had to be representative of only that business being evaluated (e.g., no other sources of wastewater are discharged to the sewer line, which can be a problem in some shopping centers). Also the sampling location had to collect all wastewater from the business, including sanitary wastewater.
2. Representative Operating Conditions - The business, on the day of the sampling, had to be operating in a manner that reflected the normal operations of the business in that category.
3. Site Inspection - The sites were thoroughly inspected prior to sampling to ensure that unauthorized chloride sources (such as SRWS) were not present.
4. Sampling Location Access - The sampling location had to be situated in such a manner as to provide safe access for District's personnel.

The sampling program included the collection of two non-concurrent 24-hour chloride composite samples at each business type. To further ensure the validity of the data, the two composite sampling events were separated by a minimum of 40 days. Inspection of the businesses during the sampling periods confirmed the activities at the facilities were those of a typical business day. All wastewater samples collected from the commercial businesses were analyzed by the District's Water Quality Laboratory using U.S. EPA Test Method 300.0. All appropriate sample handling and quality assurance/quality control procedures were followed.¹¹ The results of the sampling program are presented in Table 3.6-11.

Table 3.6-11 2001 Commercial Sampling Results

| Business Sector | Average Chloride Concentration (mg/L) | Chloride Concentration Above Water Supply (mg/L)* |
|------------------------|--|--|
| Car Washes | 75 | 6 |
| Dog Grooming | 85 | 16 |
| Hotels & Motels | 106 | 37 |
| Health Clubs | 115 | 46 |
| Restaurants | 120 | 51 |
| Laundromats | 121 | 52 |
| Movie Theaters | 146 | 77 |
| Grocers - Retail | 148 | 79 |

**Chloride concentrations above water supply in this table are based on the average 2001 chloride water supply value of 69 mg/L.*

¹¹ For a more complete discussion of quality assurance/quality control measures for chloride analysis, see Appendix 3.5-A in the District's *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2005*

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Businesses not in one of the sectors listed in Table 3.6-11 were evaluated independently. For example, convenience stores were assigned a chloride value equal to local potable water plus 30 mg/L to account for sanitary and domestic wastes.¹² This nominal value was assigned because no operations were conducted that would add significant amounts of chloride to their wastewater.

3.6.4 Commercial Sector Chloride Loading

Flowrates and wastewater chloride data were combined to estimate the chloride loading from each commercial business type in the Santa Clarita Valley, as presented in Table 3.6-12. The estimated commercial loading of chloride above water supply contributions increased from 748 pounds per day in 2002 to 1,196 pounds per day in 2011. The increased chloride loading was due to increased flows from the commercial sector, as it grew commensurate with residential growth in the Santa Clarita Valley.

The estimated concentration of chloride added to wastewater by the commercial sector is assumed to have remained steady over the past ten years at 33 mg/L. This concentration is significantly lower than the average amount of chloride added to wastewater by other sources. Therefore, the commercial sector provides a diluting effect on chloride concentrations in the District's sewerage system; if all commercial sources were removed from the District the effluent chloride concentration at the plants would increase.

Table 3.6-12 Summary of Estimated Commercial Chloride Loadings

| Year | Commercial Flow (MGD) | Flow-Weighted Average Commercial Added Chloride Concentration (mg/L) | Commercial Chloride Loading Above Blended Water Supply (pounds per day) |
|------|-----------------------|--|---|
| 2002 | 2.72 | 32.9 | 748 |
| 2003 | 2.95 | 32.5 | 800 |
| 2004 | 3.02 | 32.5 | 820 |
| 2005 | 2.99 | 32.7 | 815 |
| 2006 | 2.98 | 33.1 | 823 |
| 2007 | 3.41 | 33.3 | 945 |
| 2008 | 3.23 | 33.4 | 900 |
| 2009 | 3.18 | 33.1 | 879 |
| 2010 | 3.65 | 33.1 | 1,010 |
| 2011 | 4.30 | 33.4 | 1,196 |

3.7 Liquid Waste Disposal Station Contribution

In addition to wastewater directly discharged to the sewerage system from industrial, commercial, and residential sources, the District accepts a small amount of wastewater that is delivered by truck, also known as hauled waste. The District operates the Saugus Liquid Waste Disposal Station, which accepts trucked loads of portable toilet, septic tank, and cesspool wastes at the Saugus WRP. No industrial wastes are accepted at the station, which primarily serves Santa Clarita and the outlying unsewered areas of Canyon Country and Aqua Dulce.

Each load arriving at the Saugus Liquid Waste Disposal Station is accompanied by a manifest. The number of loads, types of loads, and volumes of wastes arriving at the station can be determined by a review of historical manifest data. Table 3.7-1 presents a summary of the number of loads and volumes of loads arriving at the station from 2002 to 2011.

¹² Metcalf and Eddy, Inc., *Wastewater Engineering Treatment and Reuse*, 4th ed., McGraw-Hill, 2003.

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Table 3.7-1 Saugus Liquid Waste Disposal Station Volumes

| Year | Number of Loads | | Gallons | |
|------|-----------------|---------|-----------------|------------|
| | Chemical Toilet | Septage | Chemical Toilet | Septage |
| 2002 | 523 | 2,270 | 948,339 | 5,731,245 |
| 2003 | 557 | 2,392 | 899,119 | 6,249,707 |
| 2004 | 896 | 2,503 | 1,146,404 | 5,784,546 |
| 2005 | 999 | 4,663 | 1,540,894 | 12,831,309 |
| 2006 | 1,257 | 3,439 | 1,765,512 | 7,367,571 |
| 2007 | 1,233 | 2,727 | 1,597,029 | 5,041,595 |
| 2008 | 1,367 | 2,860 | 1,637,258 | 5,130,228 |
| 2009 | 1,273 | 2,840 | 1,573,506 | 5,060,053 |
| 2010 | 937 | 2,254 | 1,272,539 | 4,553,385 |
| 2011 | 753 | 1,803 | 1,065,990 | 3,879,744 |

The estimated chloride concentration of hauled waste loads arriving at the Saugus Liquid Waste Disposal Station was determined by direct measurement during the period from January 2000 through July 2004. Eighty-one randomly selected loads arriving at the station were sampled and analyzed for chloride. All samples were analyzed by the District's Water Quality Laboratory using U.S. EPA Test Method 300.0 and all appropriate quality assurance/quality control measures were followed.¹³

The results of the hauled waste sampling are detailed in Table 3.7-2 (see page T-24). Chloride concentrations in hauled waste loads varied from a minimum of 51 mg/L to a maximum of 2,650 mg/L. On average, the chloride content of chemical toilet waste was found to be 1,341 mg/L and the chloride content of septage waste was found to be 175 mg/L.

The chloride mass loading from the Saugus Liquid Waste Disposal Station was estimated for the years 2002 to 2011 using the volumes of chemical toilet waste and septage received for each year and the average chloride concentrations of these wastes. The results are presented in Table 3.7-3. The estimated contribution of chloride to the District's sewerage system from the Saugus Liquid Waste Disposal Station is minimal, ranging from 52 to 99 pounds per day.

Table 3.7-3 Saugus Liquid Waste Disposal Station Estimated Chloride Loadings

| Year | Chemical Toilet Waste (pounds per day) | Septage Waste (pounds per day) | Total (pounds per day) |
|------|---|-----------------------------------|---------------------------|
| 2002 | 29 | 23 | 52 |
| 2003 | 28 | 25 | 53 |
| 2004 | 35 | 23 | 58 |
| 2005 | 47 | 52 | 99 |
| 2006 | 54 | 30 | 84 |
| 2007 | 49 | 20 | 69 |
| 2008 | 50 | 21 | 71 |
| 2009 | 48 | 20 | 68 |
| 2010 | 39 | 18 | 57 |
| 2011 | 33 | 16 | 49 |

¹³ For a more complete discussion of quality assurance/quality control measures for chloride analyses, see Appendix 3.5-A in the District's *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2005*.

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3.8 Residential Sector Contribution

3.8.1 Residential Sector Overview

The Santa Clarita Valley consists of the City of Santa Clarita and outlying communities in unincorporated Los Angeles County. As of January 2011, the City of Santa Clarita is the fourth largest city in Los Angeles County with a population of 176,971 and the 24th largest city in California. The City of Santa Clarita grew 17.5 percent from 2000 to 2010, both as a result of influx and annexations of surrounding areas into the city limits. The City population for the year 2015 is forecasted to exceed 193,000.¹⁴

The Saugus and Valencia WRPs provide wastewater treatment for the majority of residents of the Santa Clarita Valley. Based on records from the District's service charge database, as of September 2011, the District contained 40,449 detached single-family homes and 26,327 non-single family housing units (e.g., condominiums, apartments, and mobile home parks). Of the 26,327 non-single family housing units, 25,901 units were identified as condominiums/townhouses, 183 were identified as duplexes, triplexes, and fourplexes, 218 were identified as multi-unit apartment complexes, and 25 were identified as mobile homes complexes. The 26,327 non-single family housing units contained 42,990 dwelling units.

3.8.2 Residential Sector Flow Volume

The volume of flow discharged by the residential sector was estimated by finding the difference between the flow volume discharged by the Saugus and Valencia WRPs and the flow volumes from infiltration, the industrial sector, the commercial sector, and the liquid waste disposal station. Because all of these flow volumes were thought to be well characterized, this differential method has been used to provide an estimate of the residential flow volume. Additionally, in the *Santa Clarita Valley Joint Sewerage System Chloride Source Report, October 2002*, residential flow volumes were determined using both this differential method and a rigorous modeling technique based on extensive field data collection. There was excellent agreement in the residential flow volumes determined using the differential method and using the more rigorous modeling technique. However, it should be noted that slight variations in the estimated flowrates could have a meaningful impact on the overall estimation of the residential flow volume, and hence the estimated chloride load.

Using the differential technique, residential flowrates for the years 2002 to 2011 were found to vary from 13.8 MGD in 2002, to 16.5 MGD in 2006, to 14.0 MGD in 2011, as presented in Table 3.8-1. The estimated flows attributed to residences show a decrease since 2006 due to an increase in estimated flow from the industrial and commercial sectors. In addition, the combined plant flows and residential flows from 2008 to 2011 show a slightly decreasing trend. The decrease is most likely due to the economic downturn and water conservation efforts during this time period.

¹⁴ <http://www.santa-clarita.com/index.aspx?page=574> (Accessed October 13, 2012).

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Table 3.8-1 Estimated Residential Wastewater Flowrates

| Year | Combined Plant Flow (MGD) | Infiltration Flow (MGD) | Industrial Flow (MGD) | Commercial Flow (MGD) | LWDS Flow (MGD) | Residential Flow (MGD) |
|------|---------------------------|-------------------------|-----------------------|-----------------------|-----------------|------------------------|
| 2002 | 17.98 | 0 | 1.41 | 2.72 | 0.018 | 13.83 |
| 2003 | 18.12 | 0 | 1.25 | 2.95 | 0.020 | 13.90 |
| 2004 | 18.78 | 0 | 1.16 | 3.02 | 0.019 | 14.58 |
| 2005 | 21.13 | 1.74 | 1.19 | 2.99 | 0.039 | 15.17 |
| 2006 | 20.83 | 0 | 1.30 | 2.98 | 0.025 | 16.52 |
| 2007 | 20.91 | 0 | 1.56 | 3.41 | 0.018 | 15.92 |
| 2008 | 20.91 | 0 | 1.78 | 3.23 | 0.018 | 15.88 |
| 2009 | 20.44 | 0 | 1.75 | 3.18 | 0.018 | 15.49 |
| 2010 | 20.19 | 0 | 1.61 | 3.65 | 0.016 | 14.91 |
| 2011 | 19.84 | 0 | 1.53 | 4.30 | 0.014 | 14.00 |

3.8.3 Residential Sector Chloride Concentration

To determine the chloride concentration in Santa Clarita Valley residential wastewater exclusive of contributions from SRWS, data were used from the *Santa Clarita Valley Joint Sewerage System Chloride Source Report, October 2002*. In this report, it was noted that the typical chloride concentration above water supply that can be expected in municipal wastewater resulting from domestic usage is 20 to 50 mg/L, excluding chloride addition from domestic water softeners.¹⁵ To verify this concentration, the District examined chloride data collected as part of the corresponding commercial sampling program, which included samples from a major hotel. The operations that generate wastewater at a hotel are similar to those in a household, including toilet/faucet/shower use by guests, clothes washing (laundering of linens by hotel staff), and dishwashing (from any on-site restaurants and cleaning of glassware used in the rooms). The average chloride concentration above water supply in the hotel wastewater was 35 mg/L. To further verify domestic non-SRWS chloride additions, daytime¹⁶ chloride concentrations at four residential sites in the Santa Clarita Valley with a low incidence of SRWS were examined at the same time. The daytime chloride concentrations were believed to be representative of domestic wastewater with no SRWS regenerate, as the incidence of SRWS was low at these sites and SRWS are usually set to regenerate at night. As shown in Table 3.8-2, both the hotel data and the literature chloride value agree well with the daytime chloride concentrations above water supply found at the four residential sites with low SRWS usage in the Santa Clarita Valley.

Table 3.8-2 Residential Chloride Concentration Above Water Supply Comparison

| | Chloride Concentration Above Water Supply (mg/L) |
|-----------------------|--|
| Literature | 20 to 50 |
| Hotel Wastewater | 35 |
| Site 1 | 31 |
| Site 2 | 26 |
| Site 3 | 28 |
| Site 4 | 39 |
| Average, Sites 1 to 4 | 31 |

¹⁵ Metcalf & Eddy Inc., *Wastewater Engineering Treatment and Reuse*, 4th ed., McGraw Hill, 2003.

¹⁶ 6 A.M. to midnight.

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To further quantify residential non-SRWS chloride contributions, the *Santa Clarita Valley Joint Sewerage System Chloride Source Report, October 2002* contained a detailed study of residential non-SRWS sources of chloride. Chloride loadings for human waste, laundry products, other cleaning products, and swimming pool backwash were individually quantified. The chloride concentration in residential wastewater without SRWS was found to be 31 mg/L.¹⁷ However, due to recent water conservation efforts, it is possible that the chloride concentration from residential non-SRWS sources may be higher than 31 mg/L. This report utilizes a residential non-SRWS chloride concentration of 31 mg/L based on assumptions from the *Santa Clarita Valley Joint Sewerage System Chloride Source Report, October 2002* since it is recognized as best professional judgment available at this time; it should be kept in mind that the analysis may underestimate the non-SRWS residential contribution.

3.8.4 Residential Sector Chloride Load

The residential sector chloride load, exclusive of SRWS contributions, was estimated using flow and chloride concentrations as described above. The results are presented in Table 3.8-3. They indicate that the residential added chloride load, exclusive of SRWS, increased slightly from 3,575 pounds per day in 2002 to about 3,619 pounds per day in 2011, using the 31 mg/L assumed concentration. Since 2006, the estimated amount of residential chloride load has been decreasing due to a decrease in the flowrate attributed to residences as described in Section 3.8.2.

Table 3.8-3 Estimated Residential Non-SRWS Chloride Load

| Year | Residential Flowrate (MGD) | Chloride Concentration (mg/L) | Chloride Load (pounds per day) |
|------|----------------------------|-------------------------------|--------------------------------|
| 2002 | 13.83 | 31 | 3,575 |
| 2003 | 13.90 | 31 | 3,593 |
| 2004 | 14.58 | 31 | 3,769 |
| 2005 | 15.17 | 31 | 3,922 |
| 2006 | 16.52 | 31 | 4,271 |
| 2007 | 15.92 | 31 | 4,117 |
| 2008 | 15.88 | 31 | 4,106 |
| 2009 | 15.49 | 31 | 4,004 |
| 2010 | 14.91 | 31 | 3,856 |
| 2011 | 14.00 | 31 | 3,619 |

From 2002 to 2008, the primary source of chloride added to residential wastewater in the Santa Clarita Valley was SRWS. The chloride contribution from residential SRWS was estimated as the difference between the total chloride mass effluent from the Saugus and Valencia WRPs and the chloride loadings from other sources (water supply, infiltration, disinfection at the treatment plants, industrial, commercial, hauled waste, and residential non-SRWS). The mass of chloride discharged from the Saugus and Valencia WRPs for the years 2002 to 2011 is presented in Table 3.8-4, and the estimated residential SRWS chloride load for the same period is presented in Table 3.8-5.

¹⁷ For a more complete discussion of the quantification of these sources see Section 4.6.6 in the District's *Santa Clarita Valley Joint Sewerage System Chloride Report, October 2002*. For information about the quantification of chloride concentration from residential garbage grinders/disposers, see Section 3.8.3 in the District's *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2005*.

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Table 3.8-4 Saugus and Valencia WRPs Chloride Load

| Year | Flowrate (MGD) | | | Chloride Concentration (mg/L) | | | Chloride Load (pounds per day) |
|------|----------------|----------|-------|-------------------------------|----------|-----------------------|--------------------------------|
| | Saugus | Valencia | Total | Saugus | Valencia | Flow-weighted Average | |
| 2002 | 5.63 | 12.35 | 17.98 | 174 | 187 | 183 | 27,431 |
| 2003 | 4.11 | 14.01 | 18.12 | 172 | 194 | 189 | 28,563 |
| 2004 | 4.04 | 14.74 | 18.78 | 160 | 183 | 178 | 27,887 |
| 2005 | 4.19 | 16.94 | 21.13 | 125 | 146 | 142 | 24,996 |
| 2006 | 4.85 | 15.98 | 20.83 | 124 | 136 | 133 | 23,141 |
| 2007 | 4.94 | 15.97 | 20.91 | 136 | 143 | 141 | 24,620 |
| 2008 | 5.07 | 15.84 | 20.91 | 147 | 149 | 148 | 25,848 |
| 2009 | 4.86 | 15.58 | 20.44 | 140 | 137 | 138 | 23,470 |
| 2010 | 5.02 | 15.17 | 20.19 | 128 | 128 | 128 | 21,554 |
| 2011 | 4.97 | 14.87 | 19.84 | 115 | 119 | 118 | 19,524 |

Table 3.8-5 Estimated SRWS Chloride Load, Pounds per Day

| Year | Total Load | Water Supply | Inf. | Disinf. | Ind. | Com. | LWDS | Residential Non-SRWS | Residential SRWS |
|------|------------|--------------|------|---------|------|-------|------|----------------------|------------------|
| 2002 | 27,431 | 12,296 | 0 | 2,136 | 606 | 748 | 52 | 3,575 | 8,018 |
| 2003 | 28,563 | 12,709 | 0 | 2,018 | 413 | 800 | 53 | 3,593 | 8,977 |
| 2004 | 27,887 | 11,496 | 0 | 2,302 | 363 | 820 | 58 | 3,769 | 9,079 |
| 2005 | 24,996 | 9,088 | 862 | 2,209 | 514 | 815 | 99 | 3,922 | 7,487 |
| 2006 | 23,141 | 9,572 | 0 | 2,068 | 449 | 823 | 84 | 4,271 | 5,874 |
| 2007 | 24,620 | 10,795 | 0 | 2,150 | 505 | 945 | 69 | 4,117 | 6,039 |
| 2008 | 25,848 | 12,955 | 0 | 1,990 | 542 | 900 | 71 | 4,106 | 5,284 |
| 2009 | 23,470 | 13,242 | 0 | 2,014 | 700 | 879 | 68 | 4,004 | 2,563 |
| 2010 | 21,554 | 12,848 | 0 | 2,008 | 574 | 1,010 | 57 | 3,856 | 1,201 |
| 2011 | 19,524 | 11,119 | 0 | 1,822 | 727 | 1,196 | 48 | 3,619 | 993 |

The number of active residential SRWS present in the Santa Clarita Valley was estimated using the chloride loading from each SRWS. This analysis assumes that each residential SRWS contributes a daily chloride loading of 1.34 pounds per day above water supply.¹⁸ An estimate of the number of households that are using a SRWS was then made by dividing the SRWS contribution to the residential loading by the SRWS loading rate of 1.34 pounds per day per SRWS. The results are presented in Table 3.8-6.

¹⁸ See the District's *Santa Clarita Valley Joint Sewerage System Chloride Source Report, October 2002* for a complete discussion of how the chloride loading per SRWS was determined.

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Table 3.8-6 Estimated Residential SRWS

| Year | Estimated Residential SRWS Chloride Load (pounds per day) | Estimated Number of SRWS |
|------|---|--------------------------|
| 2002 | 8,018 | 5,983 |
| 2003 | 8,977 | 6,699 |
| 2004 | 9,079 | 6,775 |
| 2005 | 7,487 | 5,587 |
| 2006 | 5,874 | 4,384 |
| 2007 | 6,039 | 4,507 |
| 2008 | 5,284 | 3,943 |
| 2009 | 2,563 | 1,912 |
| 2010 | 1,201 | 896 |
| 2011 | 993 | 741 |

According to these estimates, the number of SRWS still in use in the community has decreased since the highest impact years of the 2002 to 2004 timeframe. The reduction is believed to be due to the combination of a prohibition on the installation of SRWS in the Santa Clarita Valley, which became effective in late March 2003,¹⁹ the successful community-wide public education and outreach program launched in March 2004,²⁰ the Automatic Water Softener Rebate Program – Phase I and II,²¹ the enactment of the Santa Clara River Chloride Reduction Ordinance of 2008 (Ordinance), which became effective January 1, 2009,²² and the Ordinance Enforcement Program that began in August 2011.²³ It should be kept in mind, however, that the exact numbers of SRWS in the community is unknown, and these estimates represent the best available information at this time. It should also be noted that a variance in the estimated potable water supply chloride concentration by just a few milligrams per liter could have a significant impact on the overall estimation of residential SRWS chloride load and number of SRWS.

As mentioned previously, the chloride data per source are estimates based on numerous assumptions, including assumptions made in the *Santa Clarita Valley Joint Sewerage System Chloride Source Report, October 2002*, and best professional judgment. Many inputs are difficult to quantify and this analysis represents the best available information at this time. The District has removed over 7,763 SRWS through the Automatic Water Softener Rebate Program – Phase I and II and the data clearly show a commensurate reduction in chloride loading in the District's effluent.

3.9 Chloride Trends, Loading Summary, and Future Plans

3.9.1 Chloride Trends

The flow-weighted combined effluent chloride concentrations at the District's WRPs from 1996 to 2011 are presented in Figure 3.9-1 (see page F-1). Effluent chloride concentrations in the system began rising in 1997 when local ordinances prohibiting the discharge of brines from residential SRWS were invalidated by court rulings. SRWS were heavily marketed to the community and became

¹⁹ See Section 4.1.1 for details on the ordinance.

²⁰ See Section 4.1.5 for details on the public outreach efforts.

²¹ See Section 4.1.4 for more information on the Automatic Water Softener Rebate Program – Phase I and II.

²² See Section 4.1.3 for a discussion of the Ordinance.

²³ See Section 4.1.6 for more information about the Ordinance Enforcement Program.

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increasingly popular. The upward trend in chloride was exacerbated by increasing chloride concentrations in SWP water, causing the chloride loading in water supplied to the community to increase. Effluent chloride concentrations continued to rise until early 2003. In early 2003, the District enacted an ordinance prohibiting the installation of SRWS.²⁴ At the same time, drought conditions eased in northern California and the chloride concentration in SWP water served to the community began to drop. Chloride concentrations in the District's sewerage system exhibited a strong downward trend since 2003 due to the decrease in the chloride in the blended water supply and the District's community-wide public outreach and rebate programs. The combined, flow-weighted effluent chloride concentration in the District's sewerage system in 2011 was 118 mg/L.

Figure 3.9-2 (see page F-2) presents a chart of trends in estimated chloride concentrations added to the District's sewerage system by users of the system (industrial, commercial, residential, and the liquid waste disposal station). Estimated chloride added by the system users began to increase in 1997, again commensurate with invalidation of the ordinance prohibiting installation of SRWS. Estimated chloride added by the system users continued to rise until early 2003, when the ordinance was enacted prohibiting installation of SRWS. Estimated chloride concentrations then leveled off, and began to drop in early 2004 when community-wide public outreach efforts about SRWS were implemented. They have been on a steady downward trend since, excluding the contributions from the potable water supply and wastewater disinfection.

3.9.2 Summary of Estimated Chloride Loadings

The breakdown of estimated chloride loadings by sector is presented in Tables 3.9-1, 3.9-2, and 3.9-3, and graphically depicted in Figures 3.9-3 to 3.9-12 (see pages F-3 to F-12).

Table 3.9-1 SCVSD Estimated Chloride Loadings, Pounds per Day

| Year | Total Load | Water Supply | Inf. | Disinf. | Ind. | Com. | LWDS | Residential Non-SRWS | Residential SRWS |
|------|------------|--------------|------|---------|------|-------|------|----------------------|------------------|
| 2002 | 27,431 | 12,296 | 0 | 2,136 | 606 | 748 | 52 | 3,575 | 8,018 |
| 2003 | 28,563 | 12,709 | 0 | 2,018 | 413 | 800 | 53 | 3,593 | 8,977 |
| 2004 | 27,887 | 11,496 | 0 | 2,302 | 363 | 820 | 58 | 3,769 | 9,079 |
| 2005 | 24,996 | 9,088 | 862 | 2,209 | 514 | 815 | 99 | 3,922 | 7,487 |
| 2006 | 23,141 | 9,572 | 0 | 2,068 | 449 | 823 | 84 | 4,271 | 5,874 |
| 2007 | 24,620 | 10,795 | 0 | 2,150 | 505 | 945 | 69 | 4,117 | 6,039 |
| 2008 | 25,848 | 12,955 | 0 | 1,990 | 542 | 900 | 71 | 4,106 | 5,284 |
| 2009 | 23,470 | 13,242 | 0 | 2,014 | 700 | 879 | 68 | 4,004 | 2,563 |
| 2010 | 21,554 | 12,848 | 0 | 2,008 | 574 | 1,010 | 57 | 3,856 | 1,201 |
| 2011 | 19,524 | 11,119 | 0 | 1,822 | 727 | 1,196 | 48 | 3,619 | 993 |

²⁴ See Section 4.1.1 for a discussion of the ordinance.

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Table 3.9-2 SCVSD Estimated Chloride Loadings, Concentration (mg/L)

| Year | Effl. Cl. | Water Supply | Inf. | Disinf. | Ind. | Com. | LWDS | Residential Non-SRWS | Residential SRWS |
|------|-----------|--------------|------|---------|------|------|------|----------------------|------------------|
| 2002 | 183 | 82 | 0 | 14 | 4 | 5 | 0.3 | 24 | 54 |
| 2003 | 189 | 84 | 0 | 13 | 3 | 5 | 0.4 | 24 | 60 |
| 2004 | 178 | 74 | 0 | 15 | 2 | 5 | 0.4 | 24 | 58 |
| 2005 | 142 | 52 | 5 | 12 | 3 | 4 | 0.6 | 22 | 43 |
| 2006 | 133 | 55 | 0 | 12 | 2 | 5 | 0.5 | 25 | 34 |
| 2007 | 141 | 62 | 0 | 12 | 3 | 5 | 0.4 | 24 | 35 |
| 2008 | 148 | 74 | 0 | 12 | 3 | 5 | 0.4 | 24 | 30 |
| 2009 | 138 | 78 | 0 | 12 | 4 | 5 | 0.4 | 24 | 15 |
| 2010 | 128 | 76 | 0 | 12 | 4 | 6 | 0.3 | 23 | 7 |
| 2011 | 118 | 67 | 0 | 11 | 5 | 7 | 0.3 | 22 | 6 |

Table 3.9-3 SCVSD Estimated Chloride Loadings, Percentages

| Year | Total Load | Water Supply | Inf. | Disinf. | Ind. | Com. | LWDS | Residential Non-SRWS | Residential SRWS |
|------|------------|--------------|------|---------|------|------|------|----------------------|------------------|
| 2002 | 100% | 45% | 0% | 8% | 2% | 3% | 0.2% | 13% | 29% |
| 2003 | 100% | 45% | 0% | 7% | 1% | 3% | 0.2% | 13% | 31% |
| 2004 | 100% | 41% | 0% | 8% | 1% | 3% | 0.2% | 14% | 33% |
| 2005 | 100% | 37% | 3% | 9% | 2% | 3% | 0.4% | 16% | 30% |
| 2006 | 100% | 41% | 0% | 9% | 2% | 4% | 0.3% | 19% | 25% |
| 2007 | 100% | 44% | 0% | 9% | 2% | 4% | 0.3% | 17% | 24% |
| 2008 | 100% | 50% | 0% | 8% | 2% | 4% | 0.3% | 16% | 20% |
| 2009 | 100% | 56% | 0% | 9% | 3% | 4% | 0.3% | 17% | 11% |
| 2010 | 100% | 60% | 0% | 9% | 3% | 5% | 0.3% | 18% | 5% |
| 2011 | 100% | 57% | 0% | 9% | 4% | 6% | 0.2% | 19% | 5% |

The relative contribution to chloride loadings of the industrial sector, commercial sector, liquid waste disposal station, disinfection, and residential non-SRWS has stayed relatively constant over the past several years. The industrial sector discharges one to four percent of the total loading, representing 2 to 5 mg/L of chloride in the final system effluent. The commercial sector discharges three to six percent of the total chloride loading, representing 4 to 7 mg/L chloride in the final system effluent. The liquid waste disposal station discharges less than one percent of the total chloride loading, representing about 0.4 mg/L chloride in the final system effluent. Disinfection at the WRPs contributes seven to nine percent of the total chloride loading, representing 12 to 15 mg/L in the final system effluent. Residential non-SRWS contributes 13 to 19 percent of the total chloride loading, representing approximately 22 to 25 mg/L in the final system effluent.

The two sources of chloride that have significantly varied over the past several years are chloride in the potable water supply and chloride from residential SRWS. The estimated chloride loading from water supply between 2002 and 2011 peaked in 2009 at 13,242 pounds per day of chloride, representing 78 mg/L chloride in the system effluent. In 2011, the potable water supply contributed 57 percent of the chloride load in the District's sewerage system. The estimated chloride loading from SRWS peaked in 2003/2004 at about 9,000 pounds per day, representing 59 mg/L in the system effluent. This coincided with enactment of the prohibition on installation of SRWS in the District in 2003. The SRWS contribution maintained a downward trend in 2011, as the Automatic Water Softener Rebate Program – Phase II, Ordinance, Ordinance Enforcement Program, and community-wide public outreach efforts convinced residents to remove existing SRWS. In 2011, the estimated chloride loading from SRWS was approximately 993 pounds per day, representing about 6 mg/L in the system effluent.

Section 3. Sources of Chloride Loadings

This analysis shows that residential SRWS should remain a primary target of the District's chloride source reduction efforts since residential SRWS remain a controllable source of chloride added to wastewater in the Santa Clarita Valley. The District's SRWS removal and outreach program has been highly successful in reducing the number of discharging SRWS, and hence the estimated chloride load from residential SRWS is now a small percentage of the total estimated chloride load. Since the analysis is based on numerous assumptions, it is possible that future analyses may not continue to show a decrease in the estimated chloride load and the estimated number of residential SRWS in the Santa Clarita Valley due to uncertainty in the data. Small changes in the numerous assumptions used in the analysis may now have measureable impact on the results. Even with the uncertainty in the data, the District should still be able to utilize the analysis to estimate chloride loadings over time, so that the effectiveness of chloride source reduction measures can be evaluated and a planning level determination can be made as to how to proceed with further source control efforts.

Chloride from the potable water supply should be also addressed to the maximum extent possible. In addition, switching from sodium hypochlorite to UV disinfection could decrease chloride levels in the discharges by up to 10 mg/L if the facilities are constructed. The District may also consider further source control efforts for the residential, commercial, and industrial sectors.

3.9.3 Future Plans

The District will continue to monitor and quantify chloride sources on an on-going basis. Continued efforts will include collection of data on industrial chloride concentrations and flowrates, industrial self-monitoring of chloride concentrations, quantification of commercial flowrates, tracking of treatment plant sodium hypochlorite use, tracking of volumes of wastes accepted at the Saugus Liquid Waste Disposal Station, obtaining groundwater and SWP chloride data from local water purveyors, and monitoring chloride concentrations and flowrates at the Saugus and Valencia WRPs. The District will also continue to conduct influent chloride studies at Saugus and Valencia WRPs and evaluate ways to improve chloride source estimates. It is anticipated that the loading due to SRWS will continue to decrease with enforcement of the Ordinance; however, the estimated residential SRWS chloride loading data as currently derived may not show a decrease due to the uncertainty in the data for other contributing sources. An update of the chloride loading per source category and the District's pollution prevention and public outreach programs for 2012 will be submitted to the Regional Board next year as part of the annual progress report required under the Upper Santa Clara River Chloride TMDL, Task 3.

Section 4. Chloride Source Control Measures

CHLORIDE SOURCE CONTROL MEASURES

4.1 Residential Sector

As detailed in Section 3, the primary controllable source of chloride in the Santa Clarita Valley has been residential SRWS, also known as automatic water softeners. Therefore, the District's residential source control efforts have focused on these units. This section describes the residential source control efforts, which began in 1961. These efforts were substantially increased beginning in 2000, well in advance of deadlines required under the Upper Santa Clara River Chloride TMDL.

4.1.1 Historical Control of Self-Regenerating Water Softeners

In 1961, the District adopted resolutions that prohibited the connection of laterals or other sewer lines to the District's sewerage system that included salt brines produced by the regeneration of water softeners (e.g., SRWS). This action was taken to protect the quality of the District's wastewater and in turn to protect the quality of water discharged to the Santa Clara River and/or the quality of water beneficially reused. The prohibition applied to all users of the sewerage system: residential, commercial and industrial. In 1997, the prohibition in effect was limited to only industrial and commercial users based on the outcome of several lawsuits that impacted the ability of local agencies to control residential SRWS, as further explained below.

In the mid-1990s, the California Court of Appeals made several significant rulings regarding the ability of local agencies to enact ordinances to ban or restrict residential SRWS.¹ Each agency had adopted an ordinance that either banned or placed restrictions on the use of residential SRWS. In each case, the Courts ruled that restrictive ordinances prohibiting or significantly restricting residential use of SRWS were invalid, as the State had statutes in place that regulated softener performance on a statewide basis (and these took precedence over more stringent local regulations). Specifically, in 1978, the state Legislature adopted California Health and Safety Code Section 116775 that reads, in pertinent part as follows:

*“The Legislature hereby finds and declares that the utilization of the waters of the state by residential consumers for general domestic purposes, . . . is a right that should be interfered with only when necessary for specified health and safety purposes. The Legislature further finds that variation in water quality, and **particularly in water hardness, throughout the state requires that on-site water softening or conditioning be available throughout the state** to insure to domestic consumers their right to a water supply that is effective and functional for domestic requirements of the residential household, **but that the on-site water softening or conditioning shall be available only as hereinafter set forth.**” (Emphasis added)*

California Health and Safety Code Sections 116785 and 116790 established minimum salt efficiency ratings for residential SRWS of 2,850 grains of hardness per pound of salt, and required that regeneration be based on clock or demand control devices. The Courts determined that the statute declared that the residential use of SRWS was a right, and that the local ordinances restricting SRWS use by residents interfered with that right. The Courts acknowledged the concerns of the agencies about impacts of salinity on water quality resulting from the discharge of brine wastes into sewers, but indicated that any desire to further restrict softeners would need to be addressed by the State Legislature.² These court decisions prevented local agencies

¹ Water Quality Association et al. versus County of Santa Barbara et al.; Water Quality Association et al. versus City of Santa Maria et al.; Water Quality Association et al. versus City of Escondido et al.

² 96 Daily Journal D.A.R. 4450.

Section 4. Chloride Source Control Measures

from regulating residential SRWS, even where there were adverse water quality impacts, or where salt levels contributed by water softeners posed an impediment to water recycling efforts.

In 1999, Senate Bill 1006 (Statutes of 1999, Ch. 969) was enacted, but it did not take effect until January 1, 2003. Among other things, the bill amended the California Health and Safety Code Section 116786 to establish new conditions under which a local agency could regulate SRWS.³ Health and Safety Code Section 116786 authorized a local agency to limit the availability, or prohibit the installation, of residential water softening or conditioning appliances that discharge to the sewer system through adoption of an ordinance, if three findings are made, substantiated by an independent study, and included in the ordinance. The findings must include the following:

- 1) The local agency is not in compliance with either their NPDES permit or their water reclamation requirements;
- 2) Limiting the availability, or prohibiting the installation, of the appliances is the only available means of achieving compliance with the permit or reclamation requirements; and
- 3) The local agency has adopted, and is enforcing, regulatory requirements that limit the volumes and concentrations of saline discharges from non-residential sources to the sewer system to the extent technologically and economically feasible.⁴

The independent study was required to include a quantification of all sources of salinity, including residential water softening, residential consumptive use, industrial and commercial discharges, and seawater or brackish water infiltration and inflow into the sewer collection system. The study was also required to identify remedial actions taken to reduce the discharge of salinity into the sewer system from each source, to the extent technologically and economically feasible, to bring the local agency into compliance with its permit requirements.

In addition, changes to the statute enacted through Senate Bill 1006 increased the minimum operating efficiencies for all residential SRWS sold after January 1, 2000, from 2,850 to 3,350 grains removed per pound of salt added. These minimum operating efficiencies increased to 4,000 grains removed per pound of salt added for residential SRWS sold after January 1, 2002. The amended statute also specified that the regeneration cycle of all residential SRWS sold after January 1, 2000, should be demand controlled or initiated. Historically, older SRWS were timer-controlled, meaning that the regeneration cycle was controlled by a clock, which would trigger the regeneration cycle based on a preset cycle, independent of whether or not the exchange capacity of the resin beads was exhausted.

³ Under Senate Bill 1006, new ordinances enacted by local agencies must be prospective in nature, and thus, residential water softening devices installed before the effective date of a new ordinance were automatically grandfathered in.

⁴ These provisions of Senate Bill 1006 (SB 1006) were amended by Assembly Bill 334 (AB 334), which was enacted August 4, 2003 and took effect January 1, 2004. AB 334 changed these provisions to require that limiting the availability, or prohibiting the installation, of the appliances is a necessary means of achieving compliance with waste discharge requirements or water reclamation requirements. The determination of whether it is a necessary means of compliance must include an assessment of the technological and economic feasibility of alternatives to the ordinance and an assessment of the potential saline discharge reduction as a result of the ordinance. However, the District's ordinance was adopted prior to the enactment of AB 334, so the original provisions of SB 1006 were followed.

Section 4. Chloride Source Control Measures

In 2001, the District began preparation of the independent study required for adoption of an ordinance prohibiting the installation of SRWS. The study quantified chloride contributions in the District's sewerage system for the year 2001. It examined the amount of chloride entering the system from potable water, industrial waste, commercial discharges, hauled waste, residences, and wastewater treatment plant operations. It included extensive sampling and flow monitoring in six Santa Clarita Valley neighborhoods, conducted in February, August, and October 2001. The study also detailed efforts that had been taken thus far to control and reduce chloride discharges. The report describing the study, *Santa Clarita Valley Joint Sewerage System Chloride Source Report*, was released in October 2002.

The findings of the report were reviewed by an independent panel convened by the National Water Research Institute. This panel, the National Water Research Institute Independent Review Panel (Panel), was charged with the task of independently studying the report and offering its findings and recommendations relative to making a determination of whether the District could and should regulate SRWS in accordance with state law. The Panel verified the findings in the report and substantiated that the District was taking the necessary actions to restrict non-residential sources of chloride pursuant to California Health and Safety Code Section 116786.

Subsequent to the Panel's determination, an ordinance was drafted and later adopted by the District's Board of Directors on February 25, 2003.⁵ It became effective thirty days after adoption, on March 27, 2003. A violation of the ordinance is a misdemeanor, punishable by a fine not to exceed \$1,000.00, imprisonment not to exceed thirty days, or both.

The District began efforts to publicize the ordinance as soon as it was introduced. During February and March 2003, the District conducted outreach to local newspapers, radio stations, home developers, plumbers, contractors, and water system conditioning vendors regarding the ordinance. The District's chloride website was also updated to include information about the ordinance. Letters were then sent to all households in the District's service area.

Because the ordinance did not prohibit the sale of SRWS,⁶ a key element of implementing the ordinance was to obtain agreement from local retailers to voluntarily stop selling the units. In March and April 2003, staff from the District, the Regional Board, and the City of Santa Clarita met with the local retailers that were selling SRWS. All eight retailers agreed to stop selling SRWS. These retailers were Sears, Costco, Lowe's, OSH, Caston's TV & Appliances, Warehouse Discount Center, and two Home Depot stores. Costco also stopped selling rock salt and potassium chloride in their local stores.

During this period the District also began compiling a list of acceptable alternatives to SRWS. Vendors were put on the list at their request. Before adding a new vendor to the list, the vendor's system was reviewed to ensure that it did not produce a high-chloride waste product. Vendors of acceptable alternative systems were sent letters stating that their systems were acceptable for installation in the Santa Clarita Valley. A list of approved alternative systems was initially only sent to residents upon their request, but was later added to the District's chloride website to provide wider distribution.

⁵ The District was historically operated by two independent sanitation districts: County Sanitation District Number 26 of Los Angeles County and County Sanitation District Number 32 of Los Angeles County and referred to as the Santa Clarita Valley Joint Sewerage System. These two districts were merged into a single district, the Santa Clarita Valley Sanitation District of Los Angeles County, as of July 1, 2005. For simplicity in this report, actions taken by the County Sanitation District Number 26 of Los Angeles County and County Sanitation District Number 32 of Los Angeles County prior to the merger will be considered as though they were actions taken by the District.

⁶ State law allowing prohibitions on the installation of SRWS does not allow for sales prohibitions.

Section 4. Chloride Source Control Measures

4.1.2 California Health and Safety Code Section 116787

As detailed in Section 4.1.1, the District adopted an ordinance in accordance with SB 1006 that prohibited the installation of new residential SRWS in the Santa Clarita Valley after March 27, 2003. However, SB 1006 did not allow a local agency to adopt an ordinance requiring the removal of SRWS that were installed prior to the effective date of the ordinance. To facilitate the timely removal of all residential SRWS, the District and the City of Santa Clarita worked with Senator George Runner (17th Senate District) on the enactment of Senate Bill 475. The bill added Section 116787 to the California Health and Safety Code⁷ to provide the District with the authority to adopt an ordinance to require the removal of all previously installed residential SRWS if specific findings are met. A copy of Section 116787 of the California Health and Safety Code is provided in Appendix 4.1-A. This is a special statute applicable only in the Santa Clarita Valley due to the unique circumstances associated with the requirements for reductions of chloride in order to attain water quality standards in the Santa Clara River. Because of concerns expressed during the legislative process about requiring residents and businesses (i.e. SRWS rental companies) to remove equipment legally purchased, installed, and operated and the attendant loss of use and capital investment that would be associated with such a new requirement, the bill carefully balances the rights of SRWS owners in the Santa Clarita Valley with the desire to expeditiously and cost-effectively reduce chloride levels in wastewater.

The statute required a phased voluntary and mandatory program to compensate residents for the reasonable value and cost of removal and disposal of the SRWS unit. Under the voluntary program offered prior to the effective date of the ordinance, residents would be compensated for 100 percent of the reasonable value of the removed appliance; under the mandatory program after the effective date of the ordinance, the compensation would be at the 75 percent level. This differential compensation rate was intended to provide an incentive for owners to remove their units sooner, prior to a mandatory removal program going into effect. Compensation is required to be made available if the owner disposes of the unit and provides written confirmation of the disposal. In determining reasonable value of residential SRWS, the statute required the District consider information provided by manufacturers of residential SRWS and providers of water softening or conditioning appliances and services in the District's service area regarding purchase price, useful life, and the cost of installation, removal, and disposal. For rental units, the statute allows owners to voluntarily waive the 100 percent or 75 percent compensation and allows them to avoid the disposal requirement (and retain ownership of the units for salvage or reuse elsewhere) if the owner provides written confirmation that the appliance has been removed from the home for use in a location outside the District's service area.

Prior to the adoption of an ordinance prohibiting SRWS, the statute required that the District make a finding that the removal of residential SRWS is a necessary and cost-effective means of achieving timely compliance with waste discharge requirements, water reclamation requirements, or a TMDL. In determining what constitutes a necessary and cost-effective means of achieving compliance, the District was required to assess all of the following:

- (1) Alternatives to the ordinance;
- (2) The cost-effectiveness and timeliness of the alternatives as compared to the adoption of the ordinance;
- (3) The reduction in chloride levels to date resulting from the voluntary compensation program implemented;

⁷ The bill was passed by the Legislature on August 31, 2006 and signed into law on September 22, 2006 (Statutes of 2006, Chapter 393).

Section 4. Chloride Source Control Measures

- (4) The potential reduction in chloride levels expected as a result of the mandatory compensation program;
- (5) Adoption and enforcement of regulatory requirements that limit the volume and concentrations of saline discharges from non-residential sources, to the extent that is technologically and economically feasible;
- (6) Based on available information, sufficient wastewater treatment capacity exists in Los Angeles County to make portable exchange water softening services available to residents affected;
- (7) Based on available information, the adoption and implementation of the ordinance will avoid or significantly reduce the costs associated with advanced treatment for salt removal and brine disposal that otherwise would be necessary to meet the TMDL.

Finally, the ordinance must be approved in a referendum by a majority vote of the qualified voters prior to taking effect and the ordinance may not take effect prior to January 1, 2009.

4.1.3 Santa Clara River Chloride Reduction Ordinance of 2008

The District's Board of Directors introduced the Santa Clara River Chloride Reduction Ordinance of 2008 (Ordinance) on May 27, 2008, and it was adopted on June 11, 2008. A copy of the Ordinance is attached as Appendix 4.1-B. The Ordinance was supported by the requisite findings detailed in the *Staff Report in Support of Findings Necessary for Adoption of an Ordinance Pursuant to California Health and Safety Code Section 116787, with Addendum*. The key findings of the report are summarized as follows:

- SRWS are a major source of chloride loading to the District's Valencia and Saugus WRPs through the sewer system, and the District estimates that the maximum active SRWS chloride loading to the WRPs prior to the District's public outreach efforts was approximately 8,700 pounds per day.
- A voluntary SRWS removal program, which provides rebates to residents, has been active since November 2005.
- The District estimates that the remaining active SRWS chloride loading is approximately 6,400 pounds per day.
- The total achievable reduction in chloride loading as a result of the voluntary rebate program is estimated at 4,400 pounds per day. Including the District's agreements for the removal of rental SRWS units, a total of 3,300 SRWS are expected to be removed prior to adoption and implementation of the Ordinance.
- Engineering design consultant(s) have assessed the various treatment-based alternatives to comply with the TMDL and have determined that advanced treatment, consisting of microfiltration and/or membrane bioreactors and reverse osmosis, and brine disposal are the only reliable and least costly treatment technologies to remove chloride.
- The estimated cost to remove the remaining active SRWS within the District's service area through the Ordinance is significantly less than removing the equivalent load of chloride through advanced treatment and brine disposal.

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- ❑ The removal of the remaining active SRWS chloride load through adoption and implementation of the Ordinance would be more timely than through the removal of the equivalent chloride loading with advanced treatment and brine disposal.
- ❑ The potential additional reduction in chloride loading (beyond the completion of the voluntary rebate program) through a mandatory program requiring removal of SRWS is estimated at 4,300 pounds per day.
- ❑ The District has limited chloride loading of non-residential discharges (commercial and industrial sources) to the extent that it is technologically and economically feasible.
- ❑ Sufficient treatment capacity exists in Los Angeles County to provide for disposal of brine wastes generated from portable exchange water softeners that may serve the Santa Clarita Valley as a result of any mandatory program requiring removal of SRWS.
- ❑ The removal of the remaining active SRWS chloride load through a mandatory program requiring removal of SRWS would significantly reduce the cost of compliance with the TMDL.

In accordance with the provisions of Section 116787 of the California Health and Safety Code, the Ordinance must be approved by majority vote in a voter referendum within the District's service area before it is effective. The Ordinance appeared as Measure S on the November 4, 2008 ballot. The text of Measure S appears below:

| | | |
|---|--|------------------------------------|
| DISTRICT | | |
| SANTA CLARITA VALLEY SANITATION DISTRICT | | |
| SPECIAL ELECTION | | |
| S | To reduce chloride levels in the Santa Clara River as required by the State of California and minimize future rate increases for the customers of the Santa Clarita Valley Sanitation District of Los Angeles County, shall an ordinance be adopted requiring the removal of, and providing a compensation program for, all installed residential "salt-based" self-regenerating water softeners within the District's service area? | 158 YES ➡ <input type="radio"/> |
| | | 159 NO ➡ <input type="radio"/> |

END OF BALLOT

Voters overwhelmingly approved Measure S on November 4, 2008, with almost two-thirds of them voting in favor. Measure S received 55,502 votes, 64 percent, in favor, and 31,192 votes, 36 percent, against.⁸ The District was the first agency in California to have adopted such an ordinance.

In accordance with the provisions of Section 116787 of the California Health and Safety Code, the Ordinance took effect on January 1, 2009. On January 1, 2009, the District began compensating owners of residential SRWS within its service area for 75 percent of the reasonable value of each removed residential SRWS and the reasonable cost of the removal and disposal of that residential SRWS.⁹ The Ordinance required the removal and disposal of all existing SRWS installed in the District's service area by June 30, 2009, 180 days after the effective date of the Ordinance.

⁸ County of Los Angeles, Department of Registrar/County Clerk, November 4, 2008 General Election, Final Official Election Returns, <http://rrcc.co.la.ca.us/elect/08110018/rr0018pl.html-ssj> (accessed October 28, 2009).

⁹ See Section 4.1.4 for more information on the Automatic Water Softener Rebate Program – Phase I and II.

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The District performed community-wide public outreach to inform residents of the terms of the Ordinance and to encourage compliance.¹⁰ The District also withheld administrative enforcement actions to allow all affected residents adequate time to remove their installed residential SRWS. In August 2011, the District launched an enforcement program for the Ordinance. Information about the Ordinance Enforcement Program can be found in Section 4.1.6 of this report.

4.1.4 Automatic Water Softener Rebate Program – Phase I and II

The District initiated the Automatic Water Softener Rebate Program – Phase I on November 30, 2005. The program provided a \$100 rebate to residents that removed their SRWS or a \$150 rebate to residents that removed their SRWS and replaced it with a qualified alternative unit, such as portable exchange tank service or a non-salt water conditioning device. The Automatic Water Softener Rebate Program - Phase I led to the removal of 435 SRWS between December 2005 and April 2007. The total expenditure on rebates for residents that removed their SRWS was approximately \$52,000. Detailed information on the Automatic Water Softener Rebate Program – Phase I is available in Section 4.1.3 in the *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2006* and the *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2007*.

The Automatic Water Softener Rebate Program – Phase II was developed between June 2006 and April 2007 and launched on May 1, 2007. The program provides residents with compensation for the reasonable value of their SRWS and for free removal and disposal of their unit if specific plumbers are used. The program is intended to be consistent with the provisions for a voluntary and mandatory program under the terms of the California Health and Safety Code Section 116787. Detailed information about the program development is provided in Section 4.1.4 in the *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2007*.

From May 1, 2007 to December 31, 2008, the Automatic Water Softener Rebate Program – Phase II offered rebates for 100 percent of the reasonable value of non-rental SRWS, installed in the District's service area prior to March 2003. Rebates of \$325 to \$2,000 per SRWS for the removal and disposal of non-rental SRWS were available from May 1, 2007 to January 31, 2008. On February 1, 2008, the minimum value was reduced to \$275 to account for the additional depreciation of the SRWS. Rebates of \$275 to \$2,000 per SRWS were available from February 1, 2008 to December 31, 2008.

On January 1, 2009, the rebate amount was lowered to 75 percent of the reasonable value of the SRWS consistent with terms of the California Health and Safety Code Section 116787 and the Ordinance. The minimum value of the rebates was also lowered to \$206, 75 percent of \$275. During 2011, the District continued to provide rebates of \$206 to \$2,000 for the removal and disposal of non-rental SRWS installed in the District's service area prior to March 27, 2003.

In order to treat all community members equally, residents that participated in the Automatic Water Softener Rebate Program – Phase I are eligible for the difference between the new rebate amount and the \$100 or \$150 incentive provided under the prior program. Between May 1, 2007 and December 31, 2011, the District received 205 rebate applications from participants in the Automatic Water Softener Rebate Program – Phase I requesting consideration for an additional rebate. The last application received from an Automatic Water Softener Rebate Program - Phase I participant for a supplemental rebate was on April 8, 2008. It is unlikely that the District will receive additional Automatic Water Softener Rebate Program – Phase II Application Forms from Automatic Water Softener Rebate Program - Phase I participants.

¹⁰ See Section 4.1.5 for more information on community-wide public outreach efforts.

Section 4. Chloride Source Control Measures

For new participants in the Automatic Water Softener Rebate Program – Phase II, residents obtain an application form on the District’s chloride website at www.lacsd.org/chloride. For residents that do not have access to the Internet, they may call the District’s toll-free hotline at (877) CUT-SALT and request an application form to be mailed. Residents complete the one-page application form and mail or fax it back to the District. In order to expedite processing of the application, residents are encouraged to provide verification of the SRWS purchase using one or more of the following documents, if available: dated receipt, contract, original service agreement, or other relevant paperwork. An Automatic Water Softener Rebate Program Application Form is provided in Appendix 4.1-C.

The District reviews the application form and attached documentation to evaluate eligibility for the program. Once the application is deemed complete, the District uses all available information to verify data provided on the application form and to determine the reasonable value of the SRWS. The reasonable value of the SRWS is based on the sales price and installation date of the unit, and a 12-year average service life expectancy for the unit. Depending on the age, make, and model of the SRWS, rebates for individual units range from \$206 to \$2,000.¹¹ A minimum value of \$206 is offered for all non-rental SRWS installed prior to March 27, 2003.¹²

After the reasonable value of the SRWS is calculated, the District prepares an Authorization for Rebate letter that states the address at which the SRWS is installed, the make, model, and serial number of the SRWS, and the rebate offer amount. Two copies of the Authorization for Rebate letter, one copy on white paper and one copy on yellow paper, and a List of Approved and Licensed Plumbers are mailed to the resident. An example of an Authorization for Rebate letter is provided in Appendix 4.1-C.

The purpose of the Authorization for Rebate letter is to inform the resident on the rebate offer amount before the unit is disconnected and removed. This procedure was established to eliminate confusion and disagreements after the SRWS is removed. Since the rebate offer is based on a depreciated value, the rebate offer amount will be honored if the SRWS is removed within sixty days¹³ of the date on the Authorization for Rebate letter. If the SRWS is not removed within sixty days,¹⁴ the resident may request a recalculated Authorization for Rebate letter. The Authorization for Rebate - Recalculation letter requires the removal of the SRWS within thirty days. The Authorization for Rebate letter also states that in order for the resident to receive the rebate, the SRWS must be removed and disposed of using contractors on the List of Approved and Licensed Plumbers or by an authorized District’s representative. In addition, to facilitate the removal of the SRWS the resident is asked to stop adding rock salt or potassium chloride to the unit.

After the resident receives the Authorization for Rebate letter, the resident may contact a plumber on the List of Approved and Licensed Plumbers to schedule the removal and disposal of the SRWS. Removal and disposal of the unit is at no cost to the resident if a plumber on the District’s List of Approved and Licensed Plumbers is used. The District has verified that the plumbers on the list are licensed and bonded per the requirements of the State of California, but the list does not constitute an endorsement by the District of any particular contractor.

¹¹ Rebates for individual units varied from \$325 to \$2,000 from May 1, 2007 to January 31, 2008 and from \$275 to \$2,000 from February 1, 2008 to December 31, 2008.

¹² A minimum value of \$325 was offered from May 1, 2007 to January 31, 2008 for all non-rental SRWS installed prior to March 27, 2003. A minimum value of \$275 was offered from February 1, 2008 to December 31, 2008.

¹³ All Authorization for Rebate letters expired after thirty days after the launch of the Ordinance Enforcement Program on August 3, 2011. For more information on the Ordinance Enforcement Program see Section 4.1.6.

¹⁴ See footnote 13 above.

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For convenience, some of the contractors on the List of Approved and Licensed Plumbers offer alternative non-salt water treatment units. The contractors that offer alternative units are marked with an asterisk. The installation of a non-salt water conditioning system is not required for participation in the Automatic Water Softener Rebate Program – Phase II.

When a plumber is called to remove a SRWS, the plumber will first verify that the resident has a District's Authorization for Rebate letter and confirm that the unit is a SRWS. Then, the plumber will disconnect, disable, and remove the unit from the address stated on the Authorization for Rebate letter and return the on-site plumbing to an operable state. The plumber is required to collect the yellow copy of the Authorization for Rebate letter and document the make, model, and serial number of the SRWS and the date the unit was removed on the yellow copy. The plumber also writes the street address of the residence where the SRWS was installed in permanent marker or spray paint on the unit. The plumber then transports the SRWS to the central yard near the Saugus WRP.

If desired, a resident may disconnect the unit themselves or use a plumber not on the List of Approved and Licensed Plumbers. The District provides an additional \$50 rebate for parts and materials to these residents. The Authorization for Rebate letter states that the resident should contact the District after the unit is disconnected and schedule pickup of the unit. Currently, District staff is available to pickup units on Wednesdays and Thursdays.¹⁵ Before removing the SRWS from a property, District staff verifies that the unit was installed at that location and that the resident received the Authorization for Rebate letter. After confirmation of these items, District staff loads the SRWS onto the truck. In some cases, for example if they have already installed an alternative non-salt water conditioning unit, residents would like their SRWS picked up before the rebate amount is determined. In these cases, District staff requests that the resident sign a form stating that the rebate amount has not been determined at this time and once the SRWS is removed from the property, the SRWS will be destroyed.

Daily, District staff creates an inventory of the SRWS at the yard. To receive payment, the plumber is required to send to the District the yellow copy of the Authorization for Rebate letter for each SRWS removed and an invoice. District staff confirms the information on the SRWS removed matches the information provided by the resident on the application form and that the SRWS was received at the yard. Once the verification procedure is complete, the District initiates payment to the resident and the plumber.

In May 2007, the District estimated that approximately one-quarter of the SRWS installed in the District were rental units. The Automatic Water Softener Rebate Program – Phase II provided a \$100 rebate to residents that remove their rental SRWS from May 1, 2007 to January 31, 2008. The Automatic Water Softener Rebate Program – Phase II compensation to residents for rental SRWS sunset on January 31, 2008, as a result of the contractual agreements the District formed with the retail water softening companies discussed below.

To expedite removal, the District developed contractual agreements with the retail water softening companies that provide rental SRWS units to residents in the District for the removal of approximately 1,580 rental units by June 2009. The agreements provide compensation for eligible units that are removed, disabled, and surrendered to the District within the allocated time period. Rayne Dealership Corporation signed an agreement with the District on September 12, 2007 to remove approximately 530 rental SRWS from

¹⁵ Previously, District staff was available to pickup units Monday through Friday. Due to a reduction of the number SRWS pickup requests, the available pickup days were reduced to Wednesday and Thursday in May 2010. Currently, pickups are available from 8:00 a.m. to 2:30 p.m. or 11:00 a.m. to 7:00 p.m. on Wednesdays, depending on requests from residents, and from 8:00 a.m. to 2:30 p.m. on Thursdays. Additional pickup days will be added if needed.

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the District's service area by October 31, 2008. On December 12, 2007, Culligan Water Conditioning of Orange County signed an agreement for the removal of approximately 1,000 rental SRWS by June 30, 2009, and Guaranteed Water Systems, Incorporated agreed to remove approximately 50 rental SRWS by December 31, 2008. These three companies provide the majority of rental service for SRWS in the Santa Clarita Valley.

As of December 31, 2011, Rayne Dealership Corporation removed 530 rental SRWS, Culligan Water Conditioning of Orange County removed 270 rental SRWS, and Guaranteed Water Systems removed 37 rental SRWS. A total of 837 rental SRWS were removed by December 31, 2011, as a result of these agreements. Rayne Dealership Corporation has confirmed that they have removed all known rental SRWS. The District is currently working with Culligan Water Conditioning of Orange County and Guaranteed Water Systems, Incorporated to confirm that all known rental SRWS have been removed. The actual number of rental SRWS in the District's service area was significantly lower than originally estimated by the three companies.

High Desert Water Conditioning, Inc. in Acton contacted the District in June 2009 stating that the company had rental SRWS in the District's service area that needed to be removed per the Ordinance. The District agreed to provide the company with rebates of 75 percent of the reasonable value of each SRWS and a \$50 rebate per SRWS for parts and materials for the disconnection and removal of the units. The company delivered the removed units to the District's yard for verification and disposal. The company also provided the District with the estimated cost of each SRWS and the original installation date of the unit. All High Desert Water Conditioning, Inc. rental SRWS qualified for the minimum rebate amount of \$206 plus \$50 for parts and materials, totaling \$256 per SRWS. High Desert Water Conditioning, Inc. removed 27 rental SRWS from the District's service area in June 2009. A negligible number of SRWS units operating in the Santa Clarita Valley may be rented to customers from other companies, but no specific information about these units is available to the District at this time.

The District received 6,825 applications from new participants in the Automatic Water Softener Rebate Program – Phase II from May 1, 2007 to December 31, 2011. Approximately 71 percent of the applications for the Automatic Water Softener Rebate Program – Phase II were received after passage of Measure S on November 4, 2008.

From May 1, 2007 to December 31, 2011, the Automatic Water Softener Rebate Program – Phase II removed 7,328 SRWS of which 6,459 SRWS were owned by residents or rentals removed by residents, and 869 were rental SRWS removed by the retail water softening companies¹⁶. From November 30, 2005 to December 31, 2011, the Automatic Water Softener Rebate Program – Phase I and II removed 7,763 SRWS from the Santa Clarita Valley. Figure 4.1.1 (see page F-13) shows the cumulative number of units removed from November 30, 2005 to December 31, 2011, as a result of the Automatic Water Softener Rebate Program – Phase I and II.

Approximately six percent of the total SRWS removed, 435 units, were removed during the Automatic Water Softener Rebate Program – Phase I. An additional 2,480 SRWS, 32 percent, were removed during the voluntary removal period from May 1, 2007 to December 31, 2008. Approximately 62 percent of the total SRWS removed, 4,848 units, were removed from January 1, 2009, the effective date of the Ordinance, to December 31, 2011. These statistics highlight the effectiveness of the mandatory removal provision in the Ordinance in reducing the number of SRWS from the District's service area.

¹⁶ Guaranteed Water Systems removed five rental units prior to signing the contractual agreement.

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As detailed in Section 4.1.5 below, the Automatic Water Softener Rebate Program - Phase II was accompanied by a public outreach campaign in order to inform residents and encourage full community participation.

4.1.5 Public Education and Outreach Efforts

In July 2002, after research in preparation for the *Santa Clarita Valley Joint Sewerage System Chloride Source Report, October 2002* showed that SRWS were the primary controllable source of chloride beyond the potable water supply, the District conducted a pilot-scale outreach program to reduce use of residential SRWS in the Santa Clarita Valley. The program targeted two neighborhoods, Stevenson Ranch and Fair Oaks Ranch, that were identified during the District's residential chloride sampling efforts in 2001 as neighborhoods with high usage of SRWS.¹⁷

After passage of the ordinance prohibiting the installation of SRWS in February 2003 and completion of the initial publicity in 2003,¹⁸ the District focused its residential source control efforts on a large public education and outreach program. The major multimedia community-wide components of the campaign began on March 25, 2004 and concluded on June 30, 2009. The program consisted of multiple phases and evolved significantly over the 5-year period as a result of the launch of the Automatic Water Softener Rebate Program – Phase I and II,¹⁹ Saltwater Pool Ordinance,²⁰ and the Ordinance.²¹

The District used a competitive process to select a consultant for the development and implementation of the community-wide public education and outreach efforts. The social marketing firm O'Rorke, Inc. (O'Rorke) was selected and worked on the project from September 2003 to June 2009. Smaller scale public outreach efforts continued from July 2009 to December 2011 utilizing District staff.

The first phase of the public education and outreach program was geared towards increasing the awareness of the impacts of SRWS. The program was launched with a press event in March 2004. During the spring of 2004, the District developed and aired a thirty-second cable television advertisement entitled "Hard Facts." In addition, the District mailed a postcard to all 56,000 households connected to the sewer system, updated the chloride website (www.lacsd.org/chloride), launched a dedicated toll-free hotline (877-CUT-SALT), and participated in the CLWA's Annual Open House.

The second phase of the campaign, from fall 2004 to spring 2005, focused on encouraging residents to unplug their SRWS. During this phase the District ran two thirty-second cable television advertisements, the revised second edition "Hard Facts" commercial and a newly developed "Unplug" advertisement. In addition, the District hosted a SRWS alternative vendor fair in conjunction with the City of Santa Clarita's River Rally, issued a press release promoting the vendor fair, modified the chloride website to list alternatives to SRWS and allow Santa Clarita Valley residents to submit reviews on alternative units, mailed a postcard to all 58,000 sewer households, submitted articles to homeowner's association newsletters, mailed letters to homeowner's associations, distributed brochures and postcards to the Santa Clarita Valley Realtors Association, and asked local retailers to stop selling rock salt and potassium chloride. The District also mailed

¹⁷ For additional details on the District's pilot-scale public outreach efforts, see Section 4.1.2 in the District's *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2005*.

¹⁸ See Section 4.1.1 for more information on the public education and outreach program from February 2003 to December 2003.

¹⁹ See Section 4.1.4 for more information on the Automatic Water Softener Rebate Program – Phase I and II.

²⁰ See Section 4.1.7 for more information on the Saltwater Pool Ordinance.

²¹ See Section 4.1.3 for more information on the Ordinance.

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a targeted outreach postcard to 11,000 households that had changed ownership since 1997 and began mailing letters monthly to new homeowners in the Santa Clarita Valley.

An updated campaign was introduced in the fall of 2005 to provide information on the Automatic Water Softener Rebate Program – Phase I and enactment of the Saltwater Pool Ordinance. This phase of the program featured an improved chloride website with new web pages for the Automatic Water Softener Rebate Program, Saltwater Pool Ordinance, and How to Remove Your Automatic Water Softener, and a more user-friendly Automatic Water Softener Alternatives webpage. In addition, the multimedia program included launch of a dedicated email address (cutsalt@lacsds.org), airing of the second edition “Hard Facts” and the “Unplug” cable television advertisements; airing of the third edition “Hard Facts” advertisement on cable television and at two 21-megaplex Edwards Cinemas; mailing a letter and distributing a door hanger to all 62,000 households connected to the District; press event showing a resident participating in the Automatic Water Softener Rebate Program – Phase I; advertisements in *The Signal* newspaper; participating in the City of Santa Clarita’s River Rally, CLWA’s Annual Open House, and Saugus Speedway Semi-Annual Home and Garden Show; and developing and placing signs asking residents to unplug their SRWS at local grocery stores and the Valencia Town Center.

The District began the fourth phase of the multimedia community-wide public education and outreach campaign in May 2007 in conjunction with the launch of the Automatic Water Softener Rebate Program – Phase II. From May 2007 to June 2009, the District’s public education and outreach efforts primarily focused on providing information and encouraging participation in the Automatic Water Softener Rebate Program – Phase II, providing factual information on Measure S,²² and providing information on the mandatory removal of SRWS as required by the Ordinance. The program included conducting focus groups; issuing press releases; airing of the fourth, fifth, and sixth editions of the “Hard Facts” television commercials and movie theater advertisements; placing newspaper, magazine, radio, billboard, bus shelter, and Money Mailer advertisements; sending direct mail pieces; mailing information in water bills; writing articles for the CLWA newsletter; using robocalls; and hanging street banners, street pole flags, and waste hauler truck signs. In addition, the District continued to update the chloride website; mail letters to new homeowners; staff the (877) CUT-SALT toll-free line and cutsalt@lacsds.org email address; and participate in community events such as the City of Santa Clarita’s River Rally, City of Santa Clarita’s Earth Day, CLWA’s Annual Open House, Saugus Speedway Semi-Annual Home and Garden Show, and College of the Canyons Environmental Conference.

From December 2007 to October 2009, the District also conducted targeted outreach to specific communities known to have a high concentration of SRWS. The goal of the program was to provide focused outreach on these neighborhoods to encourage residents to remove SRWS. The communities selected for the targeted outreach were neighborhoods that were constructed between 1997 and 2003 (when SRWS were legal to install) in Canyon Country, Copperhill, Fair Oaks Ranch, Stevenson Ranch, and Valencia. Based on information collected in 2001,²³ homes in Stevenson Ranch and Fair Oaks Ranch had SRWS market penetrations rates between 50 to 60 percent.

The targeted outreach program included a pilot project in Fair Oaks Ranch and meeting with the Stevenson Ranch Homeowner’s Association in December 2007; publishing an article in the Winter 2007 Stevenson Ranch Homeowner’s Association newsletter that was distributed to 3,700 homes; conducting door-to-door outreach in February and March 2008 to 3,100 homes in Canyon Country, Fair Oaks Ranch, Stevenson Ranch, and Valencia; and distribution of 1,700 flags on the covers of *The Signal* newspapers in April 2008. From September 2008 to October 2009, the targeted outreach program provided support to the VWC’s Pellet

²² See Section 4.1.3 for more information on Measure S.

²³ See Section 4.6 in the *Santa Clarita Valley Joint Sewerage System Chloride Source Report, October 2002*.

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Softening Demonstration Project in the Copperhill community. The targeted outreach program in Copperhill included door-to-door outreach and distribution of a door hanger to 432 homes, an article in the Copperhill Homeowner's Association newsletter, direct mail postcard, focus groups, and phone surveys.

As highlighted above, the District conducted an extensive multimedia public education and outreach campaign from March 2004 to June 2009 to reduce chloride loading from residential SRWS. This program included: five direct mailings and one door hanger to all sewered households in the Santa Clarita Valley; ten cable television campaigns totaling 8,811 thirty-second advertisements; six movie theater campaigns totaling 12,852 thirty-second advertisements; 572 KHTS drive time sixty-second radio spots; 20,824 letters to new homeowners; 20 advertisements in *The Signal* and *LA Times*; nine press releases; two press events; four focus groups; and participation in 17 community events. In addition, the targeted outreach program provided focused attention to approximately 3,500 households.

Detailed information about the community-wide education and outreach program from 2003 to June 2009 is available in the *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2005*; the *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2006*; the *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2007*; the *Chloride Source Identification/Reduction, Pollution Prevention, Public Outreach Plan, November 2008*; and the *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2009*.²⁴ Detailed information about the targeted public outreach program is available in the *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2008* and the *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2009*.²⁵ Detailed information on the public outreach program for the VWC's Groundwater Softening Demonstration Project can be found in the *Valencia Water Company Groundwater Softening Demonstration Project Final Report, October 2009* written by O'Rorke.

The Ordinance required all residential SRWS to be removed by June 30, 2009. Therefore, the multimedia community-wide public education and outreach program was pared down in July 2009. From July 2009 to December 2011, the District worked with local retailers to discontinue the sale of rock salt and potassium chloride, continued to send monthly letters to new homeowners, updated the chloride website with additional alternative water conditioning units and resident reviews, participated in community events, and responded to residents' questions on the toll-free chloride hotline and dedicated email address. In August and September 2011, the District also ran advertisements in *The Signal* to inform the community that the Ordinance Enforcement Program had begun.²⁶

The District began efforts to convince local retailers to stop selling rock salt and potassium chloride pellets in 2004. Because it was proving difficult to convince retailers to remove rock salt and potassium

²⁴ For additional details on the District's community-wide public education and outreach efforts, see Sections 4.1.4 in the District's *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2005* and *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2006*, and Sections 4.1.5 in the *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2007*; *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2008*; and *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2009*.

²⁵ For additional details on the District's targeted outreach efforts, see Section 4.1.6 in the District's *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2008* and *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2009*.

²⁶ For more information about the Ordinance Enforcement Program see Section 4.1.6.

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chloride pellets from their shelves, a decision was made to offer retailers a sign to place in their stores where rock salt and potassium chloride pellets are sold to explain the problems caused by the use of SRWS and encourage customers to unplug the units. The signs went on display beginning in October 2005 at four Albertsons, four Vons, and a Pavilions.

In the Spring 2009, a phone survey was conducted to inventory the stores that sell rock salt and potassium chloride pellets in the Santa Clarita Valley. Thirty stores were found to sell rock salt and/or potassium chloride including: four Albertsons, a Food for Less, two Home Depots, a Kmart, two Lowe's, two Smart and Finals, a Stater Bros, seven Ralphs, a Pavilions, three Vons, three Walmarts, the Agua Dulce Hardware, a Do-It Center, and an Orchard Supply Hardware (formerly known as OSH). Twenty stores with similar characteristics did not carry rock salt or potassium chloride.

In November 2009, the District sent a letter to 30 local retailers and 10 corporate offices requesting the Santa Clarita Valley stores discontinue the sale of rock salt and potassium chloride pellets. The letter informed the stores that voters approved Measure S which provided for the adoption of the Ordinance and that the Ordinance required the removal and disposal of all residential SRWS by June 30, 2009, in homes connected to the sewer system. It also explained that businesses in the Santa Clarita Valley have been prohibited from using SRWS since 1961. As a result, there is very little legitimate use for rock salt and potassium chloride in the Santa Clarita Valley so the District requested the stores stop selling the products as an environmentally responsible choice and to free up valuable shelf space. The District also informed the stores that since over 6,500 SRWS had been removed to date, it was anticipated that the retailers had already seen a substantial decrease in the sale of rock salt and potassium chloride. Lastly, the letter invited the retailers to one of two meetings to further discuss the issue.

As a result of the letters, meetings, and follow up phone calls in November 2009, a Kmart, three Ralphs, and two Walmart stores stated that they no longer stock rock salt and potassium chloride for SRWS. To reach the remaining retailers, District staff attempted to schedule appointments with the store managers in late January 2010.

During the last week of January 2010, District staff visited all stores known to sell rock salt and potassium chloride and/or that potentially sold SRWS. The District confirmed that a Do It Center, a Food 4 Less, a Kmart, seven Ralphs, a Sam's Club, a Stater Bros. Market, and three Walmart stores had removed rock salt and potassium chloride pellets for SRWS from their shelves. The District also confirmed that the Costco, Sears, and Target did not sell rock salt and potassium chloride for SRWS. No stores were selling SRWS.

In February and March 2010, the District continued to work with the remaining retailers to discontinue the sale of rock salt and potassium chloride. By April 2010, four Albertsons, a Do It Center, a Food 4 Less, two Home Depots, a Kmart, two Lowe's stores, seven Ralphs, a Sam's Club, the Sand Canyon Paint & Hardware, a Stater Bros. Market, and three Walmarts had removed rock salt and potassium chloride for SRWS from their shelves and committed to not restock the products. Rock salt and potassium chloride continues to be sold at an Orchard Supply Hardware, a Pavilions, two Smart and Finals, and four Vons stores. The District will continue to work with the store managers and the corporate offices to discontinue the sale of rock salt and potassium chloride.

The District continued reaching out to new residents of the Santa Clarita Valley. New residents may be unaware of the problems caused by SRWS or restrictions on their installation. Additionally, research conducted by the Claremont Graduate University found that decisions about water conditioning are often made in the period shortly after moving into a new home.²⁷ To take advantage of the opportunity to influence new

²⁷ Knight, Kim and Kung, David. *Consumer Behaviors and Trends Surrounding the Use and Impact of Chloride-*

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homeowners to remove SRWS installed by previous homeowners and prevent violations of the SRWS and saltwater pool ordinances, beginning in April 2005 letters were sent to all new homeowners in the Santa Clarita Valley. Typically the letters are sent to new owners of homes sold in the previous month. The letter explains the problems caused by chloride in the Santa Clara River, informs them of the ban on SRWS and saltwater pools, and encourages them to remove the SRWS if one came with their home and take advantage of the rebate program. During 2011, the District sent a total of 3,396 letters to new households.

The District continues to allow Santa Clarita Valley residents to submit reviews on non-salt water conditioning units for the Automatic Water Softener Alternative web page. Residents that submit reviews are required to submit their names, addresses, and telephone numbers; their residency status in the Santa Clarita Valley is verified using property tax records and/or a reverse phone directory.²⁸ As of December 2011, the number of qualified alternative water conditioning units that appear on the chloride website is 56 units. There was an increase in the number of alternative unit reviews submitted by residents, from 84 reviews in December 2010, up to 86 reviews posted as of December 2011.

As a component of the public outreach program, District staff continued to answer inquiries from the media and other sewerage entities facing chloride and/or total dissolved solids challenges. In addition, staff gave presentations on the District's residential chloride reduction program at the California Water Environment Association's Pretreatment, Pollution Prevention, and Stormwater Conference on March 1, 2011 and at the WaterReuse California Annual Conference on March 20, 2011.

The District participated in two recent community events. The first event was the CLWA's Annual Open House on May 14, 2011. The District also staffed a booth at the City of Santa Clarita's 17th Annual River Rally on September 17, 2011. At the District's booths staff distributed information and answered questions about the problems with SRWS, alternative water conditioning options, Automatic Water Softener Rebate Program – Phase II, and the Ordinance.

In addition, during 2011, the District's chloride reduction efforts, sewer service charge rate increase, Upper Santa Clara River Chloride TMDL, and Ordinance Enforcement Program received significant press coverage. These topics had coverage in *The Signal*, *watertechonline.com*, *SCV Business Journal*, and *KHTS*. The articles can be found in Appendix 4.1-D.

District staff continued to track the visits to the chloride website. The web page on alternatives to SRWS²⁹ continued to be the most frequently visited part of the website with 10,760 page visits in 2011. Other popular web pages included the home page³⁰ with 10,060 page visits in 2011 and the Automatic Water Softener Rebate Program web page³¹ with 6,269 page visits in 2011. Visitors to the website also showed an interest in the Ordinance web page³² with 1,726 page visits in 2011.

The District also tracked responses via phone and email to the public outreach campaign. Figure 4.1-2 (see page F-14) shows the variation in the response to the community-wide outreach campaign over time from January 2006 to December 2011. Figure 4.1-3 (see page F-15) is a graphical representation of the type of

Based Water Softeners. Claremont Graduate University, August 15, 2003.

²⁸ For more information on the resident review and rating program refer to Section 4.1.4 in the *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2005* and Section 4.1.5 in the *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2007*.

²⁹ http://www.lacsd.org/info/industrial_waste/chloride_in_santa_clarita/alternatives.asp

³⁰ http://www.lacsd.org/info/industrial_waste/chloride_in_santa_clarita/default.asp

³¹ http://www.lacsd.org/info/industrial_waste/chloride_in_santa_clarita/softenerrebate.asp

³² http://www.lacsd.org/info/industrial_waste/chloride_in_santa_clarita/ordinance2008.asp

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responses received during the same time period. The District received the most number of responses from December 2008 to June 2009, averaging 413 inquiries per month, highlighting the interest in the Ordinance. The majority of the questions in 2011 related to the Automatic Water Softener Rebate Program – Phase II.

4.1.6 Santa Clara River Chloride Reduction Ordinance of 2008 Enforcement Program

On October 18, 2010, the District’s Board of Directors approved a plan to remove the remaining SRWS in the District’s service area. The plan included continued sampling, ongoing public outreach, reduced rebates, voluntary home inspections, and enforcement actions if SRWS are found. Following adoption of the plan, District staff worked to develop the necessary documents, procedures, and public outreach materials for the Ordinance Enforcement Program and sought input on the proposed program from the City of Santa Clarita and County of Los Angeles staff.

On August 3, 2011, the District launched the Ordinance Enforcement Program by mailing approximately 2,500 letters to residents suspected of having illegal SRWS. The letters were sent to residents in homes that were sold a SRWS per vendor sales records and homebuilder records, and homes that were issued building permits for SRWS, but had not responded; residents that responded they had removed a SRWS but the District did not receive the unit; residents that had applied for the Automatic Water Softener Rebate Program – Phase II but the District had not received the unit; residents that previously applied for the Automatic Water Softener Rebate Program but were denied since their unit was installed after March 27, 2003 (these residents are not eligible for the Automatic Water Softener Rebate Program but must remove their SRWS), residents that had not removed their rental SRWS, and residents suspected of having illegal SRWS based on other information. Seven different letters were created to provide as much detailed information as possible. The letters stated specific information on the SRWS make, model, and installation date, if known, and reminded residents that no SRWS were “grandfathered” by the Ordinance. The letters also informed residents that the District will be conducting home inspections and sewer sampling to ensure compliance with the Ordinance and that a violation of the Ordinance after the issuance of a final administrative order is a misdemeanor punishable by a fine of up to \$1,000 or by imprisonment not to exceed 30 days, or both. The letters stated that if residences still had SRWS that the residents may be eligible for the Automatic Water Softener Rebate Program – Phase II and to complete the enclosed application forms within 30 days from the date on the letter. The letters stated that if residences did not have SRWS, residents should complete the enclosed Automatic Water Softener Questionnaires and return them to the District within 30 days from the date of the letter. To make the envelopes more noticeable, “WATER SOFTENER ENFORCEMENT HAS BEGUN” was printed in black above the address window and “RESPONSE REQUIRED” was printed in red to the right of the address window. Examples of the letters, application form, questionnaire, and envelopes mailed on August 3, 2011 are provided in Appendix 4.1-D.

On August 4, 2011, the District issued a press release announcing the start of the Ordinance Enforcement Program. In addition, the District ran a half-page black and white advertisement on Friday, August 5, 2011, and half-page color advertisements on Sunday, August 14, 2011 and Sunday, September 11, 2011 in *The Signal*.

As a result of the Ordinance Enforcement Program letters, press release, and advertisements, the District received 350 Automatic Water Softener Rebate Program Application Forms and 366 Automatic Water Softener Rebate Questionnaires from August 3, 2011 to August 31, 2011 and 120 Automatic Water Softener Rebate Program Application Forms and 75 Automatic Water Softener Rebate Questionnaires in September 2011.³³ The District received a total of 519 application forms and 458 questionnaires from

³³ Between August 3, 2011 and September 30, 2011, 118 residents mistakenly submitted both application forms and questionnaires.

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August 3, 2011 to December 31, 2011, resulting in the removal of 430 SRWS during this timeframe. Due to the higher than expected response to the letters, the District decided to postpone additional Ordinance enforcement actions until 2012 to allow sufficient time to process the application forms and questionnaires and allow residents time to remove their units.

4.1.7 Saltwater Pool Ordinance

As discussed in previous reports, one source of chloride from residences is discharge of swimming pool wastewater. Swimming pool wastewater is created from filter backwash, any overflows during rainy periods, and periodic change-outs of the swimming pool water. Although the loading of chloride from traditional residential swimming pools in the Santa Clarita Valley is expected to be small, a new popular technology could increase this contribution. The technology uses an electrolysis process to create chlorine gas in-situ at the pool from sodium chloride that has been added to the pool. The chlorine gas reacts with pathogens and organic material in the swimming pool, returning to its sodium chloride form after reaction. The sodium chloride in the pool is therefore used over and over, and is only replenished to make up for filter backwash, any overflows, and water splashed out of the pool. In order for the electrolysis process to work correctly, a chloride concentration of 1,500 to 5,500 mg/L³⁴ must be maintained in the swimming pool. Pools using this disinfection system are therefore referred to as “saltwater pools.”

To limit this new source of chloride, the District adopted an ordinance on November 9, 2005, effective on December 9, 2005, making it illegal for saltwater swimming pools to be connected to the sewer system. The Saltwater Pool Ordinance prohibits new saltwater pool connections to the sewer system and prohibits the conversion of swimming pools already connected to the sewer system to saltwater pools.

Since many swimming pools are not connected to the sewer system and are instead drained to the storm drain system, the District continues to work with staff at the City of Santa Clarita and the County of Los Angeles to educate them on the potential chloride loading from saltwater pools. The District has also encouraged them to adopt saltwater pool ordinances prohibiting the discharge of saltwater pools into the storm drain system, which would significantly limit the potential impact to the Santa Clara River from this source.

4.1.8 Future Residential Source Control Efforts

The District is firmly committed to continuing residential chloride source control efforts in the Santa Clarita Valley. The District will continue to enforce the Ordinance, offer rebates for SRWS as part of the Automatic Water Softener Rebate Program – Phase II, and support the public education and outreach program. In addition, the District intends to monitor flows within the sewer system to determine the locations of residential SRWS and/or conduct inspections upon reasonable notice of any residence that discharges to the sewer system. These programs will be periodically reassessed to determine their value to overall chloride reduction.

The public education and outreach campaign will continue to use direct mailings, advertisements, and newspaper stories to reach the general public as needed. The District will also continue mailing letters to new homeowners. In addition, the District expects to continue to investigate and implement new outreach methods to ensure residents are aware of the bans on SRWS and saltwater pools. The chloride website will be maintained and updated with new information, vendors, and reviews of whole-house water conditioning alternatives as they become available. The District will also continue to staff the (877) CUT-SALT toll-free

³⁴ See, for example, <http://www.poolandspa.com/catalog/product001138000013.cfm>, <http://www.pool-spacare.com/e-pool-saltwater-gen.html>, and http://www.poolplaza.com/pool-school/salt_maintenance.shtml.

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information number and respond to e-mail received from the public regarding the Automatic Water Softener Rebate Program – Phase II, Ordinance, Ordinance Enforcement Program, Saltwater Pool Ordinance, and other questions related to chloride.

The District was able to successfully limit the availability of rock salt and potassium chloride by working with retailers to discontinue the sale of the products. The District will continue to work with store managers and the corporate offices for the seven stores that continue to sell rock salt and potassium chloride. In addition, the District will monitor the stores that have removed the products to ensure that they are not restocked in the future.

4.2 Industrial Sector

This section discusses on-going efforts to control chloride from industrial sources in the Santa Clarita Valley. Although the industrial sector as a whole discharges approximately one to four percent of the chloride load in the final system effluent, which is a significantly lower chloride concentration and a much smaller mass load of chloride than the residential sector, the District has strictly regulated chloride discharges from this sector since 1961.³⁵

In September 2002, the District systematically implemented more stringent chloride limitations on industry in the Santa Clarita Valley. The purpose of the new limitations was to ensure that industrial saline discharges were being controlled to the extent technologically and economically feasible. At this time, all industrial dischargers in the District's sewerage system were assigned a chloride limit or required to develop a Chloride Reduction Workplan, or both. The target chloride limit for every industrial discharger was 100 mg/L, which is the current water quality objective for the upper Santa Clara River. A 100 mg/L chloride limitation was imposed on all industrial wastewater discharge permits (permits) that had historical chloride discharge concentrations at 100 mg/L or below. The purpose of the limit was to ensure that these facilities maintained their current discharge levels. Thirty-nine permits were initially assigned the 100 mg/L limit.

It was recognized, however, that it might not be technologically or economically feasible for all facilities to meet the target 100 mg/L limit. Therefore, facilities with a history of discharging greater than 100 mg/L were given an option. They could either meet a 100 mg/L chloride limit, or submit a Chloride Reduction Workplan detailing all technologically and economically feasible steps to reduce chloride in their discharge. This option was given to twenty-six permits. Of these permits, the fourteen historically discharging less than 230 mg/L chloride were assigned interim chloride limits of 230 mg/L during workplan development, to ensure that they continued to control chloride to the maximum extent feasible.³⁶

Once submitted, District staff evaluates Chloride Reduction Workplans. Each permit is assigned a specific performance-based chloride limit, which reflects the allowable chloride concentration after all technologically and economically feasible chloride reduction measures have been implemented. Many facilities have stated that they are not adding a significant amount of chloride to the wastewater but they are unable to meet the 100 mg/L chloride limit due to the amount of chloride supplied in the potable water.³⁷ In

³⁵ For additional information on the industrial source control program and historical industrial source control efforts, see Sections 4.2.1 and 4.2.2 in the District's *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2005*.

³⁶ For more information on the Chloride Reduction Workplan and guidance on the preparation of the workplan, see Appendix 4.2-A in the District's *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2005*.

³⁷ The estimated annual blended water supply chloride concentrations for the Santa Clarita Valley from 2002 to 2011 presented in Table 3.2-6 vary from 55 mg/L to 85 mg/L. However, the potable water supply chloride concentration

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these cases, the permittee is asked to obtain a letter from their water purveyor stating the amount of chloride present in the potable water delivered to the facility. The District uses the information in the Chloride Reduction Workplan and from the water purveyor to calculate the performance-based chloride limit.

A list of these facilities and their current permit limits is presented in Table 4.2-1 (see page T-25). Currently, there are 39 chloride permit limits above 100 mg/L at 34 facilities.³⁸ To ensure compliance with the chloride limits, the District samples these facilities for chloride on an on-going basis, and requires self-monitoring at most of the facilities in the District. Self-monitoring for chloride is not required at municipal swimming pools and recreational vehicle sanitary waste disposal stations. Currently, new permits are issued a 100 mg/L chloride limit unless the company requests to submit a Chloride Reduction Workplan.

The performance-based chloride limits ensure that all facilities introducing chloride to the system at concentrations greater than 100 mg/L have controlled their chloride discharges to the extent technologically and economically feasible. The District will continue to enforce chloride limits at existing industrial facilities and continue to establish and enforce chloride limits at new industrial facilities.

4.3 Commercial Sector

As with the residential and industrial sectors, the District's program to control discharges of chloride from the Santa Clarita Valley commercial sector began in 1961 with adoption of resolutions prohibiting the discharge of salt brines produced by the regeneration of water softening units to the sewerage system. As detailed in this section, the District's commercial source control program has focused on enforcing the prohibition on use of SRWS and on ensuring that brine discharges from commercial sources are controlled to the extent technologically and economically feasible.

4.3.1 Enforcement of Prohibition on Use of SRWS

A key tool for enforcement of the prohibition on discharge of SRWS brines to the sewer from commercial businesses is on-site inspection of businesses to ensure that SRWS are not used. The District began site inspections of commercial facilities in 1974, concurrent with the creation of its source control program. In 1997, commercial site inspections in the Santa Clarita Valley intensified as a result of increased attention on controlling chloride in the area, and have remained at high levels since.

In 1998, the District undertook a systematic effort to identify commercial business sectors that are likely to use softened water to maximize the impact of commercial site inspections. District staff reviewed water uses at each type of business to determine if the business sector would benefit from softened water and therefore would be likely to use a SRWS. On-site inspections were also conducted to determine whether SRWS were present. These inspections revealed that the businesses most frequently using softened water were restaurants, hotels, and dry cleaners. Restaurants use softened water to prevent spots during dishwashing. Hotels use softened water in their restaurant dishwashers to prevent spots and in their laundry facilities to minimize the quantity of laundry detergent and softening agents required. Dry cleaners use softened water in

at an individual location may vary significantly from these estimates. From 2002 to 2011, samples from the Alluvial Aquifer varied from 19 mg/L to 171 mg/L and the SWP chloride concentration varied from 44 mg/L to 95 mg/L. Therefore, for a five-year permit, it is prudent to expect variability in the chloride concentration in the potable water supplied to facilities in the Santa Clarita Valley.

³⁸ One permit has two sample locations in the permit with a chloride limit above 100 mg/L. In addition, three facilities have multiple permits (because the facilities connect at multiple locations to the public sewer) with chloride limits above 100 mg/L.

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their boilers to minimize scaling.³⁹ Based on the results of this systematic effort to identify commercial business sectors likely to use soft water, the District conducted inspections of all restaurants, hotels, bars, lounges, billiard halls, and dry cleaners in the Santa Clarita Valley.

Any business found during an inspection to be illegally operating a SRWS was verbally reminded of the District's ban on brine discharges. A follow-up letter was sent to the business, requiring the removal of the unit within thirty days. The District's Industrial Waste inspection staff then re-inspected the business to confirm that the unit had been removed. If the business failed to comply, the business would have been referred to the District's Enforcement group for further action. To date, all businesses that have been found to be operating a SRWS have removed them upon notification without the need for enforcement action. In most cases businesses that removed their SRWS replaced the units with exchange tank water softening systems.

In early 2010, the District thoroughly updated the commercial business inspection list. The District reviewed business listings through Yahoo Yellow Pages (<http://yp.yahoo.com/>), Google (www.google.com), Santa Clarita Valley Chamber of Commerce website (<http://www.scvchamber.com>), Santa Clarita Guide (<http://www.santaclaritaguide.com/Restaurants.html>), and District's inspection records and called businesses to identify new businesses, existing businesses operating under a new name, businesses that had moved to a new location, and closed businesses. The District intends to continue to review business listings periodically to identify new businesses or businesses under new ownership that might not be aware of the prohibition on SRWS.

The District also obtained information on caterers in 2010. These companies have the potential to use softened water to prevent spots during dishwashing. Most caterers contacted use disposable glassware, dishware, and utensils or rent from other companies. If the District was unable to contact the caterer via the phone, the business was added to the commercial inspection list. If the company rents their equipment, information on the rental companies was requested.

The District continues to inspect commercial businesses in the Santa Clarita Valley. On average, approximately 250 such businesses are inspected each year; in 2011, 266 commercial inspections were conducted. Beginning in 2010, all bars, caterers, dry cleaners, hotels, and restaurants from the updated commercial inspection list will be inspected once every two years. A District's Industrial Waste Inspector will visit each business, notify the business owner/site manager of the brine discharge prohibition, and conduct an inspection of the premises. If the business is found not to have a use for softened water, such as a restaurant that uses only disposable drinking glasses, dishware, and utensils or a dry cleaning drop shop, they will be removed from future lists. The District will also periodically inspect a few businesses from the sectors of concern that were found not to have a use for softened water to ensure these businesses have not changed their practices.

On August 26, 2011, a District's Industrial Waste Inspector found a SRWS at a Starbuck's Coffee during a routine commercial inspection. The business was issued a Notice of Violation on August 30, 2011, and given thirty days to remove the unit. On September 28, 2011, a District's Industrial Waste Inspector confirmed that the SRWS had been removed.

³⁹ For additional information of this effort, see Section 4.3.1 in the District's *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2005*.

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4.3.2 Control of Saline Discharges to the Extent Technologically and Economically Feasible

The District began an effort in mid-2002 to determine if additional chloride reductions could reasonably be made at commercial businesses. An outside engineering consulting firm, CGvL Engineers, was hired to identify saline discharges at commercial businesses and to determine measures to reduce any such discharges to the extent technologically and economically feasible.⁴⁰

As a result of the study, it was determined that some best management practices (BMPs) to reduce saline discharges from swimming pools were both technically and economically feasible. These included the addition of stabilizer⁴¹ for all pools and the use of bromide disinfection for indoor pools. Implementation of the BMPs began in August 2002. At that time, all commercial businesses were sent letters informing them that the District was developing chloride reduction measures for commercial businesses. In December 2002, a follow-up was sent to all businesses. The purpose of the second letter was to inform owners of swimming pools about the upcoming mandatory pool BMPs, and to also encourage other commercial businesses to incorporate voluntary chloride reduction measures for sanitizing, laundering, and janitorial cleaning. In January 2003, letters were sent to all owners of public access swimming pools in the Santa Clarita Valley, requiring implementation of the mandatory BMPs. Included in this mailing were owners of pools at apartment buildings and homeowner's associations in the Santa Clarita Valley, informing them about the BMPs so that appropriate steps could be taken during pool maintenance. Over the next several months District's Industrial Waste Inspectors visited all affected pools to help the owners prepare the certification forms required under the mandatory BMP program.

In 2011, no new public access swimming pools were identified in the Santa Clarita Valley. The District will continue to issue BMPs to new swimming pool owners as they are identified.⁴²

4.4 Liquid Waste Disposal Station

The District operates a liquid waste disposal program to ensure that hauled wastes are accepted in accordance with all laws and federal regulations⁴³ and that they do not cause adverse impacts at the Saugus WRP. Haulers must obtain a permit prior to discharging liquid wastes to the District's sewerage system. A separate permit is issued for each vehicle in which waste is hauled. The permit provides the District with information on the hauler and the vehicle. Each time a hauler discharges a waste load, a fee and manifest are required. The manifest that accompanies each waste load identifies the source⁴⁴ and waste type of each component of the particular load, as well as the information on the waste hauler.

When a load is brought to the Saugus Liquid Waste Disposal Station, the accompanying manifest is first reviewed. The waste hauler bringing the load must sign and certify that the liquid waste is non-hazardous and that it came from only non-industrial sources. A sample of the load is taken by the station attendant to ensure that it exhibits characteristics typical of portable toilet, septic tank, and/or cesspool waste. Every load is

⁴⁰ The full results of the study are available in the document *Best Management Practices to Reduce Chlorides in Commercial Wastewater for Santa Clarita Valley Joint Sewerage System, December 2002* by CGvL Engineers.

⁴¹ The stabilizer is typically cyanuric acid. Use of stabilizer helps to reduce excessive chlorine loss in pools due to the ultraviolet rays of the sun.

⁴² For more information about BMP permits and other documents associated with the BMP program, see Appendix 4.3-B in the District's *Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan, November 2005*.

⁴³ Including federal requirements specified at 40 CFR Part 403.5(b)(8).

⁴⁴ Name, address, and telephone number of the waste generator.

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tested for pH and conductivity. Samples are also taken of every load and retained, and every twenty-fifth sample is subject to a more complete chemical analysis.

In June 2001, a program was put in place at the Saugus Liquid Waste Disposal Station to ensure that liquid wastes with excessive chloride concentrations were not disposed at the station. The disposal of hauled septage loads with conductivities greater than 3,000 umhos/cm was prohibited, unless the loads were accompanied by additional analytical information ensuring that the loads do not contain hazardous, industrial, and/or other non-sanitary wastes. This prohibition was put in place based on data collected by the District indicating that septage wastes have conductivities less than 3,000 umhos/cm. Although conductivity is not a direct measure of chloride concentration, liquids containing high levels of dissolved solids will have higher conductivities. This screening program therefore prevents disposal of loads that could contain excessive chloride concentrations. Since, the Saugus Liquid Waste Disposal Station represents less than one percent of the chloride loading at the WRPs and contributes less than 1 mg/L of chloride to effluent chloride concentrations at the WRPs, further restrictions on disposal of loads at the station would not have a measurable impact on effluent chloride concentrations.

4.5 Water Reclamation Plant Processes

As discussed in Section 3.4, operation of a wastewater treatment plant requires use of a variety of chemicals. Chemicals containing chlorine and chloride increase the chloride concentration of wastewater being treated.

Chlorine, either in gaseous or sodium hypochlorite form, has been used for disinfection to deactivate pathogens at the Saugus and Valencia WRPs since they were constructed.⁴⁵ Chlorine gas was historically used for disinfection, but this practice was discontinued in 1998 for safety reasons and sodium hypochlorite has since been used. Another historical use of a chemical that contributed to the chloride loading at the Saugus and Valencia WRPs was the use of ferric chloride (FeCl_3) to enhance settling during primary sedimentation. At the Valencia WRP, FeCl_3 was also used as a filter press coagulant to enhance the dewatering of biosolids and ferrous chloride (FeCl_2) was used in the operation of the anaerobic digesters. Very small amounts of sodium hypochlorite are also used at the Valencia WRP to control odors in the flow equalization basin.

Due to concerns over the in-plant loading of chloride from WRP chemical usage, in 2000 the District's Wastewater Research Section initiated a study to consider the use of ferric sulfate (FeSO_4) as an alternative to FeCl_3 . The study showed that in terms of performance, FeSO_4 could successfully replace FeCl_3 . The increased chemical cost to switch to FeSO_4 was estimated at \$260,000 per year for the Saugus WRP and \$330,000 per year for the Valencia WRP. In May 2000, FeCl_3 was replaced with FeSO_4 for primary sedimentation at the Saugus WRP. In November 2000 and September 2001 respectively, FeCl_3 was replaced with FeSO_4 for biosolids processing/odor control and for primary sedimentation at the Valencia WRP. The primary sedimentation tank scrubber at the Valencia WRP, to which sodium hypochlorite was added for odor control, was replaced in 2003 with a biotrickling filter, eliminating this minor source of chloride in the plant's treated wastewater.

As a result of the change in chemicals, the total in-plant contribution of chloride has been significantly reduced at each WRP. In 2011, the average total chloride contribution from chemical usage at the Saugus and Valencia WRPs was 10.6 mg/L and 12.3 mg/L, respectively. The combined flow-weighted average was 11.0 mg/L, a reduction of 54 percent from the 1996 to 1999 average value of 24 mg/L.

⁴⁵ The NPDES permits for the two WRPs require compliance with a final effluent coliform limit of less than 2.2/100 mL based on a seven-day median.

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The major remaining use of chloride-containing chemicals at the Saugus and Valencia WRPs is the use of sodium hypochlorite for disinfection. The District is continuing to evaluate alternative disinfection methods to replace sodium hypochlorite disinfection. An internal task force to investigate alternative disinfection methods, consisting of personnel from the District's Operations, Research, Design, Monitoring, Planning, and Laboratory Sections, continues to meet. Since 2008, the District also has been investigating alternative disinfection methods as part of the Chloride TMDL Facilities Plan and Environmental Impact Report. One option being considered is the replacement of sodium hypochlorite disinfection with the use of ultra-violet (UV) light technology.

The use of UV-disinfection would reduce the in-plant chloride loading. A small amount of sodium hypochlorite would still be necessary in the treatment process for inert filter maintenance and disinfecting plant wash water. The replacement of sodium hypochlorite would not itself result in compliance with the current Basin Plan surface water chloride objective of 100 mg/L. On June 17, 2011, the District's Board of Directors authorized funding for the design, planning, and environmental efforts for UV disinfection facilities for the Saugus and Valencia WRPs which, if constructed, could enable the District to decrease chloride levels in the discharges by up to 10 mg/L.

4.6 Santa Clarita Valley Potable Water Supplies

4.6.1 Water Supply Chloride Contribution Study

As part of the TMDL, the District has developed a Groundwater and Surface Water Interaction Model (GSWI) for the Upper Santa Clara River watershed, which provides a thorough assessment of water supply chloride concentrations and their impact on WRP reclaimed water and receiving water quality. The GSWI model is being utilized to assess water supply management scenarios that could potentially minimize impacts to WRP reclaimed water and receiving water quality. Reports summarizing the development and application of the GSWI model are available upon request.

The District will continue to monitor water supply chloride contributions and report updated loadings as part of annual reporting requirements as specified in Task 3 of the TMDL Implementation Plan.

4.6.2 Wellhead Softening Demonstration Project

VWC has implemented a Groundwater Softening Demonstration Project, which evaluates the feasibility of wellhead water softening. The project will determine how improvements in potable water quality hardness may potentially reduce the usage of SRWS in VWC's service area and thus reduce the chloride loading of these units to the District's WRPs. The project has three main goals: 1) determine customer attitudes towards pre-softened water, 2) establish cost estimates and overall cost savings to customers, and 3) quantify chloride reduction in wastewater. VWC completed Phase I of the study in April 2006⁴⁶ and began operating the Phase II demonstration project in September 2008.

Phase II of the VWC Groundwater Softening Demonstration Project is being implemented in the Copperhill community, within the VWC's service area, using pellet softening technology. Pellet softening utilizes a column filled with sand; by raising the pH of hard water and flowing it up through the column, the calcium carbonate precipitates out and adheres to the sand creating white pellets. The only by-product of the process are white pellets, which are considered to be environmentally safe, and can be reused in various industries.⁴⁷

⁴⁶ Valencia Water Company. *Well Softening Feasibility Study (Draft Report)*. April 2006.

⁴⁷ Valencia Water Company. Valencia Water Company Groundwater Softening Demonstration Project.

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The Groundwater Softening Demonstration Project is ongoing with positive results thus far. Additional data is continuing to be gathered for further evaluation of the project based on potable water quality improvement and reduction in chloride attributable to the reduced use of SRWS.

<http://www.valenciawater.com/images/ContentImages/River%20Rally%20Poster.pdf> (accessed September 28, 2011).

Tables

**Table 3.2-1
Water Supply Volume for Santa Clarita Valley Municipal Water Purveyors
(Acre-Feet)**

| Year | LACWD 36 | | | |
|------|----------|----------|--------|-------|
| | SWP | Alluvial | Saugus | Total |
| 2002 | 1,069 | 0 | 0 | 1,069 |
| 2003 | 1,175 | 0 | 0 | 1,175 |
| 2004 | 854 | 380 | 0 | 1,234 |
| 2005 | 857 | 343 | 0 | 1,200 |
| 2006 | 1,289 | 0 | 0 | 1,289 |
| 2007 | 1,406 | 0 | 0 | 1,406 |
| 2008 | 1,354 | 0 | 0 | 1,354 |
| 2009 | 1,243 | 0 | 0 | 1,243 |
| 2010 | 1,141 | 0 | 0 | 1,141 |
| 2011 | 1,172 | 0 | 0 | 1,172 |

| Year | Newhall County Water District | | | |
|------|-------------------------------|----------|--------|--------|
| | SWP | Alluvial | Saugus | Total |
| 2002 | 5,986 | 981 | 3,395 | 10,362 |
| 2003 | 6,572 | 1,266 | 2,513 | 10,351 |
| 2004 | 5,896 | 1,582 | 3,739 | 11,217 |
| 2005 | 5,932 | 1,389 | 3,435 | 10,756 |
| 2006 | 5,898 | 2,149 | 3,423 | 11,470 |
| 2007 | 6,478 | 1,806 | 3,691 | 11,975 |
| 2008 | 5,428 | 1,717 | 4,195 | 11,340 |
| 2009 | 4,832 | 1,860 | 3,868 | 10,560 |
| 2010 | 3,035 | 2,323 | 4,173 | 9,531 |
| 2011 | 1,331 | 3,216 | 4,389 | 8,936 |

| Year | CLWA Santa Clarita Water Division | | | |
|------|-----------------------------------|----------|--------|--------|
| | SWP | Alluvial | Saugus | Total |
| 2002 | 18,921 | 9,513 | 0 | 28,434 |
| 2003 | 20,668 | 6,424 | 0 | 27,092 |
| 2004 | 22,045 | 7,146 | 0 | 29,191 |
| 2005 | 16,513 | 12,408 | 0 | 28,921 |
| 2006 | 17,146 | 13,156 | 0 | 30,302 |
| 2007 | 20,669 | 10,686 | 0 | 31,355 |
| 2008 | 18,598 | 11,878 | 0 | 30,476 |
| 2009 | 17,739 | 10,077 | 0 | 27,816 |
| 2010 | 15,188 | 10,607 | 0 | 25,795 |
| 2011 | 13,629 | 10,195 | 0 | 23,824 |

| Year | Valencia Water Company | | | |
|------|------------------------|----------|--------|--------|
| | SWP | Alluvial | Saugus | Total |
| 2002 | 15,792 | 11,603 | 965 | 28,360 |
| 2003 | 16,004 | 11,707 | 1,068 | 28,779 |
| 2004 | 18,410 | 9,862 | 1,962 | 30,234 |
| 2005 | 14,732 | 12,228 | 2,513 | 29,473 |
| 2006 | 16,313 | 11,884 | 2,449 | 30,646 |
| 2007 | 16,779 | 13,140 | 2,367 | 32,286 |
| 2008 | 16,325 | 14,324 | 1,770 | 32,419 |
| 2009 | 14,732 | 12,459 | 2,836 | 30,027 |
| 2010 | 11,214 | 13,054 | 2,995 | 27,263 |
| 2011 | 14,718 | 12,775 | 265 | 27,758 |

Table 3.2-1
Water Supply Volume for Santa Clarita Valley Municipal Water Purveyors
(Acre-Feet)

| Year | Total Water Production | | | |
|------|------------------------|----------|--------|--------|
| | SWP | Alluvial | Saugus | Total |
| 2002 | 41,768 | 22,097 | 4,360 | 68,225 |
| 2003 | 44,419 | 19,397 | 3,581 | 67,397 |
| 2004 | 47,205 | 18,970 | 5,701 | 71,876 |
| 2005 | 38,034 | 26,368 | 5,948 | 70,350 |
| 2006 | 40,646 | 27,189 | 5,872 | 73,707 |
| 2007 | 45,332 | 25,632 | 6,058 | 77,022 |
| 2008 | 41,705 | 27,919 | 5,965 | 75,589 |
| 2009 | 38,546 | 24,396 | 6,704 | 69,646 |
| 2010 | 30,578 | 25,984 | 7,168 | 63,730 |
| 2011 | 30,850 | 26,186 | 4,654 | 61,690 |

Source: Luhdorff & Scalmanini Consulting Engineers. 14th Annual Santa Clarita Valley Water Report 2011. Prepared for CLWA, CLWA Santa Clarita Water Division, Los Angeles County Waterworks District 36, Newhall County Water District, and Valencia Water Company. June 2012.

**Table 3.2-2
Water Supply Percentages for Santa Clarita Valley Municipal Water
Purveyors**

| Year | LACWD 36 | | | |
|------|----------|----------|--------|-------|
| | SWP | Alluvial | Saugus | Total |
| 2002 | 1.6% | 0.0% | 0.0% | 1.6% |
| 2003 | 1.7% | 0.0% | 0.0% | 1.7% |
| 2004 | 1.2% | 0.5% | 0.0% | 1.7% |
| 2005 | 1.2% | 0.5% | 0.0% | 1.7% |
| 2006 | 1.7% | 0.0% | 0.0% | 1.7% |
| 2007 | 1.8% | 0.0% | 0.0% | 1.8% |
| 2008 | 1.8% | 0.0% | 0.0% | 1.8% |
| 2009 | 1.8% | 0.0% | 0.0% | 1.8% |
| 2010 | 1.8% | 0.0% | 0.0% | 1.8% |
| 2011 | 1.9% | 0.0% | 0.0% | 1.9% |

| Year | Newhall County Water District | | | |
|------|-------------------------------|----------|--------|-------|
| | SWP | Alluvial | Saugus | Total |
| 2002 | 8.8% | 1.4% | 5.0% | 15.2% |
| 2003 | 9.8% | 1.9% | 3.7% | 15.4% |
| 2004 | 8.2% | 2.2% | 5.2% | 15.6% |
| 2005 | 8.4% | 2.0% | 4.9% | 15.3% |
| 2006 | 8.0% | 2.9% | 4.6% | 15.6% |
| 2007 | 8.4% | 2.3% | 4.8% | 15.5% |
| 2008 | 7.2% | 2.3% | 5.5% | 15.0% |
| 2009 | 6.9% | 2.7% | 5.6% | 15.2% |
| 2010 | 4.8% | 3.6% | 6.5% | 15.0% |
| 2011 | 2.2% | 5.2% | 7.1% | 14.5% |

| Year | Santa Clarita Water Division | | | |
|------|------------------------------|----------|--------|-------|
| | SWP | Alluvial | Saugus | Total |
| 2002 | 27.7% | 13.9% | 0.0% | 41.7% |
| 2003 | 30.7% | 9.5% | 0.0% | 40.2% |
| 2004 | 30.7% | 9.9% | 0.0% | 40.6% |
| 2005 | 23.5% | 17.6% | 0.0% | 41.1% |
| 2006 | 23.3% | 17.8% | 0.0% | 41.1% |
| 2007 | 26.8% | 13.9% | 0.0% | 40.7% |
| 2008 | 24.6% | 15.7% | 0.0% | 40.3% |
| 2009 | 25.5% | 14.5% | 0.0% | 39.9% |
| 2010 | 23.8% | 16.6% | 0.0% | 40.5% |
| 2011 | 22.1% | 16.5% | 0.0% | 38.6% |

**Table 3.2-2
Water Supply Percentages for Santa Clarita Valley Municipal Water
Purveyors**

| Year | Valencia Water Company | | | |
|------|------------------------|----------|--------|-------|
| | SWP | Alluvial | Saugus | Total |
| 2002 | 23.1% | 17.0% | 1.4% | 41.6% |
| 2003 | 23.7% | 17.4% | 1.6% | 42.7% |
| 2004 | 25.6% | 13.7% | 2.7% | 42.1% |
| 2005 | 20.9% | 17.4% | 3.6% | 41.9% |
| 2006 | 22.1% | 16.1% | 3.3% | 41.6% |
| 2007 | 21.8% | 17.1% | 3.1% | 41.9% |
| 2008 | 21.6% | 18.9% | 2.3% | 42.9% |
| 2009 | 21.2% | 17.9% | 4.1% | 43.1% |
| 2010 | 17.6% | 20.5% | 4.7% | 42.8% |
| 2011 | 23.9% | 20.7% | 0.4% | 45.0% |

**Table 3.2-4
Chloride Concentrations for Santa Clarita Valley Water Potable Supply Sources**

| Year | State Water Project (mg/L Cl) | |
|------|-------------------------------|-------------|
| | Avg. Conc. | No. Samples |
| 2002 | 83.3 | 12 |
| 2003 | 80.4 | 12 |
| 2004 | 69.0 | 12 |
| 2005 | 53.6 | 12 |
| 2006 | 50.9 | 12 |
| 2007 | 62.0 | 12 |
| 2008 | 74.6 | 12 |
| 2009 | 78.9 | 12 |
| 2010 | 75.0 | 12 |
| 2011 | 65.1 | 12 |

| Year | Alluvial Aquifer (mg/L Cl) | | | | | | | | |
|------|----------------------------|-------------|------------|-------------|------------|-------------|----------|---------------|-------------|
| | NCWD | | SCWD | | VWC | | All Data | | |
| | Avg. Conc. | No. Samples | Avg. Conc. | No. Samples | Avg. Conc. | No. Samples | Average | Avg. by Purv. | No. Samples |
| 2002 | 83.9 | 7 | 84.5 | 4 | 92.4 | 89 | 91.5 | 86.9 | 100 |
| 2003 | 93.7 | 3 | 109.8 | 4 | 98.0 | 157 | 98.2 | 100.5 | 164 |
| 2004 | 98.0 | 4 | 103.4 | 5 | 89.4 | 129 | 90.2 | 96.9 | 138 |
| 2005 | 45.0 | 4 | 61.2 | 5 | 72.1 | 117 | 70.8 | 59.4 | 126 |
| 2006 | 67.4 | 8 | 69.0 | 4 | 61.4 | 122 | 62.0 | 65.9 | 134 |
| 2007 | 61.9 | 6 | 70.6 | 5 | 64.9 | 156 | 65.0 | 65.8 | 167 |
| 2008 | 93.4 | 8 | 84.8 | 4 | 77.3 | 162 | 78.2 | 85.2 | 174 |
| 2009 | 86.4 | 7 | 92.4 | 9 | 83.6 | 167 | 84.2 | 87.5 | 183 |
| 2010 | 89.3 | 7 | 92.6 | 5 | 85.2 | 179 | 85.6 | 89.0 | 191 |
| 2011 | 79.3 | 9 | 61.8 | 4 | 83.4 | 177 | 82.8 | 74.8 | 190 |

**Table 3.2-4
Chloride Concentrations for Santa Clarita Valley Water Potable Supply Sources**

| Year | Saugus Aquifer (mg/L Cl) | | | | | | |
|------|--------------------------|-------------|------------|-------------|----------|---------------|-------------|
| | NCWD | | VWC | | All Data | | |
| | Avg. Conc. | No. Samples | Avg. Conc. | No. Samples | Average | Avg. by Purv. | No. Samples |
| 2002 | 38.0 | 3 | 28.7 | 15 | 30.2 | 33.4 | 18 |
| 2003 | 38.0 | 2 | 29.7 | 34 | 30.2 | 33.9 | 36 |
| 2004 | 39.0 | 2 | 29.1 | 35 | 29.6 | 34.1 | 37 |
| 2005 | | 0 | 31.7 | 36 | 31.7 | 31.7 | 36 |
| 2006 | 37.2 | 2 | 33.6 | 48 | 33.7 | 35.4 | 50 |
| 2007 | 42.5 | 2 | 32.9 | 48 | 33.3 | 37.7 | 50 |
| 2008 | 41.0 | 2 | 34.9 | 44 | 35.1 | 38.0 | 46 |
| 2009 | 37.5 | 2 | 33.2 | 43 | 33.4 | 35.4 | 45 |
| 2010 | 40.0 | 2 | 33.5 | 44 | 33.7 | 36.8 | 46 |
| 2011 | 40.0 | 2 | 36.6 | 48 | 36.8 | 38.3 | 50 |

Table 3.5-2 SCVSD Estimated Industrial Chloride Load, 2002

| Permit No. | Industry Type | Company | No. Chloride Samples | Average Flow (gpd) | Average Chloride (mg/l) | Chloride Mass (lb/day) | Chloride Above Water Supply (lb/day) |
|------------|-----------------|---|----------------------|--------------------|-------------------------|------------------------|--------------------------------------|
| 13044 | Misc. Mfg. | 3D Systems Inc. | 3 | 11,301 | 81 | 7.63 | 0.000 |
| 15972 | Fasteners | AVK Industrial Products | Est. | 16 | 175 | 0.02 | 0.012 |
| 10883 | Machining | B & B Manufacturing Inc. | Est. | 1,000 | 60 | 0.50 | 0.000 |
| 11205 | Printing | Bertelsmann Industry Services Inc. | 2 | 9,999 | 102 | 8.51 | 1.668 |
| 13077 | Cosmetics | Bocchi Laboratories Inc. | 2 | 2,629 | 33 | 0.71 | 0.000 |
| 8695 | Vehicle Main. | California Department of Water Resources | 1 | 200 | 110 | 0.18 | 0.047 |
| 9216 | Education | California Institute of the Arts | 2 | 420 | 107 | 0.37 | 0.088 |
| 16252 | RV Station | Camping World | Est. | 10 | 522 | 0.04 | 0.037 |
| 16262 | Truck/Car Wash | Carwash Express | Est. | 1,421 | 310 | 3.67 | 2.702 |
| 16263 | Truck/Car Wash | Carwash Express | Est. | 1,421 | 310 | 3.67 | 2.702 |
| 12514 | Truck/Car Wash | Castaic Truck Wash | Est. | 3,000 | 230 | 5.75 | 3.703 |
| 15146 | Food | Chocolates A La Carte | 1 | 2,351 | 884 | 17.33 | 15.725 |
| 15365 | Photoprocessing | Cinotech inc. | Est. | 15,000 | 76 | 9.51 | 0.000 |
| 16158 | Swimming Pool | City of Santa Clarita Newhall Pool | Est. | 268 | 1880 | 4.20 | 4.019 |
| 16160 | Swimming Pool | City of Santa Clarita North Oaks Pool | Est. | 268 | 2220 | 4.96 | 4.779 |
| 16159 | Swimming Pool | City of Santa Clarita Santa Clarita Pool | 1 | 268 | 1030 | 2.30 | 2.119 |
| 16077 | Swimming Pool | City of Santa Clarita Sports Complex | Est. | 3,578 | 604 | 18.02 | 15.577 |
| 16161 | Swimming Pool | City of Santa Clarita Valencia Glen Pool | Est. | 179 | 2950 | 4.40 | 4.282 |
| 16162 | Swimming Pool | City of Santa Clarita Valencia Meadows Pool | Est. | 179 | 1280 | 1.91 | 1.788 |
| 8675 | Education | College of the Canyons | 2 | 100 | 136 | 0.11 | 0.045 |
| 15170 | Misc. Mfg. | DA/Pro Rubber Inc. | Est. | 426 | 84 | 0.30 | 0.007 |
| 14755 | Printing | Daily News of Los Angeles | 5 | 904 | 197 | 1.49 | 0.867 |
| 15906 | Food | Dell'Olio Enterprises | Est. | 420 | 155 | 0.54 | 0.256 |
| 12248 | Metal Finishing | Electrofilm Manufacturing Co. | 2 | 1,000 | 1283 | 10.70 | 10.016 |
| 15471 | RV Station | Equilon Enterprises, LLC (Texaco) | Est. | 10 | 522 | 0.04 | 0.037 |
| 14672 | Printing | Future Media Productions | 2 | 4,806 | 94 | 3.77 | 0.481 |
| 15564 | Printing | Future Media Productions | Est. | 100 | 112 | 0.09 | 0.025 |
| 5599 | Misc. Mfg. | Gruber Systems Inc. | Est. | 3,240 | 96 | 2.59 | 0.378 |
| 11281 | Metal Finishing | Hamby Corporation | 2 | 3,000 | 113 | 2.83 | 0.776 |
| 874 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 43,000 | 210 | 75.31 | 45.903 |
| 11824 | Hospital | Henry Mayo Newhall Memorial Hospital | 2 | 1,440 | 139 | 1.67 | 0.685 |
| 12040 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 11,160 | 280 | 26.06 | 18.429 |
| 14350 | Vehicle Main. | Honda Performance Development | 3 | 1,417 | 162 | 1.91 | 0.945 |
| 3222 | Metal Finishing | HR Textron | 1 | 2,151 | 71 | 1.27 | 0.000 |
| 12600 | Misc. Mfg. | Hydrotechnology | Est. | 3,067 | 185 | 4.73 | 2.635 |
| 15750 | Metal Finishing | Iso-Science Laboratories | 2 | 50 | 244 | 0.10 | 0.068 |
| 3627 | Chemical Mfg. | Keysor Century | 6 | 143,883 | 391 | 469.19 | 370.795 |
| 13098 | Misc. Mfg. | KLM Laboratories Inc. | Est. | 300 | 116 | 0.29 | 0.085 |
| 8542 | Correctional | LA County Probation Camp Joe Scott | 1 | 100 | 87 | 0.07 | 0.004 |
| 12347 | Misc. Mfg. | Lamsco West Inc. | 1 | 75 | 89 | 0.06 | 0.004 |
| 15347 | Pharmaceutical | Leiner Health Products | Est. | 500 | 84 | 0.35 | 0.008 |
| 15934 | Research | Mannkind Corporation | 1 | 5,320 | 67 | 2.97 | 0.000 |
| 9951 | Cosmetics | Mastey De Paris Inc. | Est. | 60 | 25 | 0.01 | 0.000 |
| 9668 | Food | Mikailian Meat Products | Est. | 750 | 293 | 1.83 | 1.320 |
| 10977 | Printing | Newhall Signal | Est. | 400 | 96 | 0.32 | 0.047 |
| 11852 | Metal Finishing | Novacap | 3 | 4,574 | 13 | 0.50 | 0.000 |
| 14360 | Misc. Mfg. | Oasis Corporation | 4 | 10,400 | 117 | 10.15 | 3.036 |
| 16036 | Misc. Mfg. | Oasis Corporation | 3 | 1,390 | 84 | 0.97 | 0.023 |
| 12265 | Correctional | Peter J. Pitchess Honor Rancho | 12 | 947,260 | 86 | 679.41 | 31.601 |
| 15362 | Pharmaceutical | Pharmavite Corporation | 1 | 760 | 96 | 0.61 | 0.089 |
| 9704 | Misc. Mfg. | Polycarbon Inc. | 3 | 10,219 | 116 | 9.89 | 2.898 |
| 14125 | Cosmetics | Russ Calvin's Personal Care | 3 | 1,000 | 150 | 1.25 | 0.567 |
| 14126 | Cosmetics | Russ Calvin's Personal Care | 3 | 1,000 | 99 | 0.83 | 0.142 |
| 15470 | RV Station | Santa Clarita Mobil Station | 2 | 10 | 522 | 0.04 | 0.037 |
| 13205 | Food | Santa Clarita Valley Food Services | Est. | 2,000 | 128 | 2.14 | 0.767 |
| 15986 | Misc. Mfg. | Silgan Plastics | 1 | 350 | 270 | 0.79 | 0.549 |
| 9332 | Theme Park | Six Flags Magic Mountain | 1 | 2,521 | 142 | 2.99 | 1.262 |
| 9333 | Theme Park | Six Flags Magic Mountain | 1 | 81,068 | 129 | 87.22 | 31.777 |
| 9334 | Theme Park | Six Flags Magic Mountain | 2 | 38,192 | 108 | 34.40 | 8.282 |
| 596 | Energy | Southern California Edison | Est. | 691 | 64 | 0.37 | 0.000 |

Table 3.5-2 SCVSD Estimated Industrial Chloride Load, 2002

| Permit No. | Industry Type | Company | No. Chloride Samples | Average Flow (gpd) | Average Chloride (mg/l) | Chloride Mass (lb/day) | Chloride Above Water Supply (lb/day) |
|------------|-----------------|---|----------------------|--------------------|-------------------------|------------------------|--------------------------------------|
| 12272 | Metal Finishing | Stoll Metalcraft Inc. | 1 | 550 | 88 | 0.40 | 0.028 |
| 11674 | Misc. Mfg. | Superior Controls Company Inc. | Est. | 220 | 81 | 0.15 | 0.000 |
| 14816 | Fasteners | TA Manufacturing Co. | Est. | 3,208 | 83 | 2.22 | 0.027 |
| 11755 | Misc. Mfg. | Talladium Inc. | Est. | 52 | 73 | 0.03 | 0.000 |
| 14010 | Mail Processing | United States Postal Service | 6 | 6,658 | 229 | 12.72 | 8.163 |
| 12908 | Chemical Mfg. | US Borax and Chemical/Research | 1 | 4,960 | 94 | 3.89 | 0.496 |
| 14765 | Bottled Water | Valencia West | 2 | 250 | 32 | 0.07 | 0.000 |
| 12253 | Semiconductors | Waddan Systems | 1 | 100 | 85 | 0.07 | 0.003 |
| 12391 | Metal Finishing | Western Filter | 2 | 1,593 | 110 | 1.46 | 0.372 |
| 11993 | Photoprocessing | Western Laser Graphics | Est. | 2,645 | 190 | 4.19 | 2.382 |
| 13308 | Vehicle Main. | William S. Hart Union High School Dist. | Est. | 6,000 | 90 | 4.50 | 0.400 |
| | | SCVSD Total | | 1,408,858 | | 1,564 | 606 |
| | | SCVSD Flow-Weighted Ave. Ind. Chloride | | | 133 | | |

All chloride concentration data from 2002 unless otherwise noted.

AVK Industrial Products, B&B Manufacturing, Car Wash Express (#16262), Castaic Truck Wash, Cinetch, DA/Pro Rubber, Dell'Olio Enterprises, Future Media Productions, Gruber Systems, Hydrotechnology, KLM Laboratories, Leiner Health Products, Mastey De Paris, Mikailian Meat Products, Newhall Signal, Santa Clarita Valley Food Services, Southern California Edison, Superior Controls, TA Manufacturing, Western Laser Graphics, and William Hart Union HS District concentrations based on 2003 data.

Car Wash Express (#16263) concentrations based on 2003 data for Car Wash Express (#16262).

City of Santa Clarita Sports Complex concentration based on 2005 data.

Swimming pool concentrations based on 2003 data.

Talladium concentration based on 2001 data.

RV disposal station concentrations based on sampling of the Santa Clarita Mobil Station RV disposal station.

Table 3.5-3 SCVSD Estimated Industrial Chloride Load, 2003

| Permit No. | Industry Type | Company | No. Chloride Samples | Average Flow (gpd) | Average Chloride (mg/l) | Chloride Mass (lb/day) | Chloride Above Water Supply (lb/day) |
|------------|-----------------|---|----------------------|--------------------|-------------------------|------------------------|--------------------------------------|
| 13044 | Misc. Mfg. | 3D Systems Inc. | 1 | 5,813 | 24 | 1.16 | 0.000 |
| 15972 | Fasteners | AVK Industrial Products | 2 | 16 | 175 | 0.02 | 0.012 |
| 10883 | Machining | B & B Manufacturing Inc. | 1 | 1,000 | 60 | 0.50 | 0.000 |
| 11205 | Printing | Bertelsmann Industry Services Inc. | 4 | 9,999 | 132 | 11.01 | 3.994 |
| 13077 | Cosmetics | Bocchi Laboratories Inc. | 3 | 3,321 | 40 | 1.11 | 0.000 |
| 8695 | Vehicle Main. | California Department of Water Resources | 2 | 200 | 91 | 0.15 | 0.012 |
| 9216 | Education | California Institute of the Arts | 2 | 420 | 125 | 0.44 | 0.143 |
| 16252 | RV Station | Camping World | Est. | 10 | 522 | 0.04 | 0.037 |
| 16262 | Truck/Car Wash | Carwash Express | 2 | 1,421 | 310 | 3.67 | 2.677 |
| 16263 | Truck/Car Wash | Carwash Express | Est. | 1,421 | 310 | 3.67 | 2.677 |
| 16434 | RV Station | Castaic Lake RV Park | Est. | 10 | 522 | 0.04 | 0.037 |
| 12514 | Truck/Car Wash | Castaic Truck Wash | 2 | 3,000 | 230 | 5.75 | 3.650 |
| 15146 | Food | Chocolates A La Carte | 3 | 2,239 | 355 | 6.63 | 5.059 |
| 15365 | Photoprocessing | Cinetech inc. | 2 | 15,000 | 76 | 9.51 | 0.000 |
| 16158 | Swimming Pool | City of Santa Clarita Newhall Pool | 1 | 268 | 1880 | 4.20 | 4.014 |
| 16160 | Swimming Pool | City of Santa Clarita North Oaks Pool | 1 | 268 | 2220 | 4.96 | 4.774 |
| 16159 | Swimming Pool | City of Santa Clarita Santa Clarita Pool | 2 | 268 | 1325 | 2.96 | 2.774 |
| 16077 | Swimming Pool | City of Santa Clarita Sports Complex | Est. | 3,578 | 604 | 18.02 | 15.514 |
| 16161 | Swimming Pool | City of Santa Clarita Valencia Glen Pool | 1 | 179 | 2950 | 4.40 | 4.278 |
| 16162 | Swimming Pool | City of Santa Clarita Valencia Meadows Pool | 1 | 179 | 1280 | 1.91 | 1.785 |
| 8675 | Education | College of the Canyons | 1 | 100 | 190 | 0.16 | 0.088 |
| 15170 | Misc. Mfg. | DA/Pro Rubber Inc. | 2 | 426 | 84 | 0.30 | 0.000 |
| 14755 | Printing | Daily News of Los Angeles | 4 | 4,027 | 157 | 5.27 | 2.448 |
| 15906 | Food | Dell'Olio Enterprises | 1 | 420 | 155 | 0.54 | 0.248 |
| 12248 | Metal Finishing | Electrofilm Manufacturing Co. | 6 | 1,000 | 1315 | 10.97 | 10.266 |
| 14672 | Printing | Future Media Productions | 2 | 3,083 | 79 | 2.03 | 0.000 |
| 15564 | Printing | Future Media Productions | 2 | 100 | 112 | 0.09 | 0.023 |
| 5599 | Misc. Mfg. | Gruber Systems Inc. | 1 | 3,240 | 96 | 2.59 | 0.322 |
| 11281 | Metal Finishing | Hamby Corporation | 8 | 3,000 | 87 | 2.18 | 0.073 |
| 874 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 43,000 | 80 | 28.69 | 0.000 |
| 11824 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 1,440 | 120 | 1.44 | 0.431 |
| 12040 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 11,160 | 80 | 7.45 | 0.000 |
| 14350 | Vehicle Main. | Honda Performance Development | 2 | 1,417 | 211 | 2.49 | 1.500 |
| 3222 | Metal Finishing | HR Textron | 5 | 3,307 | 68 | 1.88 | 0.000 |
| 12600 | Misc. Mfg. | Hydrotechnology | 1 | 3,067 | 185 | 4.73 | 2.581 |
| 15750 | Metal Finishing | Iso-Science Laboratories | Est. | 50 | 89 | 0.04 | 0.002 |
| 16483 | RV Station | Kelly's Shell | Est. | 10 | 522 | 0.04 | 0.037 |
| 3627 | Chemical Mfg. | Keysor Century | 4 | 67,151 | 289 | 161.85 | 114.752 |
| 13098 | Misc. Mfg. | KLM Laboratories Inc. | 6 | 300 | 116 | 0.29 | 0.080 |
| 8542 | Correctional | LA County Probation Camp Joe Scott | Est. | 100 | 87 | 0.07 | 0.002 |
| 12347 | Misc. Mfg. | Lamsco West Inc. | 4 | 75 | 96 | 0.06 | 0.007 |
| 15347 | Pharmaceutical | Leiner Health Products | 1 | 9,652 | 84 | 6.76 | 0.000 |
| 15934 | Research | Mannkind Corporation | 3 | 19,040 | 348 | 55.26 | 41.906 |
| 9951 | Cosmetics | Mastey De Paris Inc. | 1 | 60 | 25 | 0.01 | 0.000 |
| 9668 | Food | Mikailian Meat Products | 1 | 750 | 293 | 1.83 | 1.307 |
| 10977 | Printing | Newhall Signal | 2 | 400 | 96 | 0.32 | 0.040 |
| 11852 | Metal Finishing | Novacap | 5 | 4,574 | 38 | 1.45 | 0.000 |
| 14360 | Misc. Mfg. | Oasis Corporation | 4 | 6,520 | 97 | 5.27 | 0.701 |
| 16036 | Misc. Mfg. | Oasis Corporation | 4 | 5,038 | 99 | 4.16 | 0.626 |
| 12265 | Correctional | Peter J. Pitchess Honor Rancho | 14 | 836,205 | 96 | 669.50 | 82.990 |
| 16215 | Pharmaceutical | Pharmavite Corporation | 7 | 18,680 | 150 | 23.37 | 10.267 |
| 16514 | Pharmaceutical | Pharmavite Corporation | Est. | 2,000 | 150 | 2.50 | 1.099 |
| 9704 | Misc. Mfg. | Polycarbon Inc. | 5 | 3,808 | 67 | 2.13 | 0.000 |
| 16454 | RV Station | Santa Clarita Elks Lodge | Est. | 10 | 522 | 0.04 | 0.037 |
| 15470 | RV Station | Santa Clarita Mobil Station | Est. | 10 | 522 | 0.04 | 0.037 |
| 13205 | Food | Santa Clarita Valley Food Services | 1 | 2,000 | 128 | 2.14 | 0.732 |
| 15986 | Misc. Mfg. | Silgan Plastics | 5 | 350 | 303 | 0.88 | 0.639 |
| 9332 | Theme Park | Six Flags Magic Mountain | 2 | 2,521 | 134 | 2.82 | 1.049 |
| 9333 | Theme Park | Six Flags Magic Mountain | 3 | 74,441 | 189 | 117.34 | 65.126 |
| 9334 | Theme Park | Six Flags Magic Mountain | 4 | 35,836 | 114 | 34.07 | 8.936 |

Table 3.5-3 SCVSD Estimated Industrial Chloride Load, 2003

| Permit No. | Industry Type | Company | No. Chloride Samples | Average Flow (gpd) | Average Chloride (mg/l) | Chloride Mass (lb/day) | Chloride Above Water Supply (lb/day) |
|------------|-----------------|---|----------------------|--------------------|-------------------------|------------------------|--------------------------------------|
| 596 | Energy | Southern California Edison | 1 | 691 | 64 | 0.37 | 0.000 |
| 12272 | Metal Finishing | Stoll Metalcraft Inc. | 4 | 550 | 96 | 0.44 | 0.055 |
| 11674 | Misc. Mfg. | Superior Controls Company Inc. | 1 | 220 | 81 | 0.15 | 0.000 |
| 14816 | Fasteners | TA Manufacturing Co. | 1 | 2,167 | 83 | 1.50 | 0.000 |
| 16133 | Misc. Mfg. | Talladium Inc. | Est. | 110 | 73 | 0.07 | 0.000 |
| 14010 | Mail Processing | United States Postal Service | 3 | 14,602 | 138 | 16.81 | 6.564 |
| 12908 | Chemical Mfg. | US Borax and Chemical/Research | 1 | 8,000 | 140 | 9.34 | 3.730 |
| 14765 | Bottled Water | Valencia West | 4 | 250 | 28 | 0.06 | 0.000 |
| 12253 | Semiconductors | Waddan Systems | 2 | 100 | 83 | 0.07 | 0.000 |
| 12391 | Metal Finishing | Western Filter | 7 | 1,222 | 86 | 0.88 | 0.019 |
| 11993 | Photoprocessing | Western Laser Graphics | 1 | 2,645 | 190 | 4.19 | 2.336 |
| 13308 | Vehicle Main. | William S. Hart Union High School Dist. | 1 | 6,000 | 90 | 4.50 | 0.295 |
| | | SCVSD Total | | 1,253,535 | | 1,282 | 413 |
| | | SCVSD Flow-Weighted Ave. Ind. Chloride | | | 123 | | |

All chloride concentrations based on 2003 data unless otherwise noted.

Car Wash Express (#16263) concentration based on data for Car Wash Express (#16262).

City of Santa Clarita Sports Complex concentration based on 2005 data.

Iso-Science Labs concentration based on 2004 data.

LA County Probation Camp concentration based on 2002 data.

Pharmavite (#16514) concentration based on data for Pharmavite (#16215).

RV disposal station concentrations based on 2002 sampling of the Santa Clarita Mobil Station RV disposal station.

Talladium concentration based on 2001 data.

Table 3.5-4 SCVSD Estimated Industrial Chloride Load, 2004

| Permit No. | Industry Type | Company | No. Chloride Samples | Average Flow (gpd) | Average Chloride (mg/l) | Chloride Mass (lb/day) | Chloride Above Water Supply (lb/day) |
|------------|-----------------|---|----------------------|--------------------|-------------------------|------------------------|--------------------------------------|
| 13044 | Misc. Mfg. | 3D Systems Inc. | 3 | 6,951 | 43 | 2.49 | 0 |
| 15972 | Fasteners | AVK Industrial Products | 2 | 16 | 195 | 0.03 | 0.016 |
| 10883 | Machining | B & B Manufacturing Inc. | 1 | 1,000 | 47 | 0.39 | 0 |
| 13077 | Cosmetics | Bocchi Laboratories Inc. | 2 | 1,958 | 76 | 1.24 | 0.042 |
| 16635 | Misc. Mfg. | C & R Molds | Est. | 1,440 | 185 | 2.22 | 1.3 |
| 8695 | Vehicle Main. | California Department of Water Resources | Est. | 200 | 91 | 0.15 | 0.029 |
| 9216 | Education | California Institute of the Arts | 1 | 420 | 116 | 0.41 | 0.15 |
| 16252 | RV Station | Camping World | Est. | 10 | 522 | 0.04 | 0.037 |
| 16262 | Truck/Car Wash | Carwash Express | 2 | 1,421 | 230 | 2.73 | 1.9 |
| 16263 | Truck/Car Wash | Carwash Express | Est. | 1,421 | 230 | 2.73 | 1.9 |
| 16434 | RV Station | Castaic Lake RV Park | Est. | 10 | 522 | 0.04 | 0.037 |
| 15146 | Food | Chocolates A La Carte | 3 | 2,647 | 334 | 7.37 | 5.8 |
| 16754 | Photoprocessing | Cinetech inc. | 2 | 9,120 | 76 | 5.78 | 0.20 |
| 16158 | Swimming Pool | City of Santa Clarita Newhall Pool | Est. | 268 | 1880 | 4.20 | 4.0 |
| 16160 | Swimming Pool | City of Santa Clarita North Oaks Pool | Est. | 268 | 2220 | 4.96 | 4.8 |
| 16159 | Swimming Pool | City of Santa Clarita Santa Clarita Pool | Est. | 268 | 1325 | 2.96 | 2.8 |
| 16077 | Swimming Pool | City of Santa Clarita Sports Complex | Est. | 3,578 | 604 | 18.02 | 16 |
| 16161 | Swimming Pool | City of Santa Clarita Valencia Glen Pool | Est. | 179 | 2950 | 4.40 | 4.3 |
| 16162 | Swimming Pool | City of Santa Clarita Valencia Meadows Pool | Est. | 179 | 1280 | 1.91 | 1.8 |
| 8675 | Education | College of the Canyons | 1 | 100 | 150 | 0.13 | 0.064 |
| 15170 | Misc. Mfg. | DA/Pro Rubber Inc. | 2 | 426 | 85 | 0.30 | 0.041 |
| 14755 | Printing | Daily News of Los Angeles | 3 | 7,205 | 53 | 3.18 | 0 |
| 15906 | Food | Dell'Olio Enterprises | 1 | 420 | 127 | 0.44 | 0.19 |
| 16535 | Printing | Delta Printing | 7 | 9,451 | 99 | 7.80 | 2.0 |
| 12248 | Metal Finishing | Electrofilm Manufacturing Co. | 7 | 1,000 | 403 | 3.36 | 2.7 |
| 14672 | Printing | Future Media Productions | 5 | 3,194 | 76 | 2.02 | 0.069 |
| 15564 | Printing | Future Media Productions | 1 | 100 | 65 | 0.05 | 0 |
| 5599 | Misc. Mfg. | Gruber Systems Inc. | 1 | 3,240 | 72 | 1.95 | 0 |
| 11281 | Metal Finishing | Hamby Corporation | 5 | 3,000 | 77 | 1.93 | 0.090 |
| 874 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 43,000 | 160 | 57.38 | 31 |
| 11824 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 1,440 | 111 | 1.33 | 0.45 |
| 12040 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 11,160 | 145 | 13.50 | 6.7 |
| 16689 | Vehicle Main. | Honda Performance Development | 2 | 1,900 | 77 | 1.22 | 0.057 |
| 3222 | Metal Finishing | HR Textron | 7 | 3,094 | 58 | 1.50 | 0 |
| 15750 | Metal Finishing | Iso-Science Laboratories | 3 | 50 | 89 | 0.04 | 0.0065 |
| 16483 | RV Station | Kelly's Shell | Est. | 10 | 522 | 0.04 | 0.037 |
| 3627 | Chemical Mfg. | Keysor Century | Est. | 10,356 | 289 | 24.96 | 19 |
| 16575 | Misc. Mfg. | KLM Laboratories Inc. | 2 | 4,400 | 112 | 4.11 | 1.4 |
| 12347 | Misc. Mfg. | Lamsco West Inc. | 4 | 75 | 88 | 0.06 | 0.0091 |
| 15347 | Pharmaceutical | Leiner Health Products | 1 | 9,043 | 100 | 7.54 | 2.0 |
| 16803 | Truck/Car Wash | Little Sister's Truck Wash | Est. | 3,000 | 230 | 5.75 | 3.9 |
| 15934 | Research | Mankind Corporation | 2 | 10,301 | 75 | 6.44 | 0.14 |
| 9951 | Cosmetics | Mastey De Paris Inc. | 1 | 60 | 38 | 0.02 | 0 |
| 9668 | Food | Mikailian Meat Products | 1 | 750 | 147 | 0.92 | 0.46 |
| 10977 | Printing | Newhall Signal | 3 | 400 | 87 | 0.29 | 0.045 |
| 11852 | Metal Finishing | Novacap | 5 | 4,574 | 50 | 1.91 | 0 |
| 14360 | Misc. Mfg. | Oasis Corporation | 1 | 8,240 | 69 | 4.74 | 0 |
| 16036 | Misc. Mfg. | Oasis Corporation | 8 | 11,269 | 90 | 8.46 | 1.6 |
| 12265 | Correctional | Peter J. Pitchess Honor Rancho | 16 | 801,329 | 104 | 695.04 | 205 |
| 16215 | Pharmaceutical | Pharmavite Corporation | 4 | 21,040 | 100 | 17.55 | 4.7 |
| 16514 | Pharmaceutical | Pharmavite Corporation | Est. | 2,000 | 100 | 1.67 | 0.44 |
| 9704 | Misc. Mfg. | Polycarbon Inc. | 5 | 6,959 | 66 | 3.83 | 0 |
| 16454 | RV Station | Santa Clarita Elks Lodge | Est. | 10 | 522 | 0.04 | 0.037 |
| 15470 | RV Station | Santa Clarita Mobil Station | Est. | 10 | 522 | 0.04 | 0.037 |
| 13205 | Food | Santa Clarita Valley Food Services | 1 | 2,000 | 126 | 2.10 | 0.88 |
| 15986 | Misc. Mfg. | Silgan Plastics | 4 | 350 | 95 | 0.28 | 0.063 |
| 9332 | Theme Park | Six Flags Magic Mountain | 2 | 2,521 | 107 | 2.25 | 0.71 |
| 9333 | Theme Park | Six Flags Magic Mountain | 3 | 81,123 | 96 | 64.95 | 15 |
| 9334 | Theme Park | Six Flags Magic Mountain | 6 | 30,192 | 98 | 24.68 | 6.2 |
| 596 | Energy | Southern California Edison | Est. | 691 | 64 | 0.37 | 0 |

Table 3.5-4 SCVSD Estimated Industrial Chloride Load, 2004

| Permit No. | Industry Type | Company | No. Chloride Samples | Average Flow (gpd) | Average Chloride (mg/l) | Chloride Mass (lb/day) | Chloride Above Water Supply (lb/day) |
|------------|-----------------|---|----------------------|--------------------|-------------------------|------------------------|--------------------------------------|
| 12272 | Metal Finishing | Stoll Metalcraft Inc. | 5 | 550 | 89 | 0.41 | 0.072 |
| 11674 | Misc. Mfg. | Superior Controls Company Inc. | 1 | 220 | 58 | 0.11 | 0 |
| 14816 | Fasteners | TA Manufacturing Co. | 2 | 4,291 | 106 | 3.79 | 1.2 |
| 16133 | Misc. Mfg. | Talladium Inc. | Est. | 110 | 73 | 0.07 | 0 |
| 16549 | Misc. Mfg. | Telic Company | Est. | 1,500 | 100 | 1.25 | 0.33 |
| 14010 | Mail Processing | United States Postal Service | 2 | 6,877 | 254 | 14.57 | 10 |
| 12908 | Chemical Mfg. | US Borax and Chemical/Research | 2 | 1,960 | 143 | 2.34 | 1.1 |
| 14765 | Bottled Water | Valencia West | 2 | 250 | 79 | 0.16 | 0.012 |
| 12253 | Semiconductors | Waddan Systems | 7 | 100 | 78 | 0.07 | 0.0038 |
| 12391 | Metal Finishing | Western Filter | 5 | 3,963 | 82 | 2.71 | 0.28 |
| 11993 | Photoprocessing | Western Laser Graphics | 1 | 2,645 | 81 | 1.79 | 0.17 |
| 13308 | Vehicle Main. | William S. Hart Union High School Dist. | 1 | 6,000 | 82 | 4.10 | 0.43 |
| | | SCVSD Total | | 1,159,303 | | 1,068 | 363 |
| | | SCVSD Flow-Weighted Ave. Ind. Chloride | | | 110 | | |

All chloride concentrations from 2004 unless otherwise noted.

C & R Molds concentration from 2003 data for previous site owner, Hydrotechnology.

California Dept. of Water Resources and Southern California Edison concentrations based on 2003 data.

Car Wash Express (#16263) concentration based on data for Car Wash Express (#16262).

City of Santa Clarita Sports Complex concentration based on 2005 data.

Keysor Century concentration based on 2003 data.

Little Sister's Truck Wash concentration from 2003 data for previous site owner, Castaic Truck Wash.

Pharmavite (#16514) concentration based on data for Pharmavite (#16215).

RV disposal station concentrations based on 2002 sampling of the Santa Clarita Mobil Station RV disposal station.

Swimming pool estimates based on 2003 data.

Talladium concentration based on 2001 data.

Telic concentration based on chloride limit for facilities without Chloride Reduction Plans.

Table 3.5-5 SCVSD Estimated Industrial Chloride Load, 2005

| Permit No. | Industry Type | Company | No. Chloride Samples | Average Flow (gpd) | Average Chloride (mg/l) | Chloride Mass (lb/day) | Chloride Above Water Supply (lb/day) |
|------------|-----------------|---|----------------------|--------------------|-------------------------|------------------------|--------------------------------------|
| 13044 | Misc. Mfg. | 3D Systems Inc. | 3 | 3,902 | 1 | 0.04 | 0.000 |
| 15972 | Fasteners | AVK Industrial Products | Est. | 16 | 195 | 0.03 | 0.019 |
| 10883 | Machining | B & B Manufacturing Inc. | 2 | 1,000 | 116 | 0.97 | 0.499 |
| 13077 | Cosmetics | Bocchi Laboratories Inc. | 2 | 1,375 | 43 | 0.49 | 0.000 |
| 16635 | Misc. Mfg. | C & R Molds | Est. | 1,440 | 185 | 2.22 | 1.547 |
| 8695 | Vehicle Main. | California Department of Water Resources | 1 | 200 | 57 | 0.10 | 0.001 |
| 9216 | Education | California Institute of the Arts | 1 | 420 | 92.9 | 0.33 | 0.129 |
| 16252 | RV Station | Camping World | Est. | 10 | 522 | 0.04 | 0.039 |
| 16262 | Truck/Car Wash | Carwash Express | 1 | 1,421 | 53 | 0.63 | 0.000 |
| 16263 | Truck/Car Wash | Carwash Express | Est. | 1,421 | 53 | 0.63 | 0.000 |
| 16434 | RV Station | Castaic Lake RV Park | Est. | 10 | 522 | 0.04 | 0.039 |
| 15146 | Food | Chocolates A La Carte | 3 | 3,346 | 223 | 6.22 | 4.654 |
| 16754 | Photoprocessing | Cinetech inc. | 4 | 9,100 | 74 | 5.60 | 1.332 |
| 16158 | Swimming Pool | City of Santa Clarita Newhall Pool | Est. | 268 | 1880 | 4.20 | 4.076 |
| 16160 | Swimming Pool | City of Santa Clarita North Oaks Pool | Est. | 268 | 2220 | 4.96 | 4.836 |
| 16159 | Swimming Pool | City of Santa Clarita Santa Clarita Pool | 1 | 268 | 910 | 2.03 | 1.908 |
| 16077 | Swimming Pool | City of Santa Clarita Sports Complex | 4 | 3,578 | 529 | 15.79 | 14.109 |
| 16161 | Swimming Pool | City of Santa Clarita Valencia Glen Pool | Est. | 179 | 2950 | 4.40 | 4.320 |
| 16162 | Swimming Pool | City of Santa Clarita Valencia Meadows Pool | Est. | 179 | 1280 | 1.91 | 1.827 |
| 8675 | Education | College of the Canyons | 2 | 100 | 86.5 | 0.07 | 0.025 |
| 15170 | Misc. Mfg. | DA/Pro Rubber Inc. | 2 | 426 | 82 | 0.29 | 0.092 |
| 14755 | Printing | Daily News of Los Angeles | 6 | 356 | 92 | 0.27 | 0.105 |
| 15906 | Food | Dell'Olio Enterprises | 1 | 420 | 56 | 0.20 | 0.000 |
| 16535 | Printing | Delta Printing | 7 | 7,473 | 109 | 6.81 | 3.310 |
| 12248 | Metal Finishing | Electrofilm Manufacturing Co. | 6 | 1,000 | 353 | 2.94 | 2.475 |
| 16861 | GW Remediation | ExxonMobil Oil Corporation | Est. | 7,200 | 56 | 3.36 | 0.000 |
| 14672 | Printing | Future Media Productions | 4 | 2,056 | 74 | 1.27 | 0.307 |
| 15564 | Printing | Future Media Productions | 1 | 100 | 34 | 0.03 | 0.000 |
| 5599 | Misc. Mfg. | Gruber Systems Inc. | 1 | 3,240 | 350 | 9.46 | 7.939 |
| 11281 | Metal Finishing | Hamby Corporation | 5 | 1,785 | 59 | 0.87 | 0.036 |
| 874 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 42,427 | 123 | 43.52 | 23.637 |
| 11824 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 1,440 | 188 | 2.26 | 1.583 |
| 12040 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 11,160 | 216 | 20.10 | 14.873 |
| 16689 | Vehicle Main. | Honda Performance Development | 2 | 1,900 | 137 | 2.16 | 1.272 |
| 3222 | Metal Finishing | HR Textron | 4 | 4,395 | 154 | 5.64 | 3.585 |
| 15750 | Metal Finishing | Iso-Science Laboratories | 5 | 50 | 99 | 0.04 | 0.018 |
| 16483 | RV Station | Kelly's Shell | Est. | 10 | 522 | 0.04 | 0.039 |
| 16575 | Misc. Mfg. | KLM Laboratories Inc. | 1 | 69 | 51 | 0.03 | 0.000 |
| 12347 | Misc. Mfg. | Lamsco West Inc. | 2 | 100 | 78 | 0.07 | 0.018 |
| 15347 | Pharmaceutical | Leiner Health Products | 4 | 9,333 | 80 | 6.20 | 1.829 |
| 16803 | Truck/Car Wash | Little Sister's Truck Wash | Est. | 3,500 | 230 | 6.71 | 5.073 |
| 16868 | GW Remediation | Los Angeles County Sheriffs Department | 2 | 14,000 | 52 | 6.01 | 0.000 |
| 15934 | Research | Mannkind Corporation | 4 | 6,712 | 45 | 2.53 | 0.000 |
| 9951 | Cosmetics | Mastey De Paris Inc. | 1 | 60 | 69 | 0.03 | 0.006 |
| 9668 | Food | Mikailian Meat Products | 1 | 750 | 251 | 1.57 | 1.218 |
| 10977 | Printing | Newhall Signal | 1 | 400 | 87 | 0.29 | 0.103 |
| 11852 | Metal Finishing | Novacap | 5 | 400 | 18 | 0.06 | 0.000 |
| 16930 | Misc. Mfg. | Pacific Scientific/EMC West | Est. | 1,200 | 76 | 0.76 | 0.198 |
| 12265 | Correctional | Peter J. Pitchess Honor Rancho | 13 | 861,616 | 92 | 663.92 | 260.073 |
| 16215 | Pharmaceutical | Pharmavite Corporation | 4 | 15,720 | 104 | 13.67 | 6.300 |
| 16514 | Pharmaceutical | Pharmavite Corporation | Est. | 1,600 | 104 | 1.39 | 0.641 |
| 9704 | Misc. Mfg. | Polycarbon Inc. | 2 | 6,685 | 101 | 5.61 | 2.478 |
| 16454 | RV Station | Santa Clarita Elks Lodge | Est. | 10 | 522 | 0.04 | 0.039 |
| 15470 | RV Station | Santa Clarita Mobil Station | Est. | 10 | 522 | 0.04 | 0.039 |
| 13205 | Food | Santa Clarita Valley Food Services | 1 | 2,000 | 105 | 1.75 | 0.814 |
| 16902 | Truck/Car Wash | Saugus Industrial Center | Est. | 3,100 | 230 | 5.95 | 4.493 |
| 15986 | Misc. Mfg. | Silgan Plastics | 4 | 350 | 193 | 0.56 | 0.399 |
| 9332 | Theme Park | Six Flags Magic Mountain | 1 | 2,521 | 77 | 1.62 | 0.437 |
| 9333 | Theme Park | Six Flags Magic Mountain | 2 | 85,014 | 220 | 155.98 | 116.137 |
| 9334 | Theme Park | Six Flags Magic Mountain | 4 | 30,932 | 73 | 18.70 | 4.205 |
| 596 | Energy | Southern California Edison | 1 | 691 | 90 | 0.52 | 0.195 |

Table 3.5-5 SCVSD Estimated Industrial Chloride Load, 2005

| Permit No. | Industry Type | Company | No. Chloride Samples | Average Flow (gpd) | Average Chloride (mg/l) | Chloride Mass (lb/day) | Chloride Above Water Supply (lb/day) |
|------------|-----------------|---|----------------------|--------------------|-------------------------|------------------------|--------------------------------------|
| 16156 | Laboratory | Specialty Laboratories Inc. | 4 | 1,436 | 447 | 5.36 | 4.685 |
| 12272 | Metal Finishing | Stoll Metalcraft Inc. | 4 | 480 | 92 | 0.37 | 0.142 |
| 16951 | Swimming Pool | SunCal Companies | Est. | 300 | 720 | 1.80 | 1.660 |
| 11674 | Misc. Mfg. | Superior Controls Company Inc. | 1 | 220 | 52 | 0.10 | 0.000 |
| 14816 | Fasteners | TA Manufacturing Co. | 4 | 5,292 | 69 | 3.06 | 0.577 |
| 16133 | Misc. Mfg. | Talladium Inc. | 1 | 110 | 77 | 0.07 | 0.019 |
| 16549 | Misc. Mfg. | Telic Company | Est. | 1,500 | 100 | 1.25 | 0.548 |
| 14010 | Mail Processing | United States Postal Service | 3 | 1,589 | 178 | 2.35 | 1.610 |
| 12908 | Chemical Mfg. | US Borax and Chemical/Research | 2 | 2,680 | 82 | 1.82 | 0.568 |
| 14765 | Bottled Water | Valencia West | 1 | 250 | 79 | 0.16 | 0.047 |
| 12253 | Semiconductors | Waddan Systems | 3 | 100 | 93 | 0.08 | 0.031 |
| 16102 | Swimming Pool | Westridge Community Recreation Center | Est. | 10 | 720 | 0.06 | 0.055 |
| 12391 | Metal Finishing | Western Filter | 5 | 1,889 | 85 | 1.33 | 0.447 |
| 11993 | Photoprocessing | Western Laser Graphics | 1 | 2,645 | 76 | 1.68 | 0.441 |
| 13308 | Vehicle Main. | William S. Hart Union High School Dist. | 1 | 6,000 | 16 | 0.80 | 0.000 |
| | | SCVSD Total | | 1,185,212 | | 1,064 | 514 |
| | | SCVSD Flow-Weighted Ave. Ind. Chloride | | | 108 | | |

All concentrations from 2005 unless otherwise noted.

AVK Industrial Products concentration based on 2004 data.

C & R Molds concentration from 2003 data for previous site owner, Hydrotechnology.

Car Wash Express (#16263) concentration based on data for Car Wash Express (#16262).

ExxonMobil Oil Corporation concentration based on 2006 data.

Little Sister's Truck Wash concentration from 2003 data from previous site owner, Castaic Truck Wash.

Pacific Scientific/EMC West concentration based on #11993 since IW source is film processor.

Pharmavite (#16514) concentration based on data for Pharmavite (#16215).

RV disposal station concentrations based on 2002 sampling of the Santa Clarita Mobil Station RV disposal station.

Saugus Industrial Center concentration based on 2003 data from Castaic Truck Wash since IW source is a truck wash.

Swimming pool concentrations based on 2003 data except #16159, #16077, 16102, and 16951.

Swimming pool concentration for #16102 and #16951 based on average of other 2005 swimming pool concentrations.

Telic concentration based on chloride limit for facilities without Chloride Reduction Plans.

Table 3.5-6 SCVSD Estimated Industrial Chloride Load, 2006

| Permit No. | Industry Type | Company | No. Chloride Samples | Average Flow (gpd) | Average Chloride (mg/l) | Chloride Mass (lb/day) | Chloride Above Water Supply (lb/day) |
|------------|-------------------|--|----------------------|--------------------|-------------------------|------------------------|--------------------------------------|
| 17194 | Car Care Products | 3D International LLC | Est. | 300 | 100 | 0.25 | 0.112 |
| 13044 | Misc. Mfg. | 3D Systems Inc. | 3 | 4,553 | 2 | 0.06 | 0.000 |
| 10883 | Machining | B & B Manufacturing Inc. | 2 | 1,000 | 65 | 0.54 | 0.085 |
| 13077 | Cosmetics | Bocchi Laboratories Inc. | 4 | 1,607 | 99 | 1.33 | 0.588 |
| 16635 | Misc. Mfg. | C & R Molds | Est. | 1,440 | 185 | 2.22 | 1.560 |
| 8695 | Vehicle Main. | California Department of Water Resources | 1 | 200 | 74 | 0.12 | 0.032 |
| 9216 | Education | California Institute of the Arts | 1 | 420 | 87 | 0.30 | 0.112 |
| 16252 | RV Station | Camping World | Est. | 500 | 522 | 2.18 | 1.947 |
| 16262 | Truck/Car Wash | Carwash Express | 1 | 1,700 | 68 | 0.96 | 0.183 |
| 16263 | Truck/Car Wash | Carwash Express | Est. | 1,421 | 68 | 0.81 | 0.153 |
| 16434 | RV Station | Castaic Lake RV Park | Est. | 100 | 522 | 0.44 | 0.389 |
| 15146 | Food | Chocolates A La Carte | 3 | 4,559 | 161 | 6.13 | 4.039 |
| 16754 | Photoprocessing | Cinetech inc. | 3 | 11,480 | 62 | 5.95 | 0.677 |
| 16158 | Swimming Pool | City of Santa Clarita Newhall Pool | Est. | 268 | 1880 | 4.20 | 4.079 |
| 16160 | Swimming Pool | City of Santa Clarita North Oaks Pool | Est. | 268 | 2220 | 4.96 | 4.839 |
| 16159 | Swimming Pool | City of Santa Clarita Santa Clarita Pool | 1 | 268 | 671 | 1.50 | 1.377 |
| 16077 | Swimming Pool | City of Santa Clarita Sports Complex | 3 | 3,578 | 1070 | 31.94 | 30.295 |
| 16479 | Vehicle Main. | City of Santa Clarita Transit Maintenance Facility | 2 | 3,260 | 57 | 1.54 | 0.041 |
| 16161 | Swimming Pool | City of Santa Clarita Valencia Glen Pool | Est. | 179 | 2950 | 4.40 | 4.322 |
| 16162 | Swimming Pool | City of Santa Clarita Valencia Meadows Pool | Est. | 179 | 1280 | 1.91 | 1.829 |
| 8675 | Education | College of the Canyons | 1 | 100 | 81 | 0.07 | 0.022 |
| 15170 | Misc. Mfg. | DA/Pro Rubber Inc. | 2 | 426 | 77 | 0.27 | 0.078 |
| 14755 | Printing | Daily News of Los Angeles | 4 | 2,438 | 100 | 2.04 | 0.919 |
| 15906 | Food | Dell'Olio Enterprises | 1 | 420 | 72 | 0.25 | 0.060 |
| 16535 | Printing | Delta Printing | 4 | 7,179 | 95 | 5.70 | 2.400 |
| 12248 | Metal Finishing | Electrofilm Manufacturing Co. | 5 | 1,600 | 388 | 5.18 | 4.448 |
| 16861 | GW Remediation | ExxonMobil Oil Corporation | 5 | 1,193 | 57 | 0.56 | 0.015 |
| 17052 | Food | Flavor Producers | Est. | 2,500 | 100 | 2.09 | 0.936 |
| 5599 | Misc. Mfg. | Gruber Systems Inc. | 1 | 3,690 | 380 | 11.70 | 10.000 |
| 11281 | Metal Finishing | Hamby Corporation | 5 | 1,785 | 85 | 1.26 | 0.439 |
| 874 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 42,427 | 96.3 | 34.07 | 14.578 |
| 11824 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 1,440 | 67.4 | 0.81 | 0.148 |
| 12040 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 11,160 | 121 | 11.26 | 6.134 |
| 16689 | Vehicle Main. | Honda Performance Development | 2 | 1,900 | 99 | 1.56 | 0.691 |
| 3222 | Metal Finishing | HR Textron | 6 | 9,835 | 208 | 17.06 | 12.541 |
| 15750 | Misc. Mfg. | Iso-Science Laboratories | 2 | 20 | 81 | 0.01 | 0.004 |
| 16483 | RV Station | Kelly's Shell | Est. | 30 | 522 | 0.13 | 0.117 |
| 16687 | Misc. Mfg. | King Brothers Industries | Est. | 1,630 | 100 | 1.36 | 0.610 |
| 16575 | Misc. Mfg. | KLM Laboratories Inc. | 2 | 4,400 | 55 | 2.00 | 0.000 |
| 12347 | Misc. Mfg. | Lamsco West Inc. | 1 | 100 | 81 | 0.07 | 0.021 |
| 15347 | Pharmaceutical | Leiner Health Products | 3 | 8,522 | 63 | 4.45 | 0.531 |
| 16803 | Truck/Car Wash | Little Sister's Truck Wash | 1 | 5,673 | 78 | 3.68 | 1.069 |
| 16868 | GW Remediation | Los Angeles County Sheriffs Department | 5 | 940 | 60 | 0.47 | 0.037 |
| 15934 | Research | Mannkind Corporation | 5 | 14,192 | 65 | 7.64 | 1.122 |
| 9951 | Cosmetics | Mastey De Paris Inc. | 1 | 60 | 71 | 0.04 | 0.008 |
| 9668 | Food | Mikailian Meat Products | 1 | 750 | 116 | 0.73 | 0.381 |
| 16941 | Laboratory | National Technical Systems Inc | 1 | 450 | 40 | 0.15 | 0.000 |
| 10977 | Printing | Newhall Signal | 2 | 400 | 55 | 0.18 | 0.000 |
| 11852 | Metal Finishing | Novacap | 5 | 400 | 15 | 0.05 | 0.000 |
| 16930 | Misc. Mfg. | Pacific Scientific/EMC West | Est. | 1,200 | 100 | 1.00 | 0.449 |
| 12265 | Correctional | Peter J. Pitchess Honor Rancho | 15 | 953,836 | 90 | 717.17 | 278.849 |
| 16215 | Pharmaceutical | Pharmavite LLC | 5 | 8,000 | 94 | 6.30 | 2.626 |
| 16514 | Pharmaceutical | Pharmavite LLC | 1 | 5,000 | 109 | 4.55 | 2.248 |
| 17136 | Food | Pharmavite LLC | Est. | 3,000 | 100 | 2.50 | 1.123 |
| 9704 | Misc. Mfg. | Polycarbon Inc. | 4 | 5,041 | 109 | 4.57 | 2.257 |
| 16454 | RV Station | Santa Clarita Elks Lodge | Est. | 100 | 522 | 0.44 | 0.389 |
| 15470 | RV Station | Santa Clarita Mobil Station | Est. | 1 | 522 | 0.00 | 0.004 |
| 13205 | Food | Santa Clarita Valley Food Services Agency | 1 | 2,000 | 79 | 1.32 | 0.399 |
| 16902 | Truck/Car Wash | Saugus Industrial Center | Est. | 3,100 | 78 | 2.01 | 0.584 |
| 9332 | Theme Park | Six Flags Magic Mountain | 3 | 2,521 | 69 | 1.45 | 0.296 |
| 9333 | Theme Park | Six Flags Magic Mountain | 6 | 89,151 | 96 | 71.64 | 30.670 |

Table 3.5-6 SCVSD Estimated Industrial Chloride Load, 2006

| Permit No. | Industry Type | Company | No. Chloride Samples | Average Flow (gpd) | Average Chloride (mg/l) | Chloride Mass (lb/day) | Chloride Above Water Supply (lb/day) |
|------------|-----------------|---|----------------------|--------------------|-------------------------|------------------------|--------------------------------------|
| 9334 | Theme Park | Six Flags Magic Mountain | 8 | 35,452 | 70 | 20.76 | 4.468 |
| 16939 | Bottled Water | Soma Beverage Company | 3 | 250 | 53 | 0.11 | 0.000 |
| 596 | Energy | Southern California Edison | 1 | 691 | 66 | 0.38 | 0.063 |
| 16156 | Laboratory | Specialty Laboratories Inc. | 6 | 4,356 | 125 | 4.55 | 2.550 |
| 12272 | Metal Finishing | Stoll Metalcraft Inc. | 3 | 480 | 86 | 0.34 | 0.122 |
| 16951 | Swimming Pool | SunCal Companies | Est. | 300 | 599 | 1.50 | 1.362 |
| 11674 | Misc. Mfg. | Superior Controls Company Inc. | 1 | 220 | 14 | 0.03 | 0.000 |
| 14816 | Fasteners | TA Manufacturing Co. | 3 | 7,750 | 66 | 4.27 | 0.707 |
| 16133 | Misc. Mfg. | Talladium Inc. | 3 | 110 | 67 | 0.06 | 0.011 |
| 16549 | Misc. Mfg. | Telic Company | Est. | 1,500 | 100 | 1.25 | 0.562 |
| 17181 | Personal Care | Trigg Laboratories Inc. | Est. | 2,000 | 100 | 1.67 | 0.749 |
| 14010 | Mail Processing | United States Postal Service | 2 | 4,356 | 172 | 6.25 | 4.247 |
| 914010 | Vehicle Main. | United States Postal Service | Est. | 150 | 100 | 0.13 | 0.056 |
| 12908 | Chemical Mfg. | US Borax and Chemical/Research | 2 | 2,320 | 70 | 1.36 | 0.290 |
| 12253 | Semiconductors | Waddan Systems | 3 | 100 | 63 | 0.05 | 0.007 |
| 12391 | Metal Finishing | Western Filter | 5 | 926 | 81 | 0.63 | 0.204 |
| 16102 | Swimming Pool | Westridge Community Recreation Center | Est. | 10 | 599 | 0.05 | 0.045 |
| 13308 | Vehicle Main. | William S. Hart Union High School Dist. | 2 | 6,000 | 22 | 1.12 | 0.000 |
| | | SCVSD Total | | 1,302,861 | | 1,044 | 449 |
| | | SCVSD Flow-Weighted Ave. Ind. Chloride | | | 96 | | |

All concentrations from 2006 unless otherwise noted.

3D International LLC concentration based on chloride limit for a facility without a Chloride Reduction Plan.

C & R Molds concentration from 2003 data for previous site owner, Hydrotechnology.

Car Wash Express (#16263) concentration based on data for Car Wash Express (#16262).

Flavor Producers concentration based on chloride limit for a facility without a Chloride Reduction Plan.

Kings Brothers Industries concentration based on chloride limit for a facility without a Chloride Reduction Plan.

Pacific Scientific/EMC West concentration based on chloride limit for a facility without a Chloride Reduction Plan.

Pharmavite LLC (#17136) concentration based on chloride limit for a facility without a Chloride Reduction Plan.

RV disposal station concentrations based on 2002 sampling of the Santa Clarita Mobil Station RV disposal station.

Saugus Industrial Center concentration based on data from Little Sister's Truck Wash since IW source is a truck wash.

Swimming pool concentrations based on 2003 data except #16159, #16077, 16102, and 16951.

Swimming pool concentration for #16102 and #16951 based on average of other 2006 swimming pool concentrations.

Telic Company concentration based on chloride permit limit.

Trigg Laboratories Inc. concentration based on chloride limit for a facility without a Chloride Reduction Plan.

United States Postal Service (#914010) concentration based on chloride limit for facility without a Chloride Reduction Plan.

Table 3.5-7 SCVSD Estimated Industrial Chloride Load, 2007

| Permit No. | Industry Type | Company | No. Chloride Samples | Average Flow (gpd) | Average Chloride (mg/l) | Chloride Mass (lb/day) | Chloride Above Water Supply (lb/day) |
|------------|-------------------|--|----------------------|--------------------|-------------------------|------------------------|--------------------------------------|
| 17194 | Car Care Products | 3D International LLC | Est. | 300 | 100 | 0.25 | 0.095 |
| 13044 | Misc. Mfg. | 3D Systems Inc. | 1 | 5,081 | 1 | 0.06 | 0.000 |
| 10883 | Machining | B & B Manufacturing Inc. | 1 | 1,000 | 96 | 0.80 | 0.283 |
| 13077 | Detergent Mfg. | Bocchi Laboratories Inc. | 1 | 1,214 | 47 | 0.47 | 0.000 |
| 16635 | Misc. Mfg. | C & R Molds | 2 | 1,440 | 91 | 1.10 | 0.352 |
| 8695 | Vehicle Main. | California Department of Water Resources | 1 | 200 | 57 | 0.10 | 0.000 |
| 9216 | Education | California Institute of the Arts | 1 | 420 | 107 | 0.37 | 0.158 |
| 16252 | RV Station | Camping World | Est. | 500 | 522 | 2.18 | 1.919 |
| 16262 | Truck/Car Wash | Carwash Express | 1 | 1,700 | 70 | 0.99 | 0.113 |
| 16263 | Truck/Car Wash | Carwash Express | Est. | 1,421 | 70 | 0.83 | 0.095 |
| 16434 | RV Station | Castaic Lake RV Park | Est. | 100 | 522 | 0.44 | 0.384 |
| 15146 | Food | Chocolates A La Carte | 3 | 4,779 | 214 | 8.53 | 6.063 |
| 16754 | Photoprocessing | Cinetech inc. | 3 | 18,264 | 65 | 9.85 | 0.421 |
| 16158 | Swimming Pool | City of Santa Clarita Newhall Pool | Est. | 268 | 1,880 | 4.20 | 4.064 |
| 16160 | Swimming Pool | City of Santa Clarita North Oaks Pool | Est. | 268 | 2,220 | 4.96 | 4.824 |
| 16159 | Swimming Pool | City of Santa Clarita Santa Clarita Pool | 1 | 268 | 1,140 | 2.55 | 2.410 |
| 16077 | Swimming Pool | City of Santa Clarita Sports Complex | 6 | 3,578 | 1,321 | 39.42 | 37.577 |
| 16479 | Vehicle Main. | City of Santa Clarita Transit Maintenance Facility | 2 | 3,260 | 48 | 1.30 | 0.000 |
| 16161 | Swimming Pool | City of Santa Clarita Valencia Glen Pool | Est. | 179 | 2,950 | 4.40 | 4.312 |
| 16162 | Swimming Pool | City of Santa Clarita Valencia Meadows Pool | Est. | 179 | 1,280 | 1.91 | 1.818 |
| 8675 | Education | College of the Canyons | 1 | 100 | 130 | 0.11 | 0.057 |
| 15170 | Misc. Mfg. | DA/Pro Rubber Inc. | 2 | 426 | 82 | 0.29 | 0.070 |
| 14755 | Printing | Daily News of Los Angeles | 4 | 2,055 | 61 | 1.04 | 0.000 |
| 15906 | Food | Dell'Olio Enterprises | 2 | 420 | 101 | 0.36 | 0.138 |
| 16535 | Printing | Delta Printing | 4 | 8,095 | 81 | 5.44 | 1.261 |
| 15750 | Misc. Mfg. | Eckert & Ziegler Isotope Products, Inc. | 4 | 20 | 134 | 0.02 | 0.012 |
| 12248 | Metal Finishing | Electrofilm Manufacturing Co. | 5 | 1,600 | 459 | 6.13 | 5.302 |
| 16861 | GW Remediation | ExxonMobil Oil Corporation | 7 | 578 | 69 | 0.33 | 0.032 |
| 16436 | GW Remediation | ExxonMobil Oil Corporation | 2 | 100 | 155 | 0.13 | 0.078 |
| 17052 | Food | Flavor Producers | Est. | 2,500 | 100 | 2.09 | 0.794 |
| 5599 | Misc. Mfg. | Gruber Systems Inc. | 1 | 2,143 | 260 | 4.65 | 3.540 |
| 11281 | Metal Finishing | Hamby Corporation | 6 | 1,785 | 89 | 1.32 | 0.401 |
| 874 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 42,427 | 84 | 29.69 | 7.785 |
| 11824 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 1,440 | 157 | 1.89 | 1.142 |
| 12040 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 11,160 | 155 | 14.43 | 8.665 |
| 16689 | Vehicle Main. | Honda Performance Development | 2 | 1,900 | 110 | 1.74 | 0.760 |
| 3222 | Metal Finishing | HR Textron | 5 | 12,727 | 198 | 21.04 | 14.468 |
| 16483 | RV Station | Kelly's Shell | Est. | 30 | 522 | 0.13 | 0.115 |
| 16687 | Misc. Mfg. | King Brothers Industries | 3 | 1,630 | 110 | 1.50 | 0.654 |
| 16575 | Misc. Mfg. | KLM Laboratories Inc. | 2 | 4,400 | 45 | 1.66 | 0.000 |
| 12347 | Misc. Mfg. | Lamsco West Inc. | 1 | 100 | 77 | 0.06 | 0.013 |
| 15347 | Pharmaceutical | Leiner Health Products | 4 | 8,261 | 89 | 6.11 | 1.841 |
| 16803 | Truck/Car Wash | Little Sister's Truck Wash | 2 | 4,391 | 228 | 8.33 | 6.064 |
| 16868 | GW Remediation | Los Angeles County Sheriffs Department | 6 | 940 | 103 | 0.81 | 0.323 |
| 15934 | Pharmaceutical | Mannkind Corporation | 2 | 9,615 | 71 | 5.65 | 0.690 |
| 9951 | Cosmetics | Mastey De Paris Inc. | 1 | 60 | 92 | 0.05 | 0.015 |
| 9668 | Food | Mikailian Meat Products | 2 | 750 | 174 | 1.09 | 0.701 |
| 16941 | Laboratory | National Technical Systems Inc | 1 | 450 | 114 | 0.43 | 0.196 |
| 10977 | Printing | Newhall Signal | 2 | 400 | 73 | 0.24 | 0.037 |
| 11852 | Metal Finishing | Novacap | 7 | 400 | 27 | 0.09 | 0.000 |
| 16930 | Misc. Mfg. | Pacific Scientific/EMC West | Est. | 1,200 | 100 | 1.00 | 0.381 |
| 12265 | Correctional | Peter J. Pitchess Honor Rancho | 13 | 1,183,332 | 91 | 895.57 | 284.682 |
| 16215 | Pharmaceutical | Pharmavite LLC | 4 | 7,720 | 119 | 7.66 | 3.676 |
| 16514 | Pharmaceutical | Pharmavite LLC | Est. | 3,600 | 109 | 3.27 | 1.414 |
| 17136 | Food | Pharmavite LLC | Est. | 2,040 | 100 | 1.70 | 0.648 |
| 9704 | Misc. Mfg. | Polycarbon Inc. | 3 | 10,000 | 96 | 8.00 | 2.838 |
| 16454 | RV Station | Santa Clarita Elks Lodge | Est. | 100 | 522 | 0.44 | 0.384 |
| 15470 | RV Station | Santa Clarita Mobil Station | Est. | 1 | 522 | 0.00 | 0.004 |
| 13205 | Food | Santa Clarita Valley Food Services Agency | 1 | 2,000 | 112 | 1.87 | 0.836 |
| 16902 | Truck/Car Wash | Saugus Industrial Center | 1 | 3,100 | 119 | 3.08 | 1.476 |
| 9332 | Theme Park | Six Flags Magic Mountain | 1 | 2,521 | 73 | 1.53 | 0.231 |

Table 3.5-7 SCVSD Estimated Industrial Chloride Load, 2007

| Permit No. | Industry Type | Company | No. Chloride Samples | Average Flow (gpd) | Average Chloride (mg/l) | Chloride Mass (lb/day) | Chloride Above Water Supply (lb/day) |
|------------|-----------------|---|----------------------|--------------------|-------------------------|------------------------|--------------------------------------|
| 9333 | Theme Park | Six Flags Magic Mountain | 3 | 87,123 | 139 | 101.24 | 56.264 |
| 9334 | Theme Park | Six Flags Magic Mountain | 5 | 36,685 | 76 | 23.33 | 4.387 |
| 16939 | Bottled Water | Soma Beverage Company | 2 | 16,270 | 48 | 6.55 | 0.000 |
| 596 | Energy | Southern California Edison | 2 | 691 | 90 | 0.52 | 0.162 |
| 16156 | Laboratory | Specialty Laboratories Inc. | 9 | 1,370 | 86 | 0.99 | 0.279 |
| 12272 | Metal Finishing | Stoll Metalcraft Inc. | 3 | 480 | 89 | 0.36 | 0.108 |
| 16951 | Swimming Pool | SunCal Companies | Est. | 300 | 1,321 | 3.31 | 3.151 |
| 11674 | Misc. Mfg. | Superior Controls Company Inc. | Est. | 220 | 14 | 0.03 | 0.000 |
| 14816 | Fasteners | TA Manufacturing Co. | 3 | 8,500 | 67 | 4.76 | 0.371 |
| 16133 | Misc. Mfg. | Talladium Inc. | 2 | 110 | 84 | 0.08 | 0.020 |
| 16549 | Misc. Mfg. | Telic Company | 1 | 1,500 | 69 | 0.86 | 0.088 |
| 17181 | Personal Care | Trigg Laboratories Inc. | Est. | 2,000 | 100 | 1.67 | 0.636 |
| 14010 | Mail Processing | United States Postal Service | 2 | 8,849 | 118 | 8.67 | 4.103 |
| 914010 | Vehicle Main. | United States Postal Service | Est. | 150 | 100 | 0.13 | 0.048 |
| 12908 | Chemical Mfg. | US Borax and Chemical/Research | 1 | 6,300 | 409 | 21.49 | 18.237 |
| 12253 | Semiconductors | Waddan Systems | 1 | 100 | 78 | 0.06 | 0.013 |
| 12391 | Metal Finishing | Western Filter | 5 | 1,148 | 107 | 1.03 | 0.436 |
| 13308 | Vehicle Main. | William S. Hart Union High School Dist. | 1 | 6,000 | 49 | 2.45 | 0.000 |
| | | SCVSD Total | | 1,558,733 | | 1,303 | 505 |
| | | SCVSD Flow-Weighted Ave. Ind. Chloride | | | 100 | | |

All concentrations from 2007 unless otherwise noted.

3D International LLC concentration based on chloride limit for a facility without a Chloride Reduction Plan.

Car Wash Express (#16263) concentration based on data for Car Wash Express (#16262).

Flavor Producers concentration based on chloride limit for a facility without a Chloride Reduction Plan.

Pacific Scientific/EMC West concentration based on chloride limit for a facility without a Chloride Reduction Plan.

Pharmavite LLC (#16514) concentration based on 2006 data.

Pharmavite LLC (#17136) concentration based on chloride limit for a facility without a Chloride Reduction Plan.

RV disposal station concentrations based on 2002 sampling of the Santa Clarita Mobil Station RV disposal station.

SunCal Companies swimming pool concentration based on City of Santa Clarita Sports Complex concentration.

Superior Controls Company Inc based on 2006 data.

Swimming pool concentrations based on 2003 data except #16159, #16077, and #16151.

Trigg Laboratories Inc. concentration based on chloride limit for a facility without a Chloride Reduction Plan.

United States Postal Service (#914010) concentration based on chloride limit for facility without a Chloride Reduction Plan.

Table 3.5-8 SCVSD Estimated Industrial Chloride Load, 2008

| Permit No. | Industry Type | Company | No. Chloride Samples | Average Flow (gpd) | Average Chloride (mg/l) | Chloride Mass (lb/day) | Chloride Above Water Supply (lb/day) |
|------------|-------------------|--|----------------------|--------------------|-------------------------|------------------------|--------------------------------------|
| 17194 | Car Care Products | 3D International LLC | Est. | 300 | 100 | 0.25 | 0.064 |
| 10883 | Misc. Mfg. | B & B Manufacturing Inc. | 1 | 1,000 | 11 | 0.09 | 0.000 |
| 13077 | Detergent Mfg. | Bocchi Laboratories Inc. | 2 | 4,800 | 24 | 0.97 | 0.000 |
| 20323A | Misc. Mfg. | Boston Scientific | 1 | 410 | 1 | 0.00 | 0.000 |
| 20323B | Misc. Mfg. | Boston Scientific | 1 | 8,000 | 133 | 8.87 | 3.916 |
| 20060 | Truck/Car Wash | Burrtec Waste Industries Inc. | Est. | 3,100 | 100 | 2.59 | 0.664 |
| 16635 | Misc. Mfg. | C & R Molds Inc. | 1 | 1,440 | 95 | 1.14 | 0.249 |
| 8695 | Vehicle Main. | California Department of Water Resources | 1 | 200 | 66 | 0.11 | 0.000 |
| 9216 | Education | California Institute of the Arts | 1 | 420 | 138 | 0.48 | 0.223 |
| 16252 | RV Station | Camping World Inc. | Est. | 500 | 522 | 2.18 | 1.867 |
| 16262 | Truck/Car Wash | Carwash Express | Est. | 1,700 | 79 | 1.12 | 0.065 |
| 16263 | Truck/Car Wash | Carwash Express | 1 | 1,421 | 79 | 0.94 | 0.055 |
| 16434 | RV Station | Castaic Lake RV Park | Est. | 100 | 522 | 0.44 | 0.373 |
| 15146 | Food | Chocolates A La Carte Inc. | 3 | 3,787 | 108 | 3.40 | 1.050 |
| 16754 | Photoprocessing | Cinetech Inc. | 3 | 16,808 | 67 | 9.33 | 0.000 |
| 16158 | Swimming Pool | City of Santa Clarita Newhall Pool | Est. | 268 | 1,880 | 4.20 | 4.036 |
| 16160 | Swimming Pool | City of Santa Clarita North Oaks Pool | Est. | 268 | 2,220 | 4.96 | 4.796 |
| 16159 | Swimming Pool | City of Santa Clarita Santa Clarita Pool | Est. | 268 | 1,140 | 2.55 | 2.382 |
| 16077 | Swimming Pool | City of Santa Clarita Sports Complex | 3 | 1,800 | 1,251 | 18.79 | 17.670 |
| 16479 | Vehicle Main. | City of Santa Clarita Transit Maintenance Facility | 4 | 3,260 | 93 | 2.53 | 0.510 |
| 16161 | Swimming Pool | City of Santa Clarita Valencia Glen Pool | Est. | 179 | 2,950 | 4.40 | 4.293 |
| 16162 | Swimming Pool | City of Santa Clarita Valencia Meadows Pool | Est. | 179 | 1,280 | 1.91 | 1.800 |
| 8675 | Education | College of the Canyons | 1 | 100 | 140 | 0.12 | 0.055 |
| 15170 | Misc. Mfg. | DA/Pro Rubber Inc. | 3 | 4,000 | 93 | 3.09 | 0.614 |
| 14755 | Printing | Daily News of Los Angeles | 4 | 4,000 | 38 | 1.25 | 0.000 |
| 15906 | Food | Dell'Olio Enterprises Inc. | 1 | 420 | 141 | 0.49 | 0.234 |
| 16535 | Printing | Delta Printing | 4 | 10,481 | 100 | 8.70 | 2.203 |
| 15750 | Misc. Mfg. | Eckert & Ziegler Isotope Products | 3 | 20 | 106 | 0.02 | 0.005 |
| 12248 | Metal Finishing | Electrofilm Manufacturing Co. | 6 | 1,600 | 524 | 6.99 | 6.003 |
| 16861 | GW Remediation | ExxonMobil Oil Corporation | 5 | 489 | 76 | 0.31 | 0.009 |
| 16436 | GW Remediation | ExxonMobil Oil Corporation | 3 | 184 | 110 | 0.17 | 0.054 |
| 17052 | Food | Flavor Producers, Inc. | Est. | 2,500 | 100 | 2.09 | 0.536 |
| 5599 | Misc. Mfg. | Gruber Systems Inc. | 1 | 3,240 | 240 | 6.49 | 4.477 |
| 11281 | Metal Finishing | Hamby Corporation | 6 | 1,785 | 82 | 1.22 | 0.113 |
| 874 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 42,427 | 174 | 61.57 | 35.278 |
| 11824 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 1,440 | 178 | 2.14 | 1.245 |
| 12040 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 11,160 | 1,150 | 107.04 | 100.120 |
| 16689 | Vehicle Main. | Honda Performance Development Inc. | 2 | 1,900 | 146 | 2.31 | 1.128 |
| 3222 | Metal Finishing | HR Textron Inc. | 4 | 8,024 | 228 | 15.22 | 10.252 |
| 16483 | RV Station | Kelly's Shell | Est. | 30 | 522 | 0.13 | 0.112 |
| 16687 | Misc. Mfg. | King Brothers Industries | 2 | 1,630 | 125 | 1.70 | 0.689 |
| 16575 | Misc. Mfg. | KLM Laboratories Inc. | 2 | 4,400 | 73 | 2.67 | 0.000 |
| 12347 | Misc. Mfg. | Lamsco West Inc. | 1 | 100 | 89 | 0.07 | 0.013 |
| 15347 | Pharmaceutical | Leiner Health Products | 3 | 9,569 | 101 | 8.04 | 2.112 |
| 16803 | Truck/Car Wash | Little Sister's Truck Wash | 3 | 3,942 | 99 | 3.26 | 0.813 |
| 16868 | GW Remediation | Los Angeles County Sheriffs Department | 5 | 2,045 | 98 | 1.66 | 0.398 |
| 15934 | Pharmaceutical | Mannkind Corporation | 2 | 10,880 | 88 | 7.94 | 1.198 |
| 9951 | Cosmetics | Mastey De Paris Inc. | 2 | 60 | 152 | 0.08 | 0.039 |
| 9668 | Food | Mikailian Meat Products | 1 | 750 | 180 | 1.13 | 0.661 |
| 16941 | Laboratory | National Technical Systems Inc. | 1 | 450 | 76 | 0.28 | 0.006 |
| 10977 | Printing | Newhall Signal | 2 | 400 | 90 | 0.30 | 0.051 |
| 11852 | Metal Finishing | Novacap | 4 | 400 | 8 | 0.03 | 0.000 |
| 16930 | Misc. Mfg. | Pacific Scientific/EMC West | Est. | 1,200 | 100 | 1.00 | 0.257 |
| 12265 | Correctional | Peter J. Pitchess Honor Rancho | 9 | 1,370,866 | 91 | 1039.01 | 189.534 |
| 17136 | Food | Pharmavite LLC | Est. | 3,000 | 100 | 2.50 | 0.643 |
| 16215 | Pharmaceutical | Pharmavite LLC | 3 | 8,920 | 112 | 8.33 | 2.805 |
| 16514 | Pharmaceutical | Pharmavite LLC | 1 | 4,040 | 78 | 2.64 | 0.138 |
| 9704 | Misc. Mfg. | Polycarbon Inc. | 1 | 3,260 | 58 | 1.57 | 0.000 |
| 16454 | RV Station | Santa Clarita Elks Lodge | Est. | 100 | 522 | 0.44 | 0.373 |
| 15470 | RV Station | Santa Clarita Mobil Station | Est. | 1 | 522 | 0.00 | 0.004 |
| 13205 | Food | Santa Clarita Valley Food Services Agency | 1 | 2,000 | 114 | 1.90 | 0.662 |

Table 3.5-8 SCVSD Estimated Industrial Chloride Load, 2008

| Permit No. | Industry Type | Company | No. Chloride Samples | Average Flow (gpd) | Average Chloride (mg/l) | Chloride Mass (lb/day) | Chloride Above Water Supply (lb/day) |
|------------|-----------------|---|----------------------|--------------------|-------------------------|------------------------|--------------------------------------|
| 9332 | Theme Park | Six Flags Magic Mountain | 1 | 2,514 | 120 | 2.52 | 0.958 |
| 9333 | Theme Park | Six Flags Magic Mountain | 2 | 93,798 | 215 | 168.19 | 110.066 |
| 9334 | Theme Park | Six Flags Magic Mountain | 4 | 34,563 | 76 | 21.84 | 0.418 |
| 16939 | Bottled Water | Soma Beverage Company | 2 | 32,659 | 87 | 23.70 | 3.459 |
| 596 | Energy | Southern California Edison | 1 | 691 | 150 | 0.86 | 0.436 |
| 20363 | Laboratory | Specialty Laboratories Inc. | 2 | 4,500 | 113 | 4.24 | 1.452 |
| 20330 | Misc. Mfg. | Stellar Microelectronics Inc. | 1 | 1,545 | 75 | 0.97 | 0.009 |
| 12272 | Metal Finishing | Stoll Metalcraft Inc. | 3 | 480 | 100 | 0.40 | 0.104 |
| 16951 | Swimming Pool | SunCal Companies | Est. | 300 | 1,251 | 3.13 | 2.945 |
| 14816 | Fasteners | TA Manufacturing Co. | 2 | 10,500 | 86 | 7.51 | 1.007 |
| 16133 | Misc. Mfg. | Talladium Inc. | 4 | 110 | 89 | 0.08 | 0.014 |
| 16549 | Misc. Mfg. | Telc Company | 1 | 1,500 | 100 | 1.25 | 0.322 |
| 17181 | Personal Care | Trigg Laboratories Inc. | Est. | 2,000 | 100 | 1.67 | 0.429 |
| 14010A | Mail Processing | United States Postal Service | 2 | 11,014 | 122 | 11.21 | 4.381 |
| 14010B | Vehicle Main. | United States Postal Service | 2 | 150 | 87 | 0.11 | 0.015 |
| 20206 | Misc. Mfg. | Valley Syncom Circuits Inc. | 2 | 8,000 | 182 | 12.11 | 7.152 |
| 12253 | Semiconductors | Waddan Systems | 3 | 100 | 85 | 0.07 | 0.009 |
| 12391 | Metal Finishing | Western Filter Corporation | 5 | 1,192 | 123 | 1.22 | 0.481 |
| 13308 | Vehicle Main. | William S. Hart Union High School Dist. | Est. | 6,000 | 100 | 5.00 | 1.286 |
| | | SCVSD Total | | 1,783,636 | | 1,641 | 542 |
| | | SCVSD Flow-Weighted Ave. Ind. Chloride | | | 110 | | |

All concentrations from 2008 unless otherwise noted.

3D International LLC concentration based on chloride limit for a facility without a Chloride Reduction Workplan.

Burrtec Waste Industries Inc. concentration based on chloride limit for a facility without a Chloride Reduction Workplan.

Car Wash Express (#16262) concentration based on data for Car Wash Express (#16263).

Flavor Producers concentration based on chloride limit for a facility without a Chloride Reduction Workplan.

Pacific Scientific/EMC West concentration based on chloride limit for a facility without a Chloride Reduction Workplan.

Pharmavite LLC (#17136) concentration based on chloride limit for a facility without a Chloride Reduction Workplan.

RV disposal station concentrations based on 2002 sampling of the Santa Clarita Mobil Station RV disposal station.

SunCal Companies swimming pool concentration based on City of Santa Clarita Sports Complex concentration.

Swimming pool concentrations based on 2003 data except #16159, #16077, and #16951.

Swimming pool concentration for #16159 based on 2007 data.

Trigg Laboratories Inc. concentration based on chloride limit for a facility without a Chloride Reduction Workplan.

William S. Hart Union High School Dist. concentration based on chloride limit for a facility without a Chloride Reduction Workplan.

Table 3.5-9 SCVSD Estimated Industrial Chloride Load, 2009

| Permit No. | Industry Type | Company | No. Chloride Samples | Average Flow (gpd) | Average Chloride (mg/l) | Chloride Mass (lb/day) | Chloride Above Water Supply (lb/day) |
|------------|-------------------|--|----------------------|--------------------|-------------------------|------------------------|--------------------------------------|
| 17194 | Car Care Products | 3D International LLC | 1 | 300 | 190 | 0.48 | 0.281 |
| 10883 | Misc. Mfg. | B & B Manufacturing Co. Inc. | 1 | 1,000 | 77 | 0.64 | 0.000 |
| 20461 | Printing | Bang Printing | 4 | 6,027 | 94 | 4.74 | 0.832 |
| 20323A | Misc. Mfg. | Boston Scientific Neuromodulation Corporation | 2 | 123 | 75 | 0.08 | 0.000 |
| 20323B | Misc. Mfg. | Boston Scientific Neuromodulation Corporation | 2 | 2,395 | 168 | 3.36 | 1.803 |
| 20060 | Truck/Car Wash | Burrtec Waste Industries | 1 | 3,100 | 104 | 2.69 | 0.680 |
| 16635 | Misc. Mfg. | C & R Molds Inc. | 1 | 1,440 | 90 | 1.08 | 0.148 |
| 8695 | Vehicle Main. | California Department of Water Resources | 1 | 200 | 75 | 0.13 | 0.000 |
| 9216 | Education | California Institute of the Arts | 1 | 420 | 129 | 0.45 | 0.180 |
| 16252 | RV Station | Camping World Inc. | Est. | 500 | 522 | 2.18 | 1.853 |
| 16262 | Truck/Car Wash | Carwash Express | 1 | 1,700 | 69 | 0.98 | 0.000 |
| 16263 | Truck/Car Wash | Carwash Express (Spotless Coin Car Wash) | Est. | 1,421 | 69 | 0.82 | 0.000 |
| 16434 | RV Station | Castaic Lake RV Park | Est. | 100 | 522 | 0.44 | 0.371 |
| 20471 | Truck/Car Wash | Castaic Truck Wash | 1 | 3,971 | 16 | 0.52 | 0.000 |
| 15146 | Food | Chocolates A La Carte Inc. | 1 | 3,051 | 88 | 2.23 | 0.249 |
| 16754 | Photoprocessing | Cinetech Inc. | 3 | 16,000 | 78 | 10.46 | 0.093 |
| 16158 | Swimming Pool | City of Santa Clarita Newhall Pool | Est. | 268 | 1,880 | 4.20 | 4.028 |
| 16160 | Swimming Pool | City of Santa Clarita North Oaks Pool | Est. | 268 | 2,220 | 4.96 | 4.788 |
| 16159 | Swimming Pool | City of Santa Clarita Santa Clarita Pool | Est. | 268 | 1,140 | 2.55 | 2.374 |
| 16479 | Vehicle Main. | City of Santa Clarita Transit Maintenance Facility | 2 | 2,686 | 246 | 5.50 | 3.762 |
| 16161 | Swimming Pool | City of Santa Clarita Valencia Glen Pool | Est. | 179 | 2,950 | 4.40 | 4.288 |
| 16162 | Swimming Pool | City of Santa Clarita Valencia Meadows Pool | Est. | 179 | 1,280 | 1.91 | 1.795 |
| 8675 | Education | College of the Canyons | 1 | 100 | 167 | 0.14 | 0.074 |
| 20306 | GW Dewatering | County Sanitation Districts of Los Angeles County (District 32 Main Section 1A Extension - Phase II) | Est. | 14,400 | 132 | 15.85 | 6.521 |
| 15170 | Misc. Mfg. | Da/Pro Rubber Inc. | 3 | 4,000 | 86 | 2.86 | 0.265 |
| 15906 | Food | Dell'Olio Enterprises Inc. | 1 | 420 | 116 | 0.41 | 0.134 |
| 15750 | Misc. Mfg. | Eckert & Ziegler Isotope Products Inc. | 1 | 20 | 119 | 0.02 | 0.007 |
| 12248 | Metal Finishing | Electrofilm Manufacturing Co. | 5 | 1,600 | 202 | 2.69 | 1.656 |
| 16861 | GW Remediation | ExxonMobil Oil Corporation | 5 | 575 | 78 | 0.38 | 0.003 |
| 16436 | GW Remediation | ExxonMobil Oil Corporation | 3 | 55 | 109 | 0.05 | 0.014 |
| 17052 | Food | Flavor Producers, Inc. | 1 | 2,500 | 103 | 2.15 | 0.528 |
| 5599 | Misc. Mfg. | Gruber Systems Inc. | 1 | 3,240 | 335 | 9.05 | 6.953 |
| 11281 | Metal Finishing | Hamby Corporation | 5 | 1,785 | 99 | 1.48 | 0.324 |
| 874 | Hospital | Henry Mayo Newhall Memorial Hospital | 2 | 42,427 | 261 | 92.18 | 64.682 |
| 11824 | Hospital | Henry Mayo Newhall Memorial Hospital | 2 | 1,440 | 287 | 3.45 | 2.514 |
| 12040 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 11,160 | 3,210 | 298.77 | 291.537 |
| 16689 | Vehicle Main. | Honda Performance Development Inc. | 2 | 1,900 | 110 | 1.74 | 0.513 |
| 16483 | RV Station | Kelly's Shell | Est. | 30 | 522 | 0.13 | 0.111 |
| 16687 | Misc. Mfg. | King Brothers Industries | 4 | 1,630 | 122 | 1.66 | 0.609 |
| 16575 | Misc. Mfg. | KLM Laboratories Inc. | 2 | 4,400 | 53 | 1.95 | 0.000 |
| 12347 | Misc. Mfg. | Lamsco West Inc. | 1 | 100 | 71 | 0.06 | 0.000 |
| 15347 | Pharmaceutical | Leiner Health Products | 2 | 11,884 | 72 | 7.11 | 0.000 |
| 16868 | GW Remediation | Los Angeles County Sheriffs Department | 6 | 4,080 | 83 | 2.81 | 0.163 |
| 9332 | Theme Park | Magic Mountain, LLC | 2 | 2,521 | 71 | 1.50 | 0.000 |
| 9333 | Theme Park | Magic Mountain, LLC | 3 | 96,329 | 121 | 96.99 | 34.572 |
| 9334 | Theme Park | Magic Mountain, LLC | 4 | 28,849 | 79 | 19.07 | 0.373 |
| 15934 | Pharmaceutical | Mannkind Corporation | 4 | 4,160 | 95 | 3.31 | 0.611 |
| 9951 | Cosmetics | Mastey De Paris Inc. | 1 | 60 | 115 | 0.06 | 0.019 |
| 9668 | Food | Mikailian Meat Products | 1 | 750 | 180 | 1.13 | 0.640 |
| 16941 | Laboratory | National Technical Systems Inc. | 1 | 450 | 104 | 0.39 | 0.099 |
| 10977 | Printing | Newhall Signal | 2 | 400 | 82 | 0.27 | 0.014 |
| 11852 | Metal Finishing | Novacap | 5 | 400 | 26 | 0.09 | 0.000 |
| 12265 | Correctional | Peter J. Pitchess Honor Rancho | 5 | 1,339,849 | 94 | 1052.18 | 183.930 |
| 17136 | Food | Pharmavite LLC | 1 | 3,000 | 281 | 7.03 | 5.087 |
| 16215 | Pharmaceutical | Pharmavite LLC | 3 | 12,440 | 117 | 12.17 | 4.112 |
| 16514 | Pharmaceutical | Pharmavite LLC | 1 | 5,080 | 89 | 3.76 | 0.470 |
| 9704 | Misc. Mfg. | Polycarbon Inc. | 3 | 10,000 | 113 | 9.44 | 2.963 |
| 16454 | RV Station | Santa Clarita Elks Lodge | Est. | 100 | 522 | 0.44 | 0.371 |
| 15470 | RV Station | Santa Clarita Mobil Station | Est. | 1 | 522 | 0.00 | 0.004 |
| 16077 | Swimming Pool | Santa Clarita Sports Complex/Aquatic Center | 2 | 1,800 | 1,645 | 24.69 | 23.528 |

Table 3.5-9 SCVSD Estimated Industrial Chloride Load, 2009

| Permit No. | Industry Type | Company | No. Chloride Samples | Average Flow (gpd) | Average Chloride (mg/l) | Chloride Mass (lb/day) | Chloride Above Water Supply (lb/day) |
|------------|-----------------|---|----------------------|--------------------|-------------------------|------------------------|--------------------------------------|
| 13205 | Food | Santa Clarita Valley Food Services Agency | 1 | 2,000 | 25 | 0.42 | 0.000 |
| 16939 | Bottled Water | Soma Beverage Company | 1 | 34,246 | 76 | 21.71 | 0.000 |
| 596 | Energy | Southern California Edison | 2 | 691 | 96 | 0.55 | 0.105 |
| 20363 | Laboratory | Specialty Laboratories Inc. | 1 | 4,500 | 238 | 8.93 | 6.016 |
| 20330 | Misc. Mfg. | Stellar Microelectronics Inc. | 2 | 2,390 | 49 | 0.98 | 0.000 |
| 12272 | Metal Finishing | Stoll Metalcraft Inc. | 3 | 480 | 90 | 0.36 | 0.048 |
| 16951 | Swimming Pool | SunCal Companies | 1 | 300 | 1,210 | 3.03 | 2.833 |
| 14816 | Fasteners | TA Manufacturing Co. | 2 | 7,583 | 96 | 6.05 | 1.138 |
| 16133 | Misc. Mfg. | Talladium Inc. | 3 | 110 | 82 | 0.08 | 0.004 |
| 16549 | Misc. Mfg. | Telic Company | 1 | 1,500 | 71 | 0.89 | 0.000 |
| 17181 | Personal Care | Trigg Laboratories Inc. | 1 | 2,000 | 946 | 15.78 | 14.483 |
| 14010A | Mail Processing | United States Postal Service | 2 | 4,110 | 213 | 7.28 | 4.620 |
| 14010B | Vehicle Main. | United States Postal Service | Est. | 150 | 87 | 0.11 | 0.011 |
| 20206 | Misc. Mfg. | Valley Syncom Circuits Inc. | 1 | 8,000 | 70 | 4.64 | 0.000 |
| 12253 | Semiconductors | Waddan Systems | 3 | 100 | 77 | 0.06 | 0.000 |
| 12391 | Metal Finishing | Western Filter Corporation | 6 | 2,038 | 100 | 1.70 | 0.377 |
| 13308 | Vehicle Main. | William S. Hart Union High School Dist. | 1 | 6,000 | 84 | 4.20 | 0.315 |
| 20554 | Metal Finishing | Woodward HRT Inc. | 3 | 11,000 | 177 | 16.21 | 9.079 |
| | | SCVSD Total | | 1,746,730 | | 1,825 | 700 |
| | | SCVSD Flow-Weighted Ave. Ind. Chloride | | | 125 | | |

All concentrations from 2009 unless otherwise noted.

Car Wash Express (#16263) concentration based on data for Car Wash Express (#16262).

County Sanitation Districts of Los Angeles County concentration based on the average Valencia Water Company S6 alluvial well concentration for August 2009 and October 2009 and gallons per day averaged over 100 days.

RV disposal station concentrations based on 2002 sampling of the Santa Clarita Mobil Station RV disposal station.

Swimming pool concentrations based on 2003 data except #16159, #16077, and #16951.

Swimming pool concentration for #16159 based on 2007 data.

United States Postal Service (#14010B) concentration based on 2008 data.

Table 3.5-10 SCVSD Estimated Industrial Chloride Load, 2010

| Permit No. | Industry Type | Company | No. Chloride Samples | Average Flow (gpd) | Average Chloride (mg/l) | Chloride Mass (lb/day) | Chloride Above Water Supply (lb/day) |
|------------|-------------------|--|----------------------|--------------------|-------------------------|------------------------|--------------------------------------|
| 17194 | Car Care Products | 3D International LLC | Est. | 2,300 | 190 | 3.64 | 2.181 |
| 10883 | Misc. Mfg. | B & B Manufacturing Co. Inc. | 1 | 1,000 | 86 | 0.71 | 0.078 |
| 20461 | Printing | Bang Printing | 4 | 8,185 | 91 | 6.23 | 1.021 |
| 20323A | Misc. Mfg. | Boston Scientific Neuromodulation Corporation | 4 | 579 | 69 | 0.33 | 0.000 |
| 20323B | Misc. Mfg. | Boston Scientific Neuromodulation Corporation | 4 | 11,305 | 212 | 20.01 | 12.818 |
| 20060 | Truck/Car Wash | Burrtec Waste Industries | 4 | 3,100 | 211 | 5.46 | 3.483 |
| 16635 | Misc. Mfg. | C & R Molds Inc. | 2 | 800 | 136 | 0.91 | 0.398 |
| 8695 | Vehicle Main. | California Department of Water Resources | 1 | 200 | 82 | 0.14 | 0.010 |
| 9216 | Education | California Institute of the Arts | 1 | 420 | 125 | 0.44 | 0.171 |
| 16252 | RV Station | Camping World Inc. | Est. | 500 | 522 | 2.18 | 1.859 |
| 16262 | Truck/Car Wash | Carwash Express | 1 | 1,700 | 70 | 0.99 | 0.000 |
| 16434 | RV Station | Castaic Lake RV Park | Est. | 100 | 522 | 0.44 | 0.372 |
| 20471 | Truck/Car Wash | Castaic Truck Wash | 3 | 4,233 | 98 | 3.47 | 0.780 |
| 15146 | Food | Chocolates A La Carte Inc. | 2 | 4,044 | 197 | 6.64 | 4.071 |
| 16754 | Photoprocessing | CineTech Inc. | 4 | 10,000 | 97 | 8.12 | 1.760 |
| 20525 | GW Remediation | City of Santa Clarita Bakerton Pump Station | 2 | 40,000 | 254 | 84.57 | 59.114 |
| 20526 | GW Remediation | City of Santa Clarita Nathan Hill Pump Station | 3 | 588 | 296 | 1.45 | 1.076 |
| 16158 | Swimming Pool | City of Santa Clarita Newhall Pool | Est. | 1,530 | 1,880 | 23.99 | 23.016 |
| 16160 | Swimming Pool | City of Santa Clarita North Oaks Pool | Est. | 1,530 | 2,220 | 28.33 | 27.354 |
| 16159 | Swimming Pool | City of Santa Clarita Santa Clarita Pool | Est. | 1,530 | 1,140 | 14.55 | 13.573 |
| 16479 | Vehicle Main. | City of Santa Clarita Transit Maintenance Facility | 3 | 4,000 | 75 | 2.51 | 0.000 |
| 16161 | Swimming Pool | City of Santa Clarita Valencia Glen Pool | Est. | 850 | 2,950 | 20.91 | 20.372 |
| 16162 | Swimming Pool | City of Santa Clarita Valencia Meadows Pool | Est. | 850 | 1,280 | 9.07 | 8.533 |
| 8675 | Education | College of the Canyons | 1 | 100 | 176 | 0.15 | 0.083 |
| 15170 | Misc. Mfg. | Da/Pro Rubber Inc. | 3 | 4,000 | 108 | 3.60 | 1.058 |
| 15906 | Food | Dell'Olio Enterprises Inc. | 1 | 420 | 86 | 0.30 | 0.035 |
| 15750 | Misc. Mfg. | Eckert & Ziegler Isotope Products Inc. | 3 | 20 | 173 | 0.03 | 0.016 |
| 12248 | Metal Finishing | Electrofilm Manufacturing Co. | 5 | 1,600 | 286 | 3.81 | 2.793 |
| 16861 | GW Remediation | ExxonMobil Oil Corporation | 5 | 219 | 71 | 0.13 | 0.000 |
| 16436 | GW Remediation | ExxonMobil Oil Corporation | 3 | 55 | 146 | 0.07 | 0.032 |
| 17052 | Food | Flavor Producers, Inc. | 2 | 2,200 | 103 | 1.90 | 0.495 |
| 5599 | Misc. Mfg. | Gruber Systems Inc. | 1 | 3,240 | 199 | 5.38 | 3.316 |
| 11281 | Metal Finishing | Hamby Corporation | 5 | 1,785 | 101 | 1.50 | 0.364 |
| 874 | Hospital | Henry Mayo Newhall Memorial Hospital | 2 | 42,427 | 132 | 46.53 | 19.532 |
| 11824 | Hospital | Henry Mayo Newhall Memorial Hospital | 2 | 1,440 | 205 | 2.46 | 1.540 |
| 12040 | Hospital | Henry Mayo Newhall Memorial Hospital | 2 | 11,160 | 242 | 22.48 | 15.376 |
| 16689 | Vehicle Main. | Honda Performance Development Inc. | 3 | 200 | 98 | 0.16 | 0.037 |
| 16483 | RV Station | Kelly's Shell | Est. | 30 | 522 | 0.13 | 0.112 |
| 16687 | Misc. Mfg. | King Brothers Industries | Est. | 1,000 | 122 | 1.02 | 0.385 |
| 16575 | Misc. Mfg. | KLM Laboratories Inc. | 2 | 4,400 | 74 | 2.71 | 0.000 |
| 12347 | Misc. Mfg. | Lamsco West Inc. | 1 | 100 | 97 | 0.08 | 0.017 |
| 15347 | Pharmaceutical | Leiner Health Products | 2 | 11,652 | 79 | 7.63 | 0.214 |
| 20242 | GW Remediation | Los Angeles County Fire Dept., Fire Station 111 | 4 | 132 | 162 | 0.18 | 0.094 |
| 16868 | GW Remediation | Los Angeles County Sheriffs Department | 2 | 3,247 | 61 | 1.66 | 0.000 |
| 9332 | Theme Park | Magic Mountain, LLC | 3 | 2,521 | 81 | 1.70 | 0.093 |
| 9333 | Theme Park | Magic Mountain, LLC | 4 | 83,589 | 87 | 60.70 | 7.512 |
| 9334 | Theme Park | Magic Mountain, LLC | 4 | 30,712 | 61 | 15.62 | 0.000 |
| 15934 | Pharmaceutical | Mannkind Corporation | 5 | 5,640 | 104 | 4.87 | 1.284 |
| 9951 | Cosmetics | Mastey De Paris Inc. | 3 | 60 | 129 | 0.06 | 0.026 |
| 9668 | Food | Mikaillian Meat Products | 1 | 750 | 166 | 1.04 | 0.561 |
| 16941 | Laboratory | National Technical Systems Inc. | 3 | 450 | 135 | 0.51 | 0.219 |
| 10977 | Printing | Newhall Signal | 2 | 400 | 93 | 0.31 | 0.054 |
| 11852 | Metal Finishing | Novacap | 4 | 400 | 10 | 0.03 | 0.000 |
| 12265 | Correctional | Peter J. Pitchess Honor Rancho | 6 | 1,183,863 | 98 | 969.08 | 215.734 |
| 17136 | Food | Pharmavite LLC | Est. | 3,000 | 281 | 7.03 | 5.122 |
| 16215 | Pharmaceutical | Pharmavite LLC | 2 | 12,040 | 116 | 11.63 | 3.971 |
| 16514 | Pharmaceutical | Pharmavite LLC | 1 | 4,160 | 100 | 3.47 | 0.822 |
| 9704 | Misc. Mfg. | Polycarbon Inc. | 4 | 11,589 | 141 | 13.58 | 6.205 |
| 16454 | RV Station | Santa Clarita Elks Lodge | Est. | 100 | 522 | 0.44 | 0.372 |
| 15470 | RV Station | Santa Clarita Mobil Station | Est. | 1 | 522 | 0.00 | 0.004 |
| 16077 | Swimming Pool | Santa Clarita Sports Complex/Aquatic Center | 1 | 1,800 | 1,430 | 21.47 | 20.322 |

Table 3.5-10 SCVSD Estimated Industrial Chloride Load, 2010

| Permit No. | Industry Type | Company | No. Chloride Samples | Average Flow (gpd) | Average Chloride (mg/l) | Chloride Mass (lb/day) | Chloride Above Water Supply (lb/day) |
|------------|-----------------|---|----------------------|--------------------|-------------------------|------------------------|--------------------------------------|
| 13205 | Food | Santa Clarita Valley Food Services Agency | 1 | 2,000 | 132 | 2.20 | 0.929 |
| 16939 | Bottled Water | Soma Beverage Company | 2 | 19,444 | 285 | 46.22 | 33.844 |
| 596 | Energy | Southern California Edison | 1 | 691 | 77 | 0.44 | 0.004 |
| 20363 | Laboratory | Specialty Laboratories Inc. | 1 | 11,616 | 198 | 19.18 | 11.790 |
| 20330 | Misc. Mfg. | Stellar Microelectronics Inc. | 2 | 2,179 | 30 | 0.55 | 0.000 |
| 12272 | Metal Finishing | Stoll Metalcraft Inc. | 3 | 480 | 83 | 0.33 | 0.026 |
| 16951 | Swimming Pool | SunCal Companies | Est. | 300 | 1,210 | 3.03 | 2.837 |
| 14816 | Fasteners | TA Aerospace | 4 | 7,902 | 95 | 6.27 | 1.239 |
| 16133 | Misc. Mfg. | Talladium Inc. | 4 | 110 | 94 | 0.09 | 0.017 |
| 16549 | Misc. Mfg. | Telic Company | 1 | 1,500 | 63 | 0.79 | 0.000 |
| 17181 | Personal Care | Trigg Laboratories Inc. | Est. | 2,000 | 946 | 15.78 | 14.507 |
| 14010A | Mail Processing | United States Postal Service | 2 | 4,699 | 187 | 7.31 | 4.319 |
| 14010B | Vehicle Main. | United States Postal Service | 1 | 68 | 127 | 0.07 | 0.029 |
| 20206 | Misc. Mfg. | Valley Syncom Circuits Inc. | Est. | 8,000 | 70 | 4.64 | 0.000 |
| 12253 | Semiconductors | Waddan Systems | 3 | 100 | 86 | 0.07 | 0.008 |
| 12391 | Metal Finishing | Western Filter Corporation | 5 | 3,038 | 119 | 3.02 | 1.082 |
| 13308 | Vehicle Main. | William S. Hart Union High School Dist. | 1 | 6,000 | 90 | 4.50 | 0.686 |
| 20554 | Metal Finishing | Woodward HRT Inc. | 6 | 13,992 | 188 | 21.98 | 13.073 |
| | | SCVSD Total | | 1,613,968 | | 1,595 | 574 |
| | | SCVSD Flow-Weighted Ave. Ind. Chloride | | | 118 | | |

All concentrations from 2010 unless otherwise noted.

3D International LLC concentration based on 2009 data.

Car Wash Express (#16263) concentration based on data for Car Wash Express (#16262).

King Brothers Industries concentration based on 2009 data.

Pharmavite LLC (#17136) concentration based on 2009 data.

RV disposal station concentrations based on 2002 sampling of the Santa Clarita Mobil Station RV disposal station.

SunCal Companies concentration based on 2009 data.

Swimming pool concentrations based on 2003 data except #16159, #16077, and #16951.

Swimming pool concentration for #16159 based on 2007 data.

Trigg Laboratories Inc. concentration based on 2009 data.

Valley Syncom Circuits Inc. concentration based on 2009 data.

Table 3.5-11 SCVSD Estimated Industrial Chloride Load, 2011

| Permit No. | Industry Type | Company | No. Chloride Samples | Average Flow (gpd) | Average Chloride (mg/l) | Chloride Mass (lb/day) | Chloride Above Water Supply (lb/day) |
|------------|-------------------|--|----------------------|--------------------|-------------------------|------------------------|--------------------------------------|
| 17194 | Car Care Products | 3D International LLC | Est. | 2,300 | 190 | 3.64 | 2.356 |
| 10883 | Misc. Mfg. | B & B Manufacturing Co. Inc. | 1 | 1,000 | 114 | 0.95 | 0.390 |
| 20461 | Printing | Bang Printing | 3 | 9,593 | 95 | 7.57 | 2.195 |
| 20323A | Misc. Mfg. | Boston Scientific Neuromodulation Corporation | 3 | 170 | 66 | 0.09 | 0.000 |
| 20323B | Misc. Mfg. | Boston Scientific Neuromodulation Corporation | 4 | 1,676 | 219 | 3.06 | 2.119 |
| 20060 | Truck/Car Wash | Burrtec Waste Industries | 2 | 3,120 | 71 | 1.84 | 0.091 |
| 8695 | Vehicle Main. | California Department of Water Resources | 1 | 200 | 97 | 0.16 | 0.050 |
| 9216 | Education | California Institute of the Arts | 1 | 420 | 108 | 0.38 | 0.143 |
| 16252 | RV Station | Camping World Inc. | Est. | 500 | 522 | 2.18 | 1.897 |
| 16262 | Truck/Car Wash | Carwash Express | 1 | 1,700 | 58 | 0.83 | 0.000 |
| 16434 | RV Station | Castaic Lake RV Park | Est. | 100 | 522 | 0.44 | 0.379 |
| 20471 | Truck/Car Wash | Castaic Truck Wash | 2 | 3,400 | 103 | 2.91 | 1.001 |
| 20795 | Food | CFP Chocolate Holdings | 1 | 3,267 | 88 | 2.40 | 0.572 |
| 16754 | Photoprocessing | Cinetech | 4 | 13,506 | 85 | 9.57 | 1.997 |
| 20525 | GW Remediation | City of Santa Clarita Bakerton Pump Station | 2 | 58,219 | 216 | 104.64 | 72.007 |
| 20526 | GW Remediation | City of Santa Clarita Nathan Hill Pump Station | 2 | 1,450 | 307 | 3.71 | 2.900 |
| 16158 | Swimming Pool | City of Santa Clarita Newhall Pool | Est. | 1,530 | 1,880 | 23.99 | 23.132 |
| 16160 | Swimming Pool | City of Santa Clarita North Oaks Pool | Est. | 1,530 | 2,220 | 28.33 | 27.470 |
| 16159 | Swimming Pool | City of Santa Clarita Santa Clarita Pool | Est. | 1,530 | 1,140 | 14.55 | 13.689 |
| 16479 | Vehicle Main. | City of Santa Clarita Transit Maintenance Facility | 2 | 4,000 | 62 | 2.06 | 0.000 |
| 16161 | Swimming Pool | City of Santa Clarita Valencia Glen Pool | Est. | 850 | 2,950 | 20.91 | 20.436 |
| 16162 | Swimming Pool | City of Santa Clarita Valencia Meadows Pool | Est. | 850 | 1,280 | 9.07 | 8.598 |
| 8675 | Education | College of the Canyons | 1 | 100 | 219 | 0.18 | 0.127 |
| 15170 | Misc. Mfg. | Da/Pro Rubber Inc. | 3 | 4,000 | 81 | 2.69 | 0.447 |
| 15906 | Food | Dell'Olio Enterprises Inc. | 2 | 420 | 88 | 0.31 | 0.071 |
| 15750 | Misc. Mfg. | Eckert & Ziegler Isotope Products Inc. | 2 | 20 | 98 | 0.02 | 0.005 |
| 12248 | Metal Finishing | Electrofilm Manufacturing Co. | 6 | 1,600 | 343 | 4.58 | 3.681 |
| 16861 | GW Remediation | ExxonMobil Oil Corporation | 2 | 7,200 | 53 | 3.16 | 0.000 |
| 16436 | GW Remediation | ExxonMobil Oil Corporation | 2 | 82 | 80 | 0.05 | 0.009 |
| 17052 | Food | Flavor Producers, Inc. | 2 | 2,200 | 68 | 1.24 | 0.012 |
| 5599 | Misc. Mfg. | Gruber Systems Inc. | 1 | 3,240 | 74 | 2.00 | 0.186 |
| 11281 | Metal Finishing | Hamby Corporation | 5 | 1,785 | 89 | 1.32 | 0.322 |
| 20669 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 31,600 | 204 | 53.76 | 36.053 |
| 20787 | Hospital | Henry Mayo Newhall Memorial Hospital | 1 | 20,100 | 140 | 23.47 | 12.204 |
| 16689 | Vehicle Main. | Honda Performance Development Inc. | 3 | 200 | 101 | 0.17 | 0.056 |
| 16483 | RV Station | Kelly's Shell | Est. | 30 | 522 | 0.13 | 0.114 |
| 16687 | Misc. Mfg. | King Brothers Industries | 2 | 1,000 | 120 | 1.00 | 0.440 |
| 16575 | Misc. Mfg. | KLM Laboratories Inc. | 2 | 4,400 | 49 | 1.79 | 0.000 |
| 20852 | Misc. Mfg. | Lamsco West Inc. | 3 | 900 | 85 | 0.64 | 0.135 |
| 20829 | Pharmaceutical | Leiner Health Products | 2 | 6,957 | 87 | 5.05 | 1.155 |
| 20242 | GW Remediation | Los Angeles County Fire Dept., Fire Station 111 | 1 | 7,000 | 105 | 6.13 | 2.207 |
| 16868 | GW Remediation | Los Angeles County Sheriffs Department | 1 | 3,800 | 52 | 1.64 | 0.000 |
| 9332 | Theme Park | Magic Mountain, LLC | 2 | 2,568 | 100 | 2.14 | 0.699 |
| 9333 | Theme Park | Magic Mountain, LLC | 3 | 85,246 | 148 | 105.22 | 57.445 |
| 9334 | Theme Park | Magic Mountain, LLC | 4 | 30,847 | 110 | 28.23 | 10.947 |
| 15934 | Pharmaceutical | Mannkind Corporation | 4 | 2,520 | 100 | 2.09 | 0.679 |
| 9951 | Cosmetics | Mastey De Paris Inc. | 1 | 60 | 11 | 0.01 | 0.000 |
| 9668 | Food | Mikailian Meat Products | Est. | 750 | 166 | 1.04 | 0.618 |
| 16941 | Laboratory | National Technical Systems Inc. | 4 | 450 | 183 | 0.68 | 0.433 |
| 10977 | Printing | Newhall Signal | 1 | 400 | 82 | 0.27 | 0.049 |
| 11852 | Metal Finishing | Novacap, Inc. | 4 | 400 | 14 | 0.05 | 0.000 |
| 20845 | Bottled Water | Otsuka America Manufacturing | Est. | 20,066 | 285 | 47.69 | 36.448 |
| 12265 | Correctional | Peter J. Pitchess Honor Rancho | 6 | 1,078,322 | 100 | 903.07 | 298.724 |
| 17136 | Food | Pharmavite LLC | Est. | 3,000 | 281 | 7.03 | 5.349 |
| 16215 | Pharmaceutical | Pharmavite LLC | 3 | 18,462 | 96 | 14.76 | 4.414 |
| 16514 | Pharmaceutical | Pharmavite LLC | 1 | 6,038 | 94 | 4.72 | 1.335 |
| 20363 | Laboratory | Quest Diagnostics Nichols Institute | 1 | 4,521 | 174 | 6.56 | 4.027 |
| 16454 | RV Station | Santa Clarita Elks Lodge | Est. | 100 | 522 | 0.44 | 0.379 |
| 15470 | RV Station | Santa Clarita Mobil Station | Est. | 1 | 522 | 0.00 | 0.004 |
| 16077 | Swimming Pool | Santa Clarita Sports Complex/Aquatic Center | 2 | 1,800 | 1,555 | 23.34 | 22.335 |
| 13205 | Food | Santa Clarita Valley Food Services Agency | 1 | 2,000 | 153 | 2.55 | 1.431 |

Table 3.5-11 SCVSD Estimated Industrial Chloride Load, 2011

| Permit No. | Industry Type | Company | No. Chloride Samples | Average Flow (gpd) | Average Chloride (mg/l) | Chloride Mass (lb/day) | Chloride Above Water Supply (lb/day) |
|------------|-----------------|---|----------------------|--------------------|-------------------------|------------------------|--------------------------------------|
| 9704 | Misc. Mfg. | SGL Technic Inc. - Polycarbon Division | 3 | 3,342 | 139 | 3.87 | 2.002 |
| 596 | Energy | Southern California Edison | 1 | 9,921 | 70 | 5.79 | 0.232 |
| 20330 | Misc. Mfg. | Stellar Microelectronics Inc. | 2 | 3,800 | 20 | 0.64 | 0.000 |
| 12272 | Metal Finishing | Stoll Metalcraft, Inc. | 3 | 600 | 86 | 0.43 | 0.096 |
| 16951 | Swimming Pool | SunCal Companies | Est. | 300 | 1,210 | 3.03 | 2.859 |
| 14816 | Fasteners | TA Aerospace | 3 | 7,800 | 88 | 5.74 | 1.373 |
| 16133 | Misc. Mfg. | Talladium Inc. | 4 | 110 | 76 | 0.07 | 0.008 |
| 16549 | Misc. Mfg. | Telic Company | 1 | 1,500 | 57 | 0.71 | 0.000 |
| 17181 | Personal Care | Trigg Laboratories Inc. | Est. | 2,000 | 946 | 15.78 | 14.658 |
| 14010A | Mail Processing | United States Postal Service | 2 | 6,609 | 156 | 8.57 | 4.867 |
| 14010B | Vehicle Main. | United States Postal Service | Est. | 213 | 127 | 0.23 | 0.106 |
| 20206 | Misc. Mfg. | Valley Syncom Circuits Inc. | Est. | 8,000 | 70 | 4.64 | 0.160 |
| 12253 | Semiconductors | Waddan Systems | 3 | 100 | 77 | 0.06 | 0.008 |
| 12391 | Metal Finishing | Western Filter Corporation | 5 | 3,654 | 95 | 2.90 | 0.850 |
| 13308 | Vehicle Main. | William S. Hart Union High School Dist. | 3 | 6,000 | 94 | 4.69 | 1.324 |
| 20554 | Metal Finishing | Woodward HRT Inc. | 4 | 11,463 | 218 | 20.87 | 14.441 |
| | | SCVSD Total | | 1,530,507 | | 1,581 | 727 |
| | | SCVSD Flow-Weighted Ave. Ind. Chloride | | | 124 | | |

All concentrations from 2011 unless otherwise noted.

3D International LLC concentration based on 2009 data.

Mikailian Meat Products concentration based on 2010 data.

Otsuka America Manufacturing concentration based on 2010 data for Soma Beverage Company (prior owner).

Pharmavite LLC (#17136) concentration based on 2009 data.

RV disposal station concentrations based on 2002 sampling of the Santa Clarita Mobil Station RV disposal station.

SunCal Companies concentration based on 2009 data.

Swimming pool concentrations based on 2003 data except #16159, #16077, and #16951.

Swimming pool concentration for #16159 based on 2007 data.

Trigg Laboratories Inc. concentration based on 2009 data.

United States Postal Service (#14010B) concentration based on 2010 data.

Valley Syncom Circuits Inc. concentration based on 2009 data.

Table 3.6-1 SCVSD Estimated Commercial Chloride Load, 2002

| Category | Description | Usage Unit | Water Usage Correction | Count | | | No. Units | | | Flow per Unit (gpd) | Total Flow (gpd) | Conc. Above Water Supply (mg/L) | Chloride Load Above Water Supply (lbs/day) |
|----------|---------------------------|--------------|------------------------|------------|------------|--------------|--------------|---------------|---------------|---------------------|------------------|---------------------------------|--|
| | | | | Dist. 26 | Dist. 32 | Total | Dist. 26 | Dist. 32 | Total | | | | |
| 08 | Hotel/Motel | Rooms | | 2 | 13 | 15 | 105 | 660 | 765 | 125 | 95,625 | 37 | 29.5 |
| 10 | Stores & Financial Insts. | 1000 sq. ft. | | 63 | 121 | 184 | 668.270 | 1,733.150 | 2,401.42 | 100 | 240,142 | 30 | 60.1 |
| 10 | Stores & Financial Insts. | 1000 sq. ft. | 0.6 | | 1 | 1 | | 77.590 | 77.59 | 60 | 4,655 | 30 | 1.2 |
| 10H | Shopping Center | 1000 sq. ft. | | 42 | 50 | 92 | 1,511.042 | 795.738 | 2,306.78 | 325 | 749,704 | 30 | 187.6 |
| 10H | Shopping Center | 1000 sq. ft. | 0.4 | 2 | | 2 | 31.937 | | 31.94 | 130 | 4,152 | 30 | 1.0 |
| 10I | Regional Mall | 1000 sq. ft. | | 2 | 12 | 14 | 83.517 | 547.518 | 631.04 | 150 | 94,655 | 30 | 23.7 |
| 11 | Store/Residential Comb. | 1000 sq. ft. | | | 2 | 2 | | 12.499 | 12.50 | 100 | 1,250 | 31 | 0.3 |
| 12 | Supermarket | 1000 sq. ft. | | 2 | 8 | 10 | 77.537 | 245.677 | 323.21 | 150 | 48,482 | 79 | 31.9 |
| 13 | Office Building | 1000 sq. ft. | | 10 | 63 | 73 | 117.622 | 1,173.862 | 1,291.48 | 200 | 258,297 | 30 | 64.6 |
| 13 | Office Building | 1000 sq. ft. | 0.4 | | 2 | 2 | | 99.102 | 99.10 | 80 | 7,928 | 30 | 2.0 |
| 13 | Office Building | 1000 sq. ft. | 0.6 | | 1 | 1 | | 47.130 | 47.13 | 120 | 5,656 | 30 | 1.4 |
| 14 | Professional Building | 1000 sq. ft. | | 5 | 11 | 16 | 46.264 | 145.052 | 191.32 | 300 | 57,395 | 30 | 14.4 |
| 14 | Professional Building | 1000 sq. ft. | 0.4 | | 2 | 2 | | 55.258 | 55.26 | 120 | 6,631 | 30 | 1.7 |
| 15 | Restaurant | 1000 sq. ft. | | 16 | 48 | 64 | 53.653 | 212.911 | 266.56 | 1,000 | 266,564 | 51 | 113.4 |
| 15 | Restaurant | 1000 sq. ft. | 0.4 | | 2 | 2 | | 5.968 | 5.97 | 400 | 2,387 | 51 | 1.0 |
| 16 | Indoor Theater | 1000 sq. ft. | | | 1 | 1 | | 37.050 | 37.05 | 125 | 4,631 | 77 | 3.0 |
| 17 | Car Wash | 1000 sq. ft. | | 1 | 3 | 4 | 2.827 | 12.576 | 15.40 | 3,700 | 56,991 | 6 | 2.9 |
| 17D | Self-Service Car Wash | 1000 sq. ft. | | 1 | 1 | 2 | 2.082 | 2.575 | 4.66 | 700 | 3,260 | 6 | 0.2 |
| 18 | Auto Dealers & Service | 1000 sq. ft. | | 35 | 68 | 103 | 124.084 | 460.789 | 584.87 | 100 | 58,487 | 30 | 14.6 |
| 19 | Nursery/Greenery | 1000 sq. ft. | | | 2 | 2 | | 16.500 | 16.50 | 25 | 413 | 30 | 0.1 |
| 20 | Warehousing | 1000 sq. ft. | | 16 | 163 | 179 | 592.303 | 6,748.163 | 7,340.47 | 25 | 183,512 | 30 | 45.9 |
| 22 | Dry Mfg. & Lumber Yards | 1000 sq. ft. | | 29 | 225 | 254 | 582.316 | 6,200.110 | 6,782.43 | 25 | 169,561 | 30 | 42.4 |
| 23C | Club/Lodge Hall | 1000 sq. ft. | | 2 | 2 | 4 | 24.396 | 11.488 | 35.88 | 125 | 4,486 | 51 | 1.9 |
| 24 | Night Club | 1000 sq. ft. | | 1 | | 1 | 5.200 | | 5.20 | 350 | 1,820 | 51 | 0.8 |
| 25 | Bowling/Skating | 1000 sq. ft. | | 1 | 2 | 3 | 34.197 | 71.322 | 105.52 | 150 | 15,828 | 30 | 4.0 |
| 25 | Bowling/Skating | 1000 sq. ft. | 0.8 | 1 | | 1 | 30.923 | | 30.92 | 120 | 3,711 | 30 | 0.9 |
| 26 | Auditorium/Amusement | 1000 sq. ft. | | 3 | 1 | 4 | 115.416 | 13.124 | 128.54 | 350 | 44,989 | 30 | 11.3 |
| 27 | Golf Courses/Parks | 1000 sq. ft. | | 5 | 7 | 12 | 165.136 | 201.265 | 366.40 | 100 | 36,640 | 30 | 9.2 |
| 30 | Mortuary/Cemetery | 1000 sq. ft. | | | 1 | 1 | | 4.046 | 4.05 | 100 | 405 | 30 | 0.1 |
| 33 | Health Spa (w/showers) | 1000 sq. ft. | | 1 | | 1 | 25.382 | | 25.38 | 600 | 15,229 | 46 | 5.8 |
| 34 | Churches | 1000 sq. ft. | | 16 | 22 | 38 | 254.059 | 201.344 | 455.40 | 50 | 22,770 | 30 | 5.7 |
| 35 | Private School | 1000 sq. ft. | | 4 | 10 | 14 | 21.222 | 83.954 | 105.18 | 200 | 21,035 | 30 | 5.3 |
| 36 | Convalescent Homes | Beds | | | 10 | 10 | | 574.000 | 574 | 125 | 71,750 | 30 | 18.0 |
| 52A | Multi-Use | 1000 sq. ft. | | 6 | 7 | 13 | 186.620 | 442.960 | 629.58 | 260 | 163,691 | 31 | 42.3 |
| | Totals | | | 266 | 861 | 1,127 | 4,861 | 20,893 | 25,754 | | 2,722,730 | 32.9 | 748 |

Table 3.6-2 SCVSD Estimated Commercial Chloride Load, 2003

| Category | Description | Usage Unit | Water Usage Correction | Count | | | No. Units | | | Flow per Unit (gpd) | Total Flow (gpd) | Conc. Above Water Supply (mg/L) | Chloride Load Above Water Supply (lbs/day) |
|----------|---------------------------|--------------|------------------------|----------|-------|-----|-----------|-----------|----------|---------------------|------------------|---------------------------------|--|
| | | | | Dist. 32 | Total | | Dist. 26 | Dist. 32 | Total | | | | |
| 08 | Hotel/Motel | Rooms | | 2 | 14 | 16 | 105 | 702 | 807 | 125 | 100,875 | 37 | 31.1 |
| 10 | Stores & Financial Insts. | 1000 sq. ft. | | 74 | 121 | 195 | 904.895 | 1,723.632 | 2,628.53 | 100 | 262,853 | 30 | 65.8 |
| 10H | Shopping Center | 1000 sq. ft. | | 40 | 49 | 89 | 1,598.174 | 1,132.893 | 2,731.07 | 325 | 887,597 | 30 | 222.1 |
| 10H | Shopping Center | 1000 sq. ft. | 0.4 | 1 | 2 | 3 | 16.453 | 62.502 | 78.96 | 130 | 10,264 | 30 | 2.6 |
| 10H | Shopping Center | 1000 sq. ft. | 0.6 | | 1 | 1 | | 120.713 | 120.71 | 195 | 23,539 | 30 | 5.9 |
| 10I | Regional Mall | 1000 sq. ft. | | 2 | 1 | 3 | 83.517 | 283.224 | 366.74 | 150 | 55,011 | 30 | 13.8 |
| 11 | Store/Residential Comb. | 1000 sq. ft. | | | 2 | 2 | | 12.499 | 12.50 | 100 | 1,250 | 31 | 0.3 |
| 12 | Supermarket | 1000 sq. ft. | | 2 | 8 | 10 | 48.307 | 245.677 | 293.98 | 150 | 44,098 | 79 | 29.1 |
| 13 | Office Building | 1000 sq. ft. | | 12 | 72 | 84 | 118.622 | 1,263.852 | 1,382.47 | 200 | 276,495 | 30 | 69.2 |
| 13 | Office Building | 1000 sq. ft. | 0.4 | | 2 | 2 | | 73.100 | 73.10 | 80 | 5,848 | 30 | 1.5 |
| 13 | Office Building | 1000 sq. ft. | 0.6 | | 1 | 1 | | 47.130 | 47.13 | 120 | 5,656 | 30 | 1.4 |
| 14 | Professional Building | 1000 sq. ft. | | 5 | 14 | 19 | 46.264 | 246.330 | 292.59 | 300 | 87,778 | 30 | 22.0 |
| 14 | Professional Building | 1000 sq. ft. | 0.4 | | 2 | 2 | | 55.258 | 55.26 | 120 | 6,631 | 30 | 1.7 |
| 15 | Restaurant | 1000 sq. ft. | | 15 | 49 | 64 | 50.636 | 220.770 | 271.41 | 1,000 | 271,406 | 51 | 115.4 |
| 15 | Restaurant | 1000 sq. ft. | 0.4 | | 1 | 1 | | 3.842 | 3.84 | 400 | 1,537 | 51 | 0.7 |
| 15 | Restaurant | 1000 sq. ft. | 0.8 | | 1 | 1 | | 2.126 | 2.13 | 800 | 1,701 | 51 | 0.7 |
| 16 | Indoor Theater | 1000 sq. ft. | | | 1 | 1 | | 37.050 | 37.05 | 125 | 4,631 | 77 | 3.0 |
| 17 | Car Wash | 1000 sq. ft. | | 1 | 4 | 5 | 2.827 | 18.938 | 21.77 | 3,700 | 80,531 | 6 | 4.0 |
| 17D | Self-Service Car Wash | 1000 sq. ft. | | 1 | 1 | 2 | 2.082 | 2.575 | 4.66 | 700 | 3,260 | 6 | 0.2 |
| 18 | Auto Dealers & Service | 1000 sq. ft. | | 37 | 68 | 105 | 141.394 | 464.462 | 605.86 | 100 | 60,586 | 30 | 15.2 |
| 19 | Nursery/Greenery | 1000 sq. ft. | | | 1 | 1 | | 15.700 | 15.70 | 25 | 393 | 30 | 0.1 |
| 20 | Warehousing | 1000 sq. ft. | | 19 | 173 | 192 | 802.095 | 7,194.201 | 7,996.30 | 25 | 199,907 | 30 | 50.0 |
| 22 | Dry Mfg. & Lumber Yards | 1000 sq. ft. | | 26 | 260 | 286 | 543.367 | 6,224.828 | 6,768.20 | 25 | 169,205 | 30 | 42.3 |
| 23C | Club/Lodge Hall | 1000 sq. ft. | | 2 | 2 | 4 | 24.396 | 11.488 | 35.88 | 125 | 4,486 | 51 | 1.9 |
| 24 | Night Club | 1000 sq. ft. | | 1 | | 1 | 5.200 | | 5.20 | 350 | 1,820 | 51 | 0.8 |
| 25 | Bowling/Skating | 1000 sq. ft. | | 1 | 1 | 2 | 34.197 | 71.286 | 105.48 | 150 | 15,822 | 30 | 4.0 |
| 25 | Bowling/Skating | 1000 sq. ft. | 0.6 | 1 | | 1 | 30.923 | | 30.92 | 90 | 2,783 | 30 | 0.7 |
| 26 | Auditorium/Amusement | 1000 sq. ft. | | 3 | 2 | 5 | 115.416 | 46.124 | 161.54 | 350 | 56,539 | 30 | 14.1 |
| 27 | Golf Courses/Parks | 1000 sq. ft. | | 8 | 4 | 12 | 193.136 | 101.188 | 294.32 | 100 | 29,432 | 30 | 7.4 |
| 27E | RV Park | Spaces | | | 1 | 1 | | 103 | 103 | 55 | 5,665 | 30 | 1.4 |
| 30 | Mortuary/Cemetery | 1000 sq. ft. | | | 1 | 1 | | 4.046 | 4.05 | 100 | 405 | 30 | 0.1 |
| 33 | Health Spa (w/showers) | 1000 sq. ft. | | 1 | | 1 | 25.382 | | 25.38 | 600 | 15,229 | 46 | 5.8 |
| 34 | Churches | 1000 sq. ft. | | 16 | 22 | 38 | 253.483 | 214.543 | 468.03 | 50 | 23,401 | 30 | 5.9 |
| 35 | Private School | 1000 sq. ft. | | 5 | 11 | 16 | 31.046 | 107.665 | 138.71 | 200 | 27,742 | 30 | 6.9 |
| 36 | Convalescent Homes | Beds | | | 10 | 10 | | 574 | 574 | 125 | 71,750 | 30 | 18.0 |

Table 3.6-2 SCVSD Estimated Commercial Chloride Load, 2003

| Category | Description | Usage Unit | Water Usage Correction | Count | | | No. Units | | | Flow per Unit (gpd) | Total Flow (gpd) | Conc. Above Water Supply (mg/L) | Chloride Load Above Water Supply (lbs/day) |
|----------|---------------|--------------|------------------------|------------|------------|--------------|--------------|---------------|---------------|---------------------|------------------|---------------------------------|--|
| | | | | | Dist. 32 | Total | Dist. 26 | Dist. 32 | Total | | | | |
| 52A | Multi-Use | 1000 sq. ft. | | 6 | 9 | 15 | 187.620 | 331.330 | 518.95 | 260 | 134,927 | 31 | 34.9 |
| | Totals | | | 281 | 911 | 1,192 | 5,364 | 21,718 | 27,082 | | 2,951,051 | 32.5 | 800 |

Table 3.6-3 SCVSD Estimated Commercial Chloride Load, 2004

| Category | Description | Usage Unit | Water Usage Correction | Count | | | No. Units | | | Flow per Unit (gpd) | Total Flow (gpd) | Conc. Above Water Supply (mg/L) | Chloride Load Above Water Supply (lbs/day) |
|----------|---------------------------|--------------|------------------------|----------|----------|-------|-----------|-----------|----------|---------------------|------------------|---------------------------------|--|
| | | | | Dist. 26 | Dist. 32 | Total | Dist. 26 | Dist. 32 | Total | | | | |
| 08 | Hotel/Motel | Rooms | | 2 | 14 | 16 | 105 | 738 | 843 | 125 | 105,375 | 37 | 32.5 |
| 10 | Stores & Financial Insts. | 1000 sq. ft. | | 74 | 131 | 205 | 902.181 | 2,097.726 | 2,999.91 | 100 | 299,991 | 30 | 75.1 |
| 10H | Shopping Center | 1000 sq. ft. | | 38 | 56 | 94 | 1,638.434 | 1,214.268 | 2,852.70 | 325 | 927,128 | 30 | 232.0 |
| 10H | Shopping Center | 1000 sq. ft. | 0.4 | 2 | 2 | 4 | 118.253 | 62.502 | 180.76 | 130 | 23,498 | 30 | 5.9 |
| 10H | Shopping Center | 1000 sq. ft. | 0.6 | | 1 | 1 | | 120.713 | 120.71 | 195 | 23,539 | 30 | 5.9 |
| 10I | Regional Mall | 1000 sq. ft. | | | 3 | 3 | | 438.646 | 438.65 | 150 | 65,797 | 30 | 16.5 |
| 11 | Store/Residential Comb. | 1000 sq. ft. | | | 2 | 2 | | 12.499 | 12.50 | 100 | 1,250 | 31 | 0.3 |
| 12 | Supermarket | 1000 sq. ft. | | 2 | 7 | 9 | 58.368 | 201.301 | 259.67 | 150 | 38,950 | 79 | 25.7 |
| 13 | Office Building | 1000 sq. ft. | | 12 | 68 | 80 | 118.622 | 953.573 | 1,072.20 | 200 | 214,439 | 30 | 53.7 |
| 13 | Office Building | 1000 sq. ft. | 0.4 | | 3 | 3 | | 117.139 | 117.14 | 80 | 9,371 | 30 | 2.3 |
| 13 | Office Building | 1000 sq. ft. | 0.6 | | 1 | 1 | | 47.130 | 47.13 | 120 | 5,656 | 30 | 1.4 |
| 14 | Professional Building | 1000 sq. ft. | | 5 | 14 | 19 | 46.264 | 205.916 | 252.18 | 300 | 75,654 | 30 | 18.9 |
| 14 | Professional Building | 1000 sq. ft. | 0.4 | | 2 | 2 | | 67.680 | 67.68 | 120 | 8,122 | 30 | 2.0 |
| 14 | Professional Building | 1000 sq. ft. | 0.6 | | 1 | 1 | | 33.578 | 33.58 | 180 | 6,044 | 30 | 1.5 |
| 15 | Restaurant | 1000 sq. ft. | | 16 | 50 | 66 | 54.931 | 209.473 | 264.40 | 1,000 | 264,404 | 51 | 112.5 |
| 15 | Restaurant | 1000 sq. ft. | 0.4 | | 1 | 1 | | 3.842 | 3.84 | 400 | 1,537 | 51 | 0.7 |
| 15 | Restaurant | 1000 sq. ft. | 0.8 | | 1 | 1 | | 2.126 | 2.13 | 800 | 1,701 | 51 | 0.7 |
| 16 | Indoor Theater | 1000 sq. ft. | | | 1 | 1 | | 37.050 | 37.05 | 125 | 4,631 | 77 | 3.0 |
| 17 | Car Wash | 1000 sq. ft. | | 1 | 3 | 4 | 2.827 | 12.576 | 15.40 | 3,700 | 56,991 | 6 | 2.9 |
| 17D | Self-Service Car Wash | 1000 sq. ft. | | 1 | 1 | 2 | 2.082 | 2.575 | 4.66 | 700 | 3,260 | 6 | 0.2 |
| 18 | Auto Dealers & Service | 1000 sq. ft. | | 37 | 70 | 107 | 141.394 | 474.462 | 615.86 | 100 | 61,586 | 30 | 15.4 |
| 19 | Nursery/Greenery | 1000 sq. ft. | | | 1 | 1 | | 15.700 | 15.70 | 25 | 393 | 30 | 0.1 |
| 20 | Warehousing | 1000 sq. ft. | | 20 | 171 | 191 | 839.095 | 7,104.883 | 7,943.98 | 25 | 198,599 | 30 | 49.7 |
| 22 | Dry Mfg. & Lumber Yards | 1000 sq. ft. | | 30 | 263 | 293 | 571.353 | 6,227.219 | 6,798.57 | 25 | 169,964 | 30 | 42.5 |
| 23C | Club/Lodge Hall | 1000 sq. ft. | | 3 | 2 | 5 | 30.836 | 11.488 | 42.32 | 125 | 5,291 | 51 | 2.3 |
| 24 | Night Club | 1000 sq. ft. | | 1 | | 1 | 5.200 | | 5.20 | 350 | 1,820 | 51 | 0.8 |
| 25 | Bowling/Skating | 1000 sq. ft. | | 1 | 1 | 2 | 34.197 | 71.286 | 105.48 | 150 | 15,822 | 30 | 4.0 |
| 25 | Bowling/Skating | 1000 sq. ft. | 0.6 | 1 | | 1 | 30.923 | | 30.92 | 90 | 2,783 | 30 | 0.7 |
| 26 | Auditorium/Amusement | 1000 sq. ft. | | 4 | 3 | 7 | 153.416 | 57.610 | 211.03 | 350 | 73,859 | 30 | 18.5 |
| 27 | Golf Courses/Parks | 1000 sq. ft. | | 6 | 5 | 11 | 114.925 | 137.466 | 252.39 | 100 | 25,239 | 30 | 6.3 |
| 27E | RV Park | Spaces | | | 1 | 1 | | 103 | 103.00 | 55 | 5,665 | 30 | 1.4 |
| 29 | Colleges/Univ. Private | 1000 sq. ft. | | | 1 | 1 | | 396.000 | 396.00 | 20 | 7,920 | 30 | 2.0 |
| 30 | Mortuary/Cemetery | 1000 sq. ft. | | | 1 | 1 | | 4.046 | 4.05 | 100 | 405 | 30 | 0.1 |
| 33 | Health Spa (w/showers) | 1000 sq. ft. | | 1 | | 1 | 25.382 | | 25.38 | 600 | 15,229 | 46 | 5.8 |
| 34 | Churches | 1000 sq. ft. | | 16 | 22 | 38 | 253.763 | 214.543 | 468.31 | 50 | 23,415 | 30 | 5.9 |

Table 3.6-3 SCVSD Estimated Commercial Chloride Load, 2004

| Category | Description | Usage Unit | Water Usage Correction | Count | | | No. Units | | | Flow per Unit (gpd) | Total Flow (gpd) | Conc. Above Water Supply (mg/L) | Chloride Load Above Water Supply (lbs/day) |
|----------|--------------------|--------------|------------------------|------------|------------|--------------|--------------|---------------|---------------|---------------------|------------------|---------------------------------|--|
| | | | | Dist. 26 | Dist. 32 | Total | Dist. 26 | Dist. 32 | Total | | | | |
| 35 | Private School | 1000 sq. ft. | | 5 | 12 | 17 | 31.046 | 114.241 | 145.29 | 200 | 29,057 | 30 | 7.3 |
| 36 | Convalescent Homes | Beds | | | 9 | 9 | | 524 | 524 | 125 | 65,500 | 30 | 16.4 |
| 52A | Multi-Use | 1000 sq. ft. | | 10 | 16 | 26 | 298.290 | 412.570 | 710.86 | 260 | 184,824 | 31 | 47.8 |
| | Totals | | | 288 | 940 | 1,228 | 5,577 | 22,447 | 28,024 | | 3,024,709 | 32.5 | 820 |

Table 3.6-4 SCVSD Estimated Commercial Chloride Load, 2005

| Category | Description | Usage Unit | Water Usage Correction | Count | No. Units | Flow per Unit (gpd) | Total Flow (gpd) | Chloride Conc. Above Water Supply (mg/L) | Chloride Load Above Water Supply (lbs/day) |
|----------|---------------------------|--------------|------------------------|-------|-----------|---------------------|------------------|--|--|
| 08 | Hotel/Motel | Rooms | | 16 | 843 | 125 | 105,375 | 37 | 32.5 |
| 10 | Stores & Financial Insts. | 1000 sq. ft. | | 203 | 3,090.44 | 100 | 309,044 | 30 | 77.3 |
| 10 | Stores & Financial Insts. | 1000 sq. ft. | 0.4 | 1 | 119.84 | 100 | 4,794 | 30 | 1.2 |
| 10H | Shopping Center | 1000 sq. ft. | | 97 | 2,413.21 | 325 | 784,293 | 30 | 196.2 |
| 10H | Shopping Center | 1000 sq. ft. | 0.4 | 3 | 78.96 | 130 | 10,264 | 30 | 2.6 |
| 10H | Shopping Center | 1000 sq. ft. | 0.6 | 1 | 120.71 | 195 | 23,539 | 30 | 5.9 |
| 10I | Regional Mall | 1000 sq. ft. | | 3 | 438.65 | 150 | 65,797 | 30 | 16.5 |
| 11 | Store/Residential Comb. | 1000 sq. ft. | | 2 | 12.50 | 100 | 1,250 | 31 | 0.3 |
| 12 | Supermarket | 1000 sq. ft. | | 9 | 283.95 | 150 | 42,593 | 79 | 28.1 |
| 13 | Office Building | 1000 sq. ft. | | 87 | 1,304.44 | 200 | 260,889 | 30 | 65.3 |
| 13 | Office Building | 1000 sq. ft. | 0.4 | 3 | 117.14 | 80 | 9,371 | 30 | 2.3 |
| 13 | Office Building | 1000 sq. ft. | 0.6 | 1 | 47.13 | 120 | 5,656 | 30 | 1.4 |
| 14 | Professional Building | 1000 sq. ft. | | 19 | 188.35 | 300 | 56,504 | 30 | 14.1 |
| 14 | Professional Building | 1000 sq. ft. | 0.4 | 2 | 67.68 | 120 | 8,122 | 30 | 2.0 |
| 14 | Professional Building | 1000 sq. ft. | 0.6 | 2 | 104.42 | 180 | 18,795 | 30 | 4.7 |
| 15 | Restaurant | 1000 sq. ft. | | 67 | 265.78 | 1,000 | 265,778 | 51 | 113.0 |
| 15 | Restaurant | 1000 sq. ft. | 0.4 | 2 | 10.03 | 400 | 4,011 | 51 | 1.7 |
| 15 | Restaurant | 1000 sq. ft. | 0.6 | 1 | 2.68 | 600 | 1,609 | 51 | 0.7 |
| 15 | Restaurant | 1000 sq. ft. | 0.8 | 1 | 2.13 | 800 | 1,701 | 51 | 0.7 |
| 16 | Indoor Theater | 1000 sq. ft. | | 1 | 37.05 | 125 | 4,631 | 77 | 3.0 |
| 17 | Car Wash | 1000 sq. ft. | | 4 | 15.40 | 3,700 | 56,991 | 6 | 2.9 |
| 17D | Self-Service Car Wash | 1000 sq. ft. | | 2 | 4.66 | 700 | 3,260 | 6 | 0.2 |
| 18 | Auto Dealers & Service | 1000 sq. ft. | | 110 | 654.81 | 100 | 65,481 | 30 | 16.4 |
| 19 | Nursery/Greenery | 1000 sq. ft. | | 1 | 15.70 | 25 | 393 | 30 | 0.1 |
| 20 | Warehousing | 1000 sq. ft. | | 201 | 8,256.14 | 25 | 206,403 | 30 | 51.6 |
| 22 | Dry Mfg. & Lumber Yards | 1000 sq. ft. | | 314 | 7,497.63 | 25 | 187,441 | 30 | 46.9 |
| 23C | Club/Lodge Hall | 1000 sq. ft. | | 5 | 42.32 | 125 | 5,291 | 51 | 2.3 |
| 24 | Night Club | 1000 sq. ft. | | 1 | 5.20 | 350 | 1,820 | 51 | 0.8 |
| 25 | Bowling/Skating | 1000 sq. ft. | | 2 | 105.48 | 150 | 15,822 | 30 | 4.0 |
| 25 | Bowling/Skating | 1000 sq. ft. | 0.6 | 1 | 30.92 | 90 | 2,783 | 30 | 0.7 |
| 26 | Auditorium/Amusement | 1000 sq. ft. | | 6 | 158.03 | 350 | 55,309 | 30 | 13.8 |
| 27 | Golf Courses/Parks | 1000 sq. ft. | | 16 | 265.30 | 100 | 26,530 | 30 | 6.6 |
| 27E | RV Park | Spaces | | 1 | 103.00 | 55 | 5,665 | 30 | 1.4 |
| 30 | Mortuary/Cemetery | 1000 sq. ft. | | 1 | 4.05 | 100 | 405 | 30 | 0.1 |
| 33 | Health Spa (w/showers) | 1000 sq. ft. | | 1 | 25.38 | 600 | 15,229 | 46 | 5.8 |
| 34 | Churches | 1000 sq. ft. | | 39 | 466.79 | 50 | 23,340 | 30 | 5.8 |

Table 3.6-4 SCVSD Estimated Commercial Chloride Load, 2005

| Category | Description | Usage Unit | Water Usage Correction | Count | No. Units | Flow per Unit (gpd) | Total Flow (gpd) | Chloride Conc. Above Water Supply (mg/L) | Chloride Load Above Water Supply (lbs/day) |
|----------|--------------------|--------------|------------------------|--------------|---------------|---------------------|------------------|--|--|
| 35 | Private School | 1000 sq. ft. | | 18 | 153.06 | 200 | 30,611 | 30 | 7.7 |
| 36 | Convalescent Homes | Beds | | 10 | 574.00 | 125 | 71,750 | 30 | 18.0 |
| 52A | Multi-Use | 1000 sq. ft. | | 32 | 898.94 | 260 | 233,724 | 31 | 60.4 |
| | Totals | | | 1,286 | 28,825 | | 2,992,264 | 32.7 | 815 |

Table 3.6-5 SCVSD Estimated Commercial Chloride Load, 2006

| Description | Usage Unit | Water Usage Correction | Count | No. Units | Flow per Unit (gpd) | Total Flow (gpd) | Chloride Conc. Above Water Supply (mg/L) | Chloride Load Above Water Supply (lbs/day) |
|------------------------------------|--------------|------------------------|-------|-----------|---------------------|------------------|--|--|
| Agricultural Feed Lot | 1000 sq. ft. | 1 | 1 | 0.32 | 200 | 64 | 30 | 0.0 |
| Assisted Care/Home for Aged | Beds | 1 | 10 | 574.00 | 125 | 71,750 | 30 | 18.0 |
| Auditorium | 1000 sq. ft. | 1 | 6 | 127.36 | 350 | 44,576 | 30 | 11.2 |
| Bank, Savings & Loan, Credit Union | 1000 sq. ft. | 1 | 15 | 84.55 | 100 | 8,455 | 30 | 2.1 |
| Bowling/Skating | 1000 sq. ft. | 1 | 2 | 105.48 | 150 | 15,822 | 30 | 4.0 |
| Bowling/Skating | 1000 sq. ft. | 0.6 | 1 | 30.92 | 90 | 2,783 | 30 | 0.7 |
| Car Wash, Non-Recycling Type | 1000 sq. ft. | 1 | 1 | 2.37 | 3,700 | 8,769 | 6 | 0.4 |
| Car Wash, Recycling Type | 1000 sq. ft. | 1 | 1 | 2.35 | 2,700 | 6,345 | 6 | 0.3 |
| Car Wash, Wand Type | 1000 sq. ft. | 1 | 2 | 4.65 | 700 | 3,255 | 6 | 0.2 |
| Church/Chapel/Sanctuary | 1000 sq. ft. | 1 | 40 | 488.30 | 50 | 24,415 | 30 | 6.1 |
| Club/Lodge Hall | 1000 sq. ft. | 1 | 5 | 42.32 | 125 | 5,290 | 51 | 2.3 |
| Fast Food Restaurant | 1000 sq. ft. | 1 | 4 | 15.74 | 1,000 | 15,740 | 51 | 6.7 |
| Full Service Restaurant | 1000 sq. ft. | 1 | 60 | 229.39 | 1,000 | 229,390 | 51 | 97.6 |
| Full Service Restaurant | 1000 sq. ft. | 0.8 | 1 | 2.12 | 800 | 1,696 | 51 | 0.7 |
| Full Service Restaurant | 1000 sq. ft. | 0.6 | 2 | 14.13 | 600 | 8,478 | 51 | 3.6 |
| Full Service Restaurant | 1000 sq. ft. | 0.4 | 2 | 10.02 | 400 | 4,008 | 51 | 1.7 |
| General Merchandise Store | 1000 sq. ft. | 1 | 173 | 3,097.89 | 100 | 309,789 | 30 | 77.5 |
| General Merchandise Store | 1000 sq. ft. | 0.4 | 1 | 119.84 | 40 | 4,794 | 30 | 1.2 |
| Golf Course/Park | 1000 sq. ft. | 1 | 15 | 336.55 | 100 | 33,655 | 30 | 8.4 |
| Grocery Store | 1000 sq. ft. | 1 | 12 | 368.46 | 150 | 55,269 | 79 | 36.4 |
| Gym/Health Club (w/showers) | 1000 sq. ft. | 1 | 1 | 25.38 | 600 | 15,228 | 46 | 5.8 |
| Hotel/Motel | Rooms | 1 | 17 | 955 | 125 | 119,375 | 37 | 36.8 |
| Indoor Cinema/Theater | 1000 sq. ft. | 1 | 1 | 37.05 | 125 | 4,631 | 77 | 3.0 |
| Light Manufacturing | 1000 sq. ft. | 1 | 329 | 7,787.42 | 25 | 194,686 | 30 | 48.7 |
| Lumber Yard | 1000 sq. ft. | 1 | 1 | 6.66 | 25 | 167 | 30 | 0.0 |
| Medical Office/Clinic | 1000 sq. ft. | 1 | 18 | 191.48 | 300 | 57,444 | 30 | 14.4 |
| Medical Office/Clinic | 1000 sq. ft. | 0.6 | 1 | 33.57 | 180 | 6,043 | 30 | 1.5 |
| Medical Office/Clinic | 1000 sq. ft. | 0.4 | 3 | 138.51 | 120 | 16,621 | 30 | 4.2 |
| Miscellaneous | Sewage | 1 | 34 | 756.40 | 260 | 196,664 | 30 | 49.2 |
| Mortuary/Funeral Home | 1000 sq. ft. | 1 | 1 | 4.04 | 100 | 404 | 30 | 0.1 |
| Night Club | 1000 sq. ft. | 1 | 2 | 6.60 | 350 | 2,310 | 51 | 1.0 |
| Nursery/Greenhouse | 1000 sq. ft. | 1 | 1 | 15.70 | 25 | 393 | 30 | 0.1 |
| Office General | 1000 sq. ft. | 1 | 96 | 1,466.19 | 200 | 293,238 | 30 | 73.4 |
| Office General | 1000 sq. ft. | 0.6 | 1 | 47.13 | 120 | 5,656 | 30 | 1.4 |
| Office General | 1000 sq. ft. | 0.4 | 4 | 176.16 | 80 | 14,093 | 30 | 3.5 |
| Open Storage | 1000 sq. ft. | 1 | 2 | 223.33 | 25 | 5,583 | 30 | 1.4 |

Table 3.6-5 SCVSD Estimated Commercial Chloride Load, 2006

| Description | Usage Unit | Water Usage Correction | Count | No. Units | Flow per Unit (gpd) | Total Flow (gpd) | Chloride Conc. Above Water Supply (mg/L) | Chloride Load Above Water Supply (lbs/day) |
|------------------------------------|--------------|------------------------|--------------|---------------|---------------------|------------------|--|--|
| Private Elementary/Jr. High School | 1000 sq. ft. | 1 | 19 | 155.61 | 200 | 31,122 | 30 | 7.8 |
| Regional Mall | 1000 sq. ft. | 1 | 10 | 636.12 | 150 | 95,418 | 30 | 23.9 |
| RV Park/Campground | Spaces | 1 | 1 | 103.00 | 55 | 5,665 | 30 | 1.4 |
| Service and Repair Shop | 1000 sq. ft. | 1 | 3 | 8.76 | 100 | 876 | 30 | 0.2 |
| Shopping Center | 1000 sq. ft. | 1 | 98 | 2,200.94 | 325 | 715,306 | 30 | 179.0 |
| Shopping Center | 1000 sq. ft. | 0.6 | 1 | 120.71 | 195 | 23,538 | 30 | 5.9 |
| Shopping Center | 1000 sq. ft. | 0.4 | 3 | 78.95 | 130 | 10,264 | 30 | 2.6 |
| TV/Film Studio | 1000 sq. ft. | 1 | 2 | 65.66 | 25 | 1,642 | 30 | 0.4 |
| Vehicle Fueling Station | 1000 sq. ft. | 1 | 10 | 35.45 | 100 | 3,545 | 30 | 0.9 |
| Vehicle Maintenance & Repair Shop | 1000 sq. ft. | 1 | 25 | 308.55 | 100 | 30,855 | 30 | 7.7 |
| Vehicle Paint and Body | 1000 sq. ft. | 1 | 42 | 259.47 | 100 | 25,947 | 30 | 6.5 |
| Vehicle Sales, Rental & Showroom | 1000 sq. ft. | 1 | 3 | 24.34 | 100 | 2,434 | 30 | 0.6 |
| Veterinary Office | 1000 sq. ft. | 1 | 2 | 5.68 | 300 | 1,704 | 30 | 0.4 |
| Warehouse Store | 1000 sq. ft. | 1 | 1 | 154.37 | 100 | 15,437 | 30 | 3.9 |
| Warehouse/Self Storage | 1000 sq. ft. | 1 | 245 | 9,316.49 | 25 | 232,912 | 30 | 58.3 |
| Totals | | | 1,331 | 31,001 | | 2,983,541 | 33.1 | 823 |

Table 3.6-6 SCVSD Estimated Commerical Chloride Load, 2007

| Description | Usage Unit | Water Usage Correction | Count | No. Units | Flow per Unit (gpd) | Total Flow (gpd) | Chloride Conc. Above Water Supply (mg/L) | Chloride Load Above Water Supply (lbs/day) |
|------------------------------------|--------------|------------------------|-------|-----------|---------------------|------------------|--|--|
| Agricultural Feed Lot | 1000 sq. ft. | 1 | 1 | 0.32 | 200 | 64 | 30 | 0.0 |
| Animal Kennel | 1000 sq. ft. | 1 | 1 | 8.22 | 100 | 822 | 30 | 0.2 |
| Arcade/Pool Hall | 1000 sq. ft. | 1 | 1 | 6.00 | 350 | 2,100 | 30 | 0.5 |
| Assisted Care/Home for Aged | Beds | 1 | 7 | 473.00 | 125 | 59,125 | 30 | 14.8 |
| Auditorium | 1000 sq. ft. | 1 | 3 | 38.37 | 350 | 13,430 | 30 | 3.4 |
| Bank, Savings & Loan, Credit Union | 1000 sq. ft. | 1 | 17 | 87.30 | 100 | 8,730 | 30 | 2.2 |
| Bowling/Skating | 1000 sq. ft. | 1 | 1 | 71.28 | 150 | 10,692 | 30 | 2.7 |
| Bowling/Skating | 1000 sq. ft. | 0.6 | 1 | 30.92 | 90 | 2,783 | 30 | 0.7 |
| Car Wash, Non-Recycling Type | 1000 sq. ft. | 1 | 2 | 2.37 | 3,700 | 8,769 | 6 | 0.4 |
| Car Wash, Wand Type | 1000 sq. ft. | 1 | 2 | 4.65 | 700 | 3,255 | 6 | 0.2 |
| Church/Chapel/Sanctuary | 1000 sq. ft. | 1 | 38 | 620.04 | 50 | 31,002 | 30 | 7.8 |
| Club/Lodge Hall | 1000 sq. ft. | 1 | 9 | 65.20 | 125 | 8,150 | 51 | 3.5 |
| Day Care & Preschool | 1000 sq. ft. | 1 | 1 | 29.10 | 200 | 5,820 | 30 | 1.5 |
| Fast Food Restaurant | 1000 sq. ft. | 1 | 7 | 22.59 | 1,000 | 22,590 | 51 | 9.6 |
| Full Service Restaurant | 1000 sq. ft. | 1 | 60 | 239.32 | 1,000 | 239,320 | 51 | 101.8 |
| Full Service Restaurant | 1000 sq. ft. | 0.8 | 1 | 2.12 | 800 | 1,696 | 51 | 0.7 |
| Full Service Restaurant | 1000 sq. ft. | 0.4 | 4 | 24.16 | 400 | 9,664 | 51 | 4.1 |
| General Merchandise Store | 1000 sq. ft. | 1 | 156 | 2,712.21 | 100 | 271,221 | 30 | 67.9 |
| General Merchandise Store | 1000 sq. ft. | 0.4 | 3 | 408.46 | 40 | 16,338 | 30 | 4.1 |
| Golf Course/Park | 1000 sq. ft. | 1 | 13 | 268.03 | 100 | 26,803 | 30 | 6.7 |
| Grocery Store | 1000 sq. ft. | 1 | 13 | 421.44 | 150 | 63,216 | 79 | 41.7 |
| Gym/Health Club (w/showers) | 1000 sq. ft. | 1 | 3 | 88.67 | 600 | 53,202 | 46 | 20.4 |
| Hotel/Motel | Rooms | 1 | 18 | 1,439 | 125 | 179,875 | 37 | 55.5 |
| Indoor Cinema/Theater | 1000 sq. ft. | 1 | 1 | 37.05 | 125 | 4,631 | 77 | 3.0 |
| Library | 1000 sq. ft. | 1 | 1 | 21.00 | 100 | 2,100 | 30 | 0.5 |
| Light Manufacturing | 1000 sq. ft. | 1 | 376 | 7,469.69 | 25 | 186,742 | 30 | 46.7 |
| Lumber Yard | 1000 sq. ft. | 1 | 1 | 38.97 | 25 | 974 | 30 | 0.2 |
| Medical Office/Clinic | 1000 sq. ft. | 1 | 23 | 277.63 | 300 | 83,289 | 30 | 20.8 |
| Medical Office/Clinic | 1000 sq. ft. | 0.6 | 1 | 33.57 | 180 | 6,043 | 30 | 1.5 |
| Medical Office/Clinic | 1000 sq. ft. | 0.4 | 2 | 92.51 | 120 | 11,101 | 30 | 2.8 |
| Miscellaneous | Sewage | 1 | 32 | 533.51 | 260 | 138,713 | 30 | 34.7 |
| Mortuary/Funeral Home | 1000 sq. ft. | 1 | 1 | 4.04 | 100 | 404 | 30 | 0.1 |
| Night Club | 1000 sq. ft. | 1 | 4 | 5.20 | 350 | 1,820 | 51 | 0.8 |
| Office General | 1000 sq. ft. | 1 | 123 | 2,246.97 | 200 | 449,394 | 30 | 112.4 |
| Office General | 1000 sq. ft. | 0.6 | 2 | 106.15 | 120 | 12,738 | 30 | 3.2 |
| Office General | 1000 sq. ft. | 0.4 | 3 | 117.13 | 80 | 9,370 | 30 | 2.3 |

Table 3.6-6 SCVSD Estimated Commercial Chloride Load, 2007

| Description | Usage Unit | Water Usage Correction | Count | No. Units | Flow per Unit (gpd) | Total Flow (gpd) | Chloride Conc. Above Water Supply (mg/L) | Chloride Load Above Water Supply (lbs/day) |
|------------------------------------|--------------|------------------------|--------------|---------------|---------------------|------------------|--|--|
| Open Storage | 1000 sq. ft. | 1 | 6 | 230.70 | 25 | 5,768 | 30 | 1.4 |
| Private Elementary/Jr. High School | 1000 sq. ft. | 1 | 17 | 138.35 | 200 | 27,670 | 30 | 6.9 |
| Regional Mall | 1000 sq. ft. | 1 | 15 | 577.29 | 150 | 86,594 | 30 | 21.7 |
| RV Park/Campground | Spaces | 1 | 1 | 103.00 | 55 | 5,665 | 30 | 1.4 |
| Service and Repair Shop | 1000 sq. ft. | 1 | 3 | 8.76 | 100 | 876 | 30 | 0.2 |
| Shopping Center | 1000 sq. ft. | 1 | 114 | 2,833.63 | 325 | 920,930 | 30 | 230.4 |
| Shopping Center | 1000 sq. ft. | 0.6 | 1 | 120.71 | 195 | 23,538 | 30 | 5.9 |
| Shopping Center | 1000 sq. ft. | 0.4 | 5 | 239.62 | 130 | 31,151 | 30 | 7.8 |
| Swimming Pool/Stadium | 1000 sq. ft. | 1 | 1 | 1.20 | 350 | 420 | 46 | 0.2 |
| TV/Film Studio | 1000 sq. ft. | 1 | 4 | 165.02 | 25 | 4,126 | 30 | 1.0 |
| University | Student | 1 | 1 | 1,242.00 | 20 | 24,840 | 30 | 6.2 |
| Vehicle Fueling Station | 1000 sq. ft. | 1 | 11 | 24.37 | 100 | 2,437 | 30 | 0.6 |
| Vehicle Maintenance & Repair Shop | 1000 sq. ft. | 1 | 23 | 270.85 | 100 | 27,085 | 30 | 6.8 |
| Vehicle Paint and Body | 1000 sq. ft. | 1 | 40 | 216.63 | 100 | 21,663 | 30 | 5.4 |
| Vehicle Sales, Rental & Showroom | 1000 sq. ft. | 1 | 7 | 149.43 | 100 | 14,943 | 30 | 3.7 |
| Veterinary Office | 1000 sq. ft. | 1 | 1 | 4.24 | 300 | 1,272 | 30 | 0.3 |
| Warehouse Store | 1000 sq. ft. | 1 | 1 | 154.37 | 100 | 15,437 | 30 | 3.9 |
| Warehouse/Self Storage | 1000 sq. ft. | 1 | 253 | 9,914.70 | 25 | 247,868 | 30 | 62.0 |
| Totals | | | 1,436 | 34,441 | | 3,408,267 | 33.3 | 945 |

Table 3.6-7 SCVSD Estimated Commercial Chloride Load, 2008

| Description | Usage Unit | Water Usage Correction | Count | No. Units | Flow per Unit (gpd) | Total Flow (gpd) | Chloride Conc. Above Water Supply (mg/L) | Chloride Load Above Water Supply (lbs/day) |
|------------------------------------|--------------|------------------------|-------|------------|---------------------|------------------|--|--|
| Agricultural Feed Lot | 1000 sq. ft. | 1 | 1 | 0.32 | 200 | 64 | 30 | 0.0 |
| Animal Kennel | 1000 sq. ft. | 1 | 1 | 8.22 | 100 | 822 | 30 | 0.2 |
| Arcade/Pool Hall | 1000 sq. ft. | 1 | 1 | 6.00 | 350 | 2,100 | 30 | 0.5 |
| Assisted Care/Home for Aged | Beds | 1 | 9 | 587.00 | 125 | 73,375 | 30 | 18.4 |
| Athletic Stadium | People | 1 | 1 | 146,795.00 | 1 | 146,795 | 30 | 36.7 |
| Auditorium | 1000 sq. ft. | 1 | 3 | 38.37 | 350 | 13,430 | 30 | 3.4 |
| Bank, Savings & Loan, Credit Union | 1000 sq. ft. | 1 | 16 | 82.55 | 100 | 8,255 | 30 | 2.1 |
| Bowling/Skating | 1000 sq. ft. | 1 | 1 | 71.28 | 150 | 10,692 | 30 | 2.7 |
| Bowling/Skating | 1000 sq. ft. | 0.6 | 1 | 30.92 | 90 | 2,783 | 30 | 0.7 |
| Car Wash, Non-Recycling Type | 1000 sq. ft. | 1 | 3 | 2.37 | 3,700 | 8,769 | 6 | 0.4 |
| Car Wash, Recycling Type | 1000 sq. ft. | 1 | 1 | 2.35 | 2,700 | 6,345 | 6 | 0.3 |
| Car Wash, Wand Type | 1000 sq. ft. | 1 | 2 | 4.65 | 700 | 3,255 | 6 | 0.2 |
| Church/Chapel/Sanctuary | 1000 sq. ft. | 1 | 38 | 620.04 | 50 | 31,002 | 30 | 7.8 |
| Club/Lodge Hall | 1000 sq. ft. | 1 | 7 | 50.71 | 125 | 6,339 | 51 | 2.7 |
| Convalescent & Nursing | Beds | 1 | 2 | 195.00 | 125 | 24,375 | 30 | 6.1 |
| Day Care & Preschool | 1000 sq. ft. | 1 | 1 | 29.10 | 200 | 5,820 | 30 | 1.5 |
| Fast Food Restaurant | 1000 sq. ft. | 1 | 6 | 20.64 | 1,000 | 20,640 | 51 | 8.8 |
| Full Service Restaurant | 1000 sq. ft. | 1 | 58 | 232.21 | 1,000 | 232,210 | 51 | 98.8 |
| Full Service Restaurant | 1000 sq. ft. | 0.8 | 1 | 2.12 | 800 | 1,696 | 51 | 0.7 |
| Full Service Restaurant | 1000 sq. ft. | 0.6 | 2 | 7.78 | 600 | 4,668 | 51 | 2.0 |
| Full Service Restaurant | 1000 sq. ft. | 0.4 | 4 | 24.16 | 400 | 9,664 | 51 | 4.1 |
| General Merchandise Store | 1000 sq. ft. | 1 | 151 | 1,773.07 | 100 | 177,307 | 30 | 44.4 |
| General Merchandise Store | 1000 sq. ft. | 0.8 | 1 | 145.33 | 80 | 11,626 | 30 | 2.9 |
| General Merchandise Store | 1000 sq. ft. | 0.6 | 1 | 216.06 | 60 | 12,964 | 30 | 3.2 |
| General Merchandise Store | 1000 sq. ft. | 0.4 | 9 | 828.66 | 40 | 33,146 | 30 | 8.3 |
| Golf Course/Park | 1000 sq. ft. | 1 | 11 | 239.68 | 100 | 23,968 | 30 | 6.0 |
| Grocery Store | 1000 sq. ft. | 1 | 13 | 421.44 | 150 | 63,216 | 79 | 41.7 |
| Gym/Health Club (w/showers) | 1000 sq. ft. | 1 | 2 | 78.42 | 600 | 47,052 | 46 | 18.1 |
| Gym/Health Club (w/showers) | 1000 sq. ft. | 0.4 | 1 | 77.82 | 240 | 18,677 | 46 | 7.2 |
| Hotel/Motel | Rooms | 1 | 19 | 1,488 | 125 | 186,000 | 37 | 57.4 |
| Indoor Cinema/Theater | 1000 sq. ft. | 1 | 1 | 37.05 | 125 | 4,631 | 77 | 3.0 |
| Library | 1000 sq. ft. | 1 | 1 | 21.00 | 100 | 2,100 | 30 | 0.5 |
| Light Manufacturing | 1000 sq. ft. | 1 | 431 | 7,333.11 | 25 | 183,328 | 30 | 45.9 |
| Lumber Yard | 1000 sq. ft. | 1 | 1 | 38.97 | 25 | 974 | 30 | 0.2 |
| Medical Office/Clinic | 1000 sq. ft. | 1 | 25 | 283.63 | 300 | 85,089 | 30 | 21.3 |
| Medical Office/Clinic | 1000 sq. ft. | 0.6 | 1 | 33.57 | 180 | 6,043 | 30 | 1.5 |

Table 3.6-7 SCVSD Estimated Commercial Chloride Load, 2008

| Description | Usage Unit | Water Usage Correction | Count | No. Units | Flow per Unit (gpd) | Total Flow (gpd) | Chloride Conc. Above Water Supply (mg/L) | Chloride Load Above Water Supply (lbs/day) |
|------------------------------------|--------------|------------------------|--------------|----------------|---------------------|------------------|--|--|
| Medical Office/Clinic | 1000 sq. ft. | 0.4 | 2 | 92.51 | 120 | 11,101 | 30 | 2.8 |
| Miscellaneous | Sewage | 1 | 30 | 401.24 | 260 | 104,322 | 30 | 26.1 |
| Mortuary/Funeral Home | 1000 sq. ft. | 1 | 1 | 4.04 | 100 | 404 | 30 | 0.1 |
| Night Club | 1000 sq. ft. | 1 | 4 | 5.20 | 350 | 1,820 | 51 | 0.8 |
| Office General | 1000 sq. ft. | 1 | 177 | 1,615.71 | 200 | 323,142 | 30 | 80.9 |
| Office General | 1000 sq. ft. | 0.6 | 2 | 90.98 | 120 | 10,918 | 30 | 2.7 |
| Office General | 1000 sq. ft. | 0.4 | 4 | 176.16 | 80 | 14,093 | 30 | 3.5 |
| Open Storage | 1000 sq. ft. | 1 | 6 | 230.70 | 25 | 5,768 | 30 | 1.4 |
| Private Elementary/Jr. High School | 1000 sq. ft. | 1 | 18 | 164.97 | 200 | 32,994 | 30 | 8.3 |
| Regional Mall | 1000 sq. ft. | 1 | 15 | 421.86 | 150 | 63,279 | 30 | 15.8 |
| RV Park/Campground | Spaces | 1 | 1 | 103.00 | 55 | 5,665 | 30 | 1.4 |
| School Used One Day per Week | 1000 sq. ft. | 1 | 1 | 28.49 | 50 | 1,425 | 30 | 0.4 |
| Service and Repair Shop | 1000 sq. ft. | 1 | 3 | 8.76 | 100 | 876 | 30 | 0.2 |
| Shopping Center | 1000 sq. ft. | 1 | 102 | 2,298.36 | 325 | 746,967 | 30 | 186.9 |
| Shopping Center | 1000 sq. ft. | 0.6 | 2 | 172.58 | 195 | 33,653 | 30 | 8.4 |
| Shopping Center | 1000 sq. ft. | 0.4 | 7 | 283.43 | 130 | 36,846 | 30 | 9.2 |
| Shopping Center | 1000 sq. ft. | 0.2 | 4 | 285.10 | 65 | 18,532 | 30 | 4.6 |
| Swimming Pool/Stadium | 1000 sq. ft. | 1 | 1 | 1.20 | 350 | 420 | 46 | 0.2 |
| TV/Film Studio | 1000 sq. ft. | 1 | 3 | 89.02 | 25 | 2,226 | 30 | 0.6 |
| University | Student | 1 | 1 | 1,000.00 | 20 | 20,000 | 30 | 5.0 |
| Vehicle Fueling Station | 1000 sq. ft. | 1 | 12 | 24.37 | 100 | 2,437 | 30 | 0.6 |
| Vehicle Maintenance & Repair Shop | 1000 sq. ft. | 1 | 22 | 268.22 | 100 | 26,822 | 30 | 6.7 |
| Vehicle Paint and Body | 1000 sq. ft. | 1 | 41 | 213.03 | 100 | 21,303 | 30 | 5.3 |
| Vehicle Sales, Rental & Showroom | 1000 sq. ft. | 1 | 8 | 149.43 | 100 | 14,943 | 30 | 3.7 |
| Veterinary Office | 1000 sq. ft. | 1 | 1 | 4.24 | 300 | 1,272 | 30 | 0.3 |
| Warehouse Store | 1000 sq. ft. | 1 | 3 | 86.66 | 100 | 8,666 | 30 | 2.2 |
| Warehouse Store | 1000 sq. ft. | 0.4 | 2 | 184.55 | 40 | 7,382 | 30 | 1.8 |
| Warehouse/Self Storage | 1000 sq. ft. | 1 | 272 | 9,618.83 | 25 | 240,471 | 30 | 60.2 |
| Warehouse/Self Storage | 1000 sq. ft. | 0.6 | 1 | 86.33 | 15 | 1,295 | 30 | 0.3 |
| Totals | | | 1,573 | 179,936 | | 3,228,259 | 33.4 | 900 |

Table 3.6-8 SCVSD Estimated Commercial Chloride Load, 2009

| Description | Usage Unit | Water Usage Correction | Count | No. Units | Flow per Unit (gpd) | Total Flow (gpd) | Chloride Conc. Above Water Supply (mg/L) | Chloride Load Above Water Supply (lbs/day) |
|------------------------------------|--------------|------------------------|-------|-----------|---------------------|------------------|--|--|
| Agricultural Feed Lot | 1000 sq. ft. | 1 | 1 | 0.32 | 200 | 64 | 30 | 0.0 |
| Animal Kennel | 1000 sq. ft. | 1 | 1 | 8.22 | 100 | 822 | 30 | 0.2 |
| Arcade/Pool Hall | 1000 sq. ft. | Various | 1 | 0.76 | 350 | 267 | 30 | 0.1 |
| Assisted Care/Home for Aged | Beds | Various | 8 | 499.40 | 125 | 62,426 | 30 | 15.6 |
| Athletic Stadium | People | 1 | 2 | 188.79 | 10 | 1,888 | 30 | 0.5 |
| Auditorium | 1000 sq. ft. | 1 | 3 | 38.37 | 350 | 13,430 | 30 | 3.4 |
| Bank, Savings & Loan, Credit Union | 1000 sq. ft. | Various | 16 | 83.94 | 100 | 8,394 | 30 | 2.1 |
| Bowling/Skating | 1000 sq. ft. | 1 | 2 | 102.20 | 150 | 15,330 | 30 | 3.8 |
| Car Wash, Non-Recycling Type | 1000 sq. ft. | 1 | 3 | 10.66 | 3,700 | 39,442 | 6 | 2.0 |
| Car Wash, Recycling Type | 1000 sq. ft. | 1 | 1 | 2.35 | 2,700 | 6,345 | 6 | 0.3 |
| Car Wash, Wand Type | 1000 sq. ft. | 1 | 2 | 4.65 | 700 | 3,255 | 6 | 0.2 |
| Church/Chapel/Sanctuary | 1000 sq. ft. | 1 | 39 | 632.29 | 50 | 31,615 | 30 | 7.9 |
| Club/Lodge Hall | 1000 sq. ft. | 1 | 7 | 50.71 | 125 | 6,339 | 51 | 2.7 |
| Convalescent & Nursing | Beds | 1 | 2 | 195 | 125 | 24,375 | 30 | 6.1 |
| Day Care & Preschool | 1000 sq. ft. | 1 | 1 | 29.10 | 200 | 5,820 | 30 | 1.5 |
| Fast Food Restaurant | 1000 sq. ft. | Various | 7 | 10.57 | 1,000 | 10,573 | 51 | 4.5 |
| Full Service Restaurant | 1000 sq. ft. | Various | 64 | 220.18 | 1,000 | 220,180 | 51 | 93.7 |
| General Merchandise Store | 1000 sq. ft. | Various | 165 | 2,773.80 | 100 | 277,005 | 30 | 69.3 |
| Grocery Store | 1000 sq. ft. | Various | 13 | 374.81 | 150 | 56,221 | 79 | 37.0 |
| Gym/Health Club (w/showers) | 1000 sq. ft. | 1 | 3 | 62.47 | 600 | 37,483 | 46 | 14.4 |
| Heavy Manufacturing | 1000 sq. ft. | 1 | 2 | 46.05 | 200 | 9,210 | 84 | 6.5 |
| Hotel/Motel | Rooms | Various | 19 | 1,485 | 125 | 185,630 | 37 | 57.3 |
| Indoor Cinema/Theater | 1000 sq. ft. | 1 | 2 | 130.07 | 125 | 16,259 | 77 | 10.4 |
| Library | 1000 sq. ft. | 1 | 1 | 21 | 100 | 2,100 | 30 | 0.5 |
| Light Manufacturing | 1000 sq. ft. | Various | 421 | 7,932.29 | 25 | 198,307 | 30 | 49.6 |
| Lumber Yard | 1000 sq. ft. | 1 | 1 | 38.97 | 25 | 974 | 30 | 0.2 |
| Medical Office/Clinic | 1000 sq. ft. | Various | 31 | 523.76 | 300 | 157,128 | 30 | 39.3 |
| Miscellaneous | Sewage | Various | 29 | 284.84 | 260 | 74,058 | 30 | 18.5 |
| Mortuary/Funeral Home | 1000 sq. ft. | 1 | 1 | 4.04 | 100 | 404 | 30 | 0.1 |
| Night Club | 1000 sq. ft. | 1 | 5 | 23.82 | 350 | 8,337 | 51 | 3.5 |
| Office General | 1000 sq. ft. | Various | 205 | 2,133.19 | 200 | 426,638 | 30 | 106.7 |
| Open Storage | 1000 sq. ft. | 1 | 6 | 230.7 | 25 | 5,768 | 30 | 1.4 |
| Private Elementary/Jr. High School | 1000 sq. ft. | Various | 18 | 159.94 | 200 | 31,989 | 30 | 8.0 |
| Regional Mall | 1000 sq. ft. | Various | 25 | 1,254.61 | 150 | 188,192 | 30 | 47.1 |
| RV Park/Campground | Spaces | 1 | 1 | 103.00 | 55 | 5,665 | 30 | 1.4 |
| School Used One Day per Week | 1000 sq. ft. | 1 | 1 | 28.49 | 50 | 1,425 | 30 | 0.4 |

Table 3.6-8 SCVSD Estimated Commercial Chloride Load, 2009

| Description | Usage Unit | Water Usage Correction | Count | No. Units | Flow per Unit (gpd) | Total Flow (gpd) | Chloride Conc. Above Water Supply (mg/L) | Chloride Load Above Water Supply (lbs/day) |
|-----------------------------------|--------------|------------------------|--------------|---------------|---------------------|------------------|--|--|
| Service and Repair Shop | 1000 sq. ft. | 1 | 4 | 13.94 | 100 | 1,394 | 30 | 0.3 |
| Shopping Center | 1000 sq. ft. | Various | 120 | 2,024.14 | 325 | 657,846 | 30 | 164.6 |
| Swimming Pool/Stadium | 1000 sq. ft. | 1 | 1 | 1.20 | 350 | 420 | 46 | 0.2 |
| TV/Film Studio | 1000 sq. ft. | 1 | 3 | 89.02 | 25 | 2,226 | 30 | 0.6 |
| University | Student | 1 | 1 | 1,000.00 | 20 | 20,000 | 30 | 5.0 |
| Vehicle Fueling Station | 1000 sq. ft. | 1 | 12 | 26.64 | 100 | 2,664 | 30 | 0.7 |
| Vehicle Maintenance & Repair Shop | 1000 sq. ft. | 1 | 22 | 262.49 | 100 | 26,249 | 30 | 6.6 |
| Vehicle Paint and Body | 1000 sq. ft. | 1 | 41 | 258.16 | 100 | 25,816 | 30 | 6.5 |
| Vehicle Sales, Rental & Showroom | 1000 sq. ft. | 1 | 10 | 207.52 | 100 | 20,752 | 30 | 5.2 |
| Veterinary Office | 1000 sq. ft. | 1 | 1 | 4.24 | 300 | 1,272 | 30 | 0.3 |
| Warehouse Store | 1000 sq. ft. | 1 | 5 | 388.59 | 100 | 38,859 | 30 | 9.7 |
| Warehouse/Self Storage | 1000 sq. ft. | Various | 274 | 10,090.68 | 25 | 252,267 | 30 | 63.1 |
| Totals | | | 1,603 | 34,055 | | 3,183,121 | 33.1 | 879 |

Table 3.6-9 SCVSD Estimated Commercial Chloride Load, 2010

| Description | Usage Unit | Water Usage Correction | Count | No. Units | Flow per Unit (gpd) | Total Flow (gpd) | Chloride Conc. Above Water Supply (mg/L) | Chloride Load Above Water Supply (lbs/day) |
|------------------------------------|--------------|------------------------|-------|-----------|---------------------|------------------|--|--|
| Agricultural Feed Lot | 1000 sq. ft. | 1 | 1 | 0.32 | 200 | 64 | 30 | 0.0 |
| Animal Kennel | 1000 sq. ft. | 1 | 1 | 8.22 | 100 | 822 | 30 | 0.2 |
| Arcade/Pool Hall | 1000 sq. ft. | 1 | 1 | 6.00 | 350 | 2,100 | 30 | 0.5 |
| Assisted Care/Home for Aged | Beds | Various | 8 | 504.17 | 125 | 63,021 | 30 | 15.8 |
| Athletic Stadium | People | 1 | 2 | 188.79 | 10 | 1,888 | 30 | 0.5 |
| Auditorium | 1000 sq. ft. | 1 | 3 | 38.37 | 350 | 13,430 | 30 | 3.4 |
| Bank, Savings & Loan, Credit Union | 1000 sq. ft. | 1 | 17 | 101.50 | 100 | 10,150 | 30 | 2.5 |
| Beauty Salon | 1000 sq. ft. | 1 | 1 | 1.35 | 100 | 135 | 30 | 0.0 |
| Bowling/Skating | 1000 sq. ft. | 1 | 2 | 102.20 | 150 | 15,330 | 30 | 3.8 |
| Car Wash, Non-Recycling Type | 1000 sq. ft. | 1 | 2 | 5.23 | 3,700 | 19,351 | 6 | 1.0 |
| Car Wash, Recycling Type | 1000 sq. ft. | 1 | 1 | 2.35 | 2,700 | 6,345 | 6 | 0.3 |
| Car Wash, Wand Type | 1000 sq. ft. | 1 | 2 | 4.65 | 700 | 3,255 | 6 | 0.2 |
| Church/Chapel/Sanctuary | 1000 sq. ft. | 1 | 40 | 638.59 | 50 | 31,930 | 30 | 8.0 |
| Club/Lodge Hall | 1000 sq. ft. | 1 | 7 | 50.71 | 125 | 6,339 | 51 | 2.7 |
| Convalescent & Nursing | Beds | 1 | 2 | 195 | 125 | 24,375 | 30 | 6.1 |
| Day Care & Preschool | 1000 sq. ft. | 1 | 1 | 29.10 | 200 | 5,820 | 30 | 1.5 |
| Fast Food Restaurant | 1000 sq. ft. | Various | 7 | 11.78 | 1,000 | 11,780 | 51 | 5.0 |
| Full Service Restaurant | 1000 sq. ft. | Various | 60 | 224.39 | 1,000 | 224,393 | 51 | 95.4 |
| General Merchandise Store | 1000 sq. ft. | Various | 161 | 2,794.34 | 100 | 279,434 | 30 | 69.9 |
| Golf Course & Park | 1000 sq. ft. | 1 | 11 | 239.68 | 100 | 23,968 | 30 | 6.0 |
| Grocery Store | 1000 sq. ft. | 1 | 13 | 421.44 | 150 | 63,216 | 79 | 41.7 |
| Gym/Health Club (w/showers) | 1000 sq. ft. | Various | 3 | 129.91 | 600 | 77,948 | 46 | 29.9 |
| Heavy Manufacturing | 1000 sq. ft. | 1 | 2 | 46.05 | 200 | 9,210 | 84 | 6.5 |
| Hotel/Motel | Rooms | Various | 19 | 1,481 | 125 | 185,138 | 37 | 57.1 |
| Indoor Cinema/Theater | 1000 sq. ft. | 1 | 2 | 130.07 | 125 | 16,259 | 77 | 10.4 |
| Library | 1000 sq. ft. | 1 | 1 | 21 | 100 | 2,100 | 30 | 0.5 |
| Light Manufacturing | 1000 sq. ft. | Various | 431 | 7,984.53 | 25 | 199,613 | 30 | 49.9 |
| Lumber Yard | 1000 sq. ft. | 1 | 1 | 38.97 | 25 | 974 | 30 | 0.2 |
| Medical Office/Clinic | 1000 sq. ft. | Various | 44 | 642.85 | 300 | 192,855 | 30 | 48.3 |
| Miscellaneous | Sewage | 1 | 20 | 107.20 | 260 | 27,872 | 30 | 7.0 |
| Mortuary/Funeral Home | 1000 sq. ft. | 1 | 1 | 4.04 | 100 | 404 | 30 | 0.1 |
| Night Club | 1000 sq. ft. | 1 | 5 | 23.82 | 350 | 8,337 | 51 | 3.5 |
| Office General | 1000 sq. ft. | Various | 194 | 2,417.31 | 200 | 483,461 | 30 | 121.0 |
| Open Storage | 1000 sq. ft. | 1 | 6 | 230.7 | 25 | 5,768 | 30 | 1.4 |
| Private Elementary/Jr. High School | 1000 sq. ft. | 1 | 18 | 180.45 | 200 | 36,090 | 30 | 9.0 |
| Regional Mall | 1000 sq. ft. | Various | 24 | 1,202.13 | 150 | 180,320 | 30 | 45.1 |

Table 3.6-9 SCVSD Estimated Commercial Chloride Load, 2010

| Description | Usage Unit | Water Usage Correction | Count | No. Units | Flow per Unit (gpd) | Total Flow (gpd) | Chloride Conc. Above Water Supply (mg/L) | Chloride Load Above Water Supply (lbs/day) |
|-----------------------------------|--------------|------------------------|--------------|---------------|---------------------|------------------|--|--|
| RV Park/Campground | Spaces | 1 | 1 | 103.00 | 55 | 5,665 | 30 | 1.4 |
| School Used One Day per Week | 1000 sq. ft. | 1 | 1 | 28.49 | 50 | 1,425 | 30 | 0.4 |
| Service and Repair Shop | 1000 sq. ft. | 1 | 4 | 13.94 | 100 | 1,394 | 30 | 0.3 |
| Shopping Center | 1000 sq. ft. | Various | 132 | 3,166.37 | 325 | 1,029,070 | 30 | 257.5 |
| Swimming Pool/Stadium | 1000 sq. ft. | 1 | 1 | 1.20 | 350 | 420 | 46 | 0.2 |
| TV/Film Studio | 1000 sq. ft. | 1 | 3 | 89.02 | 25 | 2,226 | 30 | 0.6 |
| Vehicle Fueling Station | 1000 sq. ft. | 1 | 11 | 24.37 | 100 | 2,437 | 30 | 0.6 |
| Vehicle Maintenance & Repair Shop | 1000 sq. ft. | 1 | 22 | 262.49 | 100 | 26,249 | 30 | 6.6 |
| Vehicle Paint and Body | 1000 sq. ft. | 1 | 39 | 252.13 | 100 | 25,213 | 30 | 6.3 |
| Vehicle Sales, Rental & Showroom | 1000 sq. ft. | 1 | 10 | 207.52 | 100 | 20,752 | 30 | 5.2 |
| Veterinary Office | 1000 sq. ft. | 1 | 1 | 4.24 | 300 | 1,272 | 30 | 0.3 |
| Warehouse Store | 1000 sq. ft. | 1 | 5 | 388.59 | 100 | 38,859 | 30 | 9.7 |
| Warehouse/Self Storage | 1000 sq. ft. | Various | 281 | 10,620.40 | 25 | 265,510 | 30 | 66.4 |
| Totals | | | 1,625 | 35,370 | | 3,653,986 | 33.1 | 1,010 |

Table 3.6-10 SCVSD Estimated Commercial Chloride Load, 2011

| Description | Usage Unit | Water Usage Correction | Count | No. Units | Flow per Unit (gpd) | Total Flow (gpd) | Chloride Conc. Above Water Supply (mg/L) | Chloride Load Above Water Supply (lbs/day) |
|--------------------------------------|--------------|------------------------|-------|-----------|---------------------|------------------|--|--|
| Agricultural Feed Lot | 1000 sq. ft. | 1 | 1 | 0.32 | 200 | 64 | 30 | 0.0 |
| Animal Kennel | 1000 sq. ft. | 1 | 1 | 4.57 | 100 | 457 | 30 | 0.1 |
| Arcade/Pool Hall | 1000 sq. ft. | 1 | 1 | 6.00 | 350 | 2,100 | 30 | 0.5 |
| Assisted Care/Home for Aged | Beds | Various | 8 | 503.43 | 125 | 62,928 | 30 | 15.7 |
| Auditorium | 1000 sq. ft. | 1 | 3 | 38.37 | 350 | 13,430 | 30 | 3.4 |
| Bank, Savings & Loan, Credit Union | 1000 sq. ft. | 1 | 17 | 111.75 | 100 | 11,175 | 30 | 2.8 |
| Beauty Salon | 1000 sq. ft. | 1 | 1 | 1.35 | 100 | 135 | 30 | 0.0 |
| Bowling/Skating | 1000 sq. ft. | 1 | 2 | 102.20 | 150 | 15,330 | 30 | 3.8 |
| Car Wash, Non-Recycling Type | 1000 sq. ft. | 1 | 2 | 5.23 | 3,700 | 19,351 | 6 | 1.0 |
| Car Wash, Recycling Type | 1000 sq. ft. | 1 | 1 | 2.35 | 2,700 | 6,345 | 6 | 0.3 |
| Car Wash, Wand Type | 1000 sq. ft. | 1 | 2 | 4.65 | 700 | 3,255 | 6 | 0.2 |
| Church/Chapel/Sanctuary | 1000 sq. ft. | 1 | 41 | 628.35 | 50 | 31,418 | 30 | 7.9 |
| Club/Lodge Hall | 1000 sq. ft. | 1 | 8 | 69.77 | 125 | 8,721 | 51 | 3.7 |
| Convalescent & Nursing | Beds | 1 | 2 | 195 | 125 | 24,375 | 30 | 6.1 |
| Dance/Music/Arts/Martial Arts School | 1000 sq. ft. | 1 | 1 | 7 | 200 | 1,344 | 30 | 0.3 |
| Day Care & Preschool | 1000 sq. ft. | 1 | 2 | 16.13 | 200 | 3,226 | 30 | 0.8 |
| Fast Food Restaurant | 1000 sq. ft. | Various | 13 | 36.04 | 1,000 | 36,045 | 51 | 15.3 |
| Full Service Restaurant | 1000 sq. ft. | Various | 62 | 247.97 | 1,000 | 247,968 | 51 | 105.5 |
| General Merchandise Store | 1000 sq. ft. | 1 | 114 | 2,836.30 | 100 | 283,630 | 30 | 71.0 |
| Golf Course & Park | 1000 sq. ft. | 1 | 12 | 257.61 | 100 | 25,761 | 30 | 6.4 |
| Grocery Store | 1000 sq. ft. | 1 | 15 | 477.38 | 150 | 71,607 | 79 | 47.2 |
| Gym/Health Club (w/showers) | 1000 sq. ft. | 1 | 4 | 198.24 | 600 | 118,944 | 46 | 45.6 |
| Heavy Manufacturing | 1000 sq. ft. | 1 | 3 | 96.89 | 200 | 19,378 | 84 | 13.6 |
| Health Services Office | 1000 sq. ft. | 1 | 1 | 52.90 | 300 | 15,870 | 30 | 4.0 |
| Hotel/Motel | Rooms | 1 | 19 | 1,980 | 125 | 247,500 | 37 | 76.4 |
| Indoor Cinema/Theater | 1000 sq. ft. | 1 | 2 | 130.07 | 125 | 16,259 | 77 | 10.4 |
| Library | 1000 sq. ft. | 1 | 1 | 21 | 100 | 2,100 | 30 | 0.5 |
| Light Manufacturing | 1000 sq. ft. | Various | 426 | 7,642.86 | 25 | 191,072 | 30 | 47.8 |
| Lumber Yard | 1000 sq. ft. | 1 | 1 | 38.97 | 25 | 974 | 30 | 0.2 |
| Medical Office/Clinic | 1000 sq. ft. | 1 | 49 | 695.31 | 300 | 208,593 | 30 | 52.2 |
| Miscellaneous | Sewage | Various | 17 | 40.42 | 260 | 10,509 | 30 | 2.6 |
| Mortuary/Funeral Home | 1000 sq. ft. | 1 | 1 | 4.04 | 100 | 404 | 30 | 0.1 |
| Night Club | 1000 sq. ft. | 1 | 1 | 10.53 | 350 | 3,686 | 51 | 1.6 |
| Office General | 1000 sq. ft. | Various | 216 | 3,321.78 | 200 | 664,356 | 30 | 166.2 |
| Open Storage | 1000 sq. ft. | 1 | 5 | 50.7 | 25 | 1,268 | 30 | 0.3 |
| Private Elementary/Jr. High School | 1000 sq. ft. | 1 | 16 | 166.62 | 200 | 33,324 | 30 | 8.3 |

Table 3.6-10 SCVSD Estimated Commercial Chloride Load, 2011

| Description | Usage Unit | Water Usage Correction | Count | No. Units | Flow per Unit (gpd) | Total Flow (gpd) | Chloride Conc. Above Water Supply (mg/L) | Chloride Load Above Water Supply (lbs/day) |
|-----------------------------------|--------------|------------------------|--------------|---------------|---------------------|------------------|--|--|
| Private University | 1000 sq. ft. | 1 | 1 | 1,107.00 | 20 | 22,140 | 30 | 5.5 |
| Regional Mall | 1000 sq. ft. | 1 | 4 | 86.45 | 150 | 12,968 | 30 | 3.2 |
| RV Park/Campground | Spaces | 1 | 1 | 103.00 | 55 | 5,665 | 30 | 1.4 |
| School Used One Day per Week | 1000 sq. ft. | 1 | 1 | 28.49 | 50 | 1,425 | 30 | 0.4 |
| Service and Repair Shop | 1000 sq. ft. | 1 | 4 | 13.94 | 100 | 1,394 | 30 | 0.3 |
| Shopping Center | 1000 sq. ft. | Various | 196 | 4,403.31 | 325 | 1,431,077 | 30 | 358.1 |
| Swimming Pool/Stadium | 1000 sq. ft. | 1 | 1 | 1.20 | 350 | 420 | 46 | 0.2 |
| TV/Film Studio | 1000 sq. ft. | 1 | 4 | 142.20 | 25 | 3,555 | 30 | 0.9 |
| Vehicle Fueling Station | 1000 sq. ft. | 1 | 12 | 30.61 | 100 | 3,061 | 30 | 0.8 |
| Vehicle Maintenance & Repair Shop | 1000 sq. ft. | 1 | 23 | 270.09 | 100 | 27,009 | 30 | 6.8 |
| Vehicle Paint and Body | 1000 sq. ft. | 1 | 37 | 243.06 | 100 | 24,306 | 30 | 6.1 |
| Vehicle Sales, Rental & Showroom | 1000 sq. ft. | 1 | 11 | 214.01 | 100 | 21,401 | 30 | 5.4 |
| Veterinary Office | 1000 sq. ft. | 1 | 2 | 15.15 | 300 | 4,545 | 30 | 1.1 |
| Warehouse Store | 1000 sq. ft. | 1 | 9 | 502.26 | 100 | 50,226 | 30 | 12.6 |
| Warehouse/Self Storage | 1000 sq. ft. | Various | 309 | 11,372.98 | 25 | 284,325 | 30 | 71.1 |
| Totals | | | 1,686 | 38,536 | | 4,296,415 | 33.4 | 1,196 |

Table 3.7-2 Saugus Liquid Waste Disposal Station Chloride Concentrations

| Date | Description | Type | Chloride (mg/L) |
|---|--------------------------------------|-----------------|-----------------|
| Chemical Toilet Waste | | | |
| 06/01/2000 | Toilet; Gump; Arnold; #59989 | Chemical Toilet | 447 |
| 08/24/2000 | Meyers; Mark, S&S Sanitation | Chemical Toilet | 1,530 |
| 11/09/2000 | Toilet; Gump; #62847 | Chemical Toilet | 306 |
| 01/25/2001 | S&S; Jim; #73889 | Chemical Toilet | 2,390 |
| 01/26/2001 | 26954 Ruether Ave; Gump; #68289 | Chemical Toilet | 319 |
| 01/26/2001 | 26954 Ruether Ave; Gump; #61027 | Chemical Toilet | 825 |
| 01/26/2001 | Ruether Ave; Gump; #76616 | Chemical Toilet | 1,620 |
| 01/26/2001 | S&S; PO Box 220027; #73892 | Chemical Toilet | 2,460 |
| 01/26/2001 | S&S; PO Box 220027; #73893 | Chemical Toilet | 2,650 |
| 05/25/2001 | S. Pacific Bay; Gump; #83289 | Chemical Toilet | 925 |
| 05/25/2001 | S&S #36952 | Chemical Toilet | 978 |
| 05/25/2001 | Gump#83261 | Chemical Toilet | 1,730 |
| 05/25/2001 | S&S#84817 | Chemical Toilet | 1,920 |
| 07/23/2001 | Gump | Chemical Toilet | 799 |
| 12/5/2003 | S&S #982161 | Chemical Toilet | 1,220 |
| Chemical Toilet Average Chloride Concentration | | | 1,341 |
| Septic Waste | | | |
| 01/31/2000 | Sierra Cross Apts; Martin; #74998 | Septic | 121 |
| 04/20/2000 | Myers; Mark; #65567 | Septic | 82 |
| 04/28/2000 | Septic; Gump; Carlos; #57900 | Septic | 83 |
| 05/15/2000 | Septic; Martin; Leonard; #58975 | Septic | 120 |
| 06/20/2000 | Martin; Joe | Septic | 87 |
| 07/14/2000 | Septic; Bohmers; #69958 | Septic | 135 |
| 07/19/2000 | Septic; Myers; Mark | Septic | 139 |
| 08/07/2000 | Sierra Cross Apts; Martin | Septic | 98 |
| 11/14/2000 | Septic; Gump; #62950 | Septic | 87 |
| 12/06/2000 | Septic; Honey Dip; #56307 | Septic | 123 |
| 12/19/2000 | Septic; Gump; #61964 | Septic | 148 |
| 01/17/2001 | Septic; L.A. Fire #88; Martin; Larry | Septic | 97 |
| 01/24/2001 | Wildlife Waystation: Westec #66724 | Septic | 51 |
| 02/06/2001 | Simpson; Myers; #60782 | Septic | 1,570 |
| 02/09/2001 | Gerlock; Myers; #70031 | Septic | 172 |
| 02/22/2001 | Domel Ln; Myers; Frank; #70040 | Septic | 146 |
| 02/26/2001 | Sierra Cross Apts; Martin | Septic | 448 |
| 03/27/2001 | LA City Fire #69; Martin | Septic | 125 |
| 04/04/2001 | SierraHts M.H.P., Martin #80485 | Septic | 119 |
| 04/16/2001 | Sierra Cross Apt; Martin #80540 | Septic | 218 |
| 04/20/2001 | Sierra Cross Apt; Martin #80561 | Septic | 144 |
| 05/11/2001 | Wastec; Felipe; #66798 | Septic | 76 |
| 06/11/2001 | 30000 Sand Canyon; Martin#85430 | Septic | 166 |
| 06/22/2001 | Sierra Heights; Martin#82541 | Septic | 201 |
| 07/23/2001 | Martinez; Myers; #86294 | Septic | 285 |
| 08/14/2001 | Sierra Heights; Gump:#87998 | Septic | 142 |
| 09/19/2001 | Sierra Cross Apts; Martin | Septic | 158 |

Table 3.7-2 Saugus Liquid Waste Disposal Station Chloride Concentrations

| Date | Description | Type | Chloride (mg/L) |
|--|--|-------------|------------------------|
| 01/16/2002 | CBM #047595 | Septic | 198 |
| 02/26/2002 | Sierra Hts. Mobile #105033 | Septic | 171 |
| 03/15/2002 | Myers, #947218 | Septic | 113 |
| 03/18/2002 | Sierra Hts #105074/947319 | Septic | 171 |
| 04/18/2002 | Wastec, Burbank P.D., #948964 | Septic | 154 |
| 08/02/2002 | Lester Bowers; Bohmer #954388 | Septic | 92 |
| 08/09/2002 | Wastec #954767 | Septic | 70 |
| 08/13/2002 | Gump; Art Strategic; #954918 | Septic | 129 |
| 09/04/2002 | Canyon Country Est., Ed's Pumping | Septic | 103 |
| 09/13/2002 | Gump; Carlos, #956434 | Septic | 162 |
| 09/30/2002 | Bohmers; Michael #957243 | Septic | 149 |
| 10/22/2002 | #958360 | Septic | 271 |
| 12/06/2002 | Martin, Willie #960682 | Septic | 208 |
| 01/23/2003 | Nogle; Larry #962386 | Septic | 131 |
| 02/10/2003 | Bohmers; Michael | Septic | 298 |
| 03/06/2003 | Burbank PD, Wastec #965983 | Septic | 152 |
| 04/25/2003 | Myers; #968792 | Septic | 143 |
| 06/04/2003 | Sage; L. Peterson #971204 | Septic | 240 |
| 08/22/2003 | Stiober; L. Peterson #976454 | Septic | 161 |
| 10/20/2003 | Gump (various sites); Carlos #979567 | Septic | 171 |
| 11/03/2003 | Bohmers #980323 | Septic | 348 |
| 12/10/2003 | Septic, Newhall Oak Tree Gun Club, #982820 | Septic | 143 |
| 12/17/2003 | Septic, Boeing Rocketdyne; Larry #982820 | Septic | 99 |
| 01/08/2004 | Wastec #983991 | Septic | 224 |
| 01/11/2004 | Septic, Mitch CC; Myers #986014 | Septic | 149 |
| 01/23/2004 | Septic, Bohmers, #984919 | Septic | 154 |
| 03/02/2004 | Saugus | Septic | 121 |
| 03/09/2004 | Septic, Bohmers, Eddie #987683 | Septic | 143 |
| 03/19/2004 | Mt. View Apt; Rob #988422 | Septic | 90 |
| 03/29/2004 | Septic, Kay MHP, Peterson #988953 | Septic | 141 |
| 04/05/2004 | Boeing/Rock; Larry, #989395 | Septic | 113 |
| 04/13/2004 | K. Steeler, Bohmers #990036 | Septic | 121 |
| 04/21/2004 | Crescent Valley; Myers #990546 | Septic | 188 |
| 05/03/2004 | Septic, Nogle, #991229 | Septic | 116 |
| 05/26/2004 | Hortesia Silva; E. Bohmer #992705 | Septic | 110 |
| 06/09/2004 | Septic, Wildlife Waystation #993577 | Septic | 150 |
| 06/24/2004 | Bambilla; Jeff Schwartz #994529 | Septic | 130 |
| 7/17/2004 | Septic, Saddle Peak Lodge, Wastec #995988 | Septic | 207 |
| Septic Average Chloride Concentration | | | 175 |

Table 4.2-1 Facility Permits with Performance-Based Chloride Limits, 2011

| Permit No. | Industry Type | Company | Chloride Limit (mg/L) |
|------------|----------------------------|---|-----------------------|
| 20461 | Printing | Bang Printing Inc. | 160 |
| 20323A | Misc. Mfg. | Boston Scientific Neuromodulation Corp. | 200 |
| 20323B | Misc. Mfg. | Boston Scientific Neuromodulation Corp. | 200 |
| 9216 | Education | California Institute of the Arts | 425 |
| 15146 | Food | CFP Chocolate Holdings | 800 |
| 16158 | Swimming Pool | City of Santa Clarita Newhall Pool | 2,470 |
| 16160 | Swimming Pool | City of Santa Clarita North Oaks Pool | 2,780 |
| 16159 | Swimming Pool | City of Santa Clarita Santa Clarita Pool | 1,900 |
| 16161 | Swimming Pool | City of Santa Clarita Valencia Glen Pool | 4,650 |
| 16162 | Swimming Pool | City of Santa Clarita Valencia Meadows Pool | 1,800 |
| 8675 | Education | College of the Canyons | 500 |
| 15906 | Food | Dell'Olio Enterprises Inc. | 200 |
| 15750 | Misc. Mfg. | Eckert & Ziegler Isotope Products, Inc. | 220 |
| 12248 | Metal Finishing | Electrofilm Manufacturing Co. | 650 |
| 16436 | Gas Station/GW Remediation | Exxon-Mobil Corporation | 270 |
| 16861 | Gas Station/GW Remediation | Exxon-Mobil Corporation | 150 |
| 5599 | Misc. Mfg. | Gruber Systems Inc. | 400 |
| 11281 | Metal Finishing | Hamby Corporation | 200 |
| 20669 | Hospital | Henry Mayo Newhall Memorial Hospital | 215 |
| 20787 | Hospital | Henry Mayo Newhall Memorial Hospital | 260 |
| 16689 | Vehicle Main. | Honda Performance Development Inc. | 300 |
| 16687 | Misc. Mfg. | King Brothers Industries | 230 |
| 16575 | Misc. Mfg. | KLM Laboratories Inc. | 200 |
| 12347 | Misc. Mfg. | Lamsco West Inc. | 200 |
| 9332 | Theme Park | Magic Mountain, LLC | 190 |
| 9333 | Theme Park | Magic Mountain, LLC | 450 |
| 9334 | Theme Park | Magic Mountain, LLC | 190 |
| 9668 | Food | Mikailian Meat Products | 200 |
| 12265 | Correctional | Peter J. Pitchess Honor Rancho | 200 |
| 16215 | Pharmaceutical | Pharmavite LLC | 200 |
| 16514 | Pharmaceutical | Pharmavite LLC | 200 |
| 16077 | Swimming Pool | Santa Clarita Sports Complex/Aquatic Center | 2,100 |
| 13205 | Food | Santa Clarita Valley Food Services | 210 |
| 9704 | Misc. Mfg. | SGL Technic Inc. - Polycarbon Division | 325 |
| 12272 | Metal Finishing | Stoll Metalcraft Inc. | 160 |
| 14010A | Mail Processing | United States Postal Service | 435 |
| 12253 | Semiconductors | Wadden Systems | 200 |
| 12391 | Metal Finishing | Western Filter Corporation | 200 |
| 20554 | Metal Finishing | Woodward HRT Inc. | 350 |

Figures

Figure 3.9-1 Santa Clarita Valley Sanitation District Final Effluent Chloride

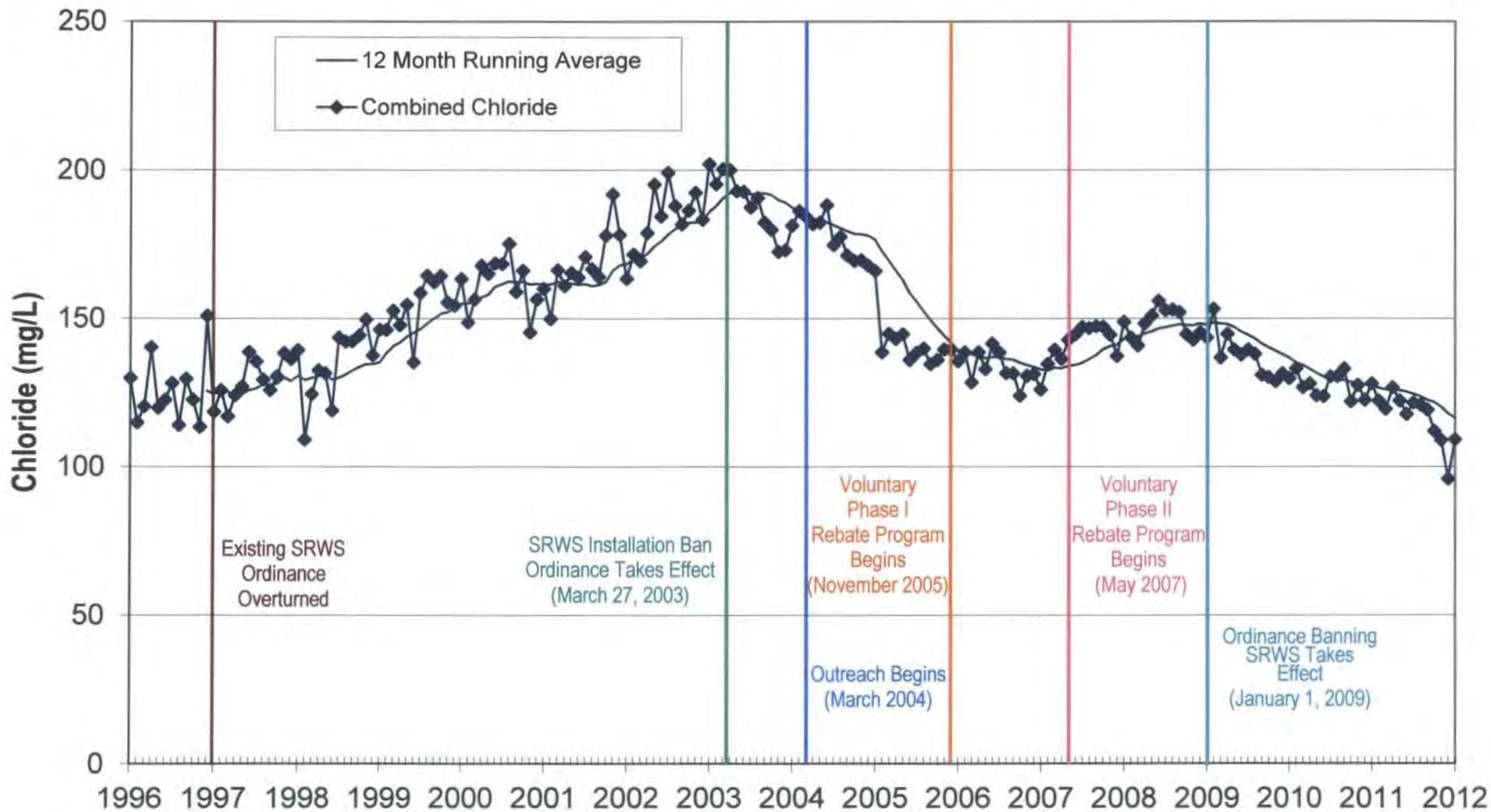
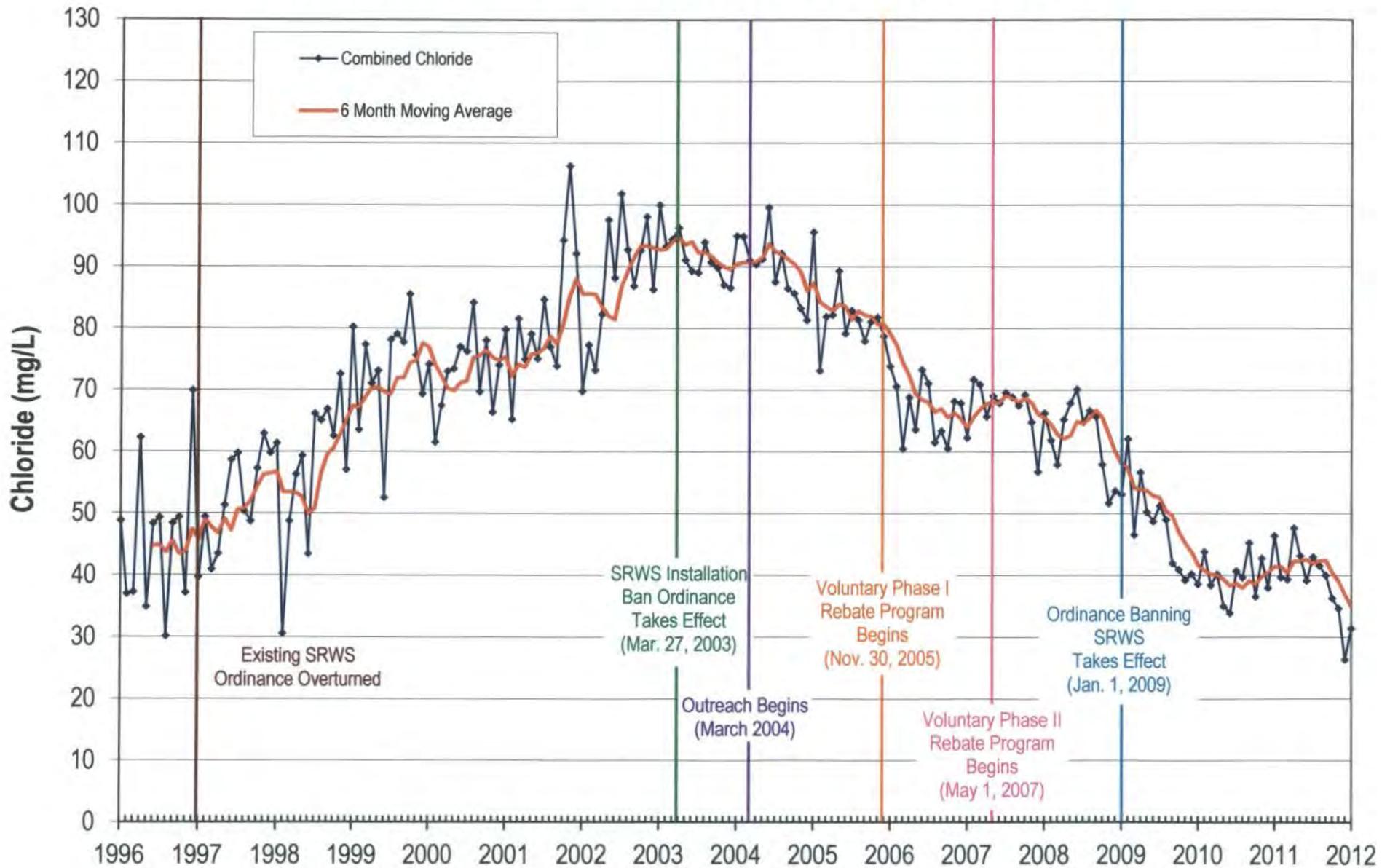
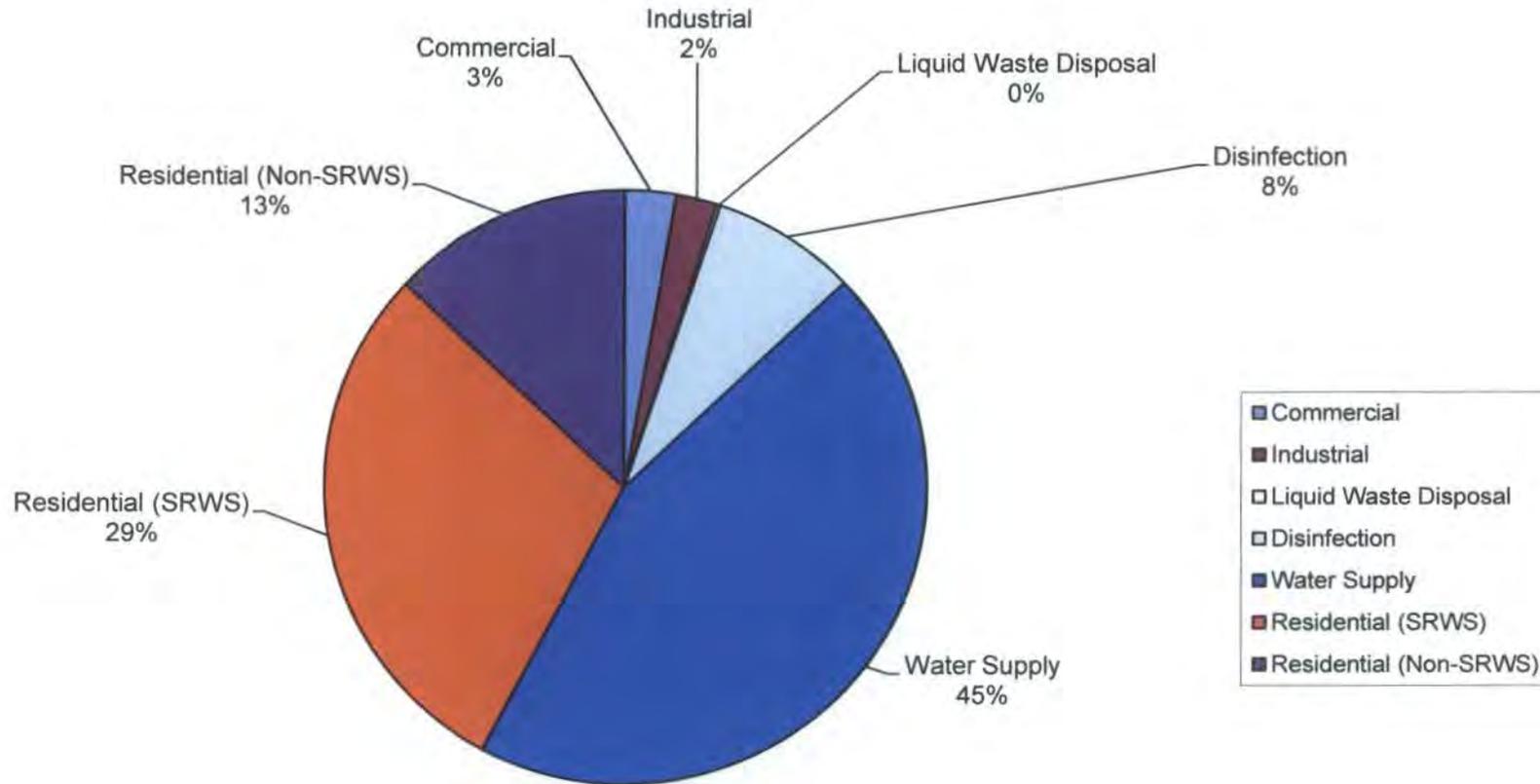


Figure 3.9-2
Estimated Chloride Added to SCVSD System by Users



**Figure 3.9-3
2002 Estimated Chloride Sources in the SCVSD Final Effluent**

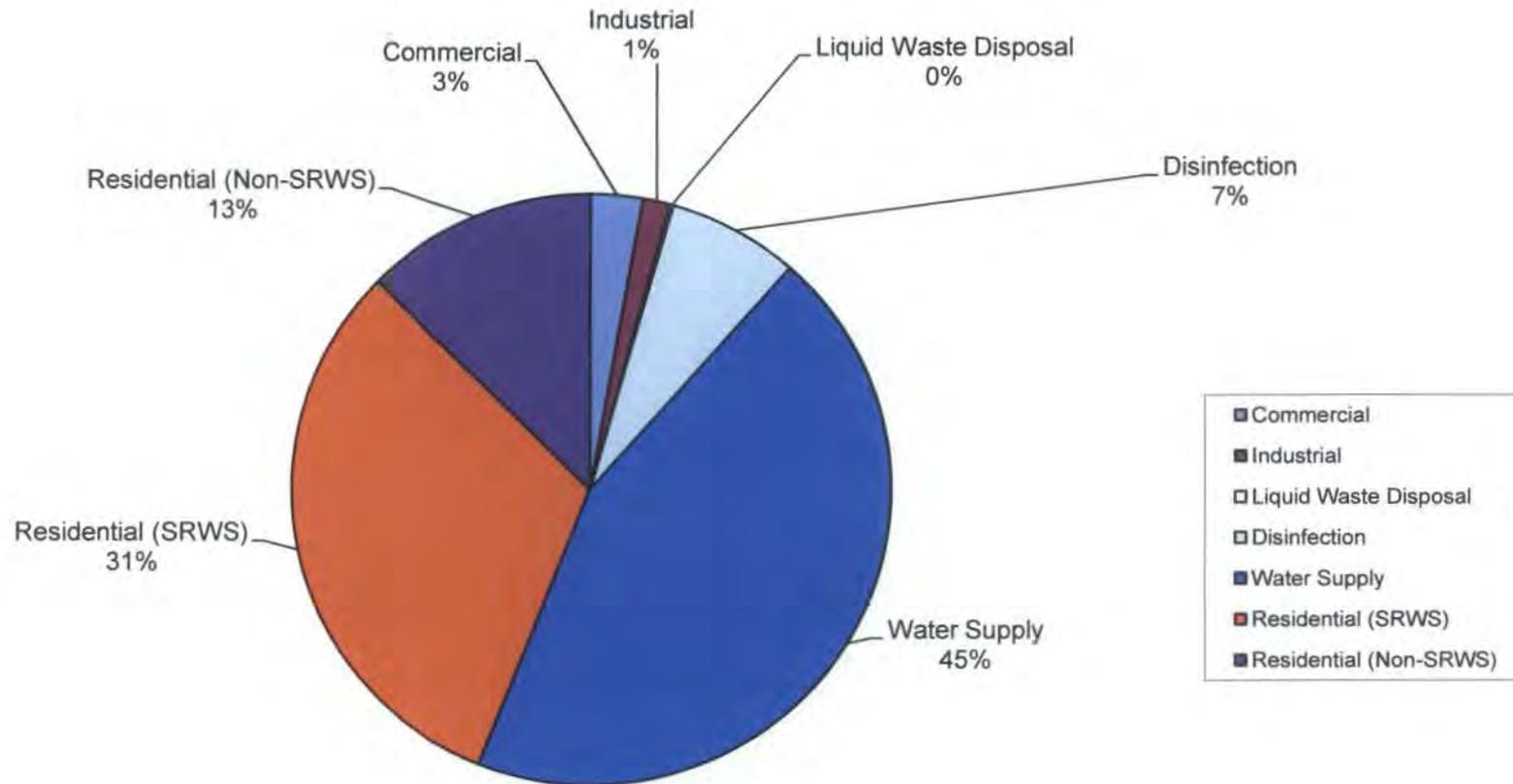


2002 SCVSD Final Effluent Chloride Concentration = 183 mg/L

2002 SCVSD Final Effluent Chloride Load = 27,431 ppd

Data presented are estimates based on numerous assumptions and best professional judgment.

Figure 3.9-4
2003 Estimated Chloride Sources in the SCVSD Final Effluent

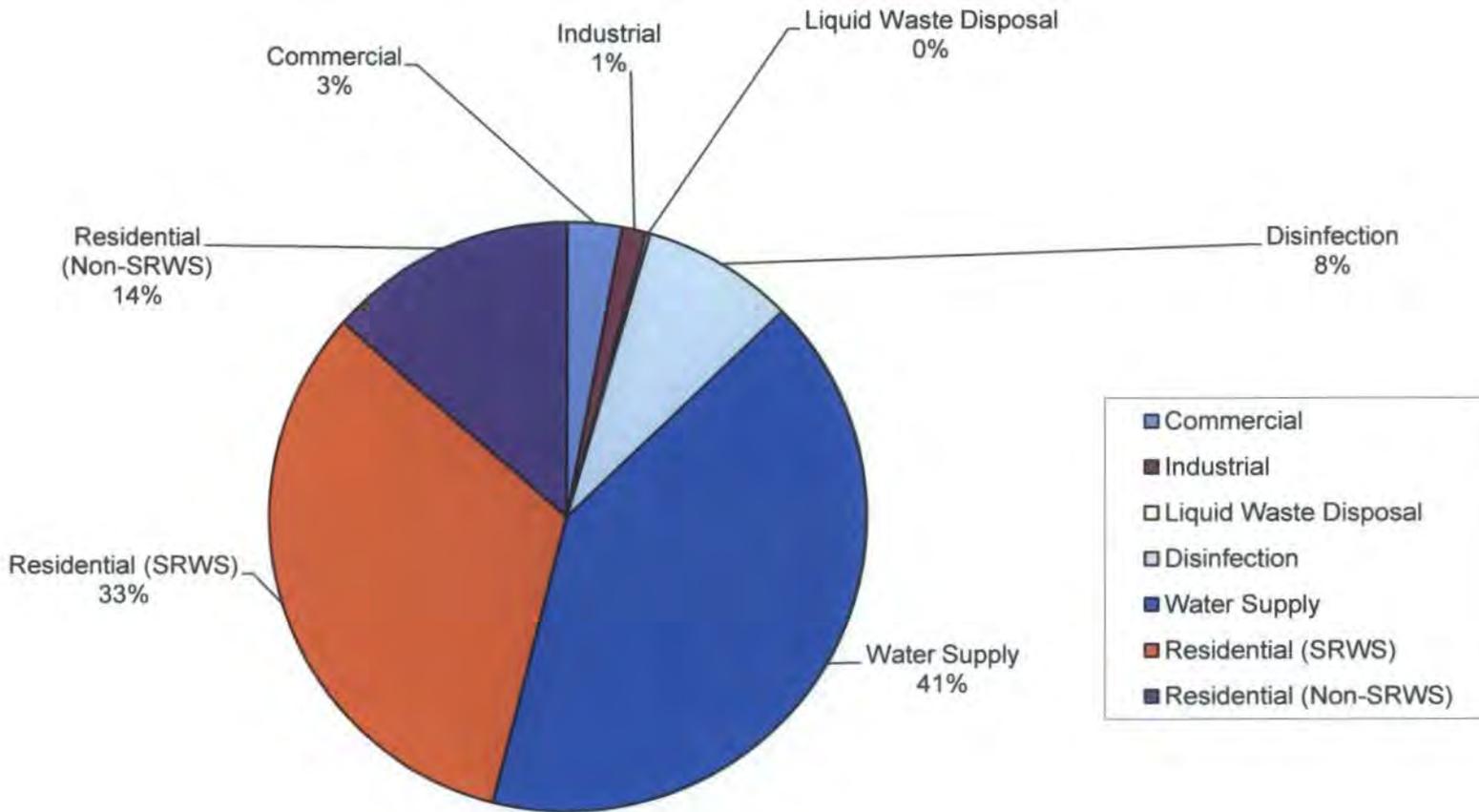


2003 SCVSD Final Effluent Chloride Concentration = 189 mg/L

2003 SCVSD Final Effluent Chloride Load = 28,563 ppd

Data presented are estimates based on numerous assumptions and best professional judgment.

Figure 3.9-5
2004 Estimated Chloride Sources in the SCVSD Final Effluent

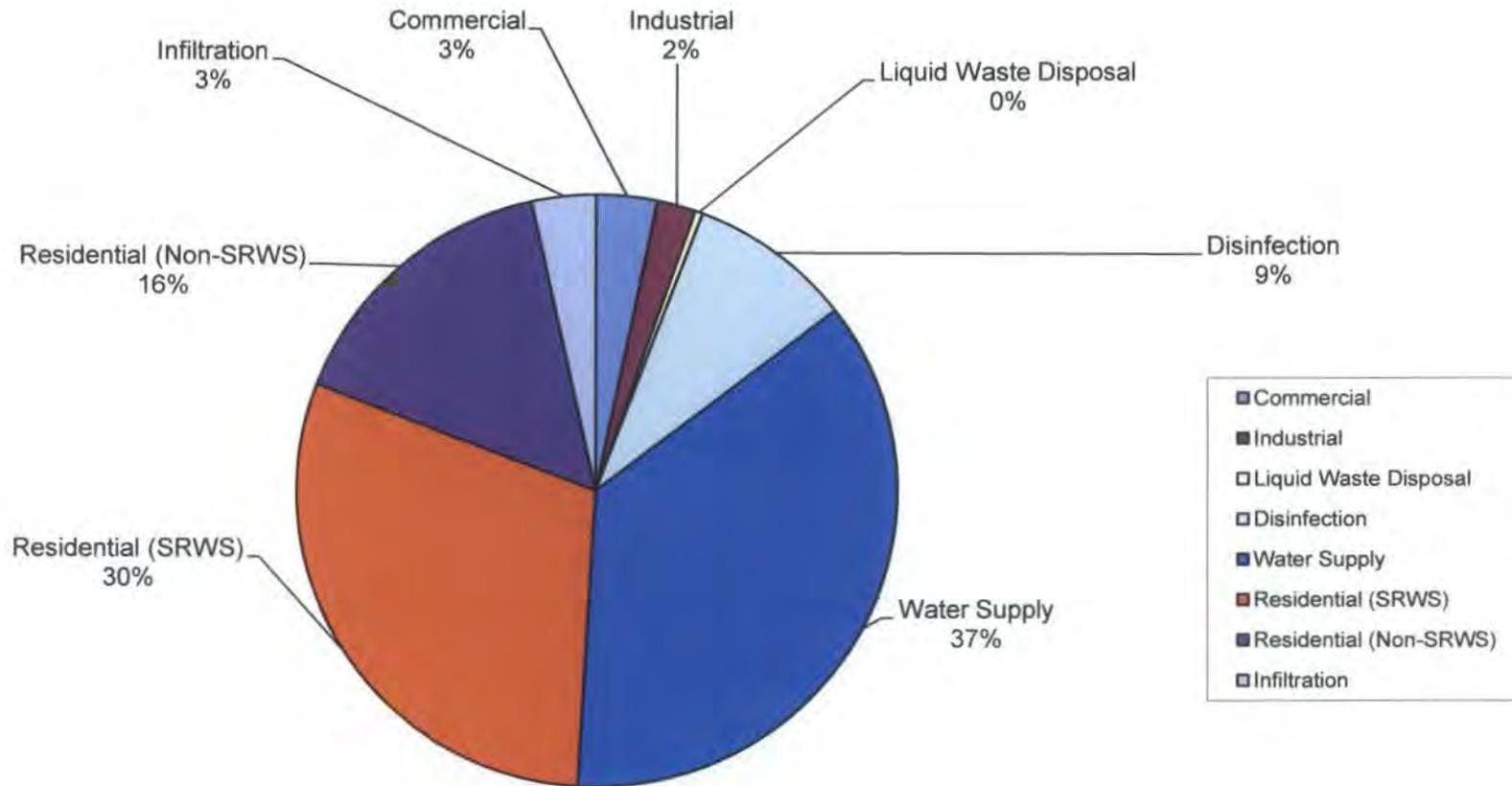


2004 SCVSD Final Effluent Chloride Concentration = 178 mg/L

2004 SCVSD Final Effluent Chloride Load = 27,887ppd

Data presented are estimates based on numerous assumptions and best professional judgment.

Figure 3.9-6
2005 Estimated Chloride Sources in the SCVSD Final Effluent

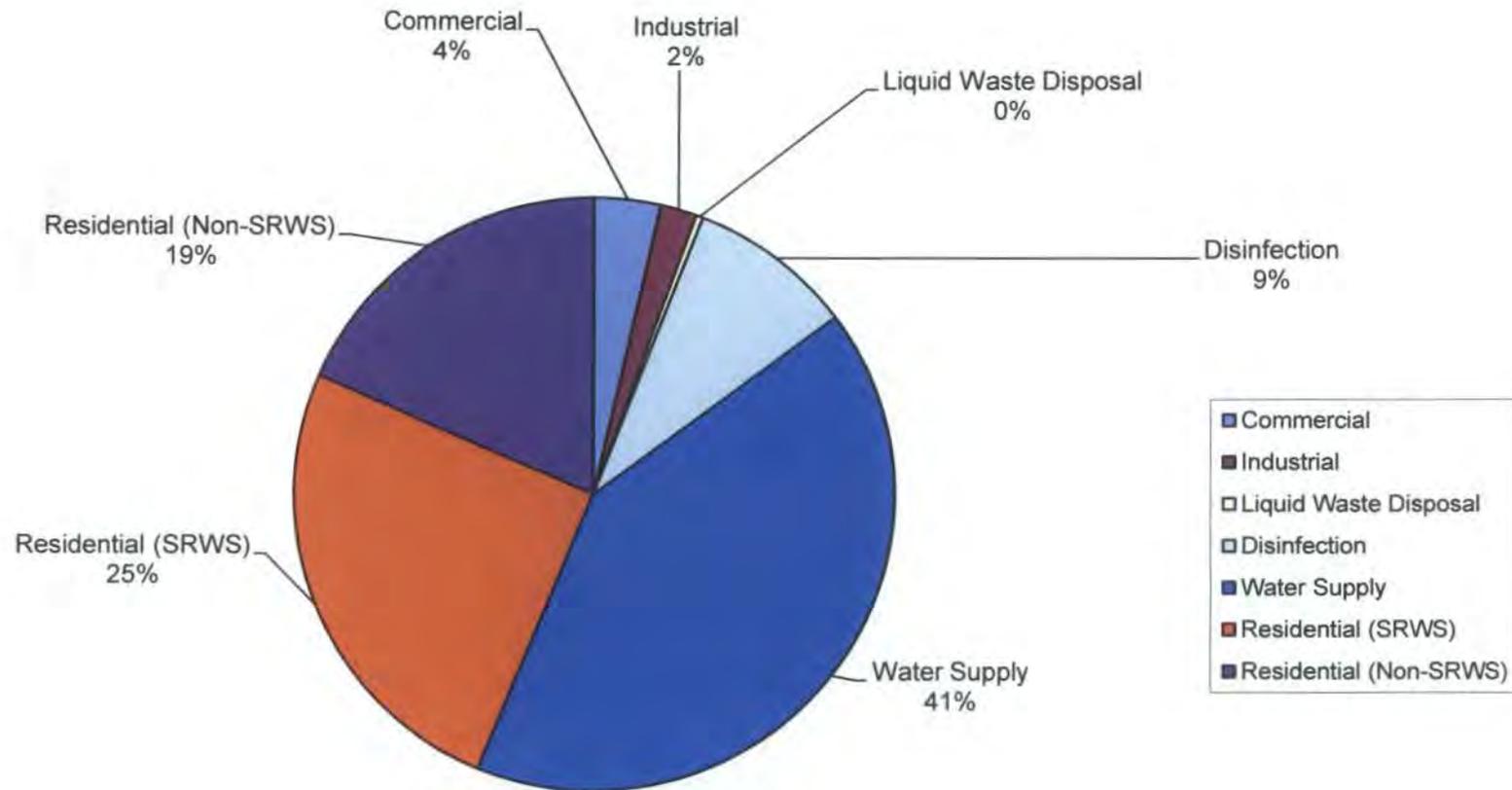


2005 SCVSD Final Effluent Chloride Concentration = 142 mg/L

2005 SCVSD Final Effluent Chloride Load = 24,996 ppd

Data presented are estimates based on numerous assumptions and best professional judgment.

Figure 3.9-7
2006 Estimated Chloride Sources in the SCVSD Final Effluent

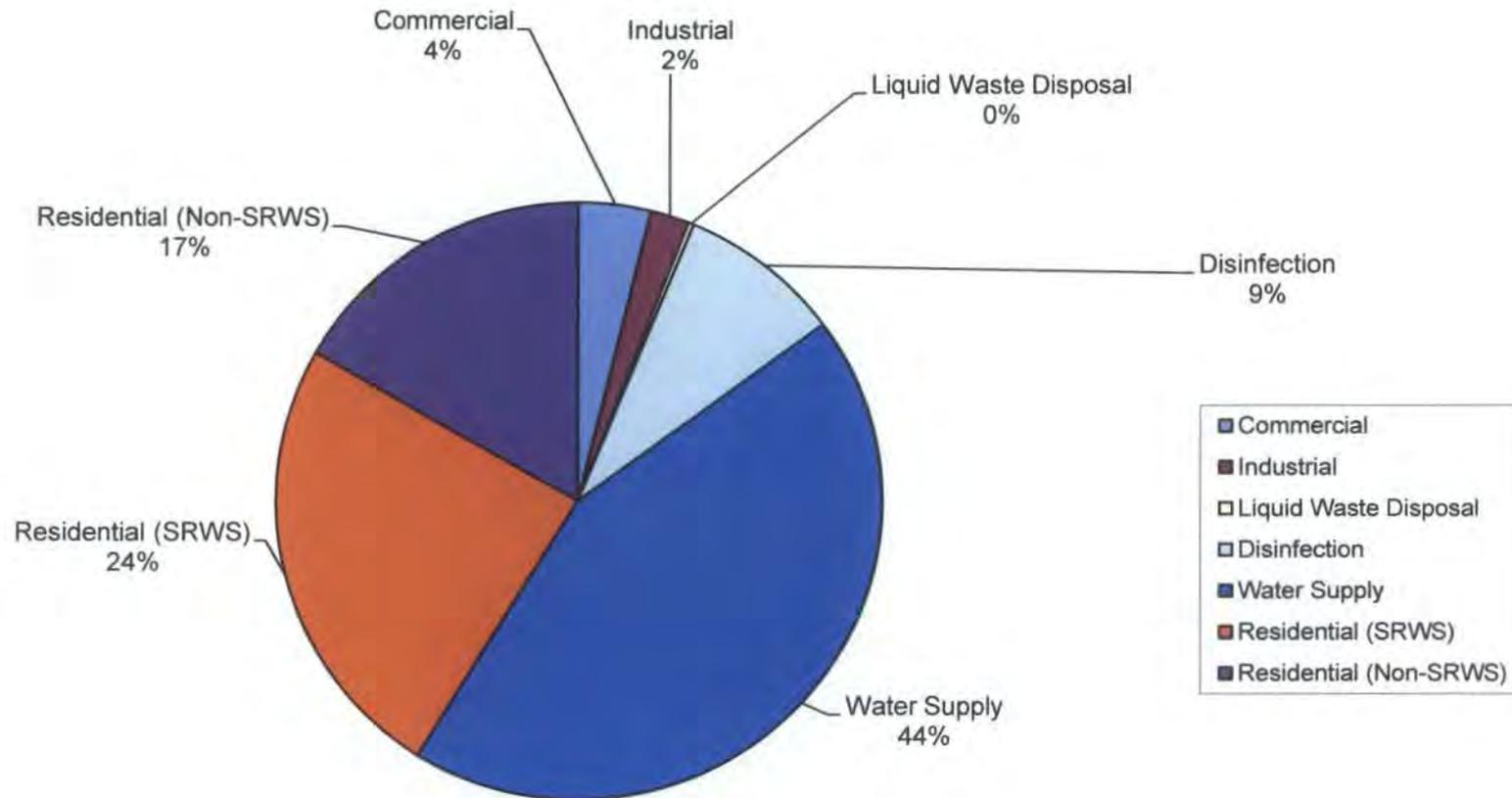


2006 SCVSD Final Effluent Chloride Concentration = 133 mg/L

2006 SCVSD Final Effluent Chloride Load = 23,141 ppd

Data presented are estimates based on numerous assumptions and best professional judgment.

Figure 3.9-8
2007 Estimated Chloride Sources in the SCVSD Final Effluent

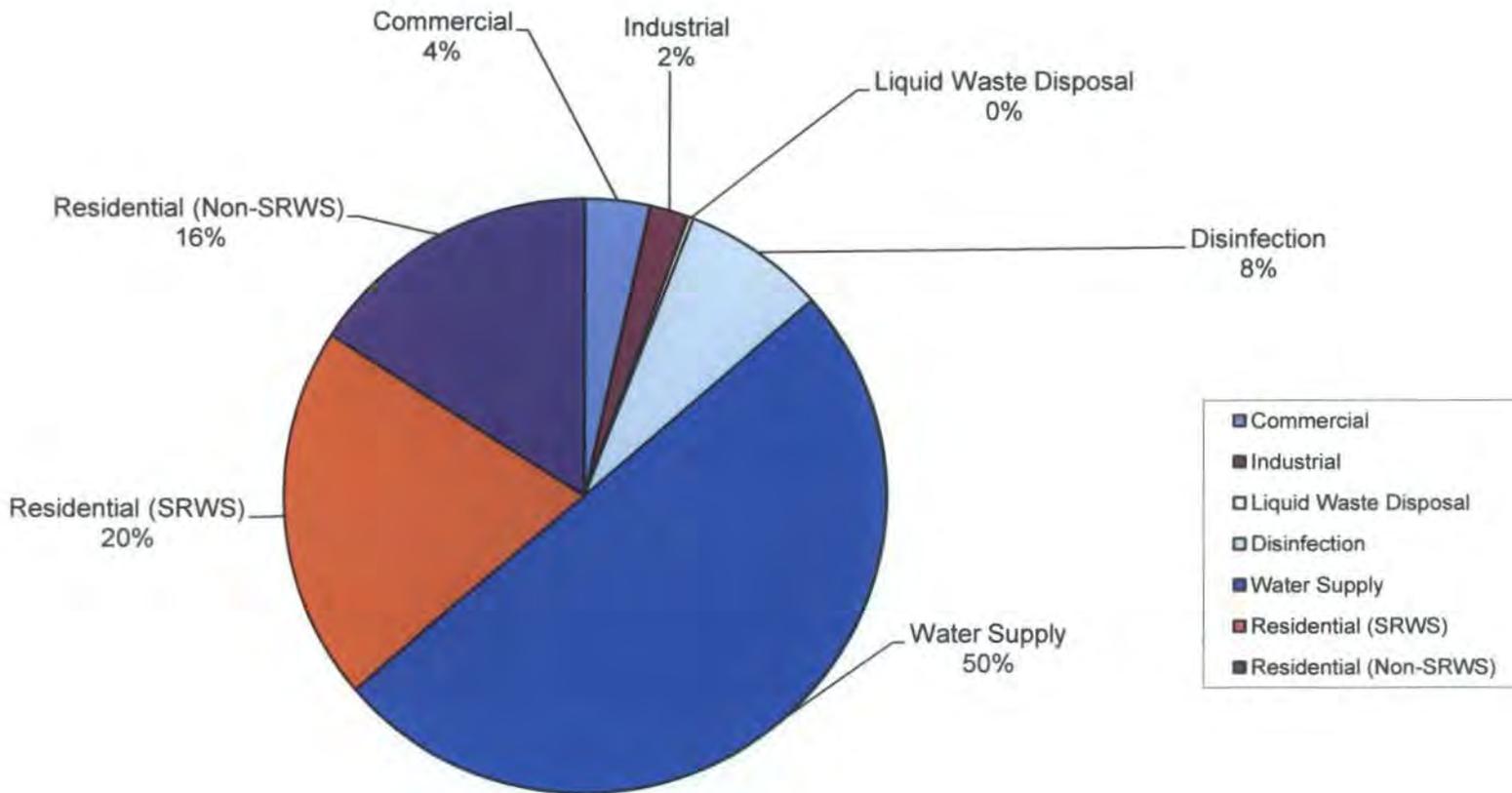


2007 SCVSD Final Effluent Chloride Concentration = 141 mg/L

2007 SCVSD Final Effluent Chloride Load = 24,620 ppd

Data presented are estimates based on numerous assumptions and best professional judgment.

Figure 3.9-9
2008 Estimated Chloride Sources in the SCVSD Final Effluent

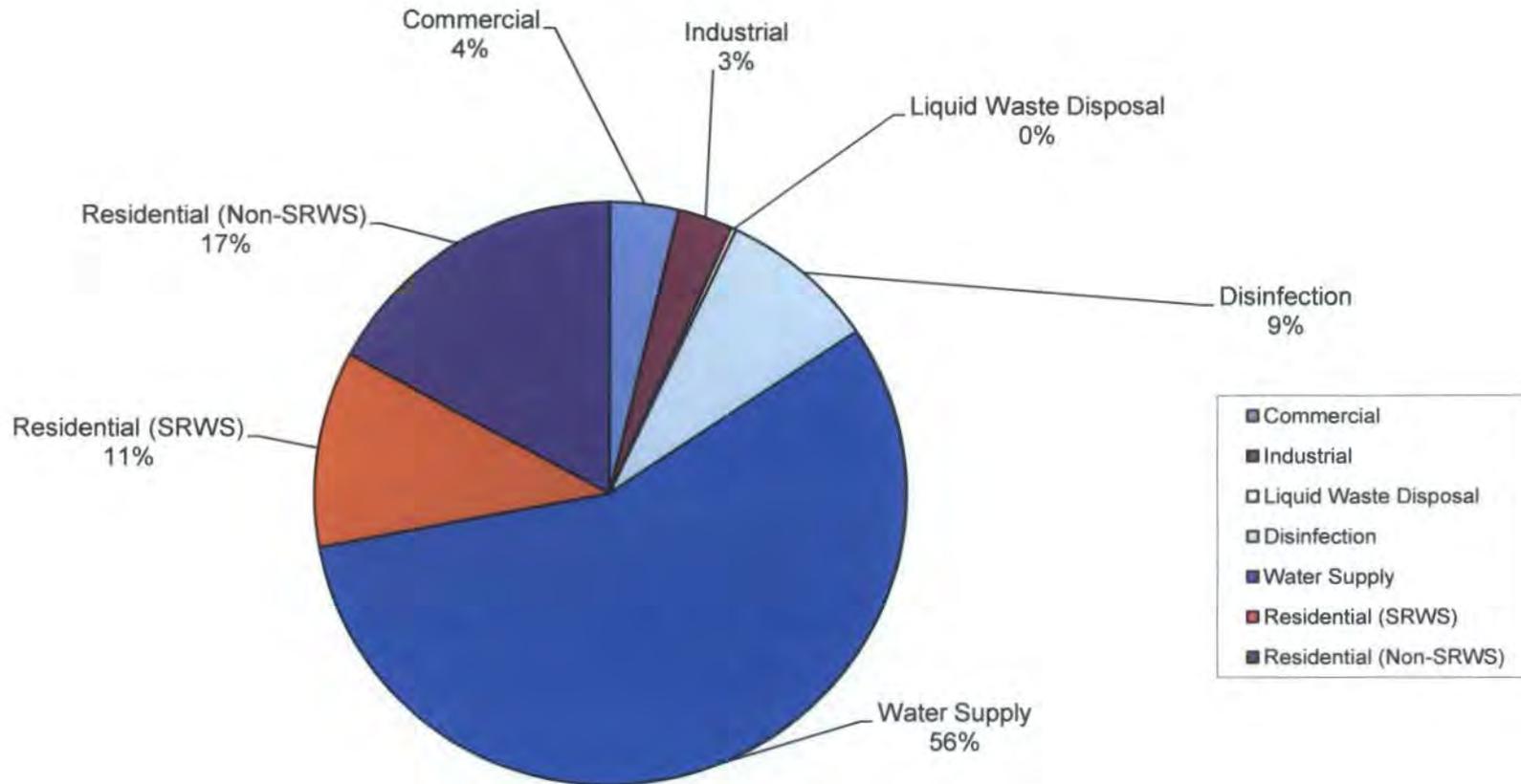


2008 SCVSD Final Effluent Chloride Concentration = 148 mg/L

2008 SCVSD Final Effluent Chloride Load = 25,848 ppd

Data presented are estimates based on numerous assumptions and best professional judgment.

Figure 3.9-10
2009 Estimated Chloride Sources in the SCVSD Final Effluent

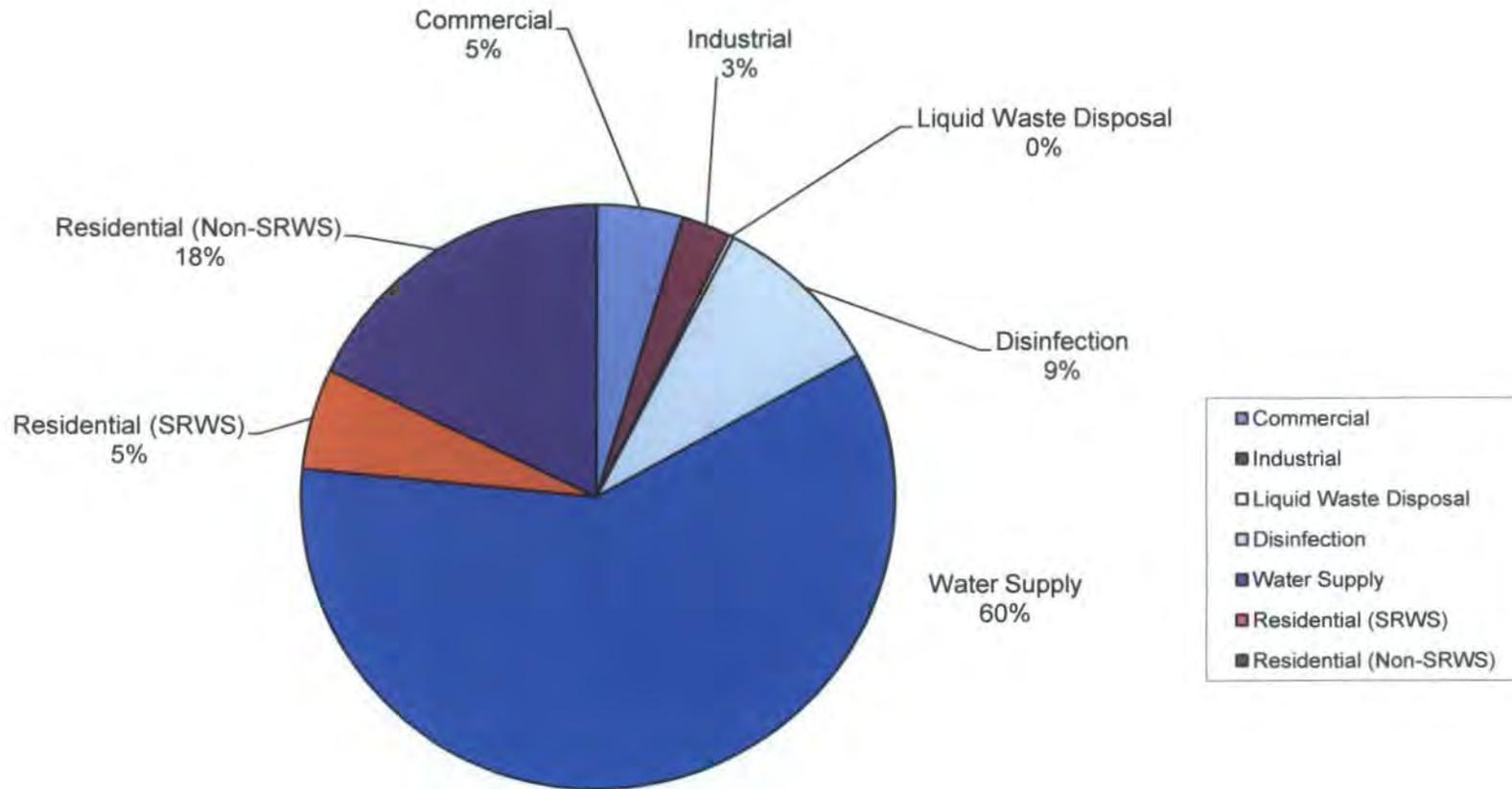


2009 SCVSD Final Effluent Chloride Concentration = 138 mg/L

2009 SCVSD Final Effluent Chloride Load = 23,470 ppd

Data presented are estimates based on numerous assumptions and best professional judgment.

Figure 3.9-11
2010 Estimated Chloride Sources in the SCVSD Final Effluent

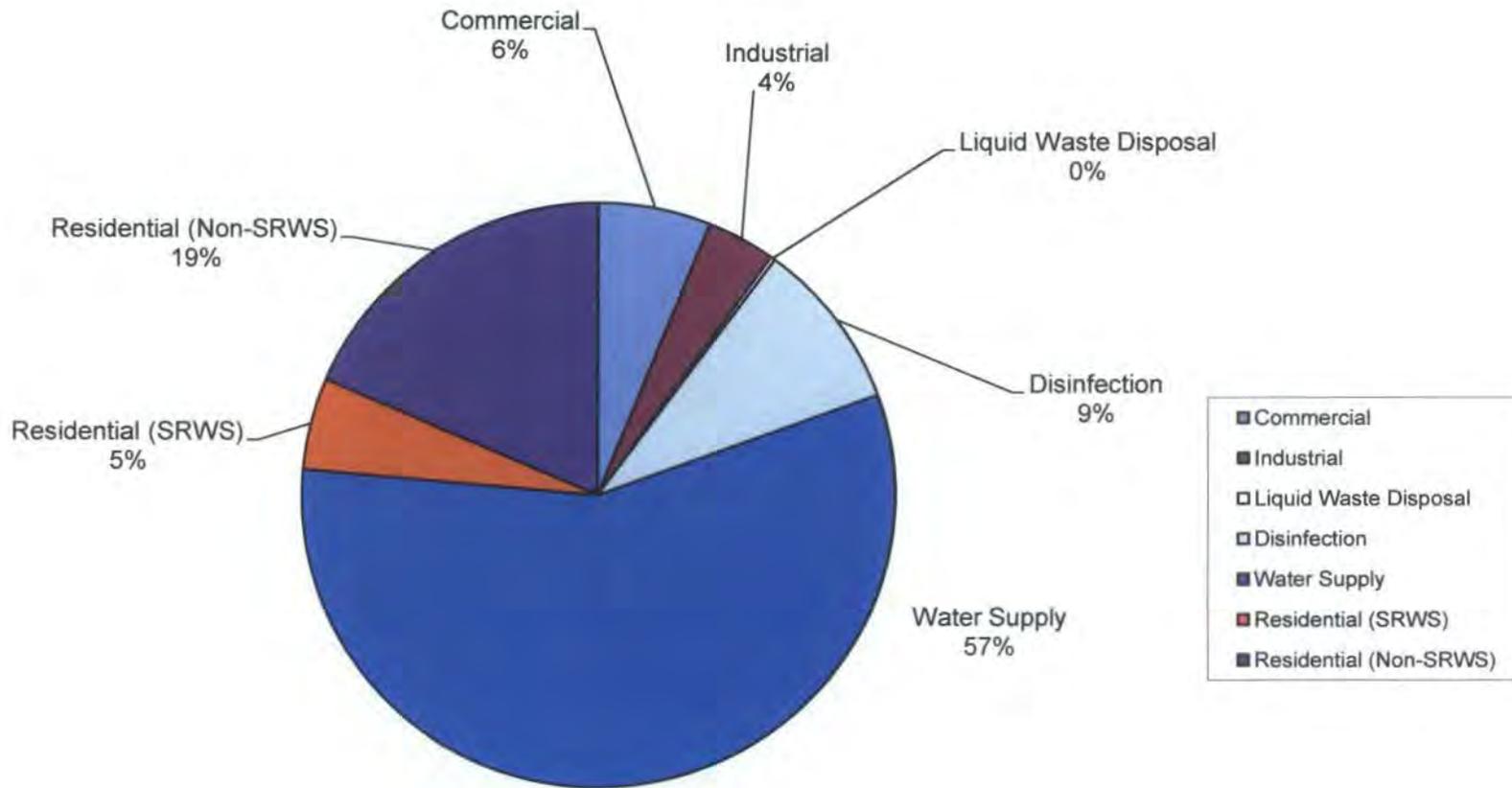


2010 SCVSD Final Effluent Chloride Concentration = 128 mg/L

2010 SCVSD Final Effluent Chloride Load = 21,554 ppd

Data presented are estimates based on numerous assumptions and best professional judgment.

Figure 3.9-12
2011 Estimated Chloride Sources in the SCVSD Final Effluent



2011 SCVSD Final Effluent Chloride Concentration = 118 mg/L

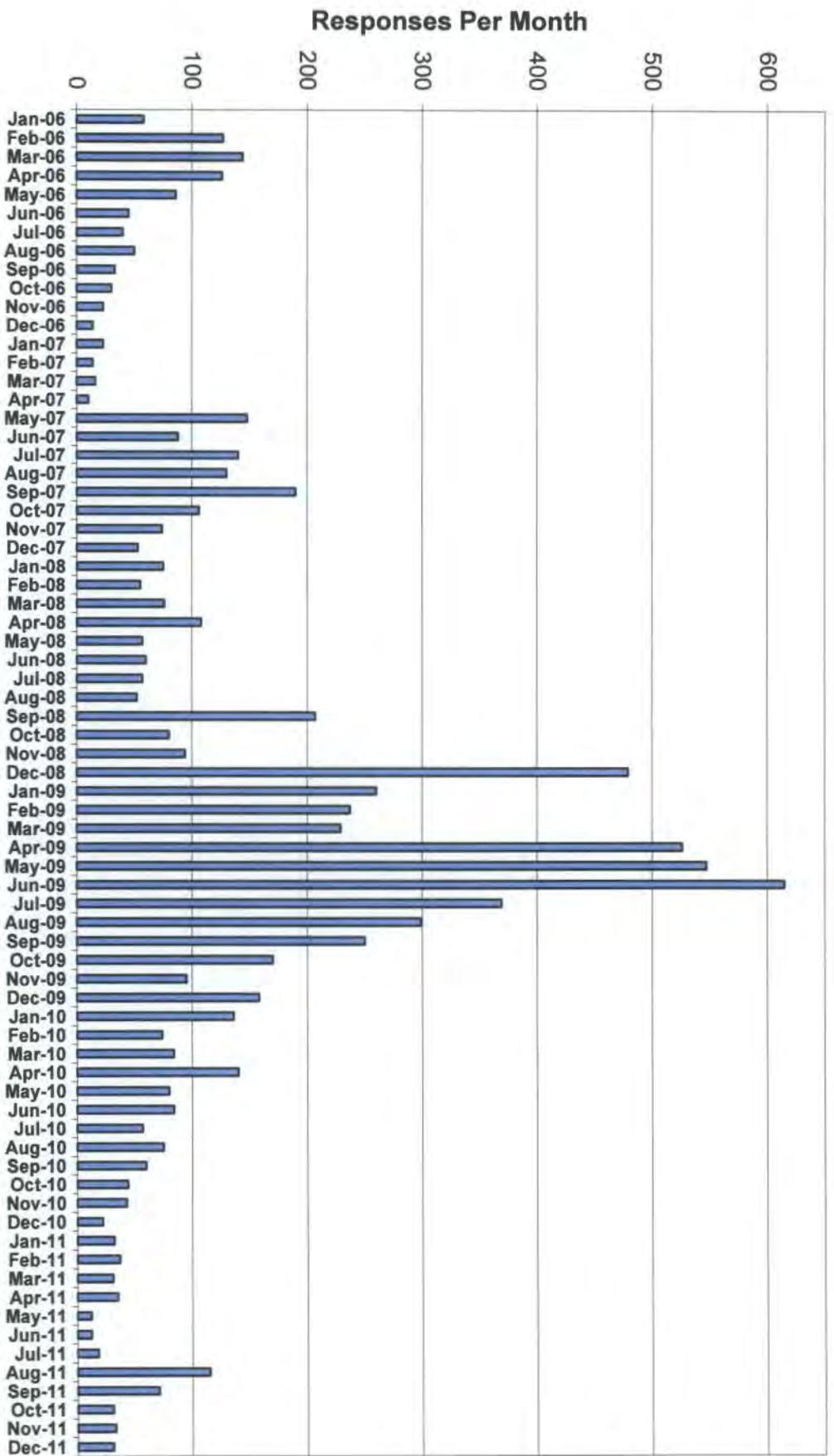
2011 SCVSD Final Effluent Chloride Load = 19,524 ppd

Data presented are estimates based on numerous assumptions and best professional judgment.

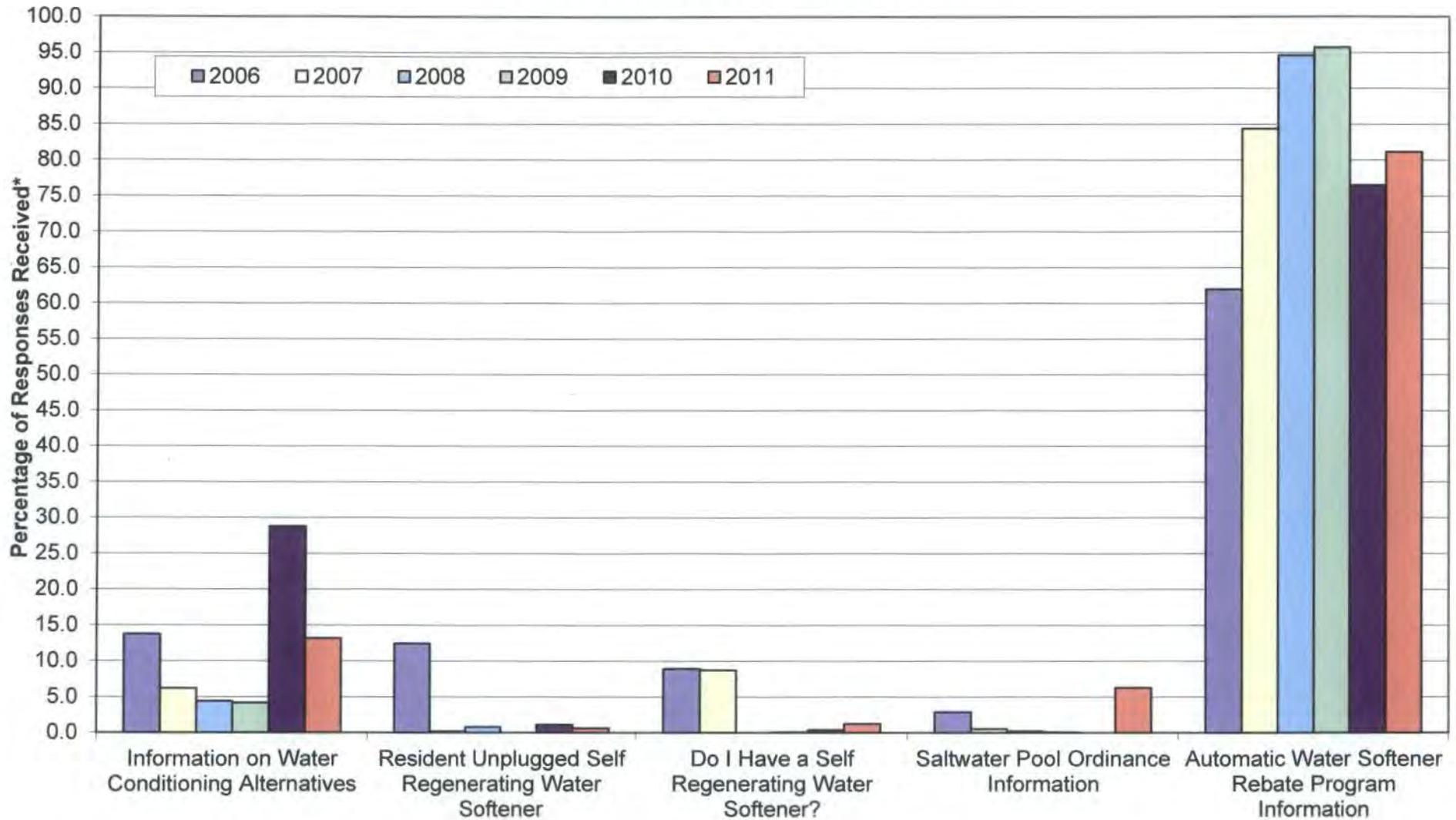
**Figure 4.1-1
Automatic Water Softener Rebate Program - Phase I and II
Cumulative Number of SRWS Removed**



Figure 4.1-2
Community-Wide Public Outreach Campaign
Variation in Responses Over Time



**Figure 4.1-3
Community-Wide Outreach Campaign
Trends in Response Types**



* Total may exceed 100% due to more than one response type for each communication.

Appendices

Appendix 4.1-A

California Health and Safety Code Section 116787

Senate Bill No. 475

CHAPTER 393

An act to add Section 116787 to the Health and Safety Code, relating to sanitation districts.

[Approved by Governor September 22, 2006. Filed with
Secretary of State September 22, 2006.]

LEGISLATIVE COUNSEL'S DIGEST

SB 475, Runner. Drinking water: residential self-regenerating water softeners: Santa Clara River.

Existing law authorizes a residential water softening or conditioning appliance to be installed only if certain conditions are met. Existing law further provides, notwithstanding the above authorization, that a local agency may, by ordinance, limit the availability of, or prohibit the installation of, residential water softening or conditioning appliances that discharge to the community sewer system if the local agency makes certain findings and includes them in the ordinance.

This bill would provide, notwithstanding that authorization, that the Santa Clarita Valley Sanitation District, or any successor district, may, by ordinance adopted subsequent to an ordinance adopted pursuant to the aforementioned provisions, require the removal of all installed residential self-regenerating water softeners, as defined, that discharge to the community sewer system, if the sanitation district makes specified findings and includes them in the ordinance.

The bill would require the sanitation district, prior to the effective date of any ordinance adopted pursuant to those provisions, to make available to owners of residential self-regenerating water softeners within its service area a voluntary program to compensate the resident for 100% of the reasonable value of the removed appliance, and the reasonable cost of the removal and disposal of the appliance, both of which shall be as determined by the sanitation district, as provided. The bill would require the sanitation district, on and after the effective date of any ordinance adopted pursuant to those provisions, to make available to owners of residential self-regenerating water softeners within its service area a program to compensate the resident for 75% of the reasonable value of the removed appliance, and the reasonable cost of removal and disposal of the appliance, both of which shall be determined by the sanitation district, as provided. The bill would provide that any ordinance adopted and approved pursuant to those provisions shall not take effect until January 1, 2009.

The bill would declare that, due to the unique circumstances related to the Santa Clara River Chloride Maximum Daily Load requirements for substantially reduced chloride levels in wastewater discharged by the

Saugus and Valencia Reclamation Plans to the Santa Clara River that the bill is intended to remedy, a general statute within the meaning of specified provisions of the California Constitution cannot be made applicable and a special statute is necessary.

The people of the State of California do enact as follows:

SECTION 1. The Legislature finds and declares all of the following:

(a) On May 4, 2005, a Total Maximum Daily Load (TMDL) for chloride, established by the Regional Water Quality Control Board, Los Angeles Region, took effect for Reaches 5 and 6 of the Santa Clara River, located in Los Angeles County.

(b) The Regional Water Quality Control Board, Los Angeles Region, found that, under the federal Clean Water Act (33 U.S.C. Sec. 1313 et seq.), this chloride TMDL was necessary to bring the Santa Clara River into attainment with water quality standards applicable to the Santa Clara River to protect beneficial uses, including salt-sensitive agricultural crops grown downstream in Ventura County such as avocados.

(c) The Regional Water Quality Control Board, Los Angeles Region, further found that the principal source of chloride into Reaches 5 and 6 is discharges from the Saugus Water Reclamation Plant and the Valencia Water Reclamation Plant, which are wastewater treatment plants serving approximately 180,000 residents of the Santa Clarita Valley.

(d) The Santa Clarita Valley Sanitation District, which owns and operates the Saugus and Valencia Water Reclamation Plants, has extensively studied the sources of chloride in local wastewater and has found that about one-third of the chloride comes from the use of residential self-regenerating water softeners that discharge brine to the sewer.

(e) Effective March 27, 2003, in accordance with the requirements of Section 116786 of the Health and Safety Code, originally added by Senate Bill 1006 (Ch. 969, Stats. 1999), the Santa Clarita Valley Sanitation District adopted an ordinance prohibiting the installation of new residential self-regenerating water softeners in the Santa Clarita Valley.

(f) Senate Bill 1006 prohibited local agencies from adopting ordinances requiring the removal of residential self-regenerating water softeners that were installed prior to the effective date of the ordinance.

(g) Without the removal of the residential self-regenerating water softeners that were installed prior to the effective date of the ordinance in the Santa Clarita Valley, it is improbable that the Saugus and Valencia Water Reclamation Plants can meet the requirements of the TMDL in a timely manner, without the installation of advanced treatment for salt removal and brine disposal at a projected cost to the community of at least \$350 million.

SEC. 2. Section 116787 is added to the Health and Safety Code, to read:

116787. (a) Notwithstanding subdivision (d) of Section 116786, the Santa Clarita Valley Sanitation District, or any successor district, may, by ordinance adopted subsequent to an ordinance adopted pursuant to Section 116786, require the removal of all installed residential self-regenerating water softeners, if the district makes all of the following findings and includes those findings in the ordinance:

(1) The removal of residential self-regenerating water softeners is a necessary and cost-effective means of achieving timely compliance with waste discharge requirements, water reclamation requirements, or a Total Maximum Daily Load (TMDL) issued by a California regional water quality control board. In determining what constitutes a necessary and cost-effective means of achieving compliance, the district shall assess all of the following:

(A) Alternatives to the ordinance.

(B) The cost-effectiveness and timeliness of the alternatives as compared to the adoption of the ordinance.

(C) The reduction in chloride levels to date resulting from the voluntary program implemented pursuant to paragraph (1) of subdivision (c).

(D) The potential reduction in chloride levels expected as a result of the program implemented pursuant to paragraph (2) of subdivision (c).

(2) The district has adopted and is enforcing regulatory requirements that limit the volume and concentrations of saline discharges from nonresidential sources to the community sewer system, to the extent that is technologically and economically feasible.

(3) Based on available information, sufficient wastewater treatment capacity exists in Los Angeles County to make portable exchange water softening services available to residents affected by this ordinance.

(4) Based on available information, the adoption and implementation of the ordinance will avoid or significantly reduce the costs associated with advanced treatment for salt removal and brine disposal that otherwise would be necessary to meet the Total Maximum Daily Load (TMDL) for chloride, established by the Regional Water Quality Control Board, Los Angeles Region, for Reaches 5 and 6 of the Santa Clara River, in Los Angeles County that took effect May 4, 2005.

(b) (1) An ordinance adopted pursuant to subdivision (a) shall not be effective until it is approved by a majority vote of the qualified votes cast in a regularly scheduled election, following the adoption of the ordinance, held in the district's service area, in a referendum in accordance with applicable provisions of the Elections Code.

(2) Information regarding the projected cost differences between advanced treatment for salt removal and brine disposal without the removal of installed residential self-regenerating water softeners, alternatives identified in paragraph (1) of subdivision (a), and the removal of installed residential self-regenerating water softeners shall be included in voter information material.

(c) (1) Prior to the effective date of any ordinance adopted pursuant to subdivision (a), the district shall make available to owners of residential

self-regenerating water softeners within its service area a voluntary program to compensate the owner of the appliance for 100 percent of the reasonable value of the removed appliance, and the reasonable cost of the removal and disposal of the appliance, both of which shall be determined by the district, with consideration given to information provided by manufacturers of residential self-regenerating water softeners and providers of water softening or conditioning appliances and services in the district's service area regarding purchase price, useful life, and the cost of installation, removal, and disposal.

(2) On and after the effective date of any ordinance adopted pursuant to subdivision (a), the district shall make available to owners of residential self-regenerating water softeners within its service area a program to compensate the owner of the appliance for 75 percent of the reasonable value of the removed appliance, and the reasonable cost of the removal and disposal of the appliance, both of which shall be determined by the district, with consideration given to information provided by manufacturers of residential self-regenerating water softeners and providers of water softening or conditioning appliances and services in the district's service area regarding purchase price, useful life, and the cost of installation, removal, and disposal.

(3) Compensation pursuant to paragraphs (1) and (2) shall only be made available if the owner disposes of the residential self-regenerating water softener and provides written confirmation of the disposal which may include, but is not limited to, verification in writing provided by the franchise refuse hauler that provides the service of removing the appliance or verification in writing of the appliance's destruction by the party responsible for its recycling or final disposal.

(4) If the owner of a residential self-regenerating water softener is in the business of renting or leasing residential self-regenerating water softeners, the owner may voluntarily waive compensation pursuant to paragraphs (1) and (2), and shall not be required to dispose of the appliance if the owner provides the district with written confirmation that the appliance has been removed from the home within the district's service area for use in a location outside the district's service area.

(5) The terms of compensation included in paragraphs (1) and (2) shall be included in an ordinance adopted pursuant to subdivision (a).

(6) (A) Upon the request of the district, the providers of water softening or conditioning services and appliances to residents of the district's service area shall provide the district, within 60 days, copies of purchase agreements or receipts, or any other specific records of sales of residential self-generating water softeners in the district's service area.

(B) The information in this paragraph shall remain protected and confidential in accordance with applicable provisions of the Public Records Act (Chapter 3.5 (commencing with Section 6250) of Division 7 of Title 1 of the Government Code).

(d) Any ordinance adopted pursuant to subdivision (a) and approved in accordance with subdivision (b) shall not take effect until January 1, 2009.

(e) For purposes of this section, "residential self-regenerating water softeners" and "appliances" mean residential water softening or conditioning appliances that discharge brine into the community sewer system.

SEC. 3. Due to the unique circumstances related to the Santa Clara River Chloride Total Maximum Daily Load requirements for substantially reduced chloride levels in wastewater discharged by the Saugus and Valencia Water Reclamation Plants to the Santa Clara River, it is necessary that the affected local agencies be authorized to require removal of residential water softening or conditioning appliances, and thus the Legislature finds and declares that a general statute cannot be made applicable within the meaning of Section 16 of Article IV of the California Constitution.

Appendix 4.1-B

Santa Clara River Chloride Reduction Ordinance of 2008

**SANTA CLARA RIVER
CHLORIDE REDUCTION ORDINANCE OF 2008**

The Board of Directors of the Santa Clarita Valley Sanitation District of Los Angeles County ordains as follows:

1. **AUTHORIZATION**

This Ordinance is enacted pursuant to authority contained in the County Sanitation District Act, California Health and Safety Code Sections 4700 *et seq.*, and exercises authority conferred by law including, but not limited to, Chapter 5, Part 12, Division 104 of the California Health and Safety Code, and Article 4, Chapter 1, Part 1, Division 2 beginning with Section 53069.4 of the Government Code.

2. **SHORT TITLE**

This Ordinance shall be known and referred to as the *Santa Clara River Chloride Reduction Ordinance of 2008*.

3. **PURPOSE**

The purpose of this Ordinance is to limit the discharge of chlorides to the Santa Clara River thereby improving the potential for the Santa Clarita Valley Sanitation District of Los Angeles County to comply with requirements of the California Regional Water Quality Control Board, Los Angeles Region. It is also the purpose of this Ordinance to reduce the expenditure of public funds and mitigate rate increases by lessening the need for new capital facilities.

4. **DEFINITIONS**

The following definitions shall apply to the terms used in this Ordinance:

(a.) "District" means the Santa Clarita Valley Sanitation District of Los Angeles County. The District owns and operates a sewer system that conveys wastewater to the Saugus and Valencia Water Reclamation Plants.

(b.) "Person" means any person, firm, association, organization, partnership, business, trust, corporation, company, district, county, city and county, city, town, the state, the federal government, and any of the agencies and political subdivisions of such entities.

(c.) "Plants" means the District's Saugus and Valencia Water Reclamation Plants.

(d.) "Community Sewer System" means the network of facilities owned and operated by the District or that are tributary to the District-owned and operated facilities that convey wastewater from within the District's service area to the Plants.

(e.) "Regional Board" means the California Regional Water Quality Control Board, Los Angeles Region, created and exercising its powers pursuant to the Porter-Cologne Water Quality Control Act, California Water Code Sections 13000 *et seq.*

(f.) "Brine" means a heavily saturated salt solution containing chloride.

(g.) "Residence" means a structure that is, or is intended to be, in whole or in part, a place of dwelling, whether occupied or not, whether fully constructed or not, and includes, without limitation, homes, whether attached to another structure or not, apartments, condominiums, and mobile homes.

(h.) "Residential self-regenerating water softener" and/or "appliance" means residential water softening or conditioning appliances that discharge Brine into the Community Sewer System. Residential self-regenerating water softeners are also more commonly known as "automatic" water softeners. Residential self-regenerating water softeners only include water softening or conditioning devices that renew their capability to remove hardness from water by the on-site application of a chloride solution to the active softening or conditioning material contained therein, followed by a subsequent rinsing of the active softening or conditioning material.

5. FINDINGS

The Board of Directors of the District finds and declares the following:

- a) The Santa Clara River is one of the only remaining natural rivers in Southern California, supporting fish and wildlife, recreation and agriculture in Los Angeles and Ventura Counties.
- b) The District's Plants discharge to the Santa Clara River.
- c) Use of residential self-regenerating water softeners installed prior to 2003 is the most significant controllable source of chloride entering the Community Sewer System and the Plants. Residential self-regenerating water softeners use salt to renew their capacity to remove hardness, and then discharge Brine to the Community Sewer System. Residential self-regenerating water softeners account for approximately 30% of all chloride in the Plant's discharge. Although wastewater is treated to a high level at the District's Plants, the Plants are not designed to remove chloride.
- d) The Regional Board has determined that chloride levels in the Santa Clara River must be reduced, and pursuant to a Total Maximum Daily Load ("TMDL") for chloride established by the Regional Board for Reaches 5 and 6 of the Santa Clara River in Los Angeles County, which became effective May 4, 2005, has required the District to reduce the chloride levels in its Plants' discharge.
- e) The District has adopted and is enforcing regulatory requirements that limit the volume and concentrations of chloride discharges from non-residential sources to the Community Sewer System to the extent technologically and economically feasible.
- f) The District has adopted and is enforcing an ordinance prohibiting the prospective installation of residential self-regenerating water softeners pursuant to Health & Safety Code Section 116786.
- g) To further reduce chloride in the Plants' discharge, the District must either reduce sources of chloride in wastewater discharged to the Community Sewer System, remove chloride from wastewater at the Plants through construction and operation of expensive and energy-intensive advanced treatment facilities, or both. Construction and operation of advanced treatment facilities for chloride removal at the Plants will result in the production of Brine, which will also require disposal. If residential self-regenerating water softeners are not removed, the incremental present worth of construction and operation of advanced treatment

and Brine disposal facilities to remove chloride contributed by residential self-regenerating water softeners is approximately \$73 million.

- h) Reducing chloride levels by requiring the removal of all remaining installed residential self-regenerating water softeners discharging to the Community Sewer System will cost the District approximately \$2-3 million.
- i) Reducing chloride levels by requiring the removal of all installed residential self-regenerating water softeners would save the District's ratepayers approximately \$70 million, based on the difference between the cost of residential self-regenerating water softener removal and the incremental cost of new advanced treatment and Brine disposal facilities to remove the same amount of chloride.
- j) Removal of residential self-regenerating water softeners within the District is estimated to take approximately one year after the effective date of this Ordinance. Under the TMDL, the District must perform environmental review, permitting, design and construction of new advanced treatment and Brine disposal facilities for the removal of chloride by May 4, 2016. Therefore, removing residential self-regenerating water softeners will reduce chloride in discharges to the Santa Clara River sooner than installing advanced treatment and Brine disposal facilities to achieve an equivalent level of chloride reduction.
- k) The removal of all installed residential self-regenerating water softeners is a necessary and cost-effective means of achieving timely compliance with a TMDL issued by the Regional Board for the Santa Clara River.
- l) Residents within the District will maintain the ability to soften or condition their water by using water softening or conditioning devices that do not discharge Brine to the Community Sewer System. Among these are portable exchange water softeners, which use a removable tank to soften water. These tanks are serviced by facilities located outside the District's service area that are permitted to treat and dispose of the Brine used to regenerate them. Based on available information, sufficient capacity to treat Brine exists in Los Angeles County, and therefore, portable exchange water softeners remain available as a water softening option for residents affected by this Ordinance.
- m) Based on available information, the adoption and implementation of this Ordinance will avoid or significantly reduce the costs associated with advanced treatment for chloride removal and Brine disposal that otherwise would be necessary to meet the TMDL.
- n) The District has established a voluntary program to compensate owners of residential self-regenerating water softeners within its service area for 100% of the reasonable value of each removed residential self-regenerating water softener and the reasonable cost of the removal and disposal of that residential self-regenerating water softener. This program shall remain in effect until the Effective Date of this Ordinance. The program is expected to result in the removal of 3,300 self-regenerating water softeners. The reduction in chloride levels resulting from the voluntary program is expected to be 4,400 pounds per day.
- o) On and after the Effective Date of this Ordinance, the District will continue a program to compensate owners of residential self-regenerating water softeners within its service area for 75% of the reasonable value of each removed residential self-regenerating water softener and the reasonable cost of the removal and disposal of that residential self-regenerating water

softener. Approximately 3,200 self-regenerating water softeners are expected to be removed. The potential reduction in chloride levels expected as a result of the program is 4,300 pounds per day.

6. REQUIREMENT FOR REMOVAL OF RESIDENTIAL SELF-REGENERATING WATER SOFTENERS

Every person who has a residential self-regenerating water softener that is installed upon his or her property or premises, and every person occupying or leasing the property or premises of another who has a residential self-regenerating water softener installed thereon, that discharges into the Community Sewer System shall remove and dispose of the installed residential self-regenerating water softener within 180 days after the Effective Date of this Ordinance.

7. ADMINISTRATIVE ENFORCEMENT

- a) The Chief Engineer and General Manager of the District ("Chief Engineer") shall administer, implement, and enforce the provisions of this Ordinance. Any powers granted to or duties imposed upon the Chief Engineer may be delegated to persons acting in the beneficial interest of or in the employ of the District. The Chief Engineer shall enforce this Ordinance by (1) performing public outreach to inform residents of the terms of this Ordinance and to encourage voluntary compliance, (2) withholding administrative enforcement actions until 180 days after the Effective Date of the Ordinance have passed to allow all affected residents adequate time to remove their installed residential self-regenerating water softeners, (3) monitoring flows within the Community Sewer System to determine the locations of residential self-regenerating water softeners, and/or (4) conducting inspections upon reasonable notice of any residence that discharges to the Community Sewer System.
- b) The Chief Engineer may issue a Notice of Violation to any Person who fails to remove a residential self-regenerating water softener as required by this Ordinance. A Notice of Violation shall allow a period of 60 days to correct the violation and to remove and dispose of the installed residential self-regenerating water softener. Any Person violating this Ordinance after issuance of Notice of Violation and the subsequent 60-day period shall pay an administrative fine to the District in an amount not to exceed \$1,000.00 for such violation.
- c) Any Person who has received a Notice of Violation may within 30 days request a hearing and review by a hearing officer of the District. The hearing shall be held within 30 days of the request. Following the hearing, the District's hearing officer may dismiss the violation or issue an Administrative Order for the imposition of an administrative fine and the removal of any installed appliance. Service of the Administrative Order may be made by personal delivery or by first class mail addressed to the Person at the address listed in the notice. An Administrative Order may be appealed in accordance with the provisions of Government Code Section 53069.4.
- d) The owner of a residential self-regenerating water softener subject to administrative enforcement under this section may elect to have the District remove the residential self-regenerating water softener from the residence. The owner retains the right to compensation for 75% of the reasonable value of the residential self-regenerating water softener.

8. **VIOLATION**

Any Person who violates any of the provisions of this Ordinance following the issuance of a final Administrative Order under Section 7 is guilty of a misdemeanor punishable by a fine of not to exceed \$1,000.00 or by imprisonment not to exceed 30 days or by both such fine and imprisonment. The amount of any such fine shall be first allocated to pay the District's costs of enforcement.

9. **SEVERABILITY**

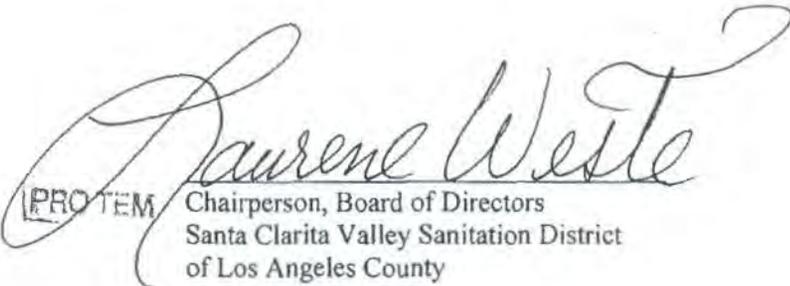
If any provision of this Ordinance or the applicability thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this Ordinance that can be given effect without the invalid portion or application, and to that end the provisions of this Ordinance are severable.

10. **REFERENDUM**

Pursuant to California Health & Safety Code Section 116787(b), this Ordinance shall not be effective until it is approved by a majority vote of the qualified votes cast in a regularly scheduled election, held in the District's service area, in a referendum in accordance with applicable provisions of the Elections Code.

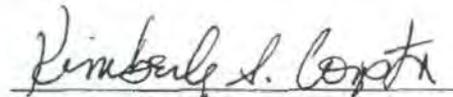
11. **EFFECTIVE DATE**

This Ordinance shall become effective 30 days from the date of final passage by the Board of Directors and subsequent approval by the voters pursuant to referendum, but no earlier than January 1, 2009.


PRO TEM Chairperson, Board of Directors
Santa Clarita Valley Sanitation District
of Los Angeles County

JUN 11 2008

ATTEST:


Clerk, Board of Directors
Santa Clarita Valley Sanitation District
of Los Angeles County

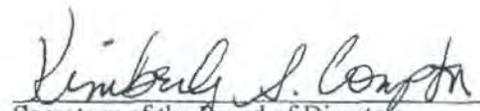
PASSED AND ADOPTED by the Board of Directors of the Santa Clarita Valley Sanitation District of Los Angeles County on June 11, 2008 by the following vote:

AYES: Directors Burke and Weste

NOES: None

ABSENT: Director Kellar

ABSTAIN: None


Secretary of the Board of Directors
Santa Clarita Valley Sanitation District
of Los Angeles County

Appendix 4.1-C

Automatic Water Softener Rebate Program – Phase II Materials



Santa Clarita Valley Automatic Water Softener Rebate Program APPLICATION FORM

Please complete **ALL** applicable sections of this Application Form, sign it, and send it to: LACSD, P.O. Box 4998, Whittier, CA 90607, Attn: SCV Rebate Program

| | | | |
|------------------------------|--|--------------------------------------|--|
| Property Type, Check one: | <input type="checkbox"/> Detached Home (single family) | <input type="checkbox"/> Apartment | <input type="checkbox"/> Mobile Home (Space No.) _____ |
| | <input type="checkbox"/> Attached Home (up to four-plex) | <input type="checkbox"/> Condominium | Please list Mobil Home Park Name: _____ |
| | <input type="checkbox"/> Townhome | | |

SECTION 1 – Applicant Information

| | |
|---|--------------------------|
| First and Last Name or Business Name (Please Print) | EMAIL address (optional) |
| | |

| | | | | |
|----------------------------------|-----------------|------|-------|----------|
| Address Where Softener Installed | Apt. or Space # | City | State | Zip Code |
| | | | | |

| | |
|----------------------|-------------------------|
| Home Phone No. () - | Daytime Phone No. () - |
| | |

 FILL OUT THIS SECTION ONLY IF CHECK SHOULD BE MAILED TO A DIFFERENT ADDRESS THAN ABOVE

| | | | | |
|---------|-----------------|------|-------|----------|
| Address | Apt. or Space # | City | State | Zip Code |
| | | | | |

SECTION 2 – Information on Salt-Based Automatic Water Softener to be Removed

I own the automatic water softener for which I am applying

Yes No – Was the automatic water softener in the home when you purchased the residence? Actual Date Installed (if unknown, please estimate)

| | |
|--------------|---------------|
| Make & Model | Serial Number |
| | |

| | | |
|--|----|---|
| Actual Purchase Price (if unknown please estimate) | \$ | To expedite processing of this application, please provide verification of water softener purchase using one or more of the following documents if available: dated receipt, contract, original service agreement, or other relevant paperwork. |
| | | |

This application form is for owners of residential automatic water softeners. To be eligible for a rebate, the automatic water softener must be installed at a residence that is served by the Santa Clarita Valley Sanitation District's sewer system. Upon verifying the application information and applicant's eligibility, an Authorization for Rebate letter will be forwarded to the applicant identifying the amount of your rebate and a list of **approved and licensed plumbers** to remove the automatic water softener unit from your residence at no cost to the applicant. **This form can be faxed or mailed using the information in the upper right hand corner.**

PLEASE READ THE TERMS AND CONDITIONS ON THE FOLLOWING PAGE AND SIGN BELOW
 Questions? Call 1-877-CUT-SALT or visit www.lacsd.org/chloride

| | |
|--|---------------------|
| I have read and understand the terms and conditions on the following page. I certify under penalty of perjury that the information I have provided is true and correct. Please allow 8 to 12 weeks for processing. | |
| Executed on _____ in _____, California | |
| <div style="border: 1px solid black; padding: 2px; display: inline-block;">SIGN HERE </div> | |
| Applicant Signature | Name (Please Print) |

Santa Clarita Valley
Automatic Water Softener Rebate Program
TERMS AND CONDITIONS

1. The unit for which I am applying is an automatic water softener, the kind to which rock salt (sodium chloride) or potassium chloride is added. I understand that **portable exchange tank units**, which are units where the softening tank is **exchanged periodically** by a service provider for a new softening tank, **are not eligible for a rebate**. Non-salt water conditioning equipment is also not eligible for a rebate.
2. The rebate is based on the reasonable value of the automatic water softener and the cost of its removal and disposal. The reasonable value of the automatic water softener will be based on 75% of the sale price and installation date of the unit and a 12-year life expectancy of the unit. Depending on the age, make, and model of your automatic water softener, rebates for individual units may range from \$206.00 to \$2,000.00. A minimum rebate of \$206.00 (effective 01/01/2009) will be issued for all owned automatic water softeners installed prior to March 27, 2003. Removal and disposal of the automatic water softener is at no cost to the resident if a plumber on the Santa Clarita Valley Sanitation District of Los Angeles County's (SCVSD's) List of Approved and Licensed Plumbers is used.
3. Rebate checks will be issued to the applicant identified in Section 1 of the Application Form.
4. The automatic water softener for which I am applying for a rebate is installed at a residence (house, multiplex, condominium, townhome, apartment, or mobile home) served by the SCVSD. Residences not served by the SCVSD or **served by septic tanks are not eligible** for the rebate.
5. I understand that this program is limited to one rebate per site address (location where the automatic water softener is installed).
6. I have not previously applied for a rebate for this automatic water softener.
7. I understand that it is **illegal to have installed automatic water softeners** in residences served by the SCVSD after March 27, 2003.
8. **I understand that the automatic water softener for which I am applying for the rebate must be disposed of ONLY by using the approved licensed plumbers on the list provided by the SCVSD or authorized SCVSD employees.**
9. I understand that the rebate will not be paid until the SCVSD verifies that the automatic water softener has been removed from the residence pursuant to line 8 above.
10. I understand that the program may be modified or terminated without prior notice.
11. As a condition of accepting this rebate, I will allow, if requested, SCVSD or its representative reasonable access to my home to verify that no automatic water softeners are present before a rebate is paid. I understand that a rebate will not be paid if I refuse to allow access to the SCVSD or its representative to verify that the automatic water softener has been removed from the residence. The verification must be scheduled within 30 days after the applicant has been contacted by the SCVSD or its representative.
12. I understand that the SCVSD may contact providers and/or parties to verify purchase information I have provided on the cost and age of the unit, as well as my name and/or address.
13. I certify that I own the automatic water softener to be removed.
14. I am responsible for meeting all rebate program requirements, terms, and conditions and complying with my state/county/city governments, property owner, and/or homeowners association requirements (if any) in my area regarding local conditions, restrictions, codes, ordinances, rules, and regulations concerning actions taken under this rebate program.
15. I understand that the SCVSD is not responsible for items lost or destroyed in mail/transit.
16. Removal of the automatic water softener must occur within 30 days of the date on the Authorization for Rebate letter or the applicant must reapply.

I hereby release the SCVSD, all other County Sanitation Districts of Los Angeles and their officers, agents and employees from and against any and all claims, demands, liability or loss arising out of activities conducted by or on behalf of the SCVSD in connection with the Automatic Water Softener Rebate Program.

I understand that I may hereafter discover facts different from or in addition to the facts that I now know or believe to be true. I am advised that California Civil Code Section 1542 provides as follows: "A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor."

I expressly waive and relinquish any and all rights, remedies and/or benefits I may now have or that may hereafter accrue in respect to the SCVSD's Automatic Water Softener Rebate Program.

Questions? Call 1-877-CUT-SALT or visit www.lacsd.org/chloride



COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

STEPHEN R. MAGUIN
Chief Engineer and General Manager

June 7, 2011
File No. «Client_Number»
DOCS No. «Docs_No»

«Customer_Name»
«Customer_Address»
«Customer_City», «Customer_St» «Zip»

Authorization for Rebate

The Santa Clarita Valley Sanitation District (Sanitation District) has processed your automatic water softener rebate application form. The rebate offered by the Sanitation District is based on the reasonable value of the automatic water softener; the cost of its removal and disposal are to be paid by the Sanitation District. Depending on the age, make, and model of your automatic water softener, rebates offered for individual units vary.

The Sanitation District offers the following rebate for your automatic water softener based on the confirmed information you provided on the Santa Clarita Valley Automatic Water Softener Application Form and in accordance with the Terms and Conditions of the Santa Clarita Valley Automatic Water Softener Program:

Automatic Water Softener Make/Model: «WS_MakeModel_Removed»
Automatic Water Softener Serial No: «WS_Serial_No_Removed» (use CONTRACTOR COPY, if different)
Rebate Offer: «M_Amt»

In order to receive the rebate, the automatic water softener must be removed by and disposed of using contractors on the attached List of Approved and Licensed Plumbers or by an authorized Sanitation District's service representative. Please contact a contractor on the List of Approved and Licensed Plumbers to schedule the removal and disposal of your automatic water softener at no cost to you (the attached yellow copy of this letter should be provided to the contractor to facilitate payment). If you would like to disconnect the automatic water softener yourself or use a contractor not on the List of Approved and Licensed Plumbers, the Sanitation District will reimburse you an additional \$50 for parts and materials. To schedule a pickup of a disconnected automatic water softener, you must contact the Sanitation District at (562) 908-4288, extension 2900 or cutsalt@lacsd.org. *To facilitate removal of the automatic water softener, please do not add more rock salt or potassium chloride to the unit.* As soon as the removal of the unit is verified, payment will be initiated.

The rebate offer in the above amount is valid only if you remove your automatic water softener within sixty days of the date on this letter. The Santa Clara River Chloride Reduction Ordinance of 2008, approved by voters as Measure S in the November 4, 2008 general election, requires all automatic water softeners be removed from residences connected to the sewer system. If you have any questions about this letter, please contact the Sanitation District at (877) CUT-SALT or cutsalt@lacsd.org.

The Sanitation District thanks you for participating in the Santa Clarita Valley Automatic Water Softener Rebate Program.

Very truly yours,

Stephen R. Maguin

Suzanne S. Wienke
Supervising Engineer II
Industrial Waste Section

SSW:PG:ch



COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

1555 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

STEPHEN R. MAGUIN
Chief Engineer and General Manager

June 7, 2011
File No. «Client_Number»
DOCS No. «Docs_No»

«Customer_Name»
«Customer_Address»
«Customer_City», «Customer_St» «Zip»

Authorization for Rebate

The Santa Clarita Valley Sanitation District (Sanitation District) has processed your automatic water softener rebate application form. The rebate offered by the Sanitation District is based on the reasonable value of the automatic water softener; the cost of its removal and disposal are to be paid by the Sanitation District. Depending on the age, make, and model of your automatic water softener, rebates offered for individual units vary.

The Sanitation District offers the following rebate for your automatic water softener based on the confirmed information you provided on the Santa Clarita Valley Automatic Water Softener Application Form and in accordance with the Terms and Conditions of the Santa Clarita Valley Automatic Water Softener Program:

Automatic Water Softener Make/Model: «WS_MakeModel_Removed»
Automatic Water Softener Serial No: «WS_Serial_No_Removed» (use CONTRACTOR COPY, if different)
Rebate Offer: «M_Amt»

In order to receive the rebate, the automatic water softener must be removed by and disposed of using contractors on the attached List of Approved and Licensed Plumbers or by an authorized Sanitation District's service representative. Please contact a contractor on the List of Approved and Licensed Plumbers to schedule the removal and disposal of your automatic water softener at no cost to you (the attached yellow copy of this letter should be provided to the contractor to facilitate payment). If you would like to disconnect the automatic water softener yourself or use a contractor not on the List of Approved and Licensed Plumbers, the Sanitation District will reimburse you an additional \$50 for parts and materials. To schedule a pickup of a disconnected automatic water softener, you must contact the Sanitation District at (562) 908-4288, extension 2900 or cutsalt@lacsd.org. To facilitate removal of the automatic water softener, please do not add more rock salt or potassium chloride to the unit. As soon as the removal of the unit is verified, payment will be initiated.

The rebate offer in the above amount is valid only if you remove your automatic water softener within sixty days of the date on this letter. The Santa Clara River Chloride Reduction Ordinance of 2008, approved by voters as Measure S in the November 4, 2008 general election, requires all automatic water softeners be removed from residences connected to the sewer system. If you have any questions about this letter, please contact the Sanitation District at (877) CUT-SALT or cutsalt@lacsd.org.

The Sanitation District thanks you for participating in the Santa Clarita Valley Automatic Water Softener Rebate Program.

Very truly yours,
Stephen R. Maguin

Suzanne S. Wienke

Suzanne S. Wienke
Supervising Engineer II
Industrial Waste Section

Form with fields: Company Name, Make, Model, Serial No., Removal Date, Disposal Date



List of Approved and Licensed Plumbers

The Santa Clarita Valley Sanitation District (Sanitation District) has approved the following contractors to remove automatic water softeners for the Automatic Water Softener Rebate Program. Please contact a contractor on this list to schedule the removal and disposal of your automatic water softener at no cost to you.

| <u>Contractor Name</u> | <u>Evenings</u> | <u>Sat./Sun.</u> |
|---|-----------------|------------------|
| Guaranteed Water Systems, Inc.* (661) 259-4343 | No | No |
| Rayne Water Corporation* (661) 257-2963 | Yes | Yes |
| Culligan Water of Sylmar* (800) 458-9572 | Yes | Yes |
| Moran Plumbing, Inc. (661) 297-1241 | Yes | Yes |
| GTS Plumbing (661) 251-2944 | Yes | Yes |

For your convenience, some of the contractors on this list also offer non-salt (alternative) water treatment units. The contractors that offer alternative units are marked with an asterisk (*). For more information on more than 50 alternative units, please visit our website at www.lacsd.org/chloride. Please note that installation of a non-salt water conditioning system is **not** required for participation in the Automatic Water Softener Rebate Program.

The contractors on this list were selected through an open bidding process in which over 100 plumbers that regularly work in the Santa Clarita Valley were invited to participate in the program. The Sanitation District has verified that the contractors on this list are licensed and bonded per the requirements of the State of California. This list does not constitute an endorsement by the Sanitation District of any particular contractor.

In addition, the Sanitation District does not endorse any particular alternative water treatment system, nor does it provide any assurances regarding the effectiveness of any of the alternative systems. The Sanitation District has reviewed the wastes generated by the alternative systems shown on the District's webpage (www.lacsd.org/chloride) and has concluded that these units do not generate a high-salt waste stream. The alternative units may be installed in the Santa Clarita Valley since they are not subject to the ordinance passed by the Sanitation District that prohibits the installation of automatic water softeners.

Questions?

Call 1-877-CUT-SALT or email cutsalt@lacsd.org

Appendix 4.1-D

Public Education and Outreach Materials

LETTER TO NEW HOMEOWNERS

Mailed Monthly



COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

STEPHEN R. MAGUIN
Chief Engineer and General Manager

July 7, 2011

Dear Santa Clarita Valley Resident,

Records we have received indicate that you may be a new resident to the Santa Clarita Valley (SCV). As such, you may be unaware of local restrictions on the use and installation of automatic water softeners and usage of saltwater swimming pools for homes connected to the sewer system. You should be aware of these regulations so that you are not sold equipment that will need to be removed from service.

- ◆ **It is illegal to install automatic water softeners to which you add salt or potassium chloride.**
- ◆ **All existing automatic water softeners were required to be removed by June 30, 2009.**
- ◆ **It is illegal for both new and existing saltwater pools to be connected to the sewer system.**

Automatic water softeners and saltwater pools produce a chloride (salt) waste that when put into sewers is sent to one of two local water reclamation plants operated by the Santa Clarita Valley Sanitation District (Sanitation District). These plants provide extensive treatment and produce water that meets drinking water standards, which is discharged to the Santa Clara River. However, these plants do not remove salt. The state's Regional Water Quality Control Board has established a water quality objective for chloride and current chloride discharge levels are above that level. If present at high levels, chloride could harm some types of downstream agriculture.

Your new home may have an automatic water softener already installed—please unplug it. Rebates of \$206 to \$2,000 are still available to residents for disconnecting and removing automatic water softeners. In addition, the Sanitation District will provide you with a list of plumbers that will disconnect and remove your system at no cost to you. To obtain a rebate application form please visit our website at www.lacsd.org/chloride. This website also provides information on alternative water conditioning systems.

The SCV community has been supportive of these efforts to improve water quality in the Santa Clara River. This support has included the passage of Measure S, the law requiring the removal of all automatic water softeners, which has resulted in the removal of nearly all automatic water softeners from the service area. However, the units that do remain need to be removed as soon as possible.

It is illegal to connect new or converted saltwater pools to the sewer system. If your new home has an existing saltwater pool that was installed prior to December 2005, we encourage you to convert to a freshwater system or consider disposal methods that do not involve the sewer or storm drain systems.

Through your efforts and those of your neighbors, the river's chloride levels can be further reduced. By complying with the referenced restrictions the controllable sources of chloride can be addressed and huge cost savings for the community can be realized.

For more information on this issue, please see the Sanitation Districts' website at www.lacsd.org/chloride, e-mail cutsalt@lacsd.org, or call 1-877-CUT-SALT.

Very truly yours,

Stephen R. Maguin

Suzanne S. Wienke
Supervising Engineer II
Industrial Waste Section



COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

STEPHEN R. MAGUIN
Chief Engineer and General Manager

October 3, 2011

Dear Santa Clarita Valley Resident,

Records we have received indicate that you may be a new resident to the Santa Clarita Valley (SCV). As such, you may be unaware of local restrictions on the use and installation of automatic water softeners and usage of saltwater swimming pools for homes connected to the sewer system. You should be aware of these regulations so that you are not sold equipment that will need to be removed from service.

- ◆ **It is illegal to install automatic water softeners to which you add salt or potassium chloride.**
- ◆ **All existing automatic water softeners were required to be removed by June 30, 2009.**
- ◆ **If you have an automatic water softener, you must apply for the Automatic Water Softener Rebate Program or remove the unit within 60 days of receiving this letter.**
- ◆ **It is illegal for both new and existing saltwater pools to be connected to the sewer system.**

Automatic water softeners and saltwater pools produce a chloride (salt) waste that when put into sewers is sent to one of two local water reclamation plants operated by the Santa Clarita Valley Sanitation District (Sanitation District). These plants provide extensive treatment and produce water that meets drinking water standards, which is discharged to the Santa Clara River. However, these plants do not remove salt. The state's Regional Water Quality Control Board has established a water quality objective for chloride and current chloride discharge levels are above that level. If present at high levels, chloride could harm some types of downstream agriculture.

Your new home may have an automatic water softener already installed—please unplug it immediately. Rebates of \$206 to \$2,000 are available to residents for disconnecting and removing automatic water softeners. In addition, the Sanitation District will provide you with a list of plumbers that will disconnect and remove your system at no cost to you. To obtain a rebate application form please visit our website at www.lacsd.org/chloride. This website also provides information on alternative water conditioning systems.

The SCV community has been supportive of these efforts to improve water quality in the Santa Clara River. This support has included the passage of Measure S, the law requiring the removal of all automatic water softeners, which has resulted in the removal of nearly all automatic water softeners from the service area. However, if your home has an illegal automatic water softener, you must apply for the Automatic Water Softener Rebate Program or remove the unit within 60 days of this letter, or you may be subject to enforcement action.

It is illegal to connect new or converted saltwater pools to the sewer system. If your new home has an existing saltwater pool that was installed prior to December 2005, we encourage you to convert to a freshwater system or consider disposal methods that do not involve the sewer or storm drain systems.

Through your efforts and those of your neighbors, the river's chloride levels can be further reduced. By complying with the referenced restrictions the controllable sources of chloride can be addressed and huge cost savings for the community can be realized.

For more information on this issue, please see the Sanitation District's website at www.lacsd.org/chloride, e-mail cutsalt@lacsd.org, or call (877) CUT-SALT.

Very truly yours,

Stephen R. Maguin

Suzanne S. Wienke
Supervising Engineer II
Industrial Waste Section

CHLORIDE WEBSITE

www.lacsd.org/chloride

LACSD Website

Chloride in Santa Clarita

Automatic Water Softeners

Automatic water softeners—the kind that use rock salt or potassium chloride pellets—are banned in the Santa Clarita Valley. Automatic water softeners discharge a salty waste into the sewer system that is treated by a process that does not remove salt, therefore, the salty waste is released into the Santa Clara River. Too much salt in the river may potentially harm downstream agricultural crops.

The Sanitation District's goal is to reduce salt in an environmentally friendly, cost-effective, and timely manner. Measure S, approved by voters on November 4, 2008, enacted the Santa Clara River Chloride Reduction Ordinance of 2008. The Santa Clara River Chloride Reduction Ordinance of 2008 required the removal of **all** residential automatic water softeners by June 30, 2009. Residents that still have automatic water softeners should click the link below for more information on the Automatic Water Softener Rebate Program.

[Rebate Program
Information](#)

[Salt Free Water
Conditioning Alternatives](#)

LACSD Website

Introduction



The purpose of this website is to educate the community about the Santa Clara River's high chloride (salt) levels, and the reasons and options for reducing chloride levels.

The goal of the Santa Clarita Valley Sanitation District (Sanitation District) is to reduce the amount of chloride entering the Santa Clara River, which flows through the Santa Clarita Valley and is the last natural river in Southern California. Wastewater generated in the Santa Clarita Valley, from actions such as flushing

toilets and washing laundry, is sent to the Sanitation District's Saugus and Valencia Water Reclamation Plants for treatment. The treated water leaving the plants that is not directly reused for landscape irrigation and other applications is sent to the Santa Clara River. While the water reclamation plants provide a high level of treatment, they do not remove chloride. If levels of chloride go too high, they could harm wildlife or have a negative impact on downstream farms that rely on river water for irrigation.

The Santa Clarita Valley water supply contributes the majority of the chloride coming out of the Sanitation District's treatment plants. The largest added source of chloride is from residences.

The Santa Clara River Chloride Reduction Ordinance of 2008, approved as Measure S by voters on November 4, 2008, required the removal of all residential automatic water softeners by June 30, 2009. Residents that still have automatic water softeners should view the Automatic Water Softener Rebate Program webpage for information on how to remove their units.

Santa Clarita businesses have been prohibited from using automatic water softeners since 1961.

LACSD Website

Chloride Frequently Asked Questions

- [But I like my automatic water softener. Can I continue to use it?](#)
- [Can I divert the brine waste from the sewer system by installing a drain line into my yard, or into a dry well?](#)
- [How can I help reduce the amount of chloride going to the Santa Clara River?](#)
- [How do I know if I have an automatic water softener?](#)
- [How does chloride end up in the Santa Clara River?](#)
- [I always thought most of the chloride in the Santa Clara River comes from industrial, rather than residential, use. Isn't that true?](#)
- [I don't like the quality of the water coming into my home. How can I treat it without using an automatic water softener?](#)
- [I still have questions. Who can I talk to for more information?](#)
- [If I use potassium chloride in my water softener instead of sodium chloride, will that help eliminate the problem?](#)
- [What is chloride?](#)
- [Why can't the Sanitation District treat our tap water to make it softer and eliminate the need for water softener systems?](#)
- [Why is chloride bad for water?](#)
- [Why is it necessary to reduce chloride levels in the Santa Clara River?](#)
- [With the removal of the automatic water softeners why hasn't the problem been solved? Why do we still have to pay for costly treatment plant upgrades?](#)

But I like my automatic water softener. Can I continue to use it?

Measure S approved by voters on November 4, 2008, enacted the Santa Clara River Chloride Reduction Ordinance of 2008. The ordinance required the removal of **all** residential automatic water softeners by June 30, 2009. Residents that still have automatic water softeners should visit the Automatic Water Softener Rebate Program webpage for information on how to remove their units.

Can I divert the brine waste from the sewer system by installing a drain line into my yard, or into a dry well?

No, the disposal of brine from an automatic water softener, even if you use potassium chloride, on to land or into a dry well is illegal. The Los Angeles Regional Water Quality Control Board (Regional Board) will not issue permits for landscape irrigation with brine and disposal brine into a dry well. Violators may be subject to penalties.

How can I help reduce the amount of chloride going to the Santa Clara River?

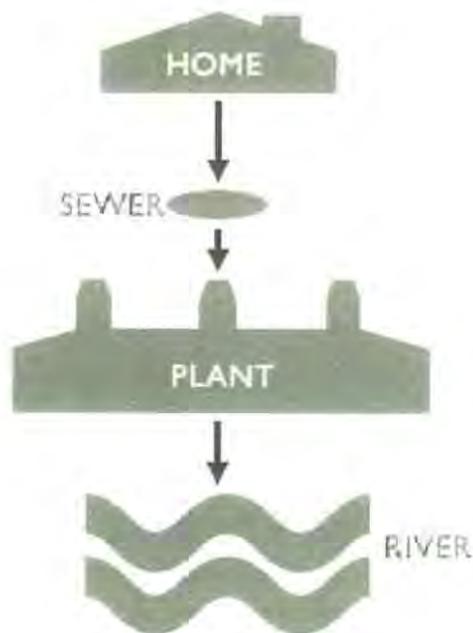
If you have an automatic water softener, also known as a self-regenerating water softener or rock salt softener, the most important thing, as required by the Santa Clara River Chloride Reduction Ordinance of 2008, is to remove the unit. Other steps you can take are to use non-chlorine bleach or hydrogen peroxide instead of chlorine bleach and to minimize the amount of laundry detergents and fabric softeners that you use, since many of these products contain chloride. You can find environmentally sound detergents and cleaners at most grocery stores.

How do I know if I have an automatic water softener?

If you add salt or potassium chloride to your water softener or have a water conditioning service do so, then you have an automatic water softener. If you have a water conditioning service change out the tank on your water softener on a regular basis, then you have a portable exchange tank system.

How does chloride end up in the Santa Clara River?

After water is used for washing dishes, showering, laundering, flushing toilets, and other uses in the Santa Clarita area, the wastewater goes to the sewer. From there it flows to either the Saugus or Valencia Water Reclamation Plant for treatment. These treatment plants are owned and operated by the Santa Clarita Valley Sanitation District (Sanitation District), and they discharge wastewater into the Santa Clara River after it has been treated. While the treatment plants remove many impurities and pollutants from wastewater, they are not designed to remove chloride. The chloride in wastewater goes through the treatment plants and is discharged to the Santa Clara River.



I always thought most of the chloride in the Santa Clara River comes from industrial, rather than residential, use. Isn't that true?

No. Most of the chloride in the Santa Clara River comes from residences, including the chloride that already exists in the drinking water from your tap. Chloride also comes from soaps, detergents and other cleaning products, particularly laundry products. The discharge of chloride from industrial and commercial businesses is regulated by the Sanitation District, and Santa Clarita businesses have been prevented from using automatic water softeners since 1961.

I don't like the quality of the water coming into my home. How can I treat it without using an automatic water softener?

A number of different treatment systems are available for the water you use in your home. [Click here for a partial list of water conditioning systems acceptable for use in the Santa Clarita Valley.](#) The Sanitation District does not endorse any particular water treatment unit, nor does the Sanitation District provide any assurances regarding the effectiveness of any unit. If you need soft water, you can switch to an alternative means of softening your water, such as a portable exchange tank water softening system. Some vendors offer non-salt treatment units for conditioning water. Depending on your needs, you may also consider filtration, activated carbon, or reverse osmosis treatment units.

Filtration simply stated, removes suspended matter from water by mechanical "screening." Basic filters usually are porous beds of insoluble material. Other examples include cast forms, plates of sheet material, synthetic membranes, finely perforated plastic, or specially sized beds of inert

particles. The filtration process removes suspended silt, clay, colloids, and some microorganisms. Simple cartridge filters may be effective for low levels of turbidity.

Activated carbon filtration systems involve the adhesion of one material on the surface of a second solid substance based on opposing electrical charges of each material. These systems are widely used to eliminate certain hazardous compounds related to industrial wastes, chemicals, and pesticides. This treatment method can also remove unpleasant tastes and odors caused by decaying organic matter, dissolved gases, and residual chlorine.

Reverse osmosis methods employ a unit divided into two chambers by a semi-permeable membrane. One of the chambers contains "raw" water with undesirable constituent(s) (e.g., salt). Reverse osmosis involves the application of pressure to the side of the chamber containing the raw water. This forces the water to leave the contaminated chamber and flow through the treatment membrane into the "treated" water chamber, leaving the unwanted minerals behind, which are then rinsed to the drain. The membrane filters the water on a molecular scale. Reverse osmosis provides partially demineralized water.

The American Ground Water Trust, state health departments, water well construction agencies, local health officials, or ground water industry professionals are sources for assistance and/or referral to qualified water testing services. It is important to have an independent water analysis. Look for a professional who understands your water chemistry, explains your treatment options and who pays attention to the details specific to your home and water supply. Before purchasing major water conditioning equipment, obtain information and bids from more than one company. You may want to check on the reputation of the company by contacting your local Better Business Bureau.

(Descriptions and suggestions above provided by the American Ground Water Trust. For more information, see their website at <http://www.aqwt.org>)

I still have questions. Who can I talk to for more information?

If you have any further questions or want more information about your choices, you may call the Sanitation District toll-free at 1-877-CUT-SALT or email us at cutsalt@lacsdsd.org.

If I use potassium chloride in my water softener instead of sodium chloride, will that help eliminate the problem?

No. Although potassium chloride does not contain sodium, it still contains chloride.

What is chloride?

Chloride is one of the two components of sodium chloride, also known as table salt or rock salt. It is also one of the two components of potassium chloride, also known as potassium tablets or potassium crystals.

Why can't the Sanitation District treat our tap water to make it softer and eliminate the need for water softener systems?

It is not within the Sanitation District's scope to treat and serve drinking water. Any decision to further treat tap water must be made by the local water agencies in the Santa Clarita Valley. It may be very costly and difficult to treat all of the tap water in the Santa Clarita area, since half of the potable (drinkable) water in the area comes from groundwater wells, and it is the water from the groundwater wells that is hard. Water treatment equipment would have to be installed and maintained at numerous wellhead locations that are scattered around the Santa Clarita Valley or combined to develop a centralized treatment facility and new distribution system.

One local purveyor, Valencia Water Company, is currently conducting a pellet softening demonstration project in the Copperhill community. More information can be obtained by calling them at (661) 294-0828.

Why is chloride bad for water?

Too much chloride in water can damage agricultural crops by causing leaf burn or drying of leaf

tissue. It also can harm aquatic life if present at levels of 230 milligrams per liter (parts per million) for sustained periods.

Why is it necessary to reduce chloride levels in the Santa Clara River?

The Los Angeles Regional Water Quality Control Board (Regional Board) has set a water quality objective of 100 milligrams per liter for the Santa Clara River. Regional Board officials believe that this objective is necessary to protect salt sensitive agricultural crops, such as avocados and strawberries. Currently the concentration of chloride being discharged to the river is consistently above the acceptable level established by the Regional Board.

With the removal of the automatic water softeners why hasn't the problem been solved? Why do we still have to pay for costly treatment plant upgrades?

The impact of automatic water softeners was evaluated and it was determined that approximately one third of the overall chloride loading in the treated wastewater could be eliminated through the removal of these units, reducing rate increases tied to wastewater treatment. Residents who have removed their automatic water softeners and passed Measure S must be commended for their role in keeping the rate as low as possible, saving over \$70 million in project facility costs. Although the Santa Clara River Chloride Reduction Ordinance of 2008 (provided for by Measure S) made major strides in lowering chloride levels in the treatment plant discharge, it was not sufficient to bring the plants into full compliance. Full compliance, without the need for advanced treatment, would have required significantly higher chloride limits during drought conditions, which the Sanitation District fought so hard to get, but that the Regional Board was not willing to grant.

Because users in the Santa Clarita Valley still contribute a significant amount of chloride to the treated wastewater effluent, through everyday activities such as doing dishes, washing clothes and taking showers, in order to comply with the standard, the community must reduce a portion of the chloride in the treated wastewater.

LACSD Website

Santa Clara River Chloride Reduction Ordinance of 2008

On November 4, 2008, voters approved the Santa Clara River Chloride Reduction Ordinance of 2008. The ordinance prohibits residential automatic water softeners in the Santa Clarita Valley. The ordinance can be obtained by following the link below.

[Santa Clara River Chloride Reduction Ordinance of 2008](#)

- Effective June 30, 2009, all residential automatic water softeners, also known as self-regenerating water softeners, are prohibited in the Santa Clarita Valley.
- Residents affected by this ordinance that own their units are able to participate in the Automatic Water Softener Rebate Program.
- A violation of the ordinance following issuance of a final administrative order is a misdemeanor punishable by fines up to \$1,000 and/or imprisonment not to exceed 30 days.
- The ordinance applies to residences served by the Santa Clarita Valley Sanitation District, which includes all areas with sewer service in the Santa Clarita Valley. Communities affected include, but are not limited to: Santa Clarita, Saugus, Valencia, Newhall, Castaic, Canyon Country, Stevenson Ranch, Fair Oaks Ranch, Bouquet Canyon, Mint Canyon, and Forrest Park.
- Residences served by septic tanks instead of sewers are not affected by the ordinance.
- The ordinance applies in the same way whether you rent your automatic water softener or own it.
- The ordinance applies only to water softeners that use either sodium chloride or potassium chloride to regenerate on site. The ordinance does not apply to water softeners that use exchange tanks that are regenerated off-site. It also does not apply to filtration, activated carbon, reverse osmosis treatment, or non-salt water conditioning units.
- If you wish to treat your water you can use water treatment systems such as activated carbon units, reverse osmosis systems, portable exchange tank softeners, salt free water conditioning devices, or water filtration systems. [Click here for more information.](#)
- Disposal of brine from an automatic water softener, even if you use potassium chloride, onto land or into a dry well requires a permit from the Regional Board. Without a permit, landscape irrigation with brine and disposal of brine into a dry well is illegal. The state agency responsible for protecting water quality (the Regional Board) will not issue permits for irrigation with brine and disposal brine into a dry well. Violators may be subject to penalties.
- Santa Clarita businesses have been prohibited from using automatic water softeners since 1961.

LACSD Website

Automatic Water Softener Ordinance

On March 27, 2003, an ordinance took effect that prohibits the installation or assisting in the installation of automatic water softeners in the Santa Clarita Valley. The ordinance can be obtained by following the link below.

[Automatic Water Softener Ordinance](#)

- Effective March 27, 2003, the installation of residential automatic or self-regenerating water softeners, including new and replacement units, was prohibited in the Santa Clarita Valley.
- A violation of the ordinance banning the installation of automatic water softeners is a misdemeanor punishable by fines up to \$1,000 and/or imprisonment not to exceed 30 days.
- The ordinance applies to residences served by the Santa Clarita Valley Sanitation District (formerly Sanitation Districts Nos. 26 and 32), which includes all areas with sewer service in the Santa Clarita Valley. Communities affected include, but are not limited to: Santa Clarita, Saugus, Valencia, Newhall, Castaic, Canyon Country, Stevenson Ranch, Fair Oaks Ranch, Bouquet Canyon, Mint Canyon, and Forrest Park.
- Residences served by septic tanks instead of sewers are not affected by the ordinance.
- The ordinance applies only to the installation of water softeners that use either sodium chloride or potassium chloride to regenerate on site. The ordinance does not apply to water softeners that use exchange tanks that are regenerated off-site. It also does not apply to filtration, activated carbon, reverse osmosis treatment, or no-salt water conditioning units.
- The ordinance applies in the same way whether you rent your automatic water softener or own it.
- If you wish to treat your water you can use water treatment systems such as activated carbon units, reverse osmosis systems, portable exchange tank softeners, no-salt water conditioning devices, or water filtration systems. [Click here for more information.](#)
- Santa Clarita businesses have been prohibited from using automatic water softeners since 1961.

LACSD Website

Saltwater Pool Ordinance

On November 9, 2005, an ordinance was enacted in the Santa Clarita Valley making it illegal for swimming pools connected to the sewer system to be converted to saltwater pools. The ordinance also made it illegal for both new and existing saltwater pools to be connected to the sewer system. A copy of the ordinance can be obtained by following the link below.

[Saltwater Pool Ordinance](#)

- Effective December 9, 2005, installation, or assisting in the installation, of saltwater pools that discharge directly or indirectly to the sewer system is prohibited.
- Effective December 9, 2005, it is illegal to convert swimming pools connected to the sewer system to saltwater pools.
- A violation of the ordinance banning saltwater pools is a misdemeanor punishable by fines up to \$1,000 and/or imprisonment not to exceed 30 days.
- The ordinance applies to residences served by the Santa Clarita Valley Sanitation District (formerly Sanitation Districts Nos. 26 and 32), which includes all areas with sewer service in the Santa Clarita Valley. Communities affected include, but are not limited to: Santa Clarita, Saugus, Valencia, Newhall, Castaic, Canyon Country, Stevenson Ranch, Fair Oaks Ranch, Bouquet Canyon, Mint Canyon, and Forrest Park.
- Residences served by septic tanks instead of sewers are not affected by the ordinance.
- The ordinance aims to reduce the amount of chloride going into the Santa Clara River.

LACSD Website

Automatic Water Softener Rebate Program

To obtain an application for the Automatic Water Softener Rebate Program, please click the link below. Be sure to fully complete the application, and sign it prior to mailing. Incomplete applications cannot be processed. The application can be mailed to Los Angeles County Sanitation Districts, P.O. Box 4998, Whittier, CA 90607, Attn: SCV Rebate Program or faxed to (562) 908-4224.

- **Rebate Application Form** ([PDF](#)) ([DOC](#))

Take the Rebate and Run: Up to \$2,000 for your Automatic Water Softener

The Santa Clarita Valley Sanitation District (Sanitation District) offers an automatic water softener rebate program. If you have an automatic water softener, you can get a rebate for the reasonable value of the unit—from \$206 up to \$2,000—and free removal by a pre-selected licensed plumber.

Applying for the rebate is simple:

1. Submit the one page rebate application to the Sanitation District (forms can be obtained by clicking on the Rebate Application Form link above).
2. After receiving your authorization to proceed, which will identify your rebate amount, schedule an appointment with a plumber on the list that accompanies the letter.
3. Watch the mail for your check.

As you may be aware, automatic water softeners release a salty waste into the sewer system. Though the wastewater is thoroughly treated before discharge into the Santa Clara River, the treatment process does not remove salt. The salty waste may be harmful to downstream aquatic life and/or agriculture.

In 2003, the Sanitation District banned the installation of all new automatic water softeners. This rebate program responds to citizens' concerns about losing the capital investment in their softener by reimbursing the reasonable value of the unit based on age, purchase price and model retail rates. The rebate program provides reimbursement for 75 percent of the reasonable value of the automatic water softener.

To qualify for the Automatic Water Softener Rebate Program, the automatic water softener, the kind to which you add rock salt or potassium chloride, **must be owned by the rebate program applicant** (rentals are not eligible). Portable exchange tanks, which are rental units where the softening tank is exchanged periodically by a service provider for a new softening tank, are legal to use and are not eligible for a rebate. The automatic water softener must be installed in a residential unit (house, multiplex, condominium, apartment, or mobile home) that is served by the Sanitation District. Residences outside of the Sanitation District or served by septic tanks are not eligible. If the residence has more than one automatic water softener, all must be removed to qualify for this rebate program. The program is limited to one rebate per site address (location where the automatic water softener is installed).

As a condition of the Automatic Water Softener Rebate Program, a Sanitation District's representative is authorized to visit the residence to verify that the automatic water softener is installed prior to removal.

If you would like to dispose of the salt or potassium chloride yourself, it must be disposed of as household hazardous waste. Residents of the City of Santa Clarita may call Curbside Incorporated at (800) 449-7587 or (800) HHW-PKUP to schedule a free household hazardous waste pickup. Residents of unincorporated Los Angeles County may dispose of salt for free at the Saugus Water Reclamation Plant located at 26200 Springbrook Avenue in Santa Clarita. At the Saugus Water Reclamation Plant, salt is collected at the Liquid Waste Disposal Station. Enter the station by driving through the railroad crossing located opposite Saugus Suzuki at 26081 Bouquet Canyon Road in Saugus. The station is open Monday through Saturday from 7:00 a.m. to 3:30 p.m. and is closed on Sundays and major holidays.

All residents may also dispose of salt for free at the annual Santa Clarita Household Hazardous Waste Collection Events and at the East San Fernando Valley S.A.F.E. Collection Center. The East San Fernando Valley S.A.F.E. Center is located at 11025 Randall Street in Sun Valley and is open Saturday, Sunday, and Monday from 9:00 a.m. to 3:00 p.m. except on major holidays.

If you have additional questions, please call 877-CUT-SALT.

LACSD Website

How to Remove Your Automatic Water Softener

Automatic water softeners use rock salt or potassium chloride. Residents that own their automatic water softener are eligible for the Automatic Water Softener Rebate Program. As part of the program, a list of licensed plumbers will be provided to remove the automatic water softener at no cost to the applicant. Most alternative unit installers will also remove your automatic water softener if you purchase or rent a unit from them.

For more information about the Automatic Water Softener Rebate Program and to get a rebate application form, please click the link below. Please submit a rebate application form before contacting the Sanitation District to schedule pickup of a disconnected automatic water softener.

- [Automatic Water Softener Rebate Program](#)

To remove your automatic water softener from a home less than 15 years old, please follow the five steps below.

- **STEP 1:** At your local hardware store, buy a 16-inch, flexible copper pipe (equipped with fittings compatible with existing house) and pipe dope (sealant) for about \$10. High-quality hose can be used in lieu of a copper pipe. Clerks at the store can advise you.
- **STEP 2:** Turn off your water. Water valves are located on the outside of homes near the meter box and will be either a side-ways or wheel handle. Check to see that your water is off by turning on your garden hose or faucet. Then turn off your hose or faucet.
- **STEP 3:** Unplug the automatic water softener from the electrical source. Using a wrench, unscrew the water pipes connecting the automatic water softener to the water source (which will be attached to the house). Then pull the unit from the wall.
- **STEP 4:** After placing pipe dope on each end of the flexible copper pipe or high-quality hose, attach it to the ends of the pipe connected to the wall. Using a wrench, tighten the copper pipe.
- **STEP 5:** Turn your water back on. If a leak occurs at the copper pipe connections to the water source, repeat steps two through five and use more pipe dope.

Once the automatic water softener is removed, please call the Sanitation District at 877-CUT-SALT or email us at cutsalt@lacsdsd.org to schedule a pickup.

For more information on qualified alternative units, please click the link below.

- [Automatic Water Softener Alternatives](#)

If you have concerns on how to remove your automatic water softener, contact your local plumber.

LACSD Website

Salt Free Water Conditioning Alternatives

The Santa Clarita Valley Sanitation District has examined the water conditioning systems listed below and found that they are not subject to the ordinance prohibiting the installation of automatic water softeners (also known as self-regenerating water softeners) in the Santa Clarita Valley. [View All](#)

Company

Product

Technology

Ratings

GO

[Rate Your Product](#)

Select By Price

TO PURCHASE

- View All
- \$0-\$499
- \$500-\$999
- \$1000-\$1499
- \$1500-\$1999
- \$2000-\$2499
- \$2500-\$2999
- \$3000-\$3499
- \$3500-\$3999
- \$4000-\$4499
- \$4500-\$4999

TO RENT

- View All
- \$0-\$24
- \$25-\$49
- \$50-\$74
- \$75-\$99
- \$100-\$124

[Search](#)

Select By Technology

- View All
- Activated Carbon Adsorption
- Filtration
- Portable Exchange Tank Softening
- Other

[Search](#)

Select By Ratings

- View All
- 1 star
- 2 stars
- 3 stars
- 4 stars
- 5 stars

[Search](#)

Consumer ratings have been submitted by Santa Clarita Valley residents exclusively and people living outside of the Santa Clarita Valley are not permitted to submit ratings to this website. The ratings do not represent the views of the Sanitation District and are provided for information purposes only.

For more information on the consumer ratings, see the [Consumer Comments Guidelines](#) and/or the [Sanitation District's Privacy Policy](#).

Contact info **1-877-CUT-SALT**, or e-mail cutsalt@lacsdsd.org

LACSD Website

Salt Free Water Conditioning Alternatives

Please note that this list does not constitute an endorsement of any particular product, nor does it provide any assurances regarding the effectiveness of any potable water treatment system.

Company

Product

Technology

Ratings

GO

[Rate Your Product](#)

Number of Products Matching Search Criteria: 56



Product Name: Aqua Vantage De-scaler

Technology: Electronic

Price - Purchase: \$0-\$499 **Rental:** Rental not available

Guarantee: None

Warranty: Lifetime

Maintenance Requirements: None

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: Aqua Vantage POE 3 and POE 4

Technology: Activated Carbon Adsorption, Filtration, Oxidation/Reduction

Price - Purchase: \$1000-\$2499 **Rental:** Rental not available

Guarantee: None

Warranty: Lifetime warranty (except filters)

Maintenance Requirements: Filters need changing once a year. Filters cost \$197 to \$239.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: Aquafer Water Source

Technology: Activated Carbon Adsorption, Filtration, Magnetic, Catalytic

Price - Purchase: \$1500-\$1999 **Rental:** Rental not available

Guarantee: Unknown

Warranty: 10 years on tank

Maintenance Requirements: Change pre and post filters once a year. Filters cost \$35 to \$45 each.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)

Product Name: Aqua-Rex

Technology: Electronic

Price - Purchase: \$0-\$499 **Rental:** Rental not available

Guarantee: 100-day money back

Warranty: 5 years

Maintenance Requirements: None



Rating: ★★★★★ **Number of Reviews:** 1 [Read Reviews](#)

For [More Information](#)

Product Name: Catalytic 1000

Technology: Catalytic

Price - Purchase: \$500-\$999 **Rental:** \$25-\$49

Guarantee: 120-day money back

Warranty: 10 years parts and labor

Maintenance Requirements: Bar needs cleaning once a week with a stainless steel pad that is provided. Cleaning takes a couple minutes.

Rating: ★★★★★ **Number of Reviews:** 9 [Read Reviews](#)

For [More Information](#)



Product Name: Clarius

Technology: Activated Carbon Adsorption, Filtration

Price - Purchase: Unknown **Rental:** Rental not available

Guarantee: 30-day money back

Warranty: Limited lifetime

Maintenance Requirements: Filter media needs replacement every 2 to 3 years. Cost unknown.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)

Product Name: Clear Water Hydromagnet

Technology: Activated Carbon Adsorption, Magnetic

Price - Purchase: \$1500-\$1999 **Rental:** \$50-\$74

Guarantee: Unknown

Warranty: 5 years

Maintenance Requirements: None

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)

No Picture
is available

Product Name: Culligan Portable Exchange Service

Technology: Portable Exchange Tank Softening

Price - Purchase: Purchase not available **Rental:** Unknown

Guarantee: 30-day money back

Warranty: None

Maintenance Requirements: Tanks must be changed every 2 to 4 weeks.

Rating: ★★★★★ **Number of Reviews:** 14 [Read Reviews](#)

For [More Information](#)



Product Name: CWS Residential Conditioner

Technology: Magnetic

Price - Purchase: \$500-\$999 **Rental:** Rental not available

Guarantee: None

Warranty: 5 years on complete unit, workmanship, and materials

Maintenance Requirements: None

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: DuPure EcoPur (formerly AES ScaleStopper)

Technology: Activated Carbon Adsorption, Filtration, Template Assisted Crystallization

Price - Purchase: Unknown **Rental:** Rental not available

Guarantee: 30-day money back

Warranty: 1 year for labor and limited lifetime

Maintenance Requirements: All filters and media need replacement every 3 years. Cost is unknown.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: EasyWater

Technology: Electronic

Price - Purchase: \$500-\$1499 **Rental:** Rental not available

Guarantee: 90-day money back

Warranty: 3 years

Maintenance Requirements: None

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: Ecomate Whole House Water System

Technology: Activated Carbon Adsorption, Template Assisted Crystallization

Price - Purchase: Unknown **Rental:** \$100- Greater than \$149

Guarantee: 30-day money back

Warranty: 1 year labor, 25 years on tanks and 5 years on all other components

Maintenance Requirements: Template assisted crystallization media needs replacement after 5 to 7 years and costs \$749. Activated carbon media needs replacement after 10 to 15 years and costs \$455.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)

Product Name: EcoPro Basic Water System

Technology: Activated Carbon Adsorption, Filtration, Catalytic

Price - Purchase: \$1500-\$2499 **Rental:** Rental not available

Guarantee: None

Warranty: 5 years on in and out valves and 10 years on tanks

Maintenance Requirements: Pre-filter needs to be replaced every 12 months at a cost of \$119. Carbon needs to be replaced every 5 years at a



cost of \$399. Filtersorb resin needs to be replaced every 5 years at a cost of \$499.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: EcoPro Premium Water System

Technology: Activated Carbon Adsorption, Filtration, Catalytic

Price - Purchase: \$2000-\$2499 **Rental:** Rental not available

Guarantee: None

Warranty: 5 years on control valves and 10 years on tanks

Maintenance Requirements: Pre-filter needs to be replaced every 12 months at a cost of \$119. Carbon needs to be replaced every 7 years at a cost of \$399. Filtersorb resin needs to be replaced every 5 years at a cost of \$499.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: ECOSmarte Whole House Water System

Technology: Activated Carbon Adsorption, Filtration, Ionization, Oxidation/Reduction

Price - Purchase: \$4000-\$4499 **Rental:** Rental not available

Guarantee: 60-day money back

Warranty: 5 years (except electrodes)

Maintenance Requirements: Electrode chamber cleaning is needed once a year. Cleaning takes 5 minutes and costs \$0.25. Filters need replacement after 5 to 8 years. Filter cost \$250.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: ECOSmarte Whole House Water System

Technology: Activated Carbon Adsorption, Filtration, Ionization, Oxidation/Reduction

Price - Purchase: \$2500-\$4499 **Rental:** Rental not available

Guarantee: 60-day money back

Warranty: 5 years on all parts except copper bars

Maintenance Requirements: Electrodes need annual cleaning which takes 2 hours and costs approximately \$5. Every 5 years copper bars need replacement at a cost of \$100 and one hour of labor. Every 4 to 6 years filtration media needs replacement at a cost of \$200. The media replacement takes about 4 hours.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: Enviro-Pure Water Conditioner
Technology: Magnetic
Price - Purchase: \$1000-\$2999 **Rental:** Rental not available
Guarantee: 60-day money back
Warranty: 10 years limited
Maintenance Requirements: None
Rating: Not Rated **Number of Reviews:** 0
 For [More Information](#)



Product Name: EWS Whole House Systems
Technology: Catalytic, Magnetic, Oxidation/Reduction
Price - Purchase: \$2000-\$3999 **Rental:** Rental not available
Guarantee: None
Warranty: 10 years
Maintenance Requirements: None
Rating: Not Rated **Number of Reviews:** 0
 For [More Information](#)



Product Name: Filtercon
Technology: Activated Carbon Adsorption, Filtration, Magnetic, Oxidation/Reduction
Price - Purchase: \$2000-\$4999 **Rental:** Rental not available
Guarantee: None
Warranty: Limited lifetime warranty on tank and 5 years on computerized timer head
Maintenance Requirements: Filters require maintenance after 10 to 15 years. Replacement filters cost between \$25 to \$3,500.
Rating: Not Rated **Number of Reviews:** 0
 For [More Information](#)



Product Name: Futura10, Futura 15, and Futura20
Technology: Catalytic
Price - Purchase: \$1000-\$2499 **Rental:** Rental not available
Guarantee: 30-day money back
Warranty: 10 year limited warranty
Maintenance Requirements: Media needs changing every 5 to 10 years and costs approximately \$480.
Rating: Not Rated **Number of Reviews:** 0
 For [More Information](#)



Product Name: GMX Models 400, 800, 848
Technology: Magnetic
Price - Purchase: \$500-\$999 **Rental:** Rental not available
Guarantee: 90-day money back
Warranty: Lifetime
Maintenance Requirements: None
Rating: Not Rated **Number of Reviews:** 0
 For [More Information](#)



Product Name: HALO 5-STAGE Water Filtration and Conditioning System
Technology: Activated Carbon Adsorption, Magnetic
Price - Purchase: \$3500-\$4499 **Rental:** Rental not available
Guarantee: None
Warranty: Limited lifetime
Maintenance Requirements: Tank needs replacement after 10 years and costs approximately \$1,750 to \$2,250.
Rating: Not Rated **Number of Reviews:** 0
 For [More Information](#)



Product Name: Hard Water Wizard
Technology: Magnetic
Price - Purchase: \$0-\$499 **Rental:** \$0-\$24
Guarantee: 90-day money back
Warranty: 2 years
Maintenance Requirements: None
Rating: Not Rated **Number of Reviews:**
 For [More Information](#)



Product Name: Housetron
Technology: Filtration, Catalytic
Price - Purchase: \$500-\$999 **Rental:** Rental not available
Guarantee: 1-year money back
Warranty: 3 years
Maintenance Requirements: Filter needs replacement every year and costs \$65.
Rating: Not Rated **Number of Reviews:** 0
 For [More Information](#)

Product Name: HT 2000 Whole House Reverse Osmosis System
Technology: Activated Carbon Adsorption, Filtration, Reverse Osmosis, Ozonation
Price - Purchase: \$4500- Greater than \$4999 **Rental:** Rental not available
Guarantee: 30-day money back
Warranty: 10 year limited warranty



Maintenance Requirements: Sediment filters need changing every 6 months and cost approximately \$30. The reverse osmosis membrane needs changing every 3 to 5 years and costs approximately \$399. The filter media needs changing every 4 to 6 years and costs approximately \$499. Company offers a service program for \$199 every 6 months or \$35 per month. With the program, service is provided on a 6 month schedule and includes all necessary filter media, membrane(s), and cartridges.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: HydroCare

Technology: Electronic

Price - Purchase: \$500-\$999 **Rental:** Rental not available

Guarantee: 1-year money back

Warranty: 3 years

Maintenance Requirements: None

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: Hydrochanger

Technology: Activated Carbon Adsorption, Catalytic

Price - Purchase: \$500-\$999 **Rental:** Rental not available

Guarantee: 6-month money back

Warranty: 10 years limited warranty

Maintenance Requirements: Filtration tank media needs to be changed after 3 years and costs \$100 to \$150.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: Hydromagnetic Activated Carbon System

Technology: Activated Carbon Adsorption, Magnetic

Price - Purchase: \$1000-\$2499 **Rental:** Rental not available

Guarantee: 30-day money back

Warranty: 5 years on control valve and lifetime on tank

Maintenance Requirements: Multi-media needs replacement after 15 years and costs \$499.

Rating: ★★★★★ **Number of Reviews:** 13 [Read Reviews](#)

For [More Information](#)

Product Name: LifeSource Whole House Water System

Technology: Activated Carbon Adsorption, Filtration

Price - Purchase: Unknown **Rental:** Rental not available

Guarantee: None

Warranty: 3 years on timer and 10 years on tank

Maintenance Requirements: Activated carbon filters last approximately 18 years. May require a cartridge pre-filter (which would need changing every 6 to 12 months at a price of \$6 per cartridge).



Rating: ★★★★★

Number of Reviews: 22

[Read Reviews](#)

For [More Information](#)



Product Name: Pelican NaturSoft NS3/NS6

Technology: Filtration, Catalytic

Price - Purchase: \$1000-\$1499 **Rental:** Rental not available

Guarantee: 90-day money back

Warranty: 10 years

Maintenance Requirements: Prefilter needs replacement every 6 months and costs approximately \$9.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: Pelican NaturSoft PSE1800/PSE2000

Technology: Activated Carbon Adsorption, Filtration, Catalytic

Price - Purchase: \$1500-\$2499 **Rental:** Rental not available

Guarantee: 90-day money back, 5 years on carbon filter

Warranty: 10 years

Maintenance Requirements: Prefilter needs replacement every 6 months and costs approximately \$9. Carbon needs replacement every 5 years and costs \$156-\$216.

Rating: ★★★★★

Number of Reviews: 1

[Read Reviews](#)

For [More Information](#)



Product Name: Pelican NaturSoft PSE1800/PSE2000

Technology: Activated Carbon Adsorption, Filtration, Catalytic

Price - Purchase: \$1000-\$2999 **Rental:** Rental not available

Guarantee: 90-day money back

Warranty: 10 years on tank and valves

Maintenance Requirements: Pre-filter needs replacement once a year and costs approximately \$10. Carbon needs replacement every 5 years and costs approximately \$200.

Rating: ★★★★★

Number of Reviews: 1

[Read Reviews](#)

For [More Information](#)

Product Name: Purity101

Technology: Activated Carbon Adsorption, Filtration, Magnetic



Price - Purchase: \$4999- Greater than \$4999 **Rental:** Rental not available

Guarantee: 60-day money back

Warranty: 1 year parts and labor and 10 years limited

Maintenance Requirements: Pre-filter needs changing every six months and costs approximately \$50. Post-filter needs changing once a year and costs approximately \$100.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: Rayne Executive Whole House Conditioner

Technology: Activated Carbon Adsorption, Filtration

Price - Purchase: \$1500-\$2499 **Rental:** Rental not available

Guarantee: None

Warranty: Limited lifetime warranty with 5 years on moving parts

Maintenance Requirements: Every 2 to 5 years, 1 hour of maintenance is required. The maintenance costs \$100 to \$300.

Rating: ★★★★★ **Number of Reviews:** 9 [Read Reviews](#)

For [More Information](#)



Product Name: Rayne Portable Exchange Service

Technology: Portable Exchange Tank Softening

Price - Purchase: Purchase not available **Rental:** \$25-\$99

Guarantee: None

Warranty: None

Maintenance Requirements: 5 minutes per month for tank delivery.

Rating: ★★★★★ **Number of Reviews:** 8 [Read Reviews](#)

For [More Information](#)



Product Name: Residential Sterling Conditioner

Technology: Activated Carbon Adsorption, Filtration, Electronic

Price - Purchase: \$500-\$999 **Rental:** Unknown

Guarantee: Unknown

Warranty: Unknown

Maintenance Requirements: Soak Sterling Conditioner in vinegar for 30 to 45 minutes. Filters need to be changed every 6 to 12 months.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: SafeWater Softener

Technology: Filtration, Catalytic

Price - Purchase: \$500-\$999 **Rental:** Rental not available

Guarantee: 3-month money back

Warranty: 5 years

Maintenance Requirements: Filter needs to be washed every 2 to 3 months and needs replacement every 7 months. Filters cost \$5 to \$30 depending on the type of filter.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)

Product Name: Scale Blaster / Aqua 2000

Technology: Electronic

Price - Purchase: \$500-\$999 **Rental:** Rental not available

Guarantee: None

Warranty: 1 year

Maintenance Requirements: None

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: Scale Blaster / Aqua 2000

Technology: Electronic

Price - Purchase: Unknown **Rental:** Rental not available

Guarantee: Unlimited money back

Warranty: 5 years

Maintenance Requirements: None

Rating: ★★★★★ **Number of Reviews:** 1 [Read Reviews](#)

For [More Information](#)



No Picture
is available

Product Name: Scale Blaster / Aqua 2000

Technology: Electronic

Price - Purchase: Purchase not available **Rental:** \$0-\$24

Guarantee: Unknown

Warranty: 5 years

Maintenance Requirements: None

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)

Product Name: Scale Prevention System (Pro Water)

Technology: Activated Carbon Adsorption, Filtration, Template Assisted Crystallization

Price - Purchase: \$1500-\$2499 **Rental:** Rental not available

Guarantee: 30-day money back

Warranty: 5 years on control valve and 10 years on tanks

Maintenance Requirements: Filters need to be changed every 10 years at a cost of approximately \$250.

Rating: ★★★★★ **Number of Reviews:** 1 [Read Reviews](#)



For [More Information](#)



Product Name: Scale Prevention System (Santa Clarita Water)

Technology: Activated Carbon Adsorption, Filtration, Template Assisted Crystallization

Price - Purchase: \$1500-\$2999 **Rental:** Rental not available

Guarantee: 30-day money back

Warranty: 5 years on control valve and lifetime on tank

Maintenance Requirements: Filtersorb resin needs replacement every 5 years and costs \$499. Multi-media needs replacement after 15 years and costs \$499.

Rating: ★★★★★ **Number of Reviews:** 1 [Read Reviews](#)

For [More Information](#)



Product Name: ScaleNet

Technology: Template Assisted Crystallization

Price - Purchase: \$500-\$2499 **Rental:** Unknown

Guarantee: Unknown

Warranty: 1 year warranty

Maintenance Requirements: Media needs replacement every five years.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)

Product Name: Scalewatcher

Technology: Electromagnetic

Price - Purchase: \$0-\$499 **Rental:** Rental not available

Guarantee: 1-year money back

Warranty: 10 years

Maintenance Requirements: None

Rating: ★★★★★ **Number of Reviews:** 1 [Read Reviews](#)

For [More Information](#)



Product Name: Scalewatcher

Technology: Electromagnetic

Price - Purchase: \$0-\$499 **Rental:** Rental not available

Guarantee: 1-year money back

Warranty: 10 years



Maintenance Requirements: None

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: SCR No Salt Water Softener

Technology: Activated Carbon Adsorption, Filtration, Template Assisted Crystallization

Price - Purchase: \$2500-\$3999 **Rental:** \$50-\$74

Guarantee: None

Warranty: 10 years on tanks

Maintenance Requirements: Sediment filter needs replacement every year and costs \$35. Carbon filter needs replacement every 5 years and costs \$380. SCR scale prevention resin needs replacement every 5 years and costs \$480.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)

Product Name: Small Wonder US149

Technology: Electromagnetic

Price - Purchase: \$0-\$499 **Rental:** Rental not available

Guarantee: 90-day money back

Warranty: 2 years

Maintenance Requirements: None

Rating: ★★★★★ **Number of Reviews:** 1 [Read Reviews](#)

For [More Information](#)



Product Name: Soo-Soft Digital Water Softener

Technology: Electromagnetic

Price - Purchase: \$0-\$499 **Rental:** Rental not available

Guarantee: 6-month money back

Warranty: 5 years of parts and labor

Maintenance Requirements: None

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: SS 25 Water Treatment Dispenser

Technology: Chemical Addition

Price - Purchase: Purchase not available **Rental:** \$50-\$99

Guarantee: None

Warranty: None

Maintenance Requirements: ANMAC provides all service and maintenance. Unit costs between \$1,000 to \$1,500 to install. A one-year service contract is required. Contract can be terminated at anytime with 30 days written notice.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)

No Picture
is available



Product Name: Superior Water Conditioner

Technology: Magnetic

Price - Purchase: \$0-\$1999 **Rental:** Rental not available

Guarantee: 90-day money back

Warranty: 10 years

Maintenance Requirements: May need replacement after 25 to 30 years.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: Titanium Supreme Series

Technology: Activated Carbon Adsorption, Filtration, Template Assisted Crystallization

Price - Purchase: \$1000-\$4999 **Rental:** Rental not available

Guarantee: 30-day money back

Warranty: Lifetime on tank and 5 years on valves

Maintenance Requirements: Ceramic beads need changing every 5 years and cost approximately \$500. Activated carbon needs changing every 5 to 15 years and costs approximately \$500.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: Waterboy

Technology: Activated Carbon Adsorption, Filtration, Oxidation/Reduction, Magnetic

Price - Purchase: \$3000-\$3499 **Rental:** Rental not available

Guarantee: 30-day money back

Warranty: Lifetime

Maintenance Requirements: Filtration media needs replacement after 10 to 15 years.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: Whole House Water Conditioning System

Technology: Activated Carbon Adsorption, Filtration, Catalytic

Price - Purchase: \$2500-\$3999 **Rental:** Rental not available

Guarantee: None

Warranty: 5 years on the filter medias and 10 years on the tank and in/out valve.

Maintenance Requirements: Activated carbon filter needs replacement after 5 years and costs approximately \$275. Filtersorb media needs replacement after 10 years and costs approximately \$720.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)

Product Name: Whole House Water Filtration Systems

Technology: Activated Carbon Adsorption, Filtration, Magnetic

Price - Purchase: \$1000-\$3999 **Rental:** Rental not available



Guarantee: None

Warranty: Limited lifetime on tanks and 1 year on computerized timer head.

Maintenance Requirements: Filter media needs replacement after 7 to 10 years at a cost of \$300.

Rating: ★★★★★ **Number of Reviews:** 1 [Read Reviews](#)

For [More Information](#)



Product Name: Whole House Water Treatment Systems

Technology: Activated Carbon Adsorption, Filtration, Oxidation/Reduction, Electronic

Price - Purchase: \$2500- Greater than \$4999 **Rental:** Rental not available

Guarantee: None

Warranty: 10 years

Maintenance Requirements: Activated carbon media needs replacement after 10 years. Replacement cost for activated carbon is currently \$450.

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)



Product Name: Zeta Rod Systems

Technology: Electronic, Electrostatic

Price - Purchase: \$1500-\$2499 **Rental:** Rental not available

Guarantee: None

Warranty: 5 years for parts and workmanship

Maintenance Requirements: None

Rating: Not Rated **Number of Reviews:** 0

For [More Information](#)

Consumer ratings have been submitted by Santa Clarita Valley residents exclusively and people living outside of the Santa Clarita Valley are not permitted to submit ratings to this website. The ratings do not represent the views of the Sanitation District and are provided for information purposes only.

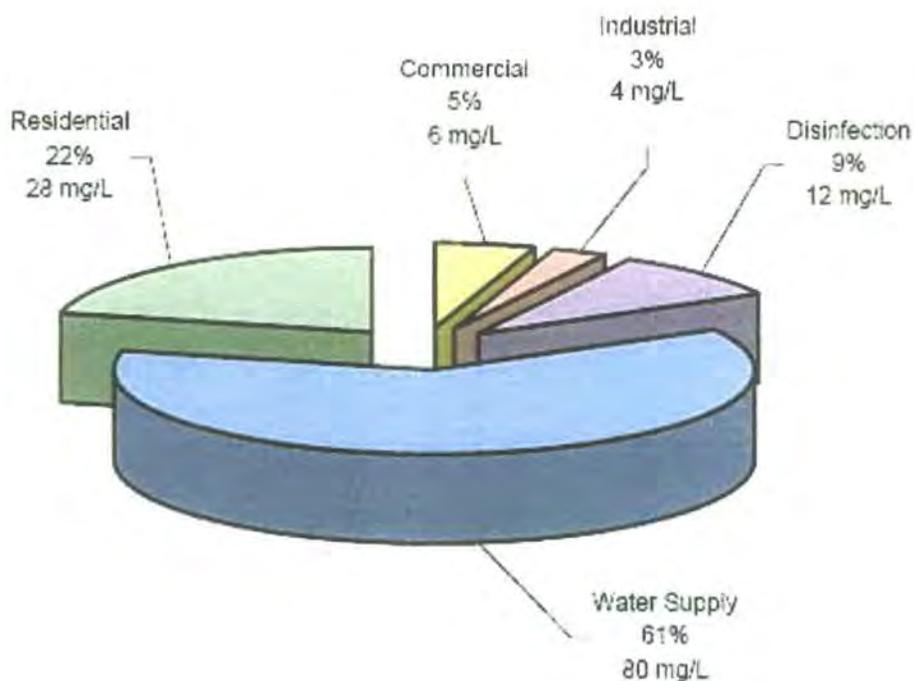
For more information on the consumer ratings, see the [Consumer Comments Guidelines](#) and/or the [Sanitation District's Privacy Policy](#).

Contact info **1-877-CUT-SALT**, or e-mail cutsalt@lacsdsd.org

LACSD Website

Sources of Chloride

Santa Clarita Valley Sanitation District October 2009 Chloride Sources



Note: Commercial, industrial, and water supply data from January to June 2009.

LACSD Website

How Softeners Work

Water softeners are one of the most effective means of treating hard water, caused by an excess of minerals -- primarily calcium and magnesium -- in the water. Water hardness is measured in mineral grains per gallon, with water containing up to one grain per gallon considered soft. Water containing more than 10 grains per gallon is generally considered hard. In the Santa Clarita area, the water is considered hard, making water softeners a popular choice for residents.

There are two basic types of water softeners: automatic water softeners (also known as self-regenerating water softeners) and exchange tank systems. Residential automatic water softeners are plumbed into the home's water supply and work by eliminating dissolved minerals through a process called ion exchange. Inside each water softener is a mineral tank that is filled with small plastic beads (also known as resin) that are negatively charged. To balance the charge, positively charged sodium ions are present on the beads. A separate brine tank holds a sodium chloride (salt) or potassium chloride solution, which is used to regenerate the softener. Under normal usage, hard water is passed through the mineral tank. The calcium and magnesium ions in the hard water have a stronger positive charge than the sodium or potassium ions on the resin. Therefore, the calcium and magnesium ions replace the sodium or potassium ions on the resin. The water flowing through the softener is now considered "soft" because the majority of the calcium and magnesium in the water has been replaced with sodium or potassium.

Eventually there will not be enough sodium left on the resin to effectively soften the water. Then the softener has to be regenerated. This process is usually done during the middle of the night because soft water is not available during the regeneration. To start the regeneration, salt water from the brine tank is sent to the mineral tank. The high levels of sodium or potassium in the brine force the calcium and magnesium off the resin, replacing it with sodium or potassium. The chloride present in the brine water simply stays in solution. After regenerating the mineral tank, the brine solution is flushed to the sewer. New salt or potassium chloride must be added to the brine tank on a regular basis to replace the salt or potassium chloride that is used to regenerate the mineral tank. Because chloride is not used up during the exchange process, eventually all of the chloride added to the mineral tank will end up being sewerred as spent brine.

Exchange tank softeners work in a manner similar to automatic water softeners, but feature a removable mineral tank that is replaced with a fresh mineral tank when the sodium on the resin is depleted. The depleted tanks are regenerated by water conditioning services at off-site facilities that are permitted to treat and discharge salty wastes, and thus do not put chloride into the Santa Clara River.

LACSD Website

Santa Clara River



The Santa Clara River, which flows west through the Santa Clarita Valley to the Pacific Ocean, is the last natural river in Southern California. Due to its shallow depth, it flows intermittently and is subject to flooding, making it unsuitable for fishing or recreational use except in limited areas. It is home to a variety of aquatic life, including endangered species such as the unarmored threespine stickleback, the Santa Ana sucker, and the arroyo chub.

The river area was first settled by the indigenous Chumash and Tataviam Indians, who relied upon the resources of the river to grow food crops and raise livestock. In 1769, a Spanish priest, Father Juan Crespi, gave the river its name during an exploration of the valley while scouting sites to build missions. He named the valley and river after Saint Clare of Assisi, who had an upcoming feast day. In the early days of Spanish settlers, the river was first diverted to irrigate mission crops to feed livestock.

In the early 1800s, aspiring ranchers were granted parcels of land along the river from the Mexican government and they used this land to create large ranches dedicated to raising livestock such as cattle and sheep.

Gradually, land use around the river shifted from ranching to agriculture in the 1870s, as the demand for cattle declined and devastating drought and flood cycles caused heavy cattle losses. With the arrival of Euro-American immigrants in the 1860s, larger scale agricultural crops were planted, including grains, sugar beets, walnuts, lima beans, and citrus, all of which relied on irrigation from the river and groundwater. During this period, for example, the Limoneira lemon ranch was founded and developed into the world's largest lemon producer.

The growth of these industries fueled rapid development in the area and the demands upon the Santa Clara River grew substantially. The years from 1920 to the present day reflect this as urban development has encroached upon the flood plains, creating greater residential and recreational uses of the river and its associated groundwater, particularly in the Los Angeles County portion of the watershed.

In the 1960s, the Sanitation District (formerly Sanitation District Nos. 26 and 32) built two water reclamation plants on the Santa Clara River to cope with this demand. The Valencia Water Reclamation Plant, located at 28185 The Old Road, occupies 27 acres west of the Golden State (5) freeway in the city of Santa Clarita. The Valencia Water Reclamation Plant provides primary, secondary, and tertiary treatment for 16 million gallons of wastewater per day and serves a population of approximately 160,000 people.

The Saugus Water Reclamation Plant is located at 26200 Springbrook Avenue and occupies four acres east of San Fernando Road in the city of Santa Clarita. The plant provides primary, secondary, and tertiary treatment for five million gallons of wastewater per day and serves a population of approximately 70,000 people.

LACSD Website

For Businesses

- [How do water softeners add chloride to wastewater?](#)
- [What are the sources of chloride in wastewater?](#)
- [What do I need to do as a business owner?](#)
- [What if I have questions or need more information?](#)
- [What is chloride?](#)
- [What is the alternative to automatic water softeners?](#)
- [Why is chloride a concern?](#)

How do water softeners add chloride to wastewater?

Water softeners exchange the calcium and magnesium (hardness) present in hard water for sodium or potassium. The calcium and magnesium adhere to resin in the softener. When the resin becomes saturated it is necessary to regenerate it. This is done by adding large amounts of sodium chloride or potassium chloride dissolved in water to the resin. The sodium or potassium displaces the calcium and magnesium, which is flushed to the sewer in a briny solution along with the chloride from the added sodium chloride or potassium chloride. When water softeners regenerate they produce a waste stream that contains significant amounts of chloride. Automatic water softeners, which do this regeneration on-site, add chloride to the sewer system in the Santa Clarita Valley. Exchange tank softeners that are regenerated at centralized off-site facilities do not produce a similar burden on the Santa Clarita Valley's sewer system.

What are the sources of chloride in wastewater?

Chloride is found in the drinking water that comes from your tap (both local groundwater and water delivered through aqueducts from Northern California). Another source of chloride in wastewater is water softeners that regenerate at their installed locations, called automatic or self-regenerating water softeners. Additionally, chloride may also be added to wastewater via human waste, swimming pools, cooling towers, boilers, and cleaning chemicals such as chlorine bleach.

What do I need to do as a business owner?

If your business is currently operating a water softener that regenerates on-site, you must immediately stop discharging brines from the unit into the sewer. If you put salt or potassium chloride in your softener or pay a water conditioning service to add salt or potassium chloride to the softener, then your softener regenerates on-site and can not be hooked up to the sewer. If someone changes out the tank in your softener on a regular basis, then you have an exchange tank system and can continue to use it. The Sanitation District regularly inspects local businesses to ensure that no automatic water softeners are connected to the sewer. Additionally, if you operate a swimming pool at your business you are required to implement certain management practices to reduce the chloride entering wastewater from your pool. Please contact the Sanitation District for more information.

What if I have questions or need more information?

If you have questions or would like more information about chloride restrictions at your business, please contact Preeti Ghuman of the Industrial Waste Section at 562-908-4288, extension 2904 or pghuman@lacsds.org

[Download notification letter](#)**What is chloride?**

Chloride is one of the two components of sodium chloride, also known as table salt or rock salt. It is also one of the two components of potassium chloride, also known as potassium tablets or potassium crystals.

What is the alternative to automatic water softeners?

If soft water is necessary for your business, you may use an exchange tank water softener that is regenerated off-site at a facility that can release salt discharges in accordance with a discharge permit. These types of water softeners are also known as canister-type softeners. There are local water conditioning businesses that offer exchange tank services. The cost varies depending on water usage and incoming water hardness.

[Click for more information on water softener alternatives.](#)

Why is chloride a concern?

All wastewater generated at businesses, except for rainwater, goes into the sewer. In Santa Clarita, wastewater flows to either the Saugus or Valencia Water Reclamation Plant for treatment. These treatment plants are not designed to remove chloride, so the chloride passes through to the Santa Clara River. The Los Angeles Regional Water Quality Control Board (Regional Board) has set a water quality objective of 100 milligrams per liter (parts per million) for the Santa Clara River. Regional Board officials believe that this objective is necessary to protect salt sensitive agricultural crops, such as avocados and strawberries. Currently the concentration of chloride being discharged to the river is consistently above the acceptable level established by the Regional Board.

LACSD Website

Press Releases

Santa Clarita Valley Residents Overwhelmingly Approve Ordinance Banning Automatic Water Softeners

11/12/2008 - Santa Clarita, CA - In a move that will save the community tens of millions of dollars, Santa Clarita Valley residents voted last week to approve Measure S, which bans the use of all automatic water softeners. The ban, a tool to reduce chloride (salt) in wastewater, will go into effect January 1, 2009 and will require all residents to remove their units within 180 days. The Santa Clarita Valley Sanitation District (District) will continue to offer rebates to automatic water softener owners and pay for removal and disposal.

[More >>](#)

Culligan Partners with Santa Clarita Valley Sanitation Districts to Remove 1,000 Automatic Water Softener Rental Units...

12/12/2007 - Santa Clarita, CA - In a move that will eliminate approximately 1,000 automatic water softeners from the Santa Clarita Valley, Culligan Water Conditioning of Orange County (www.culligan.com) and the Santa Clarita Valley Sanitation District of Los Angeles County (Sanitation District) have entered into an agreement...More

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Guaranteed Water Systems to Remove all Automatic Water Softener Rental Units...

12/12/2007 - Santa Clarita, CA - Guaranteed Water Systems and the Santa Clarita Valley Sanitation District of Los Angeles County (Sanitation District) have entered into an agreement today that will remove by 2009, approximately 50 automatic water softeners currently rented to Santa Clarita Valley residents. This voluntary agreement between...More

[More >>](#)

Rayne to Remove all Automatic Water Softener Rental Units in an Agreement that will Reduce Chloride in the Santa Clarita Valley - September 12, 2007

9/12/2007 - Santa Clarita, CA - Rayne Water Corporation (www.raynewater.com) and the Santa Clarita Valley Sanitation District of Los Angeles County (Sanitation District) have entered into an agreement today that will remove by the end of 2008, nearly 600 automatic water softeners currently rented to Santa Clarita Valley residents. This voluntary agreement between Rayne and the Sanitation District is a...More

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Governor Signs Bill Empowering Santa Clarita Valley Sanitation District to Offer and Promote Enhanced Rebate Program - September 25, 2006

9/25/2006 - Sacramento, CA - Governor Arnold Schwarzenegger signed Senate Bill 475 late Friday afternoon giving the Santa Clarita Valley Sanitation District (District) a new tool to reduce chloride in wastewater, which may keep Santa Clarita Valley sewer rates lower. **The District will also provide a new rebate offering reasonable value for voluntary removal of automatic water softeners.**

[More >>](#)

Santa Clarita Valley Sanitation District Board Members Adopt an Ordinance Banning Saltwater Pools - November 9, 2005

11/9/2005 - Santa Clarita, CA - On November 9 the Santa Clarita Valley Sanitation District board adopted an ordinance making it illegal for both new and existing saltwater pools to be connected to the sewer system. When saltwater pools are drained they contribute to higher salinity levels in the Santa Clara River. This ban on saltwater pools is believed to be the first of its kind in the United States and may serve as a model for communities struggling with related chloride issues.

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[LA Regional Water Quality Control Board Chloride TMDL Basin Plan](#) (Proceed to Santa Clara River list)

[Newhall County Water District](#)

[Saugus Water Reclamation Plant](#)

[Upper Santa Clara River Chloride TMDL Collaborative Process](#)

[Valencia Water Company](#)

[Valencia Water Reclamation Plant](#)

LACSD Website

Contact Us

Questions Regarding Residences

1-877-CUT-SALT (288-7258)

cutsalt@lacsds.org

Questions Regarding Businesses

Contact: Preeti Ghuman

562-908-4288, extension 2904

pghuman@lacsds.org

MEDIA ARTICLES

January 2011 – December 2011

[Print This Article](#)

Lynne Plambeck: Decreasing river salt can create jobs

Environmentally Speaking

By Lynne Plambeck
December 15, 2011

In the last few days, most Santa Clarita residents received a postcard from the sanitation district notifying them of the beginning of the public environmental process required to address the salt problem in the Santa Clara River.

I am sure everyone saw it, because it featured a picture of a really beautiful stretch of our Santa Clara River west of the Interstate 5 freeway.

The valley's two sewage-treatment plants, one located just west of the I-5, and the other located near Bouquet junction, both release treated waste water to the Santa Clara River.

High chloride (salt) releases from these sewer plants have been a problem for decades because of their failure to meet Clean Water Act standards that protect downstream farming. Tens of thousands of new housing units added to the Santa Clarita Valley's housing stock since the 1990s depend on often saltier imported water from Northern California, adding to the problem.

Although increasing salts seemed an undeniable water quality impact to most people, the sanitation districts chose to fight the law tooth and nail instead of just fixing the problem. They spent a lot of public funds trying to prove there were no impacts to farming, even though such impacts are well-established. One City Council member even suggested that the city of Santa Clarita spend public money to lobby Congress to amend the Federal Clean Water Act so that our city would have special dispensation to avoid the law.

In the end, the data showed that, indeed, high chloride levels affect avocados and strawberries, two foundation crops of the farming economy on Ventura County's Oxnard plain.

After a multiyear stakeholder process that included water agencies, farmers and environmental groups reached a consensus solution that eliminated the requirement for an expensive brine line, the sanitation districts created a grassroots rebellion by trying to raise sewer rates and put these costs all on the taxpayer.

Many felt that increased sewer connection fees for new development should have been the answer. The process again came to a standstill.

The Regional Water Quality Control Board finally lost patience. In May of this year, it issued notices of violations to the two local sewage-treatment plants, a first step in levying the steep fines that will be imposed if salt releases are not reduced.

Now, after some 15 years of trying to avoid fixing the problem, it looks like the process will finally begin.

Fixing the problem could have a silver lining. A report released last week by the city of Los Angeles' Economic Roundtable, "Water Use Efficiency and Jobs," quantified substantial job creation and economic growth from focusing on water-efficiency infrastructure improvements. The report describes, in detail, the economic benefits of various water conservation and water-efficiency strategies.

More efficient use of our water supply will reduce the amount of sewage water released to the river, thus perhaps aiding in the solution of our troublesome salt problem. What other solutions might reduce chlorides, save water and create jobs? We, the Santa Clarita Organization for Planning and the Environment, urge our valley's Integrated Water Management Plan stakeholder group to take a close look at this report to see how it might help us solve our problems in Santa Clarita.

Since most of us at the moment probably have our minds on our families and holiday cheer, this is probably not a great time to begin a public process to solve our river's salt problem. But we at SCOPE are at least glad to see the environmental review process to address this major problem finally get under way.

We urge you to take a minute to read that card with the beautiful picture of the Santa Clara river on it, and sign up for the Sanitation District's mailing list (svcsd@lacsdc.org), so that you can be part of the process.

Lynne Plambeck is president of the Santa Clarita Organization for Planning and the Environment, and a board member of the Newhall County Water District.

me - 10/20/11

[Print This Article](#)

Cam Noltemeyer: Salt still an issue for new development

Environmentally Speaking

By Cam Noltemeyer
October 20, 2011

In July, the Santa Clarita Valley Sanitation Districts had a meeting at 11 a.m. in Whittier. The time and place may not have been convenient for you or me to attend. Not to worry, the board of directors consists of Santa Clarita Mayor Marsha McLean, City Councilwoman Laurene Weste and County Supervisor Michael Antonovich.

We should be able to count on these elected representatives to watch out for the public, right? Well, see what you think.

Here's the background. Several years ago, the Sanitation District estimated it would require \$500 million to correct the chloride problem in the Santa Clara River and comply with the Clean Water Act. Neither the Valencia nor Saugus reclamation plants, (you may know them as sewer plants), currently remove the chloride, or salt, from the sewage.

After two years of meeting with a coalition of stakeholders, a new plan was proposed. Later, the Sanitation District estimated the new plan would cost about \$250 million less by eliminating the brine line to the ocean and instead pumping the salt into old oil wells.

Then the board tried to get the public to pay for the remaining \$250 million through increased sewer fees to residents. The community made enough fuss at the public hearing that the plan was not approved.

At the Whittier meeting, the agenda was merely identified as "Authorization Preparation of Facilities Plan, Environmental Impact

Report and Design of Facilities to Comply with Final Effluent Chloride Objective of 100mg/L at Saugus and Valencia Water Reclamation Plants” with an estimated cost of \$21 million.

Apparently, no one from the public reads Whittier Sanitation District agendas, and no one attends the meetings in Whittier in the middle of the day.

“Out of sight, out of mind,” as they say. Of course, the board approved the action.

The \$21 million is for the design and environmental documents for a plan that has not been presented to the public, nor vetted for stakeholder approval like the previous plan. There was no estimate of the total cost or any statements as to who will pay for it.

So much for transparency from our elected officials. No concerns for the families that are struggling to just keep their homes.

Now your sanitation board is allowing the Valencia Sewage Plant to process sewage discharge from the development of Newhall Ranch until the year 2024, instead of building its own plant that would remove salts as previously required.

Since proposed wells for this project are already high in chloride levels, there is little chance of meeting the 100mg/L chloride limit without a very expensive treatment facility being added to our sewage plants.

Would we be able to meet the 100mg/L chloride limit without taking on the Newhall Ranch developments?

The sanitation districts have already increased our sewer bills for the next three years, while lowering the requested connection fees for developers. At that meeting, Weste requested a program that would allow the developers to not pay until the houses were built. With such a plan, the board will be able to keep increasing our sewer rates to cover the major portion, if not all, of the unidentified plan.

The Santa Clarita Organization for Planning and the Environment believes that we need to reduce salt flows to the river, and that complying with the Clean Water Act is an important protection that guards against pollution and keeps our water quality healthy nationwide. Before it was passed in the 1970s, some rivers were so polluted that fish could not live in them.

We are not a Third World country. We need to keep our river clean.

But cleanup costs must be distributed fairly. The sanitation districts have known the high salts were a problem for decades. They allowed developers to continue to connect to their systems without including the cost of reducing the salt level, even though new development was adding to it. They just want you and me to pay for it.

Allowing Newhall Ranch to add 6,000 more units to the problem without paying to fix it just adds insult to injury.

We need open, honest government now more than ever. The people have a right to be informed, not deceived by political tricks. The next Newhall Ranch hearing is Oct. 25. It is important that you let Supervisor Antonovich and our city officials know how you feel about this.

Cam Noltemeyer is a board member for the Santa Clarita Organization for Planning and the Environment.

<http://www.the-signal.com/section/33/article/53040/>

Chloride levels might make treatment plant a wash

By Jim Holt
Signal Senior Staff Writer
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661-259-1234 x527
August 21, 2011

For nine of the past 13 months, water in the Santa Clara River has crossed the Ventura County line below pollution limits set by water-quality officials, the latest water-quality numbers reveal.

With the exception of three months late in the summer of 2010 — when California was still in the grip of a statewide drought — chloride concentration in water sampled at the county line was below 117 milligrams per liter.

Local sanitation officials have until May 2015 to ensure that no more than 117 milligrams of chloride in every liter of river water enters Ventura County.

Chloride is a naturally occurring salt. Farmers downstream in Ventura County say it damages their avocado and strawberry crops, and they have demanded that the Santa Clarita Valley Sanitation District — which dumps treated water into the river — ensure chloride levels are kept low.

A plan crafted in 2008 called for chloride-reducing efforts, including a treatment plant costing at least \$250 million. The cost of the plant would be borne by local Sanitation District ratepayers.

But the latest water tests at the Ventura County line show the 117-milligram level can be achieved without spending a dime on expensive chloride-ridding technology — at least for a time.

"But can we do it consistently, all the time, in dry years and wet years? That's the challenge," said Dave Snyder of the Santa Clarita Valley Sanitation District. Chloride levels in water increase during drought.

Last summer, ratepayers convinced the three-member sanitation board to toss out the proposed rate increase.

That move broke the 2008 deal and, in May, the regional water quality board threatened to fine the sanitation district board for each day chloride levels exceed 100 milligrams per liter.

The water board gave the district until the end of June to come up with an acceptable plan for reducing chloride or it would begin issuing fines.

The sanitation board provided the water board with a new plan.

So far no fines have been levied. The water board executive director said recently he could not comment on the prospect of fines.

<http://www.the-signal.com/section/36/article/49881/>

8/5/2011

Santa Clarita Valley Sanitation District enforces ban on automatic water softeners

SANTA CLARITA, Calif. — On Aug. 4, the Santa Clarita Valley Sanitation District mailed approximately 2,500 letters to residents suspected of having illegal automatic water softeners, according to a [press release](#).

This targeted mailing is part of an enforcement program by the district to rid the community of banned automatic water softeners and to decrease the cost to the community of complying with state mandates through the Regional Water Quality Control Board for chloride in the district's discharge to the Santa Clara River, the release stated.

"The district has successfully removed approximately 7,300 automatic water softeners as a result of the implementation of a Rebate and Public Outreach Program in the valley," said Steve Maguin, chief engineer and general manager for the district. "This has led to a very substantial decrease in the salt levels in the water leaving the district's water reclamation plants. Unfortunately, there are many illegal automatic water softeners still in the community with an estimated 500 of them discharging to the sewer system."

To read the full press release, [click here](#).

[Print This Article](#)

Lawsuit filed over Vista Canyon plan

By Natalie Everett
Signal Assistant City Editor
neverett@the-signal.com
July 19, 2011

A local environmental group is suing the city of Santa Clarita and the developers of a Canyon Country mixed-use housing project that straddles the Santa Clara River, saying the city didn't properly weigh the project against the state's Environmental Quality Act.

The Vista Canyon project consists of more than 1,000 homes and almost 1 million square feet of commercial office and retail space on 185 acres situated across Highway 14 from Canyon Country Park and west of Sand Canyon.

Vista Canyon and its environmental review were approved by the Santa Clarita City Council in May.

The Santa Clarita Organization for Planning and the Environment, known as SCOPE, filed the lawsuit in June. It says the project would encroach on the Santa Clara River floodplain and discharge chloride from a water treatment plant that's part of the project.

Jim Backer, president of JSB Development, Vista Canyon's developer, said the river width proposed under the project is twice that of most of the other portions of the river in the Santa Clarita Valley.

As for chloride, SCOPE President Lynne Plambeck said the city's environmental review of the Vista Canyon project didn't require the project to clean the water to the state's specifications, leaving the burden of chloride cleanup to the taxpayers.

Backer said the project has undergone five years of review. He said he was disappointed but not surprised by the lawsuit.

"The river received a huge amount of attention," Backer said. "(The project has) been thoroughly analyzed. But some people don't like those results."

The city is preparing a response to the lawsuit, Backer said. It could take anywhere from a couple of months to a year to sort out.

Whether the lawsuit affects the city's annexation efforts in the area is unclear. The city is pursuing the largest annexation in its history, of some 3,250 acres including portions of the Sand Canyon and Jakes Way neighborhoods of Canyon Country, as

well as Vista Canyon, which would provide the sales tax generation that would pay for the added infrastructure.

As with Henry Mayo Newhall Memorial Hospital's expansion, Plambeck said, the city has missed an opportunity to ask for more strict environmental controls. SCOPE pursued a lawsuit in that case, too; it lost.

An appeals court in that case said SCOPE didn't exhaust its administrative possibilities before pursuing litigation. Plambeck said the plaintiffs don't expect the same problem this time around.

<http://www.the-signal.com/archives/48167/>

Hunt for illegal water devices hardens

Utilities: District officials estimate about 400 to 500 softeners in area

By Jim Holt
Signal Senior Staff Writer
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661-259-1234 x527
July 4, 2011

Officials are coming down hard on owners of salt-generating illegal water softener systems.

The Santa Clarita Valley Sanitation District announced last week that its hunt for owners of the systems is under way.

"We're still seeing chloride spikes out there," said district spokesman David Snyder, referring to levels of chloride observed in the regular monitoring of wastewater.

"We feel there are between 400 and 500 out there who are still discharging chloride," he said.

In all, district heads estimate as many as 2,000 people in the Santa Clarita Valley own banned water softeners.

In 2008, residents voted in favor of a ban to remove all brine-generating water softeners from area homes in an effort to reduce the amount of chloride discharged into the Santa Clara watershed.

Sanitation officials have identified many of the 2,000 water softeners through sales receipts, rebate inquiries and tips, they said.

Those residents will be given 30 days to apply for the water softener rebate program.

Those who don't respond to the warning can expect a visit from district workers intent on inspecting homes.

Residents caught with banned softeners will be given another 30 days to apply for the rebate or 60 days to get rid of banned machines.

If they don't, they face a \$1,000 fine.

[Print This Article](#)

Utility: No need to bristle about our brine mines

Local water and gas officials say special sodium-injected mines won't affect chloride levels

By Jim Holt
Signal Senior Staff Writer
jholt@the-signal.com
July 1, 2011

Local water and gas officials said Thursday the brine-injection wells that are part of stepped-up natural-gas extraction in the Santa Clarita Valley do not affect the levels of salt in the Santa Clara River watershed.

"This naturally occurring zone of nonpotable, saline brine water was deposited millions of years ago, and is significantly deeper than any potable (drinking) water zones that may exist in the area," said Anne Silva, spokeswoman for the Southern California Gas Company.

Several local residents, including Santa Clarita City Councilwoman Laurene Weste, have said they're concerned that injecting salt into the ground could increase levels of chloride in groundwater.

The Santa Clarita Valley Sanitation District has been ordered to reduce the levels of chloride, a naturally occurring salt, in the Santa Clara River.

SoCal Gas plans to double its production and storage of natural gas in the Honor Rancho site between Rye Canyon Road and Interstate 5, north of Newhall Ranch Road.

The gas company's plans called for creating three new brine-injection wells, which are wells saturated with salt, or sodium chloride.

"When natural gas is withdrawn from the storage field, brine water is also produced along with the natural gas," Silva said in an email Thursday to The Signal.

"The brine water is removed from the natural gas and then sent through the brine-water injection wells into a naturally occurring brine water zone," Silva said.

The brine-injection wells — including old ones created locally by the oil industry last century — run at a depth of 10,000 feet to 12,000 feet, gas company reports say.

Dan Masnada, general manager of the Castaic Lake Water Agency, said the deepest water wells in the Santa Clarita Valley are those that tap into water 2,000

feet underground.

That water is drawn from the Saugus Formation, a natural aquifer that extends below 6,000 feet underground.

One of deepest oil-drilling ventures saw a well dug at Castaic Junction that went to a depth of 19,000 feet, said Masnada.

Brine injection wells that deep, and at depths of 10,000 to 12,000 feet underground, pose no threat of contamination to the Saugus Formation, he said.

<http://www.the-signal.com/archives/47341/>

[Print This Article](#)

The Signal
6/30/11

Water officials pitch plan

By Jim Holt
Signal Senior Staff Writer
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June 30, 2011

In an effort to avoid being hit with hefty water fines by the state, local sanitation officials have presented state officials with a brand new plan on how to reduce chloride ending up in the Santa Clara River watershed.

The basic thrust of the new proposed deal is that since current chloride conditions have changed, so should the agreement on how to control them.

The Santa Clarita Valley Sanitation District was given a deadline of June 27 to submit a plan of action to the Los Angeles Regional Water Quality Control Board, which threatened fines of at least \$10,000 a day for each of the district's two water-reclamation plants.

In response, district officials sent a letter to the board dated Monday, a copy of which was obtained by The Signal on Wednesday.

In it, the district promises to comply with all legal and regulatory requirements, one of which demands that the district discharge no more than 100 milligrams of chloride per liter into the Santa Clara River watershed.

It also promises to deliver two plans — one detailing the facilities needed to reduce chloride to acceptable levels and the other to assess its impact on the environment.

Sanitation heads want to begin designing the new facilities by Dec. 31, 2012.

It also urges the board to understand and appreciate that current chloride conditions are not as bad as they were when the water board gave it permission to discharge wastewater.

"Water-quality conditions and chloride levels in the Upper Santa Clara River have improved significantly since 2009," the district's letter of response states.

Chloride is a naturally occurring salt that farmers downstream say damages their crops. It is released into the river from the sanitation district's two water-reclamation plants, which treat sewage from the Santa Clarita Valley.

Water quality-control officials have ordered the Sanitation District to reduce its chloride output to 100 milligrams per liter.

Possibility of fines

Will the regional board fine the local Sanitation District?

District spokesman Phil Friess said the decision is not expected to be delivered at the next meeting of the board of directors July 14.

"We're not going to receive enforcement at the July meeting," he said Wednesday. "I thought the board was going to be involved in the district fines, (but) that's incorrect.

"There's a prosecution team at the regional board of staffers, and the board is separate, so it's actually staff that issue liability, not the board."

Initial plan

In their initial plan crafted in 2008 — called the Alternative Water Resources Management plan — sanitation officials outlined a multiyear schedule involving a \$250 million reverse osmosis plant that would reduce chloride ending up in the river.

That plan should change now to reflect changes in the environment, district heads say in their letter Monday.

"Not all of the components of the (original plan's) facilities proposed in 2008 are still needed to achieve the level of downstream water quality and protection of designated beneficial uses (those) facilities were designed to achieve," the letter said.

The district wants the board to consider two developments that reduce chloride content:

n Court-imposed pumping restrictions that reduce the amount of salty seawater "back flow" entering water the Santa Clarita Valley receives via the California aqueduct and the State Water Project.

n Banking groundwater along the aqueduct, which is low in chloride.

These two developments, according to district heads, have effectively reduced the amount of chloride in the water entering Castaic Lake.

District officials promise to prove their argument to the water board with an engineering study recently commissioned by the Castaic Lake Water Agency that will "provide a sound technical basis for projections of future peak State Water Project chloride levels."

<http://www.the-signal.com/archives/47263/>

[Print This Article](#)

The Signal
6/27/11

Utilities increasing

By Natalie Everett
Signal Assistant City Editor
neverett@the-signal.com
June 27, 2011

The average Santa Clarita Valley homeowner will pay \$8.48 more monthly for electricity, sewer, trash and water services, a 5 percent increase on average for the four utilities in one year — assuming one proposed rate increase is approved.

Trash and sewer rates for Santa Clarita Valley residents are set to go up Friday, an additional 84 cents for trash on average and \$1.33 for sewer for an average household.

Southern California Edison has asked the state to raise its rates starting Jan. 1; the impact would be about \$5 more to the average customer, company officials say.

Water rates are set to increase Jan. 1, too, by more than 3 percent.

Some Santa Clarita Valley residents had mostly the same reaction to creeping utility prices: a shrug and a sheepish smile.

"What can we do? You gotta pay it," Valencia resident Doug Dunlap said as he pumped gas into his sedan at the Shell station at McBean Parkway and Valencia Boulevard on Friday.

Who serves the SCV?

Each of the utilities serving the Santa Clarita Valley quantifies the average household differently, according to the services offered.

Residents of Edison's average home use about 600 kilowatt-hours of electricity monthly, according to Edison.

And the average gas company customer uses about 26 "thermos," or 2,600 cubic feet, of natural gas, according to the Southern California Gas Co.

There are three main water retailers in the SCV: Newhall County Water District, Valencia Water Company and Santa Clarita Water Division. The Santa Clarita Water Division is owned by the SCV's water wholesaler, Castaic Lake Water Agency.

Newhall County and Valencia Water's average ratepayer numbers are calculated to use 15,708 gallons of water each month; for Santa Clarita Water Division, the average ratepayer uses 13,464 gallons.

Rates for a fourth and smaller retailer, L.A. County Waterworks District 36, weren't available last week.

Trash and sewer service providers charge flat rates per household.

Waste Management and Burrtec Waste Industries provide curbside trash pickup for residents of the city and the county, respectively.

The Santa Clarita Valley Sanitation District, part of the Los Angeles County Sanitation Districts, operates the local sewer system.

Rising costs

Utility retailers say the costs of operating and maintaining their systems have gone up. Everything from labor to fuel is more expensive than it used to be, retailers say, making it more costly to deliver services to customers.

"The cost goes up over time for basically the same reasons that the cost of bread, the cost of a car, etc., go up over time due to inflation," said Dan Masnada, general manager of the Castaic Lake Water Agency.

"The good news is that the SCV retail cost of water is lower than (that of) 80 percent of Southern California water retailers," Masnada said in an email.

Since 2006, water and sewer costs have gone up the most — 37 percent and 52 percent, respectively.

Homeowners who were paying \$35 a month for water in 2006 will be paying \$48 a month come Jan. 1.

Steve Cole is general manager of the Newhall County Water District, which serves Newhall and parts of Castaic and Tesoro del Valle, as well as other areas of the valley.

Cole said the biggest hike in expenses has been for purchased state water, which has gone from \$181 per acre foot in 2006 to \$478 per acre-foot in 2011. An acre-foot is roughly enough water to serve an SCV family for a year.

"We are also subject to the increases in electricity and gasoline," Cole said. "It takes a lot of electricity to pump water. We also have a lot of service vehicles and equipment that have been subject to higher gasoline prices. The higher oil prices also have a ripple effect in everything we purchase from asphalt to pipe."

"Remember, water is still a great deal," Cole wrote in an email. "At our 2011 rate, it is just \$0.0033 per gallon, less than a penny."

Monthly sewer bills were once \$11.75, but starting July 1, they'll be \$17.91.

That increase doesn't include threatened fines to the sanitation district for failure to remove chloride from its wastewater.

Those fines could be levied as early as today.

Aging infrastructure

Aging infrastructure also contributes to increases costs for sewer and electricity providers.

Keeping the Santa Clarita Valley's two water reclamation plants running and the sewer system in shape accounts for the sanitation district's rate increases that take effect Friday.

For the first time in five years, Southern California Edison is asking the state to raise its rates, said Gil Anderson, the company's spokesman.

The electric company, which serves most of Southern California, except for the Los Angeles area, has been maintaining and improving its World War II-era infrastructure in recent years, Anderson said.

Those costs were offset by lower power-generation costs, but now an increase in rates is needed, Anderson said.

Sipping a beverage outside a coffee house Friday afternoon, Canyon Country resident Mike Martinez wondered about the reasons for Edison's rate increase request.

"They've got to borrow money to build the system. And that takes 70 years to pay off. And then you turn around, and they need it for maintenance, too," Martinez said. "I'm not saying there's anything wrong there, but it makes you wonder."

Keeping bills lower

Some residents have reacted to higher prices with changed habits, turning off their lights and taking shorter showers to keep their bills at bay.

Martinez said he's a fiend about keeping his air conditioning set at 78 degrees.

He says he has reacted to higher water prices by irrigating his lawn once a day instead of twice, and for half as long.

"Everything is going up," noted Stevenson Ranch resident Carri Arquilevich. "I'm

definitely more conscious about turning off the lights, and having my kids turn things off when they're not using them."

<http://www.the-signal.com/archives/47119/>

Officials hunt for chloride culprits

Water: Local leaders are on the search for illegal softeners as deadline looms for a plan to lower salt in wastewater

By Jim Holt
Signal Senior Staff Writer

THE SIGNAL
6-20-11

With a looming deadline to comply with water standards or pay up, local sanitation district and city officials are teaming up to track down scofflaws still using salt-discharging water softeners.

"We have inspectors to enforce the ordinance that allows us to issue a notice of violation," said Dave Snyder of the sanitation district.

"We can issue fines, which are a misdemeanor and which could mean 30 days in jail," Snyder said.

Santa Clarita spokeswoman Gail Ortiz said the city is preparing to "crack down on rogue water softeners."

"Residents need to adhere to (the law)," Ortiz said.

Local residents and customers of the Santa Clarita Valley Sanitation District agreed in 2008 to become the first community in the United States to voluntarily get rid of water softeners that discharge salt into the sewage system.

Measure S took effect on Jan. 1, 2009, and

See CHLORIDE, A8



Dan Watson/The Signal
Lab analyst Roger Casey tests a sample of wastewater to meet state standards at the Valencia Water Reclamation Plant on Friday.

1/3

Chloride

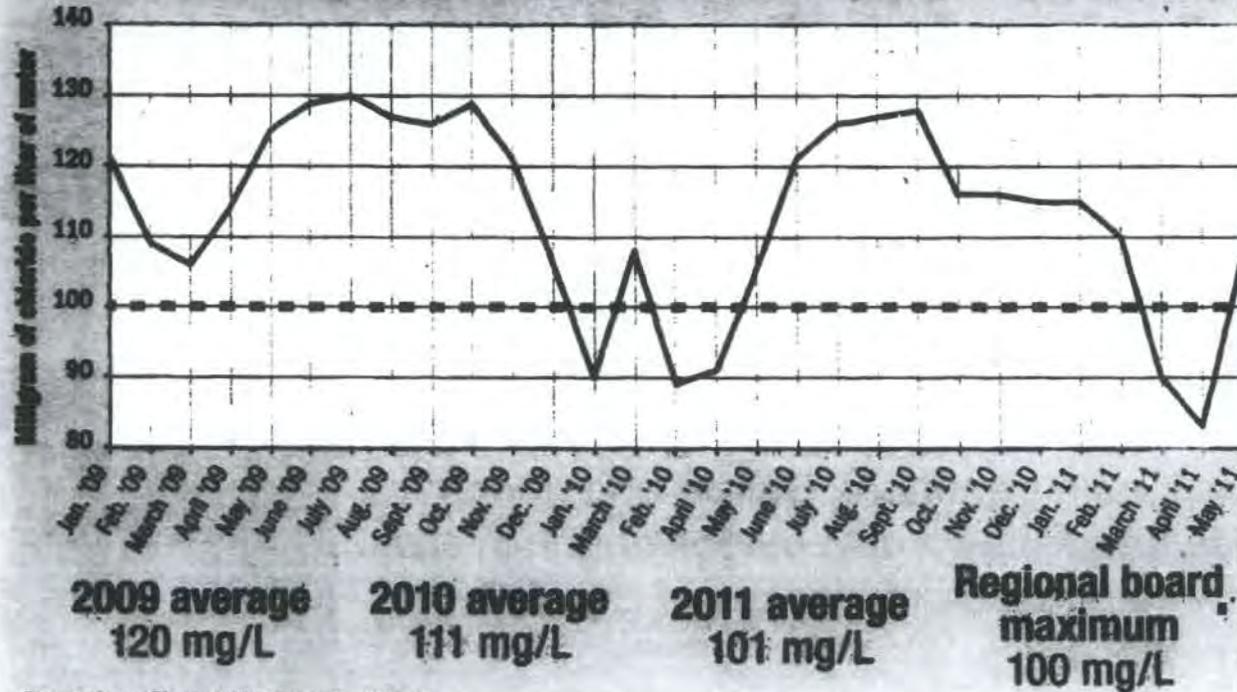
Continued from A1

some 7,200 residents forfeited their softeners. The move reduced levels of chloride from discharged water by 55 to 60 milligrams per liter.

But the sanitation district stands a tad bit over the chloride limit imposed by the Los Angeles Regional Water Quality Control Board, recently released numbers indicate. And the board is not inclined to give the valley an exception to the rule, a water board official said last week.

Officials estimate 500 residents are still harboring illegal water softeners. Removing all those softeners could save the rest of the valley's residents the threatened fines, sanitation district officials say.

Chloride in the Santa Clara River near L.A./Ventura county line



Source: Santa Clarita Valley Sanitation District

Chloride enforcement

Inspectors assigned by the Santa Clarita Valley Sanitation District to enforce the ban on salt-generating water softeners have special tactics available to detect rogue appliances. They include:

- responding to regular and identifiable "spikes" in the amount of salt detected entering the sewer system.
- sampling of random sewer lines
- responding to tips
- monitoring retail salt sales
- targeting isolated sewer lines identified through monitoring

Source: Santa Clarita Valley Sanitation District

1/1/11

Sewer users could pay

The board has consistently said it will issue fines of at least \$20,000 a day against the sanitation district for every day it exceeds water-discharge standards of 100 milligrams per liter for chloride, a naturally occurring salt that farmers downriver say is damaging their crops.

Sanitation district customers would pick up the tab.

The latest district reading of chloride measured at the Ventura County line was 101 milligrams per liter.

Sewage from local residences and businesses flows into one of two treatment plants that serve the valley. After treatment, it is discharged into the Santa Clara River and flows into Ventura County, where it is used for crops and other purposes.

While the treatment plants make the water safe, they were not built to remove chloride.

A plan was brokered several years ago to meet the 100-milligram chloride level, and the board allowed for a more lenient temporary level if the district moved ahead with plans to construct a reverse-osmosis plant at an initial cost of \$250 million.

But ratepayers last summer balked at the high-

er rates that would fund the new plant. Hikes would be stiff for residential users, but they were called prohibitive for businesses that use a lot of water, including restaurants and laundromats.

The district has until June 27 to come up with an alternative plan or begin paying the daily fines.

2 permanent solutions

Removing illegal softeners is one of three key factors in reducing overall chloride and one of two "permanent" solutions, according to district spokesman Phil Friess.

The other two key factors affecting chloride levels are lower levels of chloride in state water and higher levels of rainfall.

"We're not seeing as much salt in state water imported by this community," Friess said. "This is the result of court ordered restrictions."

A federal court judge in 2007 prohibited "back flow" of salty water into the system that delivers State Water Project water to Southern California. The order meant less salty water coming into the Santa Clari-

ta Valley, which means less salt in the water discharged into the river.

The Santa Clarita Valley gets about 50 percent of its water from the State Water Project. The rest is from groundwater sources.

Drought is the factor that remains out of control. When rainfall is reduced, salt concentrations in the river increase — and there's little anyone can do about it.

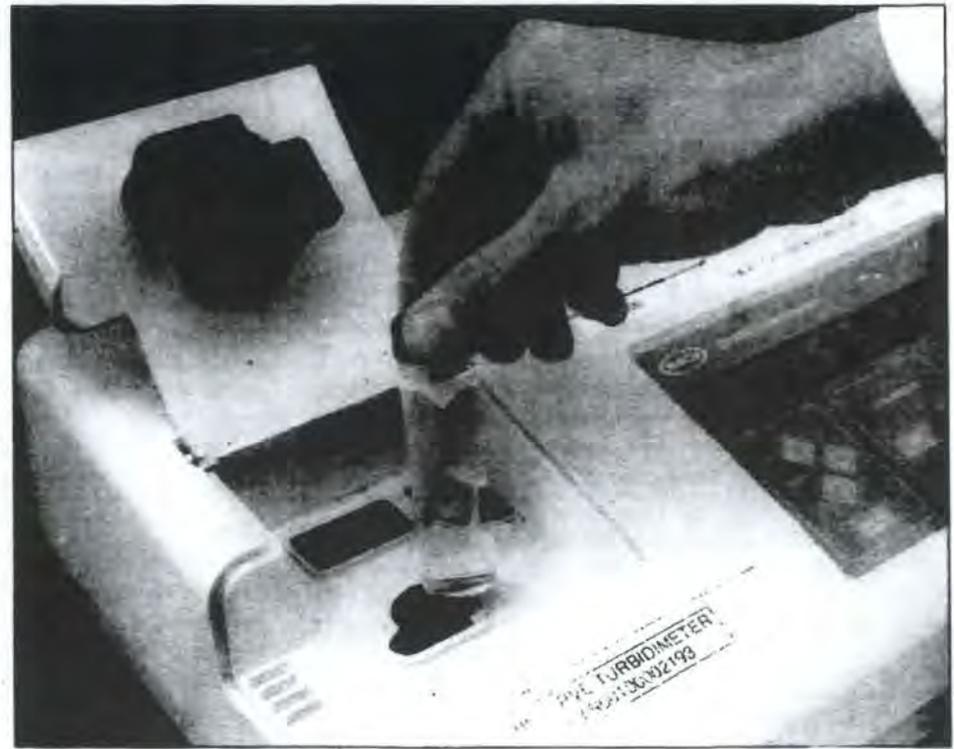
Standards must be met

Sam Unger, executive officer of the Los Angeles Regional Water Quality Control Board, personally signed each of two notices of violation sent to the local sanitation district in May.

He took issue with a Castaic Lake Water Agency memo cited by The Signal in a recent article saying the water quality board might defer or eliminate portions of the water plan it had already approved.

"We never agreed that any portion of the (Alternative Water Resources Management) Plan be deferred," Unger said Wednesday.

"Several members on the



Dan Watson/The Signal

A turbidimeter is used to test wastewater at the Valencia Water Reclamation Plant on Friday.

(regional water) board have made it clear that the district is expected to implement the plan or adhere to the chloride standards," he said, referring to the 100-

milligrams-per-liter standard.

The board notice of violation, which gave the district a month to come up with an alternative plan,

threatens fines of \$10,000 a day for each of the district's water treatment plants discharging chloride in excess of the target amount.

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12/10

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New plan may stop water fines

Government: Local water district may face a penalty of at least \$10,000 a day for each of two plants

By Jim Holt
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June 13, 2011

In a race to ward off hefty state water fines threatened over chloride levels, local sanitation officials are pinning their hopes on a consultant's plan that re-examines water delivered here from Northern California.

The Santa Clarita Valley Sanitation District has less than two weeks to come up with a convincing plan to reduce the amount of salty chloride ending up in the Santa Clara River watershed.

If it fails, the Los Angeles Regional Water Quality Control Board is prepared to fine the district at least \$10,000 a day for each of two water treatment plants, according to a warning letter sent by the board to the district.

State water re-examined

In February, local water officials contracted Kennedy Jenks Consultants to gather data that could prove the quality of water delivered here from Northern California is not what it was when chloride rules were laid down.

"If we can demonstrate through the Kennedy Jenks report that we have a plan, we think we can meet the requirements," district spokesman Phil Friess said.

"The water quality has improved, and if we're going to build a new plant we have to build it around that," Friess said. "A good engineering study should illustrate what we contend about changes in the state water supply regarding water quality."

Chloride problem

In 2002, farmers in Ventura County, downstream from the Santa Clarita Valley, complained to the state water board that the Santa Clara River water was too salty and that chloride was damaging crops such as strawberries and avocados.

SCV wastewater runs through one of two treatment plants and then is dumped in the river.

The water board told local sanitation officials chloride content in its discharged water could not exceed 100 milligrams per liter of water.

The district came up with an alternative water plan — hammered out by several water

stakeholders — that the regional water board approved.

The Alternative Water Resources Management Plan called for chloride not to exceed 117 milligrams per liter in wet and average years and 130 milligrams per liter in dry or drought years.

That plan hinged on a number of conditions being met - one of which was the promise the sanitation district would raise sewer rates to pay for a chloride-ridding water treatment plant. Existing water treatment plants do not remove the naturally occurring salt.

In July, ratepayers convinced the three-member sanitation board to toss out the proposed rate increase.

Last month, the regional water board threatened to fine the sanitation board for each day that chloride levels exceed 100 milligrams per liter.

Looming fines

District officials now want to prove that imported Northern California water — which makes up about 50 percent of the Santa Clarita Valley's water supply — has changed enough to warrant a new deal.

They want to show the cost of removing chloride from the Santa Clara River may not be as high as first feared.

Chloride content measured by the district at the Ventura County line in March was 90 mg/L, 83 mg/L in April and 107 mg/L last month.

Fresh data gathered by Kennedy Jenks could indicate the need for a less-expensive salt-ridding plant, sanitation district officials said.

In turn, the water board could approve a new plan for a more cost-effective chloride-reducing plant.

"I can't predict what they'll do," Friess said.

The water board might just be receptive to the new data, according to a Castaic Lake Water Agency memo detailing the Kennedy Jenks deal.

"Board staff indicated they understood conceptually that elements of the AWRM may be deferred or eliminated while maintaining (Alternative Water Resources Management Plan) discharge standards; however, technical analysis is needed to confirm this.

"If the requested technical analysis is not performed, implementation of the AWRM plan in the most cost-effective and efficient manner may not be possible."

The district has until June 27 to present an acceptable plan.

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Clock ticking on chloride fines

Regional water board rejects Santa Clarita Valley Sanitation District proposal

By Jim Holt
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June 9, 2011

Local sanitation officials have 18 days to come up with an acceptable plan for reducing chloride discharged into the Santa Clara River watershed or face fines of \$10,000 a day for each of two water treatment plants, The Signal has learned.

And those fines could be passed along to Santa Clarita Valley sewer-system users, as they have in other California communities fined for releasing the naturally occurring salt into their wastewater.

The Los Angeles Regional Water Quality Control Board notified the Sanitation Districts of Los Angeles County in a letter late last month that the Santa Clarita Valley Sanitation District violated the conditions of its discharge permit.

The board has given the district until June 27 to submit a suitable plan for reducing chloride or it will begin issuing fines.

"They sent us a letter saying: 'You're in violation, what are you going to do to correct that violation?'" said Phil Friess of the Santa Clarita Valley Sanitation District.

The threat of fines was expected, Friess said, after board members, acting on public comment last July, rejected a key element of a district plan already accepted by the board.

That plan — called the Integrated Regional Water Management Plan — called for a number of steps to be taken on the road to reducing the discharge of chloride into the watershed.

A key part of the plan called for raising sewer rates in order to build an expensive salt-ridding reverse-osmosis plant.

Those plans were derailed last summer when Santa Clarita Valley residents sent a clear message to the three-member sanitation district board that the proposed rate increases were unacceptable.

In response, the board postponed all talk of increased sewer rates.

But the problem of chloride remained.

The water plan

The regional water board, one of nine in the state, enforces water quality standards defined by the Porter-Cologne Water Quality Control Act of 1969.

When it issued a discharge permit to the local sanitation district — setting limits for pollutants such as chloride — it was on the understanding that the district was on its way to ensuring consistently low chloride levels.

The district's promise to the board was a plan calling for:

- removing salt-based water softeners in homes;
- upgrading ultraviolet disinfection technology;
- improving salt-management facilities set up in Ventura County;
- diluting Santa Clara River water with less salty water from the Saugus Formation, an aquifer deep under the Santa Clarita Valley;
- and building a reverse-osmosis plant with an initial price tag of \$250 million, the cost to be borne by local sewage ratepayers.

In return, the regional water board granted temporary permission to exceed the 100 milligram chloride discharge level, including:

- 117 milligrams per liter, measured at the Ventura County line;
- 130 mg/L during times of drought;
- and 150 mg/L at the point of discharge, meaning the point at which treated water leaves the sanitation district pipes.

Chloride levels in the Santa Clara River reported at the Ventura County line rose above 117 mg/L only once between January and July last year, said Frank Guerrero, a senior engineer with the Sanitation District. That was in June 2010, when the level reached 119 milligrams per liter, he said.

Deal-breaker

All clocks were reset, however, when the proposed rate increases to fund chloride removal were rejected by residents last July.

On May 2, the district submitted an alternate plan to the regional water board, but that plan was rejected.

In the board's notice of violation dated May 27, water board staffer Jenny Newman said the May 2 plan was "inadequate because it is not a plan for actions to meet the final effluent

limited for chloride of 100 milligrams per liter.”

The district now has until the end of the month to come up with a plan deemed suitable by the regional water board.

“An answer hasn’t been fully developed,” Friess said. “District staff is working with city staff to develop an appropriate response.”

The district is subject to fines called “administrative civil liabilities” and is liable for \$10,000 each day in which the violation occurs at each water treatment plant, plus \$10 multiplied by the number of gallons by which the volume discharged exceeds 1,000 gallons.

The fines could end up being higher if the matter is referred to the Attorney General’s Office.

In that case, the attorney general could demand up to \$25,000 per day, and \$25 per gallon.

<http://www.the-signal.com/section/36/article/46253/>

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Senator wants board reform

Politics: Strickland wants to shift power from state agencies to the people

By Jim Holt
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May 16, 2011

State Sen. Tony Strickland, R-Moorpark, wants to make state agencies such as the regional water board accountable to the people.

His plan to wrest power away from appointed board members and put it back in the hands of the people was one of several initiatives he outlined Friday for members of The Signal's Editorial Board.

"We have (placed) too much power and responsibility into unaccountable boards and agencies," Strickland said. "Let's look at the Air Resources Board or the regional water control board or the Coastal Commission.

"We have as a legislature, in my opinion, given too much power and authority to unaccountable boards," he said.

The power state agencies and boards wield often involves decisions affecting every citizen of California, valuable state resources such as water and millions of dollars.

In the Santa Clarita Valley, decisions made by the Los Angeles Regional Water Quality Control Board could, by threat of water fines, cost local residents hundreds of thousands of dollars.

"I can't tell you how many constituents come to my office frustrated that there is no accountability," said Strickland, who represents California Senate District 19, which includes portions of Los Angeles, Ventura, and Santa Barbara counties. "If I don't do a good job, people can vote me in or out at least there's accountability there.

"I believe, we have to put a lot of those duties and responsibilities back in the legislature," he said.

Strickland's call to action on reforming the structure of state boards is the second time in two months the people from the Santa Clarita Valley have been told that by state politicians.

The first mention, in March, was from a state Democrat.

In March, Assemblyman Jared Huffman, D-San Rafael, told a delegation of Santa Clarita civic leaders visiting Sacramento that it's time state legislators consider pulling the power plug on regional water boards that enforce different standards on things such as chloride water levels.

The State Water Resources Control Board oversees nine regional boards with each board consisting of nine members – all of whom are appointed by the governor, none of them elected.

The regional board could issue fines against the Santa Clarita Valley Sanitation District of \$10,000 a day, for each of its two water treatment plants if they determine chloride levels are above their set limit.

<http://www.the-signal.com/archives/45045/>

The Signal
4/29/11

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Our View: Lack of water standard unfair

By The Signal Editorial Board
April 29, 2011

“Whisky is for drinking; water is for fighting over.”

It’s an old quote, but it hasn’t lost an ounce of truth over the years. There’s always a controversy to be had involving the most basic component of life on the planet.

For us here in the Santa Clarita Valley, it’s been the issue of chloride in the water supply: deciding how much is an acceptable amount, and who’s responsible for keeping that level.

In fact, the “acceptable level” of this naturally occurring salt varies from area to area within the state. And if the “powers that be” for our area decide the level’s not acceptable here, we could wind up footing the bill.

That bill could cost us — the sewage ratepayers of the Santa Clarita Valley — hundreds of millions of dollars.

The agricultural interests downstream in Ventura County have lobbied the Los Angeles Regional Water Quality Control Board to require that water leaving the Santa Clarita Valley be less than 100 milligrams per liter by 2014 (though we’re currently allowed 117 during this grace period).

Otherwise, the strawberry and avocado cash crops in the next county could suffer serious damage, they say. But the science behind that number is questionable, to say the least.

David Kimbrough, laboratory supervisor for the Castaic Lake Water Agency, cited avocado farmers in Irvine as one group successfully growing sensitive crops with levels of chloride higher than 117 milligrams per liter.

But that’s a different region with a different water-quality control board, so they get to play by different rules.

Compounding the confusion is the fact that chloride levels vary from year to year, depending on rainfall. During drought years, the concentration of the salt goes up. During rainy years, chloride is flushed away.

The agency charged with enforcing water-compliance standards around the state is the California Water Resources Board.

Members of that board are appointed by — and answer directly to — the governor of California.

However, it became apparent last week when Gov. Jerry Brown visited the Santa Clarita Valley that he's completely unaware of the chloride issue.

Granted, the mammoth state budget deficit is likely taking up the majority of Brown's attention since he assumed office in January.

But we're concerned that what is a very expensive issue for communities such as ours is being totally overlooked by the very agency that's supposed to be running the show.

Assemblyman Cameron Smyth, R-Santa Clarita, tried to grapple with the issue by introducing a bill to set statewide standards for chloride. But he's been forced to table it to try to work out a deal with the powerful Farm Bureau.
Stalemate.

But for Santa Clarita Valley residents, the clock is ticking.

By 2014, we're supposed to build a reverse-osmosis water-treatment plant — at a cost of at least \$500 million — on our dime, or face devastating fines.

Meantime, the Santa Clarita Valley Sanitation District has put everything on hold, desperately casting about for some less expensive way to get chloride out of the river.

But alternatives might prove ineffective during times of drought.

And while all this is going on, avocado growers in Irvine are happily raising their crops with water-chloride levels higher than the standards Ventura farmers say is a necessity for their avocado crops to thrive.

Enough of this silliness. It's time for the state to take responsibility for the absurd labyrinth of bureaucracy it's created in the good name of clean water.

It's time for the governor to face up to some other responsibilities that go with the office he sought so fervently.

We want sound water-quality direction without politics and special interests muddying the equation.

We want a moratorium on all chloride-related decisions until a sensible, science-based standard can be applied fairly across the state.

Yes, it's everyone's water, but we shouldn't be the only ones paying for it.

<http://www.the-signal.com/section/32/article/44139/>

Chloride bill gets stalled

Recently re-introduced, proposal to standardize statewide chloride level hits another snag

By Jim Holt
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April 24, 2011

A recently introduced bill calling for a statewide chloride standard is already opposed by agriculture interests eager to sit down and talk before it becomes law, a local lawmaker said this week.

"We've had a long relationship with agricultural folks, so certainly, they had concerns with the bill," Assemblyman Cameron Smyth, R-Santa Clarita, said Friday. Smyth wrote the bill. "And, because of our relationship, we've decided to step back and see if we can come up with an agreement."

So Smyth decided to put a two-year hold on the bill while talks with the agriculture industry continue.

Crop concerns

Removing chloride — a naturally occurring salt — from Santa Clarita Valley's discharged water became a hotly debated topic last summer, when downstream Ventura County farmers said it was damaging to their crops.

The cost of removing chloride to avoid fines issued by the regional board for noncompliance could be \$500 million, SCV residents were told. The bill would have to be paid by local water users.

That could skyrocket sewer rates and cripple local businesses, especially those that use lots of water, such as restaurants.

Smyth's bill

Smyth introduced Assembly Bill 1058 on March 31. The bill calls for the state to adopt a policy establishing a statewide water-quality objective and plan of implementation for levels of chloride."

The bill, which would amend a section of the state's Water Bond Law adopted in 1970, drew the immediate attention of agricultural interests in Sacramento.

Under the proposed bill, the State Water Resources Control Board to set a statewide water quality objective for chloride by July 1, 2013, and outline a way to implement the plan.

The objective should take into account that "Other measures of salinity may affect the suitability of water used for agricultural purposes," according to the bill.

Smyth's bill was turned over to the state's Environmental Safety and Toxic Materials committee for discussion and consideration.

Smyth, who served on that committee for four years, said he doubts it will endorse his bill.

Fearing it would die in committee and seeing an opportunity to hammer out an agreement with the Farm Bureau, Smyth said he decided to "park the bill in committee for two years." The stall gives him time to meet with farm interests, come up with an agreement and perhaps draft a more comprehensive version of the current bill, Smyth said.

"The positive thing about this is that it's brought both sides to the table," he said.

Local support

The Santa Clarita City Council is expected Tuesday to vote on whether to endorse it.

"This is a bill that would make science the indicator for where chloride levels should be (in terms of) a certain rate," city spokeswoman Gail Ortiz said.

The city reached out to Gov. Jerry Brown on the issue of chloride for the first time Thursday during Brown's first visit to Santa Clarita since he was elected governor. Santa Clarita Mayor Marsha McLean asked the governor for a meeting to discuss the issue.

Brown, speaking at the invitation-only town-hall meeting at Hart High School, told her: "Maybe we could do something."

In September, McLean drafted a resolution now being considered by the League of California Cities demanding that the state provide cities with adequate funding to pay for special regulatory fees such as water quality fines issued by the water resources control board and its nine regional boards.

<http://www.the-signal.com/section/36/article/43889/>

Chloride not yet on governor's radar

By Jonathan Randles
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April 22, 2011

Gov. Jerry Brown was formally introduced to local leaders' fight to relax strict mandates on chloride levels in the Santa Clara River on Thursday.

During his invitation-only town-hall meeting at Hart High School, Santa Clarita Mayor Marsha McLean asked to have a sit-down with Brown to talk about raising the allowable chloride levels in the Santa Clara River.

Brown was in town to sell his proposal to extend current income and sales taxes to prevent billions of dollars of cuts in public education and safety.

When the governor called on McLean to speak at the forum, she spent almost three minutes laying out Santa Clarita's chloride woes.

"I just request that perhaps we could set up a meeting with you in your office to discuss this issue that impacts our schools, our businesses and all of our residents," McLean said. "The Los Angeles Regional Water Control Board has set a (chloride) standard that is lower than any other area across the state. It's an impossible mandate to reach."

"OK," Brown said. "Maybe we could do something."

He then called on another speaker.

McLean said after the meeting, Brown told her his office would be in contact with the city to talk about the chloride issue. She said it's the first time the city has reached out to the governor's office.

"This was the perfect opportunity (to talk about chloride)," McLean said. "We definitely think the governor needs to be involved."

City Councilwoman Laurie Ender said it was obvious Brown had never heard of the controversy before McLean asked the question.

"It seemed pretty clear to me he wasn't made aware of the chloride issue," Ender said.

Backed by farmers from Ventura County who say chloride damages their crops, the water board has required Santa Clarita to maintain chloride levels to 117 milligrams per liter in the river. The level is difficult to maintain during a drought.

To keep chloride levels low, Santa Clarita residents could be on the hook for a treatment plant that could cost \$210 million or more.

<http://www.the-signal.com/section/36/article/43789/>

Print This Article

Water board not an easy plunge

Government: Roadblocks abound for taking seats on regional body, which controls chloride standards

By Jim Holt
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April 18, 2011

A completed application form sits on the desk of local water official B. J. Atkins.

It's his written request for appointment to a seat on the Los Angeles Regional Water Quality Control Board.

Atkins is on the fence about whether to mail it off to Sacramento for Gov. Jerry Brown's consideration.

"I'm looking at what it takes in terms of time," he said. "I have a meeting (Wednesday night), a meeting Thursday. Every week, there's something.

"My wife already refers to herself as a 'water widow.'"

The time commitment, however, is just one of the roadblocks Atkins faces on his way to the powerful regional board representing the water interests of the Santa Clarita Valley — and offering a local voice on the hotly contested issue of chloride reduction.

Reducing chloride content in the Santa Clara River became a hotly debated topic last summer after the Santa Clarita Valley Sanitation District announced plans to raise rates in order to pay for salt-ridding plants — all to meet the chloride levels set by the regional board. Fines for noncompliance would be about \$10,000 a day.

No member on the regional board is from the Santa Clarita Valley, but some locals are considering applying.

Their roadblocks include: conflict-of-interest rules, no money paid to them outside a \$100 stipend per meeting, regular commutes across the county, volumes of technical homework and, not to mention, the governor's tendency to appoint Democrats.

Nine regional boards

The regional board is one of nine in California mandated to uphold the federal Clean Water Act of 1972. Each board has nine members, and all of them are appointed by the governor, not elected.

The Santa Clarita Valley has a chance to gain better control of its water destiny this fall, when five of the nine seats on the ruling water board come up for grabs.

Three seats are empty now. The terms of two more expire in 18 weeks.

This means the makeup and character of the board mandated to rule on chloride content in the Santa Clara River are yet to be fully defined.

Atkins, who serves on the Newhall County Water District board of directors and is its liaison member to the Castaic Lake Water Agency board, asked a friend who sits on the Lahontan Regional Water Quality Control Board for insight and advice.

"He told me 'What other (agency) affects millions of dollars and millions of people, but pays nothing?'" Atkins said.

The Brown priority

Gov. Jerry Brown has yet to appoint anyone to any of the nine regional boards in the state, including Los Angeles.

Since elected, Brown has placed a high value on water earmarked for agriculture.

In Brown's seven-step plan to "protect water quality and supplies," the importance of water for farmers nearly tops his list.

Brown's second priority, after ensuring safe drinking water for Californians, is agriculture.

To that end, Brown plans to create an Office of Agricultural Water Supply Improvement "to facilitate water sales and transfers benefiting agriculture."

Brown's focus on agriculture underscores a need for balance on the water boards, Atkins said.

"Many of the people on the board are handpicked by the agricultural community," he said. "We need to be making reasoned decisions, and that's not what's coming out of the regional board.

"Maybe it's time," he said.

The Brown identity

Kevin Korenthal, who ran for a seat on the Castaic Lake Water Agency last year, said he wants to sit on the regional board.

"Now that I know there's multiple seats available, I'm going to take a stab at it," he said last week.

"There are a lot of pressing issues near and dear to my heart," he added, citing chloride as one of them.

Korenthal, executive director of the trade association Associated Builders and Contractors, California Cooperation Committee, said he considered running last year but was deterred when California elected a Democratic governor.

Korenthal is Republican.

"The election did throw cold water on that idea," he said, referring to Brown's track record of appointing mostly Democrats to various state boards and agencies since January.

Conflicting interests

Maria Gutzeit is one of the few people who applied for a seat on the regional board in 2006, when chloride was first coming into its own as a pressing local issue.

Gutzeit, like Atkins, sits on the Newhall County Water District board.

Like Atkins, who is part owner of Atkins Environmental HELP (Hazard and Environmental Liability Professionals) Inc., Gutzeit runs an environmental consulting company — Compliance Plus — working with companies on the quality of water they discharge.

What felled Gutzeit — who withdrew her application — was a conflict-of-interest rule. Water board members can't receive more than 10 percent of their income from money collected from those holding permits to discharge water. That is, unless those permit holders are in the agriculture industry.

"Why is anyone who makes a living in the water industry ruled out?" Gutzeit asked. "And why does agriculture have an exception to that rule which lets them get an income from permitted dischargers?"

If Atkins, too, is exempt — and he thinks he might be — who is left to represent the Santa Clarita Valley on the board?

The Clean Water Act

Lynne Plambeck, like Atkins and Gutzeit, sits on the board of the Newhall County Water District.

Plambeck, who's also president of the Santa Clarita Organization for Planning and the Environment, said she didn't know if she would apply for the regional board seat.

"I've thought about it," she said. "But I think my first duty is to my elected office.

"The board has to follow the Clean Water Act and rule in compliance with it, appreciating there are seven beneficial uses," she said of the regional office.

Farmers and agricultural interests reflect one of the "beneficial uses" defined by the state in response to the Clean Water Act. Natural habitats are another, Plambeck said.

Plambeck said regional board members who protect the environment and work to preserve natural habitats by demanding no more than 100 milligrams of chloride per liter of discharged water would be addressing the spirit of the Clean Water Act.

[Print This Article](#)

Board floats sewer-rate hike

Sanitation District board introduces ordinance endorsing rate increases

By Jim Holt
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April 15, 2011

Sewer rates are likely going up, following a decision by the Santa Clarita Valley Sanitation District board of directors Thursday night.

After an hourlong public hearing at Santa Clarita City Hall that attracted less than a dozen citizens, the three-member board introduced an ordinance to endorse the district's proposed rate hikes.

The same board is expected to adopt the ordinance with a vote when it meets again, sometime between now and the end of June, with the new rates taking effect July 1.

The district wants to raise rates to pay for its day-to-day operations, which include undertaking capital projects.

A ratepayer — defined by the district as a single-family home of three occupants — pays \$199 a year. Under the proposed rate hike, that ratepayer would pay: \$215 in 2011-12; \$231 in 2012-13; and \$247 in 2013-14.

Among residents offering comments on the proposed rate hikes was Al Ferdman, president of the Canyon Country Advisory Committee.

Board members said they particularly liked his suggestion on recycling water.

"We cannot separate current-user rates and expansion plans from the chloride issue," he told the board.

"I would like to suggest that we consider reducing the output of our (water-reclamation plants) into the river to the absolute minimum required, and then look at the costs related to recycling the remaining output for use in both commercial and residential landscaping bills."

Steve Maguin, the Sanitation District's assistant chief engineer and assistant general manager who explained the district's costs and needs to the board, also said he and his staff have also been looking at ways to enhance its water-recycling system.

Thursday's meeting followed eight similar meetings in which district officials outlined water-treatment plans and problems.

As was stressed many times throughout the meeting, the proposed rate hikes discussed have

nothing to do with the issue of addressing chloride content in discharged water.

Removing chloride — a naturally occurring salt — from Santa Clarita Valley's discharged water became a hotly debated topic last summer, when downstream Ventura County farmers said it was damaging to their crops.

The cost of removing chloride could be \$500 million, SCV residents were told. The bill would have to be paid by local water users.

The issue of possibly raising rates again to meet chloride reducing concerns is something to be addressed in the near future, board members said.

The district's cash reserves have been depleted, so rates must be raised to reflect the full cost of services, according to the district's website.

To minimize the impact, the board has opted to temporarily borrow money from the Capital Improvement Fund. The district anticipates borrowing about \$5 million in the upcoming fiscal year 2011-12.

The borrowed money will have to be repaid "with interest" before the next treatment-plant expansions are needed, according to the district.

The ratepayers would pay it back.

<http://www.the-signal.com/section/36/article/43397/>

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Lynne Plambeck: Water salts are still worth talking about

Environmentally Speaking

By Lynne Plambeck
April 14, 2011

With an upcoming public hearing on increased sewer-connection fees in the works for today, it's time to talk salt again.

The Santa Clarita Valley Sanitation District says its proposed rate increase, the subject of a public hearing tonight at City Hall, is to repay funds that were borrowed, and has nothing to do with the need to fund the chloride cleanup.

This is a bit suspicious in light of all the other hearings.

Whose rate was too low? Will they be raising connection fees for new development?

The outflow from the sanitation treatment plants in Valencia and Saugus currently do not meet the clean water standard of 100 milligrams per liter for chloride, a salt that we are charged with reducing in our treated water that is released into the Santa Clara River.

The 100-milligram-per-liter level was set by Los Angeles County Regional Water Quality Control Board in response to the Clean Water Act, passed in 1972 by Congress.

The Clean Water Act was approved at a time when our rivers were so polluted that they caught on fire. It has been responsible for cleaning up our water resources and improving water quality in all 50 states.

Many aspects of everyday life increase the salt load to the sanitation plants, including the necessity to use more recycled water, which is higher in salts. As water efficiency and the need to use recycled water to meet a growing population increase, so will the chlorides in our watershed.

Imported water is also a huge and unavoidable contributor of salts, necessitated by all the new development.

When the Trojans wanted to ensure that Carthage would never be rebuilt, they salted the ground so that crops wouldn't grow. Now, more than 3,000 years later, will we do the same to our own cropland in the Santa Clarita and Santa Clara River valleys by thoughtless negligence?

To the Santa Clarita Organization for Planning and the Environment, the question is not whether we should fix the salt problem, but how we should fix it, and who should pay for it.

The original estimate to fix the problem was \$500 million. After public protests, the water agencies, farmers and environmental organizations worked together to find a plan that would reduce the salt load to the farmers while costing less. But estimates to fix the problem were

still high.

Now residents are rebelling against rate increases to pay for this fix, and we think rightly so. Why should the burden be placed on homeowners while rates for developers were kept low in spite of the Sanitation District being aware of this problem since 1979?

If they had begun to fix the problem then, instead of ignoring it, rates could have been gradually and fairly increased to fix the problem.

Ignoring rising chloride levels in the previous decades only increased the problem. And it is still not a solution now. We urge you to attend this hearing and add your voice to finding a solution.

Chloride is not the only kind of salt in the news. Ammonium perchlorate is also a salt, which is used in the manufacture of bombs and rocket propellant.

While rising chloride levels will take years to ruin cropland, perchlorate is an immediate health concern, especially for "sensitive receptors," such as children and fetuses.

By blocking thyroid function, perchlorate can cause retardation in children and thyroid deficiency in adults. These health effects are well established facts.

Since perchlorate can come from many sources, including milk and lettuce, we believe it is important to eliminate as much as possible from our drinking-water supply. While the Whittaker-Bermite site may be cleaned to a shallow surface depth, perchlorate (and other pollutants such as trichloroethylene and perchloroethylene) will be with us in Santa Clarita for decades.

It is a disservice to the existing residents of our valley to minimize the health risks from this contaminant. We need to keep our residents informed and test our drinking water often to make sure that the water supplies we serve the public are safe.

While some water sources are tested monthly or quarterly, others are only tested annually.

Perchlorate testing is not expensive. Why not check more often at sites that have a previous history in order to make sure that spikes of contaminants are not missed?

There is no reason to take risks with public health, especially the health of our children.

Lynne Plambeck is the president of the Santa Clarita Organization for Planning and the Environment.

<http://www.the-signal.com/section/33/article/43319/>

Officials to discuss sewer-rate increase

Water: Sanitation District will hear from ratepayers on a proposed increase at meeting in City Hall

By Jim Holt
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April 13, 2011

Directors on the local Sanitation District board want to hear from ratepayers Thursday night on a proposed sewer-rate increase.

The proposed rate hikes have nothing to do with the issue of addressing chloride content in discharged water, Santa Clarita Valley Sanitation District officials said Tuesday.

"There's no money in the rate proposal for chloride," said Dave Bruns, assistant department head for the district's financial-management section, which is expected to attend the meeting.

The public hearing is scheduled for 6 p.m. Thursday in Council Chambers at Santa Clarita City Hall, 23920 Valencia Boulevard.

The district is proposing rate hikes to pay for its day-to-day operations, which include undertaking capital projects such as building a new water-treatment plant.

The district's cash reserves have been depleted, so rates must be raised to reflect the full cost of services, according to the district's website.

To minimize the impact, the board has opted to temporarily borrow money from the Capital Improvement Fund. The district anticipates borrowing about \$5 million in the upcoming fiscal year 2011-12.

The borrowed money will have to be repaid "with interest" before the next treatment-plant expansions are needed, according to the district.

The ratepayers would pay it back.

Again, this is above and beyond any money raised to reduce chloride.

Removing chloride — a naturally occurring salt — from Santa Clarita Valley's discharged water became a hotly debated topic last summer, when downstream Ventura County farmers said it was damaging to their crops.

The cost of removing chloride could be \$500 million, SCV residents were told. The bill would have to be paid by local water users.

That could skyrocket sewer rates and cripple local businesses, especially those that use lots of

water, such as restaurants.

"None of the proposed service charge will be used to fund any chloride-related facilities," the district's website states.

<http://www.the-signal.com/section/36/article/43283/>

Drought's over, but still time to save

Local officials promise to keep cautious water usage despite announcement that dry spell is over

By Jim Holt
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April 6, 2011

Water officials vow to continue treating local water as a scarce and precious resource even though the statewide drought is, according to Gov. Jerry Brown, officially over.

"The Castaic Lake Water Agency and the retailers will continue to pursue and encourage a permanent water-use efficiency ethic in the Santa Clarita Valley," agency General Manager Dan Masnada said Tuesday.

Brown proclaimed an end to the statewide drought last week.

Among other effects, drought conditions concentrate chloride, a salt, in the Santa Clara River.

In response to the drought that Gov. Arnold Schwarzenegger declared in June 2008, the limit for chloride in water was reset to 130 milligrams per liter of the salty compound, above the normal level of 100 milligrams per liter. That was with an understanding that 117 milligrams per liter would be the target limit later.

Removing chloride — a naturally occurring salt — from Santa Clarita Valley's discharged water became a hotly debated topic last summer, when downstream Ventura County farmers said it was damaging to salt-sensitive crops, such as strawberries and avocados.

This reignited a public uproar over rate hikes proposed to address the problem with \$500 million reverse-osmosis plants.

With the drought officially over, State Water Project officials plan to release more water to its customers, which include Castaic Lake Water Agency. Adding state water to the local mix will likely lower the chloride concentration.

In seasons of regular rainfall, chloride in the soil is flushed away and chloride in water is diluted, according to Ventura County farmers interviewed last summer.

But that doesn't mean building the reverse-osmosis plants is off the table.

"We have to come up with a system designed based on the worst case projected," said Philip Friess, of the Sanitation District of Los Angeles. The district is expected to meet state thresholds for chloride in the water it discharges or risk being fined. "We have to comply all the time, not just in good times, but in times of drought."

State Department of Water Resources officials last month reported water content in the Sierra

snowpack to be at about 165 percent of the expected average.

The department also reported the state's major reservoirs have more water than normal, including Lake Oroville and Lake Shasta, with 104 percent and 111 percent, respectively.

The governor noted in a statement that, although he lifted the drought, water conservation is key.

"Drought or no drought, demand for water in California always outstrips supply," Brown said.

Local water officials agree.

"Water is a resource that is quantitatively fixed and we need to do all we can to not just conserve it during dry years but to use it efficiently and wisely all the time," Masnada said. "It's not just the right thing to do, but also the cost-effective thing to do."

<http://www.the-signal.com/section/36/article/42967/>

State to take look at chloride

Politics: Official denounces regional water boards, calls for consistent statewide standards

By Jim Holt
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March 25, 2011

Assemblyman Jared Huffman said it's time state legislators consider pulling the power plug on regional water boards that enforce different standards on things such as chloride water levels.

It's also time to return to a statewide standard, said Huffman, D-San Rafael.

And Huffman could make it happen: He chairs the state Assembly's Water, Parks & Wildlife Committee.

Differing water standards — when they're set by different people on different regional boards — are "not a good thing," Huffman said.

"There was a proposal a few years ago to do away with regional (water quality control) boards and reconstitute them and have a state board do a much more centralized job of setting these statewide standards," Huffman told a delegation of visiting Santa Clarita Valley civic leaders Tuesday during the annual Sacramento bus tour, sponsored by KHTS AM-1220.

"That was not well-received by the water-stakeholder community," he said Tuesday.

Agricultural firms, including those who farm salt-sensitive crops, such as strawberries and avocados, are among the stakeholders in the water community mentioned by Huffman.

"We're probably going to have to have more of a statewide standard at the state board instead of having the regional boards with their power of autonomy," Huffman said.

Huffman made the statement in response to a question put to him by a visiting member of the Castaic Lake Water Agency about chloride levels that Santa Clarita Valley ratepayers are expected to meet despite a multimillion-dollar cost.

Water agency board Vice President Bill Cooper, who spent most of his career at the Metropolitan Water District of Southern California, asked Huffman why Santa Clarita Valley is expected to honor chloride standards that differ from other standards across the state.

"We have an issue in our valley with chlorides," Cooper said. "The regional water quality control board has set a standard for discharge downstream. That standard doesn't match up with the same kinds of standards throughout the state.

"Other areas have chloride discharges (with) a different standard going into the same kind of

agricultural land," he said. "So why do we have different standards and how do we correct that so that it's consistent?"

Huffman told Cooper he hears the same complaint about "all over the map" standards from others.

"Well, you're not alone," Huffman told Cooper.

"I hear this from lots of folks," he told the group. "For example, if you want to try to recycle water and use it in a way where it might get into an aquifer, there are standards all over the map.

"In places like Orange County, you can actually take recycled water, put it right into the drinking water supply and turn on the tap," Huffman said. "Their standards are very high, and it's worked very well for them. But they have what they call potable reuse.

"In other places," he added. "You can't even irrigate an (airplane) field with recycled water because they are so deathly afraid it's going to get into the groundwater and somehow intermingle with the drinking water supply.

"It's totally different standards simply by virtue of the two different regional boards, different people," he said. "I'm always interested in trying to bring more cohesion to these rules we have on different basins."

Cooper said Thursday that Huffman's statement was "very significant."

<http://www.the-signal.com/section/36/article/42371/>

[Print This Article](#)

Locals flush out results of taxpayers' money

Utilities: Water-reclamation plant hosts tour to show where residents' dollars go

By Laura Dixon
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March 21, 2011

Against a backdrop of towering roller coasters and a mix of biological and chlorine-like chemical smells mingling in the air, about a dozen community members toured their local sewage-treatment plant Saturday morning.

After sending out a notice to local residents last month regarding proposed sanitation fee increases for the next three years, Santa Clarita Valley Sanitation District officials invited residents to take an introductory tour of the Valencia Water Reclamation Plant.

"The only time people have questions about sanitation is when there's a problem," said Dave Bruns, assistant head of the plant's finance department. "A lot of people get our notice about the increases, but they never see the plant and where their money's going ... we thought this would be a good opportunity."

The tour group began before a set of beakers holding wastewater in its various stages, from the murky liquid pumped into the Valencia plant to the crystalline, chemically treated water dumped into the Santa Clara River at the end of the process.

Cynthia Arance, a career transitions adviser for the Hart district's Career Visions program, said she attended the Saturday morning tour to scope out the plant's employment opportunities for students and its potential as a future field-trip destination.

"I didn't even know this was here, and I've lived here for 14 years," she said.

Arance and the rest of the group followed Greg Osburne, the plant's operations supervisor, through clusters of digester tanks and pipes that collectively treat 20 million gallons of wastewater daily.

Meanwhile, he explained the complex wastewater-treatment process from the first bacteria-cultivation phase to the end filtering process just before the treated water is pumped into the river.

"There's some chemistry to it; there's some research — you don't just push the button and go," Osburne said.

He also pointed out some of the plant's older equipment, including a 1970s-era backup generator the plant relies on during power outages.

The water reclamation district's recently proposed service charge increases for homes and businesses, set at \$17.91 for the upcoming fiscal year beginning July 1, would partly be used to upgrade such outdated equipment, Osburne explained.

"The majority of the budget is dominated by upgrades and maintenance," Bruns said during a presentation immediately following the tour.

Additionally, he said service-fee increases would help the waste water district keep up with inflation and state-mandated safety regulations.

Another rising cost? The fuel needed to haul about 1 million gallons of waste-ridden sludge to Kern County each week, where it's applied to non-food crops, Bruns said.

Bruns stressed that proposed fee hikes won't be used to pay for facilities that control chloride levels in the Santa Clara River.

He encouraged attendees to participate in a public hearing during the sanitation district's board meeting at 6 p.m., April 14 at Santa Clarita City Hall, when the board is scheduled to vote on the proposed service rate increases.

<http://www.the-signal.com/section/36/article/42167/>

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Salty talks tabled for time being

Officials postpone discussion of proposed rate hikes until all reports on chloride levels are in

By Jim Holt
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March 20, 2011

Talks of raising sewer rates to build two salt-ridding reverse-osmosis plants won't resume until all chloride reports are in, officials said Friday.

Santa Clarita City Councilwoman Laurene Weste, speaking as a member of the Santa Clarita Valley Sanitation District board, said that plans to revisit the proposed rate hikes are not likely to happen before May.

Talks last year on the controversial subject were postponed until spring following a boisterous meeting at Santa Clarita City Hall in July when residents complained about a four-year plan to raise sewer rates.

"We don't have a date for the talks," Weste said. "We have to wait until all the reports are in."

One of those reports is a detailed analysis of the chloride content in water delivered to the Santa Clarita Valley from Northern California.

Last month, the Castaic Lake Water Agency, which buys Northern California water via the State Water Project, called on water specialists Kennedy/Jenks Consultants to do that report.

Removing chloride — a naturally occurring salt — from Santa Clarita Valley's discharged water became a hotly debated topic last summer, when downstream Ventura County farmers said it was damaging to salt-sensitive crops, such as strawberries and avocados.

The chloride would be removed with two proposed reverse-osmosis plants. Building the plants would cost about \$500 million, and the bill would have to be paid by local water users.

"Nothing is going to happen on chloride until all facts are in," Weste said. "It would be foolish to proceed without all the information. In the meantime, we are working diligently, using all our resources to research this issue."

Water experts have had their eye on salt in discharged water for decades.

In 1975, the Los Angeles Regional Water Quality Control Board set local chloride levels at between 80 and 90 milligrams of chloride per liter of water. That's roughly the chloride concentration of Northern California water and local groundwater.

In 2008, the chloride limit was reset to 130 milligrams per liter to accommodate for drought

conditions — with an understanding that 117 milligrams per liter would be the target limit later.

The latest figures on chloride found in the Santa Clara River show water at the Ventura County line to be within state set limits.

Dave Snyder, who calculates the content for the Santa Clarita Valley Sanitation District of Los Angeles County, reported Friday that the chloride content of water at the Ventura County Line is 115 milligrams per liter.

Water sampled at both Sanitation District treatment plants, and then averaged, show chloride concentrations of 128 milligrams per liter in November, 123 milligrams per liter in December and 128 milligrams per liter in January.

A year after more than 7,000 salt-based water softeners were removed from local homes, chloride levels dropped by 50 to 60 milligrams, according to Sanitation District officials.

<http://www.the-signal.com/section/36/article/42111/>

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Our View: Time to put salt back on the table

The Signal Editorial Board
March 20, 2011

It's the first day of spring. That means flowers blooming, bees buzzing ... and chloride resuming its place among Santa Clarita Valley issues.

It was last summer when the Santa Clarita Valley Sanitation District voted to delay dealing with the demands of a Los Angeles-based water board — made up of mostly coastal-dwelling, entirely appointed officials — who told us we had to pay to remove a naturally occurring salt from our wastewater.

It was essential, we were told, so that farmers downstream could grow high-value avocados and strawberries, rather than the apparently less lucrative lemons and oranges they used to be satisfied growing.

We'll take the issue up again, our district officials said, in the spring. That'll give us time to do some more research.

So why not just remove the salt and make the farmers happy? we might wonder. After all, we like strawberries as much as the next guy.

The price tag, we were told last summer, could be \$210 million. Or \$500 million. Or maybe as much as \$700 million to build a plant to remove the chloride.

And if we refuse? Well, the fines could run \$10,000 a day. Or maybe \$1 million or \$3 million a day.

Who pays for it? Why, anyone whose toilet flushes into the sewer system rather than into a septic tank.

Prohibitive for residents on fixed incomes, the hikes in sewer rates and hook-up fees could devastate businesses that use a lot of water, including restaurants, local officials said.

And don't think that rate hike notice you received in the mail recently has anything to do with the solution. That hike is just for maintaining the existing system — the one that doesn't remove chloride from the wastewater.

Removing the salt would cost considerably more.

Since the issue was last in the public eye, some new events have occurred.

A recent study by Los Angeles County sanitation officials of wastewater at the L.A.-Ventura county line marked chloride at 115 milligrams per liter. The goal set by 2014 is 117 milligrams per liter if we build a salt-removing plant.

So how did the numbers sink so low without a treatment plant?

For one thing, water we import from Northern California through the State Water Project was diluted with less-salty water from the Kern River.

And it rained a lot over the winter. Rain dilutes salt concentrations in water and also flushes salt out of the ground, where groundwater picks it up.

Another potential bright spot, City Councilwoman Laurene Weste said at a business luncheon last week, is treating water with ultraviolet radiation, which reduces chloride levels. That process is under consideration.

But Kern River water, UV treatment and rain aren't reliable enough to impress water boards in Los Angeles or farmers downstream. Rainy winters are nice, but the reality is they can't be counted on.

The chloride issue is largely a function of drought, and drought in Southern California is inevitable.

Weste told members of the Valley Industrial Association on Tuesday that the real solution is a peripheral canal, which would skirt the San Joaquin River Delta and bring clear mountain snow melt directly to Southern California.

Currently, NorCal water flows into the Delta, which becomes invaded with sea water and agricultural chemicals.

With thoughts of the catastrophic earthquake and tsunami in Japan, Weste said, a natural disaster in the San Joaquin Delta would literally wipe out much of Southern California's water supply.

Such a canal was on the ballot in 1982, but California voters were short-sighted in turning it down, she said.

"It's like the people in Pompeii refusing to acknowledge they live beside a volcano."

However, while the fines proposed for Santa Clarita Valley residents if they don't build an expensive salt-treatment plant seem ridiculous, the price tag for a California peripheral canal is astronomical: estimates put it at \$15 billion to \$23 billion.

So it's spring again. Time for all the agencies involved to shake out their salt-reduction plans and for residents to come together again and confront the issue.

The Signal pledges to keep you informed.

Wallets may drown in high water bills

Analysis: Chloride levels may cause money problems for city businesses

By Jana Adkins
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March 10, 2011

Santa Clarita businesses and residents are facing significant increases in their water fees over the next few years to cover the cost of building new water-filtration plants to reduce levels of the naturally occurring salt chloride in runoff from the Santa Clara River.

What began decades ago as an effort to protect residents from drinking polluted industrial water, the Clean Water Act now incorporates standards to protect the foods we eat, as well.

However, the chloride issue is not related to any injury from polluted water or food. The issue relates to the harm high concentrations of chloride might do to salt-sensitive crops such as avocados and strawberries growing in Ventura County, where the water flows after it's treated and discharged.

Residents and businesses are asking whether it's equitable to require Santa Clarita Valley residents to pay higher sewage rates so that farmers downstream can grow crops that are not indigenous to the area and that are extra-sensitive to chloride.

The question is paramount because proposed rate hikes to build chloride-removing water-treatment plants could cripple businesses dependent on large amounts of water, such as restaurants and laundromats.

And increased sewage connection fees could become a barrier to future businesses opening in the Santa Clarita Valley and to its reputation as a business-friendly community.

Double increases

The Santa Clarita Valley Sanitation District has already requested a rate increase to keep its operation going.

The Los Angeles Regional Water Quality Control Board would add another rate increase for plants to remove chloride from wastewater. The cost of building the plants has been estimated as high as \$500 million.

"I understand the problem over chloride, and what may be affecting farmers down the river — but there's got to be a better way of doing that," local restaurateur Greg Amsler said last June. "All it does is put up a roadblock to future businesses that might want to move here."

In the end, protecting chloride-sensitive crops pits segments of the local business community against the Ventura County farming industry. And the issue leaves all local residents to pick up

the tab to keep those crops growing.

Water primer

In The Signal's ongoing series on chloride by investigative reporter Jim Holt, it was reported that SCV imports water from Northern California via the State Water Project that already contains 80 milligrams of chloride per liter. Additional chloride enters the water runoff as it passes through urban development areas.

The crops in question are said to require water with chloride levels less than 117 milligrams per liter.

In times of drought, the Los Angeles Regional Water Quality Control Board allows the chloride levels to reach 130 milligrams per liter because of naturally occurring higher levels of chloride concentration building up in the soil.

Depending on when water samples are measured, SCV averages 130 milligrams per liter in runoff water. During rainy season, levels are generally lower because chloride is washed out of the soil.

Chloride levels topped 150 milligrams per liter only twice from June 2000 to December 2006 in measurements taken in the Santa Clara River, and the 79-month average was 125.67 milligrams per liter.

Magic number

Critics of the set 117 milligrams per liter number say there's insufficient evidence that such low levels are necessary.

The Clean Water Act of 1972 set the standard for chloride content in river water at 100 milligrams per liter. But subsequent studies placed acceptable levels at different marks when the Water Quality Control Board revisited the issue.

However, the water board did not conduct a new scientific study for the Santa Clara River question. It opted instead to perform a peer review of studies done elsewhere and dating back to the 1960s.

A 1999 report said "the 100 milligrams-per-liter value is the result of an incorrectly interpreted reference," but it became the mandated target for county sanitation districts.

Ironically, humans can handle chloride levels in the water that reach 250 milligrams per liter, according to the Environmental Protection Agency and the state board of health.

And when the environmental engineering firm CH2M Hill performed a peer review of existing literature, the firm noted: "There is no literature stating that chloride or salt stress during flowering affects or does not affect (the) fruit."

However, none of this information changes the Santa Clarita Valley Sanitation District's legal obligation to build the water-treatment plants.

Calls for remedies

If the city or county do not comply with the Water Quality Control Board standards, it can levy

daily fines up to \$10,000 for every day SCV fails to be in compliance.

The Signal's investigative series also revealed that the state Water Board issued an unprecedented number of fines against small towns — often in the millions of dollars. The fines were levied during the Great Recession when cities across the state were struggling to keep budgets from plunging deeper into the red.

The chloride stories prompted Santa Clarita Valley Assemblyman Cameron Smyth to announce in August 2010 that he wants the regional water boards to be more accountable to the public, calling on an oversight body to see that it happens.

Santa Clarita City Councilwoman Marsha McLean also called on fellow city representatives at a League of California Cities conference in September to sign a resolution insisting that the state provide cities with adequate funding to pay for special regulatory fees.

Meanwhile, the farming industry says it did not set the chloride standard and that growing less-sensitive crops is not the sole answer.

In a December story, Ventura County strawberry farmers, when interviewed, revealed that chloride was only a problem in times of drought. Normally, regular levels of rainfall wash chloride from the soil and away from plants.

In today's global economy, farmers are competing with growers from around the world. They contribute \$2.6 billion to the state economy.

Water tab

The bill to erect the water-treatment plants would cost all residents.

Annual sewage rates were projected to spike from \$199 to \$296 to design a \$210 million water-treatment plant. If the cost of the plant increases, residents and businesses alike would see their rates jump even higher.

Any rate increases for water treatment would come on top of the current proposed rate increases to bring water bills up to \$247 annually by the year 2014 to meet existing water-management expenses.

That means that if approved, the estimates for building water plants could double the costs for water customers.

The flip side — not complying — could cost \$3.6 million a year, costs that would be borne by sewage ratepayers.

Sewage connection fees for new businesses would jump considerably, but specific rates have not yet been projected, according to John Gulledge of the Los Angeles County Sanitation Districts.

"If a business discharges 10 times as much (sewage) as a single-family home, they pay the equivalent of 10 homes," said Steve Maguin, general manager and chief engineer for the district overseeing the Santa Clarita Valley.

More than 6,000 rate-hike protests were received by the Santa Clarita Valley Sanitation District last July, when district officials held meetings in a standing-room only hearing. The vote on proposed sewer hikes was delayed until this spring.

But the deadline is looming: the district has until 2014 to be in compliance.

Forum topic

The Valley Industry Association is presenting a panel Tuesday at its monthly luncheon, which will be open to non-members, to discuss the chloride issue.

Speaking on the panel will be Holt of The Signal; Phil Friess of the Los Angeles County Sanitation District; Laurene Weste, Santa Clarita City Council member; and Lila Littlejohn, executive editor of The Signal. The panel will be moderated by Ian Lamont, publisher of The Signal.

<http://www.the-signal.com/section/24/article/41607/>

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Panel to present water-fee increases to business community

By Signal Staff
March 9, 2011

Significant proposed rate increases for all Santa Clarita area water customers, to build new water filtration plants to deal with the chloride levels local water, are the subject of the Valley Industrial Association's monthly luncheon on March 15. The event is open to both members and non-members.

A panel will present an overview of the chlorides issue, including proposed rate hikes, and examine the effect building a treatment plant would have on businesses and residents. Actual costs will be outlined, along with the significant increases expected for the business community.

New businesses in particular could find the proposed connection fees price-prohibitive to opening a business in the SCV. The proposed rate hikes are based on the significant chloride concentrations in the Santa Clara River. Estimated cleanup costs could be as high as \$500 million, and the bill would have to be paid by local water users. Increased fees could be crippling to many local businesses.

The panel, moderated by Signal publisher Ian Lamont, consists of representatives from the L.A. County Sanitation District, Santa Clarita city council and The Signal newspaper. Those members of the business community interested in attending may RSVP with VIA by March 10 at (661) 294-8088 or www.via.org.

<http://www.the-signal.com/section/24/article/41563/>

[Print This Article](#)

District board mulls rate bumps

Water: Directors look for community input on 8-percent increase on sewage service

By Laura Dixon
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March 8, 2011

The Santa Clarita Valley Sanitation District is proposing higher fees over the next three years to help cover everyday operational costs and improvements to the water reclamation plants in Valencia and Saugus.

The district's board of directors, which includes Santa Clarita Mayor Marsha McLean, Councilwoman Laurene Weste and Los Angeles County Mayor Michael D. Antonovich, will hold an April 14 public hearing in Santa Clarita to consider community members' input regarding the recommended fee increase of \$1.33 per month, or \$16 annually. That's an 8-percent increase.

Now, SCV residents are paying \$199 annually for sewage service.

If approved by the Sanitation District board of directors, local home and business owners would pay \$215 per year starting July 1.

Sanitation monthly service charges districtwide would continue to rise by \$16 annually until June 2014, when local customers would owe \$247 in annual fees.

The fee increases would only cover local sewer and pumping plant operation and upkeep and would not be used to fund facilities that control chloride levels in the Santa Clara River, according to the district's notice for the upcoming hearing.

Last year, customers' disapproval of service fee hikes to pay for chloride-related facilities was key in the district board's rejection of higher fees, said John Kilgore, financial planning deputy for the Sanitation District.

Before the board of directors casts its vote on the increases in May, district officials are waiting to hear from SCV customers, Kilgore said.

In addition to the public hearing in April, local residents can attend presentations at the Castaic Area Town Council Meeting on March 16 or at the West Ranch Town Council meeting on April 6.

Informational meetings will also be held at Santa Clarita City Hall on March 23 and March 29.

Community members may submit any written questions or comments before the April 14 hearing by mail at P.O. Box 4000, Whittier, 90607-4000 or call district staff at (888) 808-

Chlorides Issue: Far From Over

The Valley Industry Association will provide a platform for addressing the continuing saga of the chlorides issue and possible ramifications of proposed action at its March 15 business luncheon beginning at 11:45 a.m. at the Valencia Country Club, 27330 Tourney Road in Valencia.

Signal Publisher Ian Lamont will be joined by Executive Editor Lila Littlejohn and Senior Writer Jim Holt in a panel discussion on the topic that threatens to impact the entire Santa Clarita Valley community.

Chloride levels in the Santa Clara River became one of the most hotly debated topics in 2010, according to The

Signal newspaper, when local residents learned they might have to pay millions of dollars for a plant to remove the salty compound from the water.

There's an old-fashioned water war brewing between those upstream and those downstream, Holt wrote in a Dec. 25, 2010 news story, referring to the battle ensuing between Santa Clarita residents and Ventura farmers.

The panel discussion will present an overview of the chlorides issue, review the proposed rate hikes, and examine the impact building a new water treatment plant would have on businesses and residents. Actual costs per household will be outlined, along with the signifi-

cant increases expected for the business community, especially new businesses looking to move into the area.

Considering the Santa Clarita Valley hopes to attract new industries into the area as part of its economic development effort, costs related to the chlorides issue could potentially work against that initiative.

The business luncheon is open to the public. Cost is \$40 for VIA members and \$50 for non-members. Reservations for the March 15 luncheon should be received by Thursday, March 10 and can be made by calling the VIA office at (661) 294-8088 or by visiting www.via.org.

SVC Business Journal

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[Print This Article](#)

Unfunded mandates are devastating for Santa Clarita Valley ratepayers

By Bill Arens
Santa Clarita
February 24, 2011

We in the Santa Clarita Valley are being asked to pay for a state mandate to clean up the water we use. First, we need to look at the players.

The state supplies our local wholesaler its water. Castaic Lake Water Agency, another state agency, supplies our local water retailers with about half that water (the rest comes from local wells).

We use the water supplied to us by these state agencies and flush it down the drain to the Los Angeles County Sanitation District, another state agency. The state agency that monitors the output of those plants says they have to clean up the water so it meets another state mandate.

Then there is the enforcement group, another state agency, that goes around terrorizing small cities, towns and communities demanding they pay heavy fines for something over which they have no control.

Looking at the players, tell me how many readers have any control over any of them and what they do? My bet is, readers have as much control over them as I do: no control at all. The only thing we could do is what we did: remove the salt-based water softeners.

If the state did its job and built the peripheral canal as it was supposed to 40 years ago, we would not have this problem.

The Feb. 16 article "Budget cuts endanger meetings law" said: "But because of a lawsuit against the state over unfunded mandates to local governments, the state is required to pay for the costs."

I am going to stop right there. If this \$500 million reverse-osmosis plant isn't an unfunded mandate, I don't know what is. Even at half that cost, it would be devastating to the SCV, its businesses and its residents.

<http://www.the-signal.com/section/35/article/40989/>

[Print This Article](#)

Agency angles to reset chloride standards

Castaic Lake Water Agency board considers analyzing how much salt is in the water when it arrives

By Jim Holt
Signal Senior Staff Writer
jholt@the-signal.com
661-259-1234 x527
February 23, 2011

The cost of removing salty chloride from the Santa Clara River may not be as high as first feared.

Water arriving here from Northern California is not as salty these past couple of years and therefore poses less of a problem to fix, say local water officials, who now want experts to devise a spreadsheet to reflect that change.

Directors with the Castaic Lake Water Agency are expected to OK a contract tonight with water experts Kennedy/Jenks Consultants to perform a detailed analysis of the chloride content in water delivered here via the State Water Project.

The Chloride Mass Balance Analysis would put together a mathematical model that agencies could use to compute the chloride content of state water supplied to users by the Castaic Lake Water Agency.

Removing chloride — a naturally occurring salt — from Santa Clarita Valley's discharged water became a hotly debated topic last summer, when downstream Ventura County farmers said it was damaging to their crops.

The cost of cleanup could be \$500 million, SCV residents were told, and the bill would have to be paid by local water users.

That could skyrocket sewer rates and cripple local businesses, especially those that use lots of water, such as restaurants.

But water watchers say they've noticed something peculiar about chloride levels during the past few years of drought.

"What we found was that during the last drought, we saw chloride levels that did not increase in a manner similar to what we've seen in previous droughts," said Dirk Marks, the Castaic Lake Water Agency's water resource manager.

State Water Project water's chloride levels are believed to be diluted by large quantities of nearly chloride-free water being added to the mix. That water is coming from places like Kern County, which built water-banking supplies from purer sources than the State Water Project.

Water arriving here with less chloride alleviates some of the urgency to construct two salt-

riding reverse-osmosis plants at a cost of hundreds of millions of dollars to construct.

The hope is that the Kennedy/Jenks model will convince state water-quality regulators to reset their clocks, so to speak, whenever they demand that facilities meet chloride discharge standards.

The proposed Kennedy/Jenks study would be an essential part of a larger effort to see if the Santa Clarita Valley Sanitation District, which is charged with getting rid of chloride in discharged water, could meet chloride standards in a more cost-effective way than building the reverse-osmosis plants.

Under tonight's recommendation, the Sanitation District would reimburse the water agency for as-yet-undetermined cost of the Kennedy/Jenks study.

<http://www.the-signal.com/section/36/article/40931/>

White Film On Dishes Is Harmless And Expected

Written by Christopher Glotfelty

Thursday, 10 February 2011 14:30

It sort of defeats the purpose, doesn't it? You pack your dishwasher full of dirty plates, utensils, glasses and cups, pour in the detergent, and return an hour later with the expectation they'll emerge bearing that "good-as-new," crystalline finish. Instead, you're left with a new coat of white film – an unfortunate, chalky reminder that you really have no idea what goes on inside that hulky and soapy appliance.



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Back in 2008, 64 percent of voters in the Santa Clarita Valley Sanitation District passed Measure S, which banned salt-based water softeners. The purpose of the measure was to reduce the levels of chloride discharged into the Santa Clara River. Thus, if you live in the district, which encompasses most of the Santa Clarita Valley, you have hard water.

Hard water contains various mineral salts of calcium and magnesium, and it's these types of deposits that form the white residue left on your dishes.

"It's the mineral content in water. That being said, there's no health implications as a result of that," said Mauricio Guardado, Retail Manager of the Santa Clarita Valley Water Division. "We do extensive testing and we ensure that we meet all of the federal and state water quality regulations. The film is more of a nuisance than anything else."

Behind closed doors, the water inside the dishwasher heats and eventually evaporates, leaving behind the ashy layer.

Nevertheless, the issue has more to do with dishwashing detergent companies than Measure S. Last year, the American Cleaning Institute, which is comprised of most detergent manufacturers, rolled out self-imposed regulations on phosphates in their products.

Phosphates are inorganic compounds that can cause algae blooms in gutters and rivers. In the case of your everyday house chores, however, phosphates were your friends, as they eliminated the potential for that white film.

Currently, there are legal limits for phosphates in detergents in 16 states. Although California is not included, select detergent companies have drastically reduced the phosphate content in their detergents which are distributed throughout the country.

Guardado said the SCWD, one of Santa Clarita's four water retailers, doesn't have an issue with phosphates and that

although the water contains minerals, it is still of high quality.

"People may have already forgotten perhaps that there was a ban of water softeners," he said. "I think a lot of people are seeing the effects of that when they're used to having water softeners taking out all of those minerals."

At Tuesday's City Council meeting, Mayor Marsha McLean touched on the subject during the Council announcements. The Mayor, who consistently advocates environmentally-friendly initiatives, suggested using vinegar in the dishwashing cycle to combat the white film.

[Print This Article](#)

Citizens only ones who can ask right questions

By Allen Hadley
Valencia
January 25, 2011

The Jan. 13 letter in The Signal refuting the concerns expressed by "Environmentally Speaking" columnist Lynne Plambeck regarding the cost of the salt cleanup in her Jan. 6 column, "Groups filed suit to help save our river," did not really get my attention until I saw the source of the letter.

I asked myself why a county employee in Whittier was taking the time to write a letter to address this particular issue.

Also, since he not only signed his name but also identified his agency name and position, was he doing it in an official capacity?

I would have expected this type of letter from a representative of Newhall Land Development LLC, but not from a public employee.

While it may be true that residents of the Newhall Ranch project will pay for preventative measures to alleviate any additional chloride input into the water system, this is only one of many issues regarding this project.

Perhaps he has no knowledge of the traffic congestion through the Newhall Pass and what effect another 20,000 cars every day will have.

He also did not address the other issues — how the project affects the floodplain of the Santa Clara River basin, at what cost the additional water is being provided and how that might affect the water rates for everyone.

It seems that individuals have to raise questions such as these while large agencies and companies are the only source of the opposite point of view.

The truth is out there somewhere.

<http://www.the-signal.com/section/35/article/39589/>

[Print This Article](#)

Lynne Plambeck: Development should have to foot the bill

By Lynne Plambeck
January 20, 2011

For the last 15 years, the city of Santa Clarita and surrounding areas have experienced unprecedented growth, permitting thousands of new housing units. These units were approved based on water from Northern California that is high in salts called chlorides.

During that same time period, downstream farmers began expressing their concern that the levels of chloride being released by sanitation plants into the Santa Clara River were well beyond limits of the Clean Water Act and affecting their crops.

During this time, the planning agencies placed no requirements for fixing this problem on the new development. The Sanitation Districts did not increase connection fees on this development to help pay for reducing to the chloride levels, even though the water it used was causing most of the problem.

The salt problem continued to be raised throughout the hearings for the 21,000-unit Newhall Ranch project. To address the problem, Los Angeles County required a new sewage-treatment plant to be built for Newhall Ranch when it approved the Specific Plan in 2003.

Newhall Land Development LLC applied for and received a permit for a new sanitation plant from the Regional Water Quality Board for the Ranch project.

Again, with the chloride problem in mind, the Water Quality Board required the plant to remove chlorides from any releases to the river.

Now, eight years later, Newhall Land wants to avoid building the new sanitation plant and instead hook up to the existing Valencia treatment plant, thus adding to the chloride problem.

Although it is a requirement of the specific plan with which they must comply, the environmental documents for the first two tracts of Newhall Ranch, totaling about 6,000 units, indicate the company "may" use the Valencia treatment plant. Why should you care?

Because that would mean that you would once again be paying for the cost of removing chloride salts for new development.

Once again, the developer is attempting to transfer the costs of his development to the local taxpayers, this time through an increase in sewer fees.

At hearings last year, attended by hundreds of angry residents, our community made it clear to the Sanitation Districts' Board that they strongly objected to an increase in sewer fees.

The Santa Clarita Organization for Planning and the Environment asked why these fees had not been included to connection fees for new development over the last 15 years.

After all, meeting the Clean Water Act limits for salt in the river was not a new issue, the problem and the solutions were well known to the Sanitation Districts. Why wasn't the cost of this new needed infrastructure included in the cost of connection fees for new development, as it should have been?

In an agenda item before supervisors Tuesday, it became clear once again that Newhall Land is attempting to avoid building its required salt-free sanitation plant.

While the agenda resolution itself reiterated the formation of a new sanitation district for the treatment plant in Newhall Ranch, the staff also said that the first 6,000 units of Newhall Ranch would use the existing Valencia treatment plant.

It referenced an agreement made with the Sanitation Districts for these 6,000 units.

Several community members, including SCOPE, objected. How could the Sanitation Districts make such an agreement when the Specific Plan required Newhall Land to build its own salt-free plant? Why didn't anyone know about this agreement? It was not discussed or disclosed in any of the many environmental documents for this project.

Thanks to Supervisor Michael D. Antonovich, these questions may be answered. At Tuesday's meeting, he directed the Sanitation Districts to respond to the community's questions. Although he did not set a deadline, we hope that we will receive a copy of their response in the near future.

The same problem will occur in the city if residents don't watch out.

The 1,350-unit Vista Canyon proposal will need a sewer plant or annexation to a sewer district. At the moment, there is no indication in the environmental document that this plant will be required to remove salts.

Does that mean that the city intends to have the public pick up the tab in its sewer fees?

The recently approved 1,260-unit Skyline Ranch project in the county will also require annexation to a sewer district

Like all new development in the Santa Clarita Valley, much, if not all, of the water for these projects will come from Northern California through the State Water Project, and it is high in chlorides.

If the city's sanitation district council members, Laurene Weste and Marsha McLean, want to avoid having our local sewer rates increased, why aren't they demanding that new development pay the cost of its own infrastructure instead of putting the burden on residents through sewer-fee increases?

Lynne Plambeck is president of the Santa Clarita Organization for Planning and the Environment and a Santa Clarita resident. Her column reflects her own views and not necessarily those of The Signal.

<http://www.the-signal.com/section/33/article/39353/>

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Tom Campbell: Your water agency facing many challenges in the new year

SCV voices

By Tom Campbell
January 16, 2011

Editor's note: Second in two parts of a look at the past and future of Castaic Lake Water Agency.

As we discussed in part one of this commentary, 2010 is going to be a tough act to follow when it comes to water issues in the Santa Clarita Valley, as the past year was filled with milestones and accomplishments, not to mention the apparent end of a three-year drought.

But even as rain and, yes, snow have chilled and soaked our valley in the early days of 2011, we are looking ahead to a year of great promise for the Castaic Lake Water Agency and the communities we serve. Here are a few things we're focusing on as we strive to provide a safe, reliable supply of water to meet the valley's growing needs:

* **Water recycling:** Recycled water is the "next big thing" for CLWA, as water recycling infrastructure is expected to be our largest capital improvement effort over the next 40 years. Whatever the outcome of water supply challenges in years ahead — whether it's future droughts or ongoing issues in the Sacramento-San Joaquin Delta — it's clear that responsible water supply management will continue to be of the utmost importance.

In the interest of stretching every drop of supply, it makes sense to recycle water just as we recycle other resources, like aluminum, paper and plastic.

It will be used for high-volume water uses, such as irrigation of large landscaped areas. (Think golf courses, parks, landscaped medians and so on).

Recycled water will have a "trickle up" effect because its use will increase availability of the rest of the SCV's water supply portfolio for potable purposes.

Ultimately, CLWA believes the SCV will utilize more than 22,000 acre-feet of recycled water per year. (An acre-foot is enough to cover an acre of land one foot deep).

In 2011, we expect to see significant progress on the next phase of our recycled water program, planning and design for the "South End Project."

This project will provide recycled water for irrigation by large users on the southwest portion of our valley including College of the Canyons, California Institute for the Arts and Hart High School.

* **Urban water management plan:** CLWA and local water retailers are working together to

develop and adopt the new Urban Water Management Plan, a state-mandated document looking ahead at projected water supply and demands for the next two decades.

Water agencies like CLWA must adopt a plan every five years, and it's a useful planning tool that helps us prepare to meet future demands and explain how we'll absorb fluctuations in supply related to weather and other external circumstances.

We are especially proud of how effective our water supply planning has been, enabling us to weather the recent drought without mandatory restrictions on water use.

The plan helps us continue planning ahead, and make sure we have sufficient supplies and reserves of stored water to ensure that we can meet the valley's needs even when circumstances become challenging.

In the first half of this year we will continue public workshops to gain input on the plan. We expect to adopt the plan by June.

*** Education:** We believe it's vital to educate younger generations about the importance of using our precious water resources wisely, and those efforts continue in 2011.

In addition to our established educational programs and field trips for elementary school students, we have revamped our junior high school program and are expanding our outreach to high school students.

Among those efforts are the completion of our third annual Water Challenge scholarship competition, as well as a new program called APES, an Advanced Placement Environmental Science pilot program that offers high school students the opportunity to gain hands-on experience at CLWA headquarters.

Also, we are developing a program for high school biology classes called, "Smeltdown," which will educate students about the importance of balancing agricultural, environmental and urban issues in the Sacramento-San Joaquin Delta.

*** Following through on the delta:** Speaking of the delta, in 2011, we plan to continue our support of the Bay Delta Conservation Plan, which seeks to achieve the co-equal goals of ecosystem restoration and restoring water supply reliability in the troubled Delta.

A working draft of the conservation plan has been released, and we expect in the coming months to see an assessment on whether the BDplan can produce an ultimate solution for the Delta's issues.

*** The chloride question:** The coming year should bring major developments on a brewing issue that is one of our valley's most vexing.

The Los Angeles County Sanitation Districts and other agencies are attempting to address the issue of the chloride content in the wastewater discharged from SCV sewage treatment plants and its impact on certain crops in Ventura County. Chloride sources vary.

The water we receive from the State Water Project and our local groundwater contains some (though not in levels that are harmful to humans and most crops) and, as water is used, additional chlorides are added through factors such as human salt consumption and the use of salt-based automatic water softeners, which the city of Santa Clarita outlawed in 2008.

At CLWA, we are working together with the Sanitation Districts, the city and other stakeholders in an effort to arrive at the most cost-effective and efficient solution.

In addition, 2011 will see continued progress on some initiatives we mentioned in part one, including completion of CLWA's Rio Vista Water Treatment Plant expansion and the pursuit of new solar power generation facilities on CLWA properties.

From long-range planning to conservation, recycling and tackling state and regional issues, 2011 will be a busy year.

More information on CLWA is available at www.clwa.org.

Tom Campbell is the president of the Castaic Lake Water Agency board of directors. His column reflects the agency's views, and not necessarily those of The Signal

<http://www.the-signal.com/section/33/article/39215/>

[Print This Article](#)

Cost for development paid for by residents

Thomas J. Lebrun
Los Angeles County Sanitation Districts
January 13, 2011

This letter is in response to comments made in a Jan. 6 Signal opinion column from Lynne Plambeck titled "Groups filed suit to help save our river."

The author asks the question, "who will be paying for the infrastructure for the Newhall Ranch project, especially the salt cleanup?"

The developer, Newhall Land Development LLC, will pay for the wastewater infrastructure to serve the Newhall Ranch development.

A 2002 agreement between Newhall Land and the Sanitation District survived the bankruptcy, and it sets conditions for the first 6,000 homes in Newhall Ranch to temporarily discharge wastewater to the Valencia Water Reclamation Plant.

The conditions include: payment of the standard connection fee (fair share of the cost of the existing infrastructure), and transfer of title of the 22-acre Newhall Ranch WRP site to the sanitation district.

Newhall Ranch residents also will pay the Sanitation District a service charge to recover the full cost of treating their wastewater at the Valencia WRP.

Prior to building more than 6,000 homes, Newhall Land must construct the Newhall Ranch WRP and the plant must be sized to treat all the wastewater generated by development.

The cost for operating the Newhall Ranch WRP will be paid by the residents of Newhall Ranch.

The Los Angeles Regional Water Quality Control board already has issued a permit for the Newhall Ranch WRP with a chloride limit of 100 milligrams per liter.

Newhall Land and Farming Company will construct an advanced wastewater-treatment plant utilizing reverse-osmosis technology to meet this chloride limit.

The reverse osmosis process produces a salty waste byproduct that is called brine. Newhall Land and Farming Company has applied for a permit from the U.S. EPA to dispose of the brine from the Newhall Ranch WRP using deep-well injection.

The Sanitation District has investigated using deep well injection for disposal of brine as part of the Chloride total maximum daily load studies for Santa Clarita but has no involvement in Newhall Land and Farming Company's proposal for deep-well injection. Implementation of the Newhall Ranch development will not alleviate nor add to the financial burden for Santa Clarita Valley Sanitation District's compliance with the Chloride total maximum daily load. Newhall Land and Farming Company and its customers will pay for treatment of wastewater generated by Newhall Ranch.

[Print This Article](#)

Lynne Plambeck: Groups filed suit to help save our river

Environmentally Speaking

By Lynne Plambeck
January 6, 2011

On Monday, several organizations, including the Santa Clarita Organization for Planning and the Environment, filed legal objections to the California Fish and Game's River Alteration approval. This permit would allow massive filling of the floodplain of the Santa Clara River to accommodate the proposed 21,000-unit Newhall Ranch project west of Interstate 5.

Although the legal arguments are based on the environmental documents and can be somewhat esoteric, the real problems with this project are down-to-earth and easily understandable.

Pretty much everyone knows that Newhall Ranch was acquired by Landsource, a limited liability company, several years ago. Then Landsource, along with Lennar Corp., got the California Public Employees' Retirement System — CalPERS — to sink \$1 billion of public money into this project.

While those of us in Santa Clarita wondered how new roads, a sewer plant, water supply and other expensive infrastructure for this massive project would ever be funded and built, the ill-advised CalPERS investment disappeared in a predictable burst of the housing bubble.

This loss touched every one of us in California. Local agencies such as water districts, cities and other public entities had to scramble to make sure money was available for their employees' retirement.

I am not talking about fat-cat top administrator pensions here, which are spiked just before those folks retire. (I am as upset as anyone about that abuse of the retirement system).

I am talking about retirement for regular people who police our streets, fight our fires, help find the books we want at the library, care for our parks, fix our water pipes and teach our children.

In short, I'm talking about the folks who have worked hard to make our communities a great place to live. These folks counted on this retirement money to buy groceries and pay the rent and utilities after their working years were over.

Making the retirement fund whole meant that every agency had to either raise

rates, raise taxes or reduce services. Most did a combination of the three. So Lennar walked away with the nearly \$1 billion of public-investment funds that they took out of Landsource after the CalPERS outlay, and you and I paid for it with reduced services and increased costs.

SCOPE long has advocated that new development must pay for itself. Existing residents and taxpayers should not fund it.

To us, this is just part of good planning. A development that must use its own funds to finance infrastructure will look carefully at those costs and ways to use existing infrastructure efficiently.

That is why we continue to ask who will be paying for the infrastructure for the Newhall Ranch project, especially the salt cleanup.

Although the project will supposedly require a reverse-osmosis sanitation plant, the environmental documents indicated that the project "might" use the Valencia treatment plant for a while. Does that mean that you and I will be picking up the tab to get the salts out of Newhall Ranch water?

Coincidentally, the Newhall Ranch proposal also discussed deep-well injection for the disposal of brine.

Are these the same wells proposed by the Sanitation District that required the recent hotly contested sewer-rate increase? Will Lennar Corp. (who bought back into Newhall Ranch at a considerably reduced amount) find yet another way to raid the public's pocket book?

We hope not. We believe that a careful review of the legal issues in this approval will bring sunlight to the matter and set the record straight.

With the current housing market still in turmoil and the foreclosure rates still high, we have an opportunity to take a deep breath and carefully consider the impacts of this huge project on the Santa Clara River and our community.

We can take a closer look to make sure that it is really viable.

We are grateful to all the organizations that joined us in making this second look possible, including the Center for Biological Diversity, the Friends of the Santa Clara River, the California Native Plant Society, the Wishtoyo Foundation and the Ventura Coastkeeper.

Lynne Plambeck is a Santa Clarita resident and president of Santa Clarita Organization for Planning and the Environment. Her column reflects her own views and not necessarily those of The Signal. "Environmentally Speaking" appears Thursdays and rotates among local environmentalists.

<http://www.the-signal.com/archives/38765/>

[Print This Article](#)

Marsha McLean: Mayoral resolutions for Santa Clarita in 2011

Marsha McLean
January 2, 2011

I am so pleased to be serving again as Santa Clarita's mayor for 2011. This is a very exciting time for the city of Santa Clarita. I want to share with readers some of the programs and projects we will be working on in the coming year.

The city will continue construction of the Old Town Newhall library, a vital component of the Downtown Newhall Specific Plan.

Through the city's Open Space Preservation District, we will continue to pursue more land acquisitions and partnerships to bring additional acreage into public ownership.

The city will begin construction for the Newhall Metrolink parking expansion, providing additional parking for transit riders and the Newhall downtown area.

Bringing new jobs and businesses to enhance economic development is important, but I want to make sure we give equal attention to making sure our existing businesses and older, established neighborhoods are not forgotten.

This year, the city will be focused on the transition and operation of the new Santa Clarita Public Libraries on July 1, bringing our community a first-class library system for the three local libraries.

We will be working to complete construction of the Lyons/I-5 Gateway Beautification project in partnership with Los Angeles County, adding a beautiful, landscaped gateway to our community.

The Amgen Tour of California will return to Santa Clarita May 22, and in June, a new event called the Trifecta will be launched in our city.

In our transit division, we will be introducing a new Senior Ambassador program, using trained senior volunteers to teach other seniors how to use/navigate the fixed-route transit system.

I will continue to work to the best of my ability to enhance our Metrolink schedules and to work with the Southern California Association of Governments Regional Council, the North County Transportation Coalition and other transportation committees, commissions and coalitions to help alleviate traffic

congestion, both within and without our city.

It is important to me to make sure we remain fiscally sound and able to maintain our strong law enforcement policies to protect our neighborhoods.

For the Sheriff's Department we will continue our excellent arrest record as part of the very successful J-Team, or juvenile team, that has allowed us to effectively address and reduce juvenile crime in the city.

The unresolved chloride issue is a top priority this year. Our city has implemented many programs and will continue to work with the L.A. County Sanitation District and the Regional Water Quality Control Board and our state legislators to give the most accurate and up-to-date information on those programs.

While this is a large list, it is by no means inclusive of everything we are working on or will accomplish in 2011.

If you are interested in a more complete list, please visit our website at santaclarita.com and take a look at the city's annual budget.

Sometimes there is information that arrives through e-mail or fliers on doorsteps or through blogs that may include certain kinds of information.

Our residents deserve to be able to hear all sides of each issue and to be able to make up their own minds, and I want to make sure residents know where to find each and every bit of available material. I encourage our citizens to utilize all communication methods for the most accurate and up-to-date information.

During the next year, we will have the opportunity to determine the way our city grows over the next 50 years.

I have been a community activist for many years, and I participated in workshops and study sessions starting more than 10 years ago that began the process for shaping our next general plan.

It is extremely important for concerned residents to know where and how they can have all questions answered. I know that our council and staff encourage and welcome personal contact, and I hope our residents take advantage of this open communication invitation so that the One Valley, One Vision plan, encompassing the entire 200-square-mile SCV, will be the best it can be for our future.

During my year as mayor, I will be working hard to assure that our community knows how to reach the mayor and the City Council.

The city offers a wide variety of avenues for city information and to be heard,

including: public meetings, The Signal's "Live from City Hall" column, e-mail, Twitter, Facebook and Seasons magazine. This Week in Santa Clarita (our weekly television show), monthly magazine messages, online broadcasts, City Briefs (our online newsletter) and good old-fashioned conversations in the grocery store are all great ways to learn about what your city is working on and to have your voice heard.

With your help, I look forward to a year that brings all good things that will continue to make our city one of the best in the nation.

Thank you!

Marsha McLean is a member of the Santa Clarita City Council and will serve as mayor for 2011. Her column reflects her own views and not necessarily those of The Signal.

<http://www.the-signal.com/section/33/article/38635/>

ORDINANCE ENFORCEMENT PROGRAM LETTERS

Mailed August 3, 2011



COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

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www.lacsd.org

STEPHEN R. MAGUIN
Chief Engineer and General Manager

August 3, 2011
Client No.: «Client_Number»

Current Resident
«Customer_Address»
«Customer_City», «Customer_St» «Zip»

Ban on All Automatic Water Softeners in the Santa Clarita Valley

Santa Clarita Valley voters approved Measure S, the *Santa Clara River Chloride Reduction Ordinance of 2008* (2008 Ordinance) on November 4, 2008. The Ordinance required the removal and disposal of all automatic water softeners in homes connected to the sewer system in the Santa Clarita Valley. Automatic water softeners, which use rock salt or potassium chloride pellets, were banned because they discharge high levels of salt to the sewer system. Continued use of automatic water softeners, which is prohibited, will further increase the cost for all residents.

The Santa Clarita Valley Sanitation District's (Sanitation District's) records show that an automatic water softener was installed at your residence and may not have been removed:

Automatic Water Softener Make/Model: «WS_MakeModel_Removed»

Automatic Water Softener Installation Date: «Approx_date_installed»

The Sanitation District prohibited the installation of residential automatic water softeners effective March 27, 2003. The Sanitation District's records show that your automatic water softener may have been installed illegally in violation of the *Ordinance Prohibiting the Installation of Certain Water Softening Appliances* (2003 Ordinance). If you have documentation that shows the automatic water softener was installed prior to March 27, 2003, please contact Ms. Preeti Ghuman at (562) 908-4288, extension 2904.

If the automatic water softener is still at your home, please remove it immediately and complete the enclosed Automatic Water Softener Questionnaire. **If you do not have an automatic water softener at your home**, please complete the enclosed Automatic Water Softener Questionnaire. Please return the questionnaire to the Sanitation District within 30 days from the date on this letter.

All automatic water softeners must be removed from the property and no automatic water softeners are "grandfathered" by the 2008 Ordinance. The Sanitation District will begin enforcement of the 2008 Ordinance by conducting home inspections and sewer sampling soon. A violation of the 2008 Ordinance following the issuance of a final Administration Order is a misdemeanor punishable by a fine of \$1,000 or by imprisonment not to exceed 30 days, or by both. If your automatic water softener was also installed illegally after March 27, 2003, you are in violation of the 2003 Ordinance and subject to an additional fine of \$1,000 or imprisonment not to exceed 30 days, or both.

For more information on the 2003 and 2008 Ordinances, please visit our website at www.lacsd.org/chloride. If you have any questions or concerns regarding this letter, please contact the Sanitation District at (877) CUT-SALT or cutsalt@lacsd.org.

Very truly yours,

Stephen R. Maguin

David W. Snyder
Section Head
Industrial Waste Section

DWS:PG:tld



COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

STEPHEN R. MAGUIN
Chief Engineer and General Manager

August 3, 2011
Client No.: «Client_Number»

Current Resident
«SitusCustomer_Address»
«SitusCustomer_City», «SitusCustomer_St» «SitusZip»

Ban on All Automatic Water Softeners in the Santa Clarita Valley

Santa Clarita Valley voters approved Measure S, the *Santa Clara River Chloride Reduction Ordinance of 2008* (Ordinance) on November 4, 2008. The Ordinance required the removal and disposal of all automatic water softeners in homes connected to the sewer system in the Santa Clarita Valley. Automatic water softeners, which use rock salt or potassium chloride pellets, were banned because they discharge high levels of salt to the sewer system. Continued use of automatic water softeners, which is prohibited, will further increase the cost for all residents.

The Santa Clarita Valley Sanitation District's (Sanitation District's) records show that the following automatic water softener was installed at your residence and it has not been removed to date:

Automatic Water Softener Make/Model: «AWS_MakeModel»

Automatic Water Softener Installation Date: «SerialNo»

All automatic water softeners must be removed from the property and no automatic water softeners are "grandfathered" by the Ordinance. The Sanitation District will begin conducting home inspections and sewer sampling soon to ensure compliance with the Ordinance. A violation of the Ordinance after the issuance of a final administrative order is a misdemeanor punishable by a fine of up to \$1,000 or by imprisonment not to exceed 30 days, or both. However, the Sanitation District will not cite residents that remove their unit within 30 days of the Authorization for Rebate letter.

The Sanitation District has an Automatic Water Softener Rebate Program Application Form on record for this address. **If you still have the automatic water softener**, please follow the instructions on the enclosed Authorization for Rebate letter.

If you do not have an automatic water softener at your home, please complete the enclosed Automatic Water Softener Questionnaire and return it to the Sanitation District within 30 days from the date on this letter.

For more information on the Ordinance or the Automatic Water Softener Rebate Program, please visit our website at www.lacsd.org/chloride. If you have any questions or concerns regarding this letter, please contact the Sanitation District at (877) CUT-SALT or cutsalt@lacsd.org.

Very truly yours,

Stephen R. Maguin

David W. Snyder
Section Head
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The Santa Clarita Valley Sanitation District's (Sanitation District's) records show that an automatic water softener may be present at this address.

All automatic water softeners must be removed from the property and no automatic water softeners are "grandfathered" by the Ordinance. The Sanitation District will begin conducting home inspections and sewer sampling soon to ensure compliance with the Ordinance. A violation of the Ordinance after the issuance of a final administrative order is a misdemeanor punishable by a fine of up to \$1,000 or by imprisonment not to exceed 30 days, or both. However, the Sanitation District will not cite residents that submit an Automatic Water Softener Rebate Program Application Form within 30 days from the date on this letter and remove their unit within 30 days of the Authorization for Rebate letter.

If you have an automatic water softener you may qualify for a rebate for 75 percent of its reasonable value and free removal and disposal of the unit. To apply for the rebate, please complete and return the enclosed application form. In response to your application, an Authorization for Rebate letter will be sent identifying the amount of the rebate and a list of approved and licensed plumbers to remove the unit from your residence at no cost to you. The Authorization for Rebate letter allows 30 days for the removal of the automatic water softener. After the removal of the unit is verified, you will receive your authorized rebate payment.

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The Santa Clarita Valley Sanitation District's (Sanitation District's) records show that an automatic water softener was installed at your residence and it may have been removed:

Automatic Water Softener Make/Model: «WS_MakeModel_Removed»

Automatic Water Softener Installation Date: «Approx_date_installed»

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The Santa Clarita Valley Sanitation District's (Sanitation District's) records show that an automatic water softener was installed at your residence and has not been removed:

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Automatic Water Softener Installation Date: «Approx_date_installed»

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The Santa Clarita Valley Sanitation District's (Sanitation District's) records show a building permit for an automatic water softener was issued to this address and the unit has not been removed to date.

All automatic water softeners must be removed from the property and no automatic water softeners are "grandfathered" by the Ordinance. The Sanitation District will begin conducting home inspections and sewer sampling soon to ensure compliance with the Ordinance. A violation of the Ordinance after the issuance of a final administrative order is a misdemeanor punishable by a fine of up to \$1,000 or by imprisonment not to exceed 30 days, or both. However, the Sanitation District will not cite residents that submit an Automatic Water Softener Rebate Program Application Form within 30 days from the date on this letter and remove their unit within 30 days of the Authorization for Rebate letter.

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The Santa Clarita Valley Sanitation District's (Sanitation District's) records show that a rental automatic water softener was installed at your residence and it has not been removed to date:

Automatic Water Softener Make/Model: «WS_MakeModel_Removed»

Automatic Water Softener Installation Date: «Approx_date_installed»

All automatic water softeners must be removed from the property and no automatic water softeners are "grandfathered" by the Ordinance. The Sanitation District will begin conducting home inspections and sewer sampling soon to ensure compliance with the Ordinance. A violation of the Ordinance after the issuance of a final administrative order is a misdemeanor punishable by a fine of up to \$1,000 or by imprisonment not to exceed 30 days, or both.

If the automatic water softener is in your home, please contact the company that owns the unit to have it removed immediately. After the unit is removed, please complete the enclosed Automatic Water Softener Questionnaire. **If you do not have an automatic water softener at your home,** please complete the enclosed Automatic Water Softener Questionnaire. Please return the completed questionnaire to the Sanitation District within 30 days from the date on this letter.

For more information on the Ordinance, please visit our website at www.lacsd.org/chloride. If you have any questions or concerns regarding this letter, please contact the Sanitation District at (877) CUT-SALT or cutsalt@lacsd.org.

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David W. Snyder
Section Head
Industrial Waste Section

DWS:PG:tld



Santa Clarita Valley Automatic Water Softener Rebate Program APPLICATION FORM

Please complete **ALL** applicable sections of this Application Form, sign it, and send it to: LACSD, P.O. Box 4998, Whittier, CA 90607, Attn: **SCV Rebate Program**

| | | | |
|------------------------------|--|--------------------------------------|--|
| Property Type, Check one: | <input type="checkbox"/> Detached Home (single family) | <input type="checkbox"/> Apartment | <input type="checkbox"/> Mobile Home (Space No.) _____ |
| | <input type="checkbox"/> Attached Home (up to four-plex) | <input type="checkbox"/> Condominium | Please list Mobil Home Park Name: _____ |
| | <input type="checkbox"/> Townhome | | |

SECTION 1 – Applicant Information

| | |
|---|--------------------------------|
| First and Last Name or Business Name (Please Print) _____ | EMAIL address (optional) _____ |
|---|--------------------------------|

| | | | | |
|--|-------------------------------|------------|-------------|----------------|
| Address Where Softener Installed _____ | Apt. or Space # _____ | City _____ | State _____ | Zip Code _____ |
| Home Phone No. () - _____ | Daytime Phone No. () - _____ | | | |

FILL OUT THIS SECTION ONLY IF CHECK SHOULD BE MAILED TO A DIFFERENT ADDRESS THAN ABOVE

| | | | | |
|---------------|-----------------------|------------|-------------|----------------|
| Address _____ | Apt. or Space # _____ | City _____ | State _____ | Zip Code _____ |
|---------------|-----------------------|------------|-------------|----------------|

SECTION 2 – Information on Salt-Based Automatic Water Softener to be Removed

I own the automatic water softener for which I am applying

Yes No – Was the automatic water softener in the home when you purchased the residence?

| | | |
|--------------------|---------------------|---|
| Make & Model _____ | Serial Number _____ | Actual Date Installed (if unknown, please estimate) _____ |
|--------------------|---------------------|---|

| | |
|---|---|
| Actual Purchase Price (if unknown please estimate) \$ _____ | To expedite processing of this application, please provide verification of water softener purchase using one or more of the following documents if available: dated receipt, contract, original service agreement, or other relevant paperwork. |
|---|---|

This application form is for owners of residential automatic water softeners. To be eligible for a rebate, the automatic water softener must be installed at a residence that is served by the Santa Clarita Valley Sanitation District's sewer system. Upon verifying the application information and applicant's eligibility, an Authorization for Rebate letter will be forwarded to the applicant identifying the amount of your rebate and a list of **approved and licensed plumbers** to remove the automatic water softener unit from your residence at no cost to the applicant. **This form can be faxed or mailed using the information in the upper right hand corner.**

PLEASE READ THE TERMS AND CONDITIONS ON THE FOLLOWING PAGE AND SIGN BELOW
 Questions? Call 1-877-CUT-SALT or visit www.lacsd.org/chloride

I have read and understand the terms and conditions on the following page. I certify under penalty of perjury that the information I have provided is true and correct. Please allow 8 to 12 weeks for processing.

Executed on _____ in _____, California

| | |
|---------------------|---------------------|
| SIGN HERE → | |
| Applicant Signature | Name (Please Print) |

Santa Clarita Valley
Automatic Water Softener Rebate Program
TERMS AND CONDITIONS

1. The unit for which I am applying is an automatic water softener, the kind to which rock salt (sodium chloride) or potassium chloride is added. I understand that **portable exchange tank units**, which are units where the softening tank is **exchanged periodically** by a service provider for a new softening tank, **are not eligible for a rebate**. Non-salt water conditioning equipment is also not eligible for a rebate.
2. The rebate is based on the reasonable value of the automatic water softener and the cost of its removal and disposal. The reasonable value of the automatic water softener will be based on 75% of the sale price and installation date of the unit and a 12-year life expectancy of the unit. Depending on the age, make, and model of your automatic water softener, rebates for individual units may range from \$206.00 to \$2,000.00. A minimum rebate of \$206.00 (effective 01/01/2009) will be issued for all owned automatic water softeners installed prior to March 27, 2003. Removal and disposal of the automatic water softener is at no cost to the resident if a plumber on the Santa Clarita Valley Sanitation District of Los Angeles County's (SCVSD's) List of Approved and Licensed Plumbers is used.
3. Rebate checks will be issued to the applicant identified in Section 1 of the Application Form.
4. The automatic water softener for which I am applying for a rebate is installed at a residence (house, multiplex, condominium, townhome, apartment, or mobile home) served by the SCVSD. Residences not served by the SCVSD or **served by septic tanks are not eligible** for the rebate.
5. I understand that this program is limited to one rebate per site address (location where the automatic water softener is installed).
6. I have not previously applied for a rebate for this automatic water softener.
7. I understand that it is **illegal to have installed automatic water softeners** in residences served by the SCVSD after March 27, 2003.
8. **I understand that the automatic water softener for which I am applying for the rebate must be disposed of ONLY by using the approved licensed plumbers on the list provided by the SCVSD or authorized SCVSD employees.**
9. I understand that the rebate will not be paid until the SCVSD verifies that the automatic water softener has been removed from the residence pursuant to line 8 above.
10. I understand that the program may be modified or terminated without prior notice.
11. As a condition of accepting this rebate, I will allow, if requested, SCVSD or its representative reasonable access to my home to verify that no automatic water softeners are present before a rebate is paid. I understand that a rebate will not be paid if I refuse to allow access to the SCVSD or its representative to verify that the automatic water softener has been removed from the residence. The verification must be scheduled within 30 days after the applicant has been contacted by the SCVSD or its representative.
12. I understand that the SCVSD may contact providers and/or parties to verify purchase information I have provided on the cost and age of the unit, as well as my name and/or address.
13. I certify that I own the automatic water softener to be removed.
14. I am responsible for meeting all rebate program requirements, terms, and conditions and complying with my state/county/city governments, property owner, and/or homeowners association requirements (if any) in my area regarding local conditions, restrictions, codes, ordinances, rules, and regulations concerning actions taken under this rebate program.
15. I understand that the SCVSD is not responsible for items lost or destroyed in mail/transit.
16. Removal of the automatic water softener must occur within 30 days of the date on the Authorization for Rebate letter or the applicant must reapply.

I hereby release the SCVSD, all other County Sanitation Districts of Los Angeles and their officers, agents and employees from and against any and all claims, demands, liability or loss arising out of activities conducted by or on behalf of the SCVSD in connection with the Automatic Water Softener Rebate Program.

I understand that I may hereafter discover facts different from or in addition to the facts that I now know or believe to be true. I am advised that California Civil Code Section 1542 provides as follows: "A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor."

I expressly waive and relinquish any and all rights; remedies and/or benefits I may now have or that may hereafter accrue in respect to the SCVSD's Automatic Water Softener Rebate Program.

Questions? Call 1-877-CUT-SALT or visit www.lacsd.org/chloride

Santa Clarita Valley Sanitation District AUTOMATIC WATER SOFTENER QUESTIONNAIRE

Please complete **ALL** applicable sections of this questionnaire, sign it, and return it by mail to: LACSD, P.O. Box 4998, Whittier, CA 90607; or by fax to (562) 908-4224; Attention: **SCV Enforcement Program**.

Address *City* *State* *Zip Code*

This questionnaire has been sent to you because the Sanitation District's records show that an automatic water softener was installed at your residence.

If the automatic water softener has been removed, please provide information on the disposition of the unit within 30 days.

The automatic water softener was removed on _____ and the unit was disposed at _____

Actual or Approximate Date *Location*

The automatic water softener was removed on _____ and the automatic water softener was given or sold to _____ The recipient's contact information is _____ and _____

Actual or Approximate Date *Person's Name* *Phone Number* *Address*

I/We purchased the home on _____ and an automatic water softener was not on the premises.

Actual or Approximate Date

I/We began renting the home on _____ and an automatic water softener was not on the premises.

Actual or Approximate Date

Other:

I have read and completed the questionnaire. I certify under penalty of perjury that the information I have provided is true and correct.

SIGN HERE →

Signature *Name (Please Print)* *Date*



COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY
P.O. Box 4998, Whittier, CA 90607-4998

WATER SOFTENER ENFORCEMENT HAS BEGUN

**RESPONSE
REQUIRED**

**“SANTA CLARITA VALLEY SANITATION DISTRICT
ENFORCING BAN ON ILLEGAL
AUTOMATIC WATER SOFTENERS”
PRESS RELEASE**

August 3, 2011



For Immediate Release
August 4, 2011

District Contact: Dave Snyder (562) 908-4288 x 2902

SANTA CLARITA VALLEY SANITATION DISTRICT ENFORCING BAN ON ILLEGAL AUTOMATIC WATER SOFTENERS

SANTA CLARITA, CA – Today, the Santa Clarita Valley Sanitation District mailed approximately 2,500 letters to residents suspected of having illegal automatic water softeners. This targeted mailing is part of an enforcement program by the District to rid the community of banned automatic water softeners and to decrease the cost to the community of complying with State mandates through the Regional Water Quality Control Board for chloride (salt) in the District's discharge to the Santa Clara River.

Nearly two thirds of Santa Clarita Valley voters approved Measure S, enacting *the Santa Clara River Chloride Reduction Ordinance of 2008*. The Ordinance required the removal and disposal of all automatic water softeners in homes connected to the sewer system. These water softeners, which use rock salt or potassium chloride pellets, discharge high levels of salt to the sewer system. Though the District's two wastewater reclamation plants produce high quality water that is suitable for recycling, they do not remove salt. The treated water leaving the treatment plants exceeds the state-set salt limit.

"The District has successfully removed approximately 7,300 automatic water softeners as a result of the implementation of a Rebate and Public Outreach Program in the valley," said Steve Maguin, Chief Engineer and General Manager for the District. "This has led to a very substantial decrease in the salt levels in the water leaving the District's water reclamation plants. Unfortunately, there are many illegal automatic water softeners still in the community with an estimated 500 of them discharging to the sewer system."

"This Enforcement Program will help remove the remaining automatic water softeners in the community. It will further lower the salt concentration in the water going to the river and ultimately save Santa Clarita Valley residents and businesses a substantial sum of money," said Marsha McLean, Mayor of the City of Santa Clarita.

Residents who still have illegal automatic water softeners have 30 days to apply for a rebate and an additional 30 days, after the receipt of an Authorization for Rebate letter, to remove the unit. For residents who received an enforcement letter and no longer have an illegal automatic water softener, they will have 30 days to complete a questionnaire and return it to the District.

Home inspections will be conducted for residents that do not respond to the enforcement letters. If automatic water softeners are found, residents will be issued Notices of Violation and may be fined \$1,000.

The District serves the wastewater management needs of the Santa Clarita Valley. The agency protects public health and the environment by constructing, operating, and maintaining a regional system that collects, treats, recycles and disposes of wastewater. The Directors of the District are the mayor and a City Council member from Santa Clarita and the chairperson of the Los Angeles County Board of Supervisors.

For more information on the automatic water softener ban and the Rebate Program, please visit the District's website at www.lacsd.org/chloride or call 1-877-CUT-SALT.

####

**HALF-PAGE BLACK & WHITE
NEWSPAPER ADVERTISEMENT**

The Signal

August 5, 2011

ATTENTION

SANTA CLARITA VALLEY RESIDENTS

ILLEGAL

AUTOMATIC

WATER

SOFTENERS

COST

US ALL!



ENFORCEMENT
of voter-approved ban has begun

TARGETED
home inspections will be conducted

VIOLATORS
will be cited and may be fined up to \$1,000

APPLY
for rebate or remove unit immediately

IT'S NOT TOO LATE
to get a rebate

877-CUT-SALT
www.lacsd.org/chloride



SANITATION DISTRICTS OF LOS ANGELES COUNTY



**HALF-PAGE COLOR
NEWSPAPER ADVERTISEMENT**

The Signal

**August 14, 2011
September 11, 2011**

ATTENTION

SANTA CLARITA VALLEY RESIDENTS

ILLEGAL

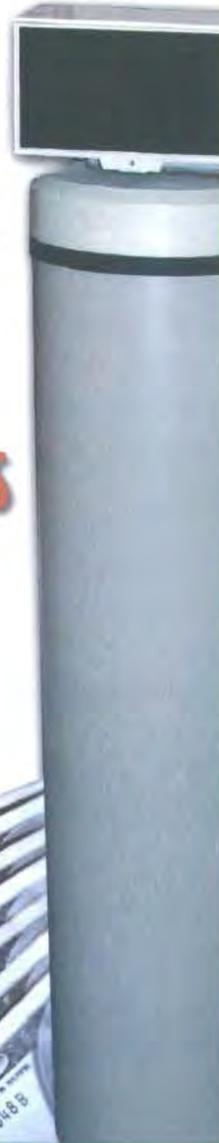
AUTOMATIC

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COST

US ALL!



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IT'S NOT TOO LATE

to get a rebate

877-CUT-SALT
www.lacsd.org/chloride



**SANTA CLARA RIVER
CHLORIDE REDUCTION ORDINANCE OF 2008**

The Board of Directors of the Santa Clarita Valley Sanitation District of Los Angeles County ordains as follows:

1. **AUTHORIZATION**

This Ordinance is enacted pursuant to authority contained in the County Sanitation District Act, California Health and Safety Code Sections 4700 *et seq.*, and exercises authority conferred by law including, but not limited to, Chapter 5, Part 12, Division 104 of the California Health and Safety Code, and Article 4, Chapter 1, Part 1, Division 2 beginning with Section 53069.4 of the Government Code.

2. **SHORT TITLE**

This Ordinance shall be known and referred to as the *Santa Clara River Chloride Reduction Ordinance of 2008*.

3. **PURPOSE**

The purpose of this Ordinance is to limit the discharge of chlorides to the Santa Clara River thereby improving the potential for the Santa Clarita Valley Sanitation District of Los Angeles County to comply with requirements of the California Regional Water Quality Control Board, Los Angeles Region. It is also the purpose of this Ordinance to reduce the expenditure of public funds and mitigate rate increases by lessening the need for new capital facilities.

4. **DEFINITIONS**

The following definitions shall apply to the terms used in this Ordinance:

(a.) "District" means the Santa Clarita Valley Sanitation District of Los Angeles County. The District owns and operates a sewer system that conveys wastewater to the Saugus and Valencia Water Reclamation Plants.

(b.) "Person" means any person, firm, association, organization, partnership, business, trust, corporation, company, district, county, city and county, city, town, the state, the federal government, and any of the agencies and political subdivisions of such entities.

(c.) "Plants" means the District's Saugus and Valencia Water Reclamation Plants.

(d.) "Community Sewer System" means the network of facilities owned and operated by the District or that are tributary to the District-owned and operated facilities that convey wastewater from within the District's service area to the Plants.

(e.) "Regional Board" means the California Regional Water Quality Control Board, Los Angeles Region, created and exercising its powers pursuant to the Porter-Cologne Water Quality Control Act, California Water Code Sections 13000 *et seq.*

(f.) "Brine" means a heavily saturated salt solution containing chloride.

(g.) "Residence" means a structure that is, or is intended to be, in whole or in part, a place of dwelling, whether occupied or not, whether fully constructed or not, and includes, without limitation, homes, whether attached to another structure or not, apartments, condominiums, and mobile homes.

(h.) "Residential self-regenerating water softener" and/or "appliance" means residential water softening or conditioning appliances that discharge Brine into the Community Sewer System. Residential self-regenerating water softeners are also more commonly known as "automatic" water softeners. Residential self-regenerating water softeners only include water softening or conditioning devices that renew their capability to remove hardness from water by the on-site application of a chloride solution to the active softening or conditioning material contained therein, followed by a subsequent rinsing of the active softening or conditioning material.

5. FINDINGS

The Board of Directors of the District finds and declares the following:

- a) The Santa Clara River is one of the only remaining natural rivers in Southern California, supporting fish and wildlife, recreation and agriculture in Los Angeles and Ventura Counties.
- b) The District's Plants discharge to the Santa Clara River.
- c) Use of residential self-regenerating water softeners installed prior to 2003 is the most significant controllable source of chloride entering the Community Sewer System and the Plants. Residential self-regenerating water softeners use salt to renew their capacity to remove hardness, and then discharge Brine to the Community Sewer System. Residential self-regenerating water softeners account for approximately 30% of all chloride in the Plant's discharge. Although wastewater is treated to a high level at the District's Plants, the Plants are not designed to remove chloride.
- d) The Regional Board has determined that chloride levels in the Santa Clara River must be reduced, and pursuant to a Total Maximum Daily Load ("TMDL") for chloride established by the Regional Board for Reaches 5 and 6 of the Santa Clara River in Los Angeles County, which became effective May 4, 2005, has required the District to reduce the chloride levels in its Plants' discharge.
- e) The District has adopted and is enforcing regulatory requirements that limit the volume and concentrations of chloride discharges from non-residential sources to the Community Sewer System to the extent technologically and economically feasible.
- f) The District has adopted and is enforcing an ordinance prohibiting the prospective installation of residential self-regenerating water softeners pursuant to Health & Safety Code Section 116786.
- g) To further reduce chloride in the Plants' discharge, the District must either reduce sources of chloride in wastewater discharged to the Community Sewer System, remove chloride from wastewater at the Plants through construction and operation of expensive and energy-intensive advanced treatment facilities, or both. Construction and operation of advanced treatment facilities for chloride removal at the Plants will result in the production of Brine, which will also require disposal. If residential self-regenerating water softeners are not removed, the incremental present worth of construction and operation of advanced treatment

and Brine disposal facilities to remove chloride contributed by residential self-regenerating water softeners is approximately \$73 million.

- h) Reducing chloride levels by requiring the removal of all remaining installed residential self-regenerating water softeners discharging to the Community Sewer System will cost the District approximately \$2-3 million.
- i) Reducing chloride levels by requiring the removal of all installed residential self-regenerating water softeners would save the District's ratepayers approximately \$70 million, based on the difference between the cost of residential self-regenerating water softener removal and the incremental cost of new advanced treatment and Brine disposal facilities to remove the same amount of chloride.
- j) Removal of residential self-regenerating water softeners within the District is estimated to take approximately one year after the effective date of this Ordinance. Under the TMDL, the District must perform environmental review, permitting, design and construction of new advanced treatment and Brine disposal facilities for the removal of chloride by May 4, 2016. Therefore, removing residential self-regenerating water softeners will reduce chloride in discharges to the Santa Clara River sooner than installing advanced treatment and Brine disposal facilities to achieve an equivalent level of chloride reduction.
- k) The removal of all installed residential self-regenerating water softeners is a necessary and cost-effective means of achieving timely compliance with a TMDL issued by the Regional Board for the Santa Clara River.
- l) Residents within the District will maintain the ability to soften or condition their water by using water softening or conditioning devices that do not discharge Brine to the Community Sewer System. Among these are portable exchange water softeners, which use a removable tank to soften water. These tanks are serviced by facilities located outside the District's service area that are permitted to treat and dispose of the Brine used to regenerate them. Based on available information, sufficient capacity to treat Brine exists in Los Angeles County, and therefore, portable exchange water softeners remain available as a water softening option for residents affected by this Ordinance.
- m) Based on available information, the adoption and implementation of this Ordinance will avoid or significantly reduce the costs associated with advanced treatment for chloride removal and Brine disposal that otherwise would be necessary to meet the TMDL.
- n) The District has established a voluntary program to compensate owners of residential self-regenerating water softeners within its service area for 100% of the reasonable value of each removed residential self-regenerating water softener and the reasonable cost of the removal and disposal of that residential self-regenerating water softener. This program shall remain in effect until the Effective Date of this Ordinance. The program is expected to result in the removal of 3,300 self-regenerating water softeners. The reduction in chloride levels resulting from the voluntary program is expected to be 4,400 pounds per day.
- o) On and after the Effective Date of this Ordinance, the District will continue a program to compensate owners of residential self-regenerating water softeners within its service area for 75% of the reasonable value of each removed residential self-regenerating water softener and the reasonable cost of the removal and disposal of that residential self-regenerating water

softener. Approximately 3,200 self-regenerating water softeners are expected to be removed. The potential reduction in chloride levels expected as a result of the program is 4,300 pounds per day.

6. REQUIREMENT FOR REMOVAL OF RESIDENTIAL SELF-REGENERATING WATER SOFTENERS

Every person who has a residential self-regenerating water softener that is installed upon his or her property or premises, and every person occupying or leasing the property or premises of another who has a residential self-regenerating water softener installed thereon, that discharges into the Community Sewer System shall remove and dispose of the installed residential self-regenerating water softener within 180 days after the Effective Date of this Ordinance.

7. ADMINISTRATIVE ENFORCEMENT

- a) The Chief Engineer and General Manager of the District ("Chief Engineer") shall administer, implement, and enforce the provisions of this Ordinance. Any powers granted to or duties imposed upon the Chief Engineer may be delegated to persons acting in the beneficial interest of or in the employ of the District. The Chief Engineer shall enforce this Ordinance by (1) performing public outreach to inform residents of the terms of this Ordinance and to encourage voluntary compliance, (2) withholding administrative enforcement actions until 180 days after the Effective Date of the Ordinance have passed to allow all affected residents adequate time to remove their installed residential self-regenerating water softeners, (3) monitoring flows within the Community Sewer System to determine the locations of residential self-regenerating water softeners, and/or (4) conducting inspections upon reasonable notice of any residence that discharges to the Community Sewer System.
- b) The Chief Engineer may issue a Notice of Violation to any Person who fails to remove a residential self-regenerating water softener as required by this Ordinance. A Notice of Violation shall allow a period of 60 days to correct the violation and to remove and dispose of the installed residential self-regenerating water softener. Any Person violating this Ordinance after issuance of Notice of Violation and the subsequent 60-day period shall pay an administrative fine to the District in an amount not to exceed \$1,000.00 for such violation.
- c) Any Person who has received a Notice of Violation may within 30 days request a hearing and review by a hearing officer of the District. The hearing shall be held within 30 days of the request. Following the hearing, the District's hearing officer may dismiss the violation or issue an Administrative Order for the imposition of an administrative fine and the removal of any installed appliance. Service of the Administrative Order may be made by personal delivery or by first class mail addressed to the Person at the address listed in the notice. An Administrative Order may be appealed in accordance with the provisions of Government Code Section 53069.4.
- d) The owner of a residential self-regenerating water softener subject to administrative enforcement under this section may elect to have the District remove the residential self-regenerating water softener from the residence. The owner retains the right to compensation for 75% of the reasonable value of the residential self-regenerating water softener.

8. **VIOLATION**

Any Person who violates any of the provisions of this Ordinance following the issuance of a final Administrative Order under Section 7 is guilty of a misdemeanor punishable by a fine of not to exceed \$1,000.00 or by imprisonment not to exceed 30 days or by both such fine and imprisonment. The amount of any such fine shall be first allocated to pay the District's costs of enforcement.

9. **SEVERABILITY**

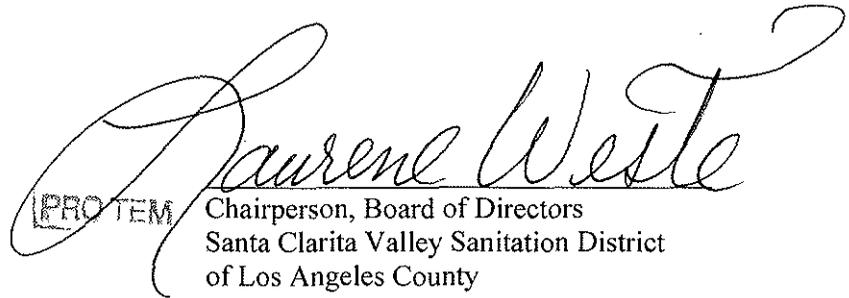
If any provision of this Ordinance or the applicability thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this Ordinance that can be given effect without the invalid portion or application, and to that end the provisions of this Ordinance are severable.

10. **REFERENDUM**

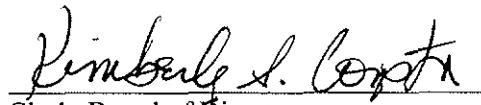
Pursuant to California Health & Safety Code Section 116787(b), this Ordinance shall not be effective until it is approved by a majority vote of the qualified votes cast in a regularly scheduled election, held in the District's service area, in a referendum in accordance with applicable provisions of the Elections Code.

11. **EFFECTIVE DATE**

This Ordinance shall become effective 30 days from the date of final passage by the Board of Directors and subsequent approval by the voters pursuant to referendum, but no earlier than January 1, 2009.


PRO TEM Chairperson, Board of Directors
Santa Clarita Valley Sanitation District
of Los Angeles County
JUN 11 2008

ATTEST:


Clerk, Board of Directors
Santa Clarita Valley Sanitation District
of Los Angeles County

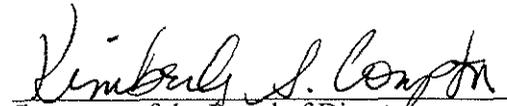
PASSED AND ADOPTED by the Board of Directors of the Santa Clarita Valley Sanitation District of Los Angeles County on June 11, 2008 by the following vote:

AYES: Directors Burke and Weste

NOES: None

ABSENT: Director Kellar

ABSTAIN: None


Secretary of the Board of Directors
Santa Clarita Valley Sanitation District
of Los Angeles County

Estimate of Annual Industrial Waste (IW) Inspector Labor Cost for SRWS Home Inspections in the SCV

Notes: Currently 9 Districts' IW inspectors have volunteered to participate in the inspection program. Additionally, the 4 supervising inspectors have agreed to participate. It is anticipated that the inspections will be conducted twice monthly on Saturdays with volunteer inspectors being required to participate on at least one of the Saturdays each month. I anticipate that on average there will be 5 inspectors plus one Supervising inspector working on any given Saturday. Each Saturday would consist of an approximate 9-hour day from 0900 hours to 1830 hours including driving time to and from the Santa Clarita Valley. Inspectors would be compensated at the overtime rate of 1.5 times their normal pay rate for work completed on Saturdays.

The current monthly base salary for an Inspector II-step 5 is \$7203. This salary includes the 7% CalPERS employer paid member contribution. While not all inspectors are compensated at the IWI II-step 5 rate, I will use the productivity rate of \$46.78/hour provided by IW Section Head Dave for the purpose of these calculations as it likely represents a good approximation of the average rate being earned by inspectors who are participating in this project.

Calculation

IW Inspector II-Step 5 productive earning rate= \$46.78/hour. Multiplying by the 0.4 factor to calculate the approximate cost of benefits = $0.4 \times \$46.78/\text{hour} = \$18.71/\text{hour}$.

Inspector overtime rate = $1.5 \times \$46.78/\text{hour} = \$70.17/\text{hour}$

Total hourly inspector labor cost = $\$18.71/\text{hour} + \$70.17/\text{hour} = \$88.88/\text{hour}$

$6 \text{ inspectors/day} \times 9 \text{ hours/day} \times 2 \text{ days/month} \times 12 \text{ months/year} = 1296 \text{ hours/year}$

Total annual inspector labor cost = $\$88.88/\text{hour} \times 1296 \text{ hours/year} = \$115,188.48$