

Executive Summary

This annual report, which is the eleventh in a series that began to describe water supply conditions in 1998, provides current information about the water requirements and water supplies of the Santa Clarita Valley. The report was prepared for the imported water wholesaler, Castaic Lake Water Agency (CLWA), and for the four local retail water Purveyors that serve the Valley: CLWA Santa Clarita Water Division, Los Angeles County Waterworks District 36, Newhall County Water District, and Valencia Water Company. These entities and representatives from the City of Santa Clarita and the County of Los Angeles Department of Regional Planning meet as required to coordinate the management of imported water with local groundwater and recycled water to meet water requirements in the Valley.

This report provides information about local groundwater resources, State Water Project (SWP) and other imported water supplies, water conservation, and recycled water. The report reviews the sufficiency and reliability of supplies in the context of existing water demand, with focus on actual conditions in 2008, and it provides a short-term outlook of water supply and demand for 2009.

ES.1 2008 Water Requirements and Supplies

In 2008, total water requirements in the Santa Clarita Valley were about 90,700 acre-feet (af), of which about 75,900 af (84 percent) were for municipal use and the remainder (14,800 af) was for agricultural and other (miscellaneous) uses, including individual domestic uses. Total demand in 2008 was about two percent lower than in 2007, less than what was estimated in the 2007 Water Report, and water requirements in 2008 were also lower than the average projection in the 2005 Urban Water Management Plan (UWMP). Total water requirements in 2008 were met by a combination of about 48,700 af from local groundwater resources (about 33,900 af for municipal and about 14,800 af for agricultural and other uses), about 41,700 af of SWP and other imported water, and about 300 af of recycled water.

Of the 48,700 af of total groundwater pumping in the Valley in 2008, about 41,750 af were pumped from the Alluvium and about 6,950 af were pumped from the underlying, deeper Saugus Formation. Alluvial pumping represented about a 2,950 af increase from 2007, and Saugus pumping was slightly lower than in 2007, by about 750 af. Neither pumping volume resulted in any notable overall change in groundwater conditions (water levels, water quality, etc.) in either

aquifer system. Imported water deliveries to the Purveyors decreased by about 3,600 af from the previous year. Water uses and supplies in 2008 are summarized in the following Table ES-1.

**Table ES-1
Santa Clarita Valley
Summary of 2008 Water Supplies and Uses
(acre-feet)**

<i>Municipal</i>		
SWP and other Imported		41,705
Groundwater (Total)		33,884
<i>Alluvium</i>	27,919	
<i>Saugus</i>	5,965	
Recycled Water		311
Subtotal		75,900
<i>Agriculture/Miscellaneous</i>		
SWP and other Imported		-
Groundwater (Total)		14,750
<i>Alluvium</i>	13,797	
<i>Saugus</i>	953	
Subtotal		14,750
Total		90,650

In accordance with the California Urban Water Management Planning Act, the Valley-wide UWMP was updated in 2005 to extend projected water demands through 2030, and to describe the combination of local groundwater, imported water supplies from the State Water Project and other sources, local recycled water supplies, and other water supplies planned to meet those existing and projected water demands in the Valley. The 2005 UWMP describes the reliability of local groundwater resources and the adequacy of groundwater supplies to meet groundwater demand, including consideration of the impacts of perchlorate contamination on several municipal water supply wells. The 2005 UWMP also describes the plans and ongoing work for integrated control of perchlorate migration and full restoration of perchlorate-impacted groundwater supply.

Notable details about each component of water supply in the Valley, and about the water supply outlook for 2009, include the following.

ES.2 Alluvial Aquifer

The groundwater operating plan in the 2005 UWMP includes Alluvial pumping in the range of 30,000 to 40,000 acre-feet per year (afy) following average/normal years, and slightly reduced pumping (30,000 to 35,000 afy) following dry years. Pumping from the Alluvium in 2008 was 41,750 af, which is slightly above the operating plan range for the Alluvium but did not adversely affect groundwater levels and storage in the basin. On average, pumping from the Alluvium has been about 32,000 afy since supplemental imported water became available in 1980. That average rate remains near the lower end of the range of operational yield.

On a long-term basis, continuing through 2008, there is no evidence of any historic or recent trend toward permanent water level or storage decline. In general, throughout a large part of the basin, Alluvial groundwater levels have generally remained near historic highs during the last 30 years. Above average precipitation in late 2004 and 2005 resulted in significant water level recovery in the eastern part of the basin, continuing the overall trend of fluctuating groundwater levels within a generally constant range over the last 30 years. These ongoing data indicate that the Alluvium remains in good operating condition and can continue to support pumping in the operating range included in the 2005 UWMP, or slightly higher, without adverse results (e.g., long-term water level decline or degradation of groundwater quality.)

Based on an integration of water quality records from multiple wells completed in the Alluvium, there have been historical fluctuations in groundwater quality, typically associated with variations in precipitation and streamflow. However, like groundwater levels, there has been no long-term trend toward groundwater quality degradation; groundwater produced from the Alluvial aquifer remains a viable municipal and agricultural water supply.

In 2002, as part of ongoing monitoring of wells for perchlorate contamination, perchlorate was detected in one Alluvial well (the SCWD Stadium Well) located near the former Whittaker-Bermite facility. The detected concentration was slightly below the then-applicable Notification Level for perchlorate (6 µg/l, which was subsequently established as the Maximum Contaminant Level for perchlorate in October 2007), and the well has been inactivated for municipal water supply since the detection of perchlorate. In early 2005, perchlorate was detected in a second Alluvial well, VWC's Well Q2. After an interim period of wellhead treatment, that well has now been returned to regular water supply service. All other Alluvial wells operated by the Purveyors continue to be used for municipal water supply service; those wells near the Whittaker-Bermite property are sampled in accordance with drinking water regulations and perchlorate has not been detected. As detailed in the 2005 UWMP, the ongoing inactivation of one Alluvial well due to

perchlorate contamination does not limit the Purveyors' ability to produce groundwater from the Alluvium in accordance with the groundwater operating plan in the 2005 UWMP.

The ongoing characterization and plan for control and cleanup of perchlorate in the Valley has focused on the Saugus Formation. In addition, however, on-site cleanup and control activities that began in 2006, and continued through 2008, include continuation of soil cleanup on the Whittaker-Bermite site, and continuation of pumping and treatment in the Northern Alluvium on the Whittaker-Bermite site. Expanded pumping and treatment, intended to effect perchlorate containment in the Northern Alluvium, became operational in October 2007.

ES.3 Saugus Formation

The groundwater operating plan in the 2005 UWMP includes pumping from the Saugus in the range of 7,500 to 15,000 afy in average/normal years; it also includes planned dry-year pumping from the Saugus of 21,000 to 35,000 afy for one to three consecutive dry years. The 2005 UWMP recognizes the results of basin yield analyses in 2004 and 2005 which found that such short-term pumping can be recharged during subsequent wet/normal years to allow groundwater levels and storage to recover, as it has in historical periods.

Pumping from the Saugus Formation was about 6,950 af in 2008; on average, Saugus pumping has been about 6,800 afy since 1980. Both rates remain near the lower end of the range included in the UWMP. As a result of long-term relatively low pumping from the Saugus Formation, groundwater levels in that aquifer have remained generally constant to slightly increasing over the last 35 to 40 years; those trends continued in 2008.

In 1997, ammonium perchlorate was discovered in four wells completed in the Saugus Formation in the vicinity of the former Whittaker-Bermite facility located generally toward the east, on the south side of the basin. All four of those impacted wells remain out of active supply service; one of them has been permanently sealed and destroyed. In 2006, a very low level of perchlorate was detected in another Saugus municipal well (NCWD's Well NC-13). That low level detection has been interpreted to not indicate anything new about the migration of perchlorate; however, it has also prompted additional monitoring well installation and a focused study of the Saugus Formation in that area. Results are being integrated with other groundwater remediation efforts and reviewed by the State Department of Toxic Substances Control (DTSC). All other Saugus wells owned and operated by the Purveyors are available for municipal water supply service. As part of regular operation, those wells are sampled in accordance with drinking water regulations and perchlorate has not been detected. Despite the inactivated Saugus

wells, the Purveyors still have sufficient pumping capacity in other wells to meet the planned normal range of Saugus pumping in the 2005 UWMP.

Work toward the ultimate remediation of perchlorate contamination, including the restoration of impacted groundwater supply continued to progress in 2008, with focus on construction of facilities to implement a jointly developed plan to “pump and treat” contaminated water from two of the originally impacted wells to stop migration of the contaminant plume, and to deliver treated water to partially replace impacted well capacity. Environmental review of the project was completed with adoption of a Mitigated Negative Declaration in September 2005. The Final Interim Remedial Action Plan was completed and approved by DTSC in January 2006.

Construction of facilities and pipelines necessary to implement the pump and treat program and to also restore inactivated well capacity began in November 2007. Construction is scheduled to be completed in summer 2009, followed by operational start-up.

ES.4 Imported Water

Historically comprised of only its SWP Table A Amount, CLWA’s imported water supplies now consist of a combination of SWP water and water acquired from the Buena Vista Water Storage District in Kern County. CLWA’s contractual Table A Amount is 95,200 af of water from the SWP. Under the 2007 Water Acquisition Agreement with the Buena Vista Water Storage District (Buena Vista) and the Rosedale-Rio Bravo Water Storage District (Rosedale-Rio Bravo), Buena Vista’s high flow Kern River entitlements (and other acquired waters that may become available) are captured and recharged within the Rosedale-Rio Bravo’s service area on an ongoing basis. CLWA will receive 11,000 af of these supplies annually through either exchange of Buena Vista’s and Rosedale-Rio Bravo’s SWP supplies or through direct delivery of water to the California Aqueduct via the Cross Valley Canal.

CLWA’s final allocation of SWP water for 2008 was 35 percent of its Table A Amount, or 33,320 af. The total available imported water supply in 2008 was 57,488 af, comprised of the 33,320 af of Table A supply, 11,000 af purchased from Buena Vista/Rosedale Rio Bravo, 12,146 af of 2007 carryover delivered in early 2008, and 1,022 af through the Yuba Accord. CLWA deliveries were 41,705 af to the Purveyors; the remaining 14,610 af of 2008 Table A Amount represent carryover available for 2009 water supply. No additional banking of imported water occurred in 2008.

CLWA has two groundwater banking agreements with the Semitropic Water Storage District in Kern County. In accordance with those agreements, over a ten-year period (until 2012/13),

CLWA can withdraw up to 50,870 af of its Table A water that was stored in 2002 and 2003 to meet future Valley demands when needed. Following the planned utilization of 4,950 af of banked water in 2009 from the Semitropic Account, that balance will be 45,920 af. In addition to the banking in Semitropic, CLWA finalized an agreement with the Rosedale-Rio Bravo Water Storage District in 2005 and can now bank up to 20,000 af of surplus Table A Amount in that District's Water Banking and Exchange Program. In addition to 20,000 af previously banked in both 2005 and 2006, CLWA banked 8,200 af of water in 2007. In accordance with the provisions of that agreement, CLWA can withdraw up to a total of 42,900 af of that water, at a rate up to 20,000 af, to meet Valley water demands when needed. Additionally, as part of the Buena Vista Water Acquisition Agreement, CLWA is entitled to 22,000 af of water that was stored in the Rosedale Rio-Bravo Water Banking and Exchange Program in 2005 and 2006 on CLWA's behalf. As of 2009, CLWA maintains a recoverable total of 64,900 af in the Rosedale Rio-Bravo Water Banking and Exchange Program.

Since SWP water deliveries are subject to reduction when dry conditions occur in Northern California, the UWMP includes programs, like the Semitropic and Rosedale-Rio Bravo programs, for enhancing water supply reliability during such occurrences. A capital improvement program funded by CLWA has been established to provide facilities and additional water supplies needed to firm up SWP water supplies during times of drought.

ES.5 Recycled Water

Recycled water service was initiated in July 2003 in accordance with CLWA's Draft Reclaimed Water System Master Plan (2002). The amount of recycled water used for irrigation purposes, at a golf course and in roadway median strips, was approximately 310 af in 2008. CLWA completed programmatic CEQA analysis in early 2007 for full implementation of the recycled water system as outlined in the Master Plan. CLWA is preparing the design of the second phase of the Recycled Water Master Plan that will take water from the Saugus Water Reclamation plant and distribute it to identified users to the north, across the Santa Clara River and then to the west and the east, which will include service to Santa Clarita Central Park.

ES.6 2009 Water Supply Outlook

In 2009, total water demands are expected to be about 91,000 af, comparable to actual water use over the last two years, and below the water demand projections in the 2005 UWMP. It is expected that water demands in 2009 will continue to be met with a generally similar mix of

water supplies comprised of local groundwater, supplemental SWP and other imported water, and recycled water.

As of April 15, 2009, the allocation of water from the SWP is 30 percent of CLWA's Table A Amount, or 28,560 af. Combined with local groundwater from the two aquifer systems (48,000 af), total Flexible Storage Account (6,060 af), net carryover of SWP Table A allocation from 2008 (14,610 af), annual acquisition through the Buena Vista Water/Rosedale Rio-Bravo Water Acquisition Agreement (11,000 af), acquisition of water through the Yuba Accord (800 af), recovery and delivery of some water previously stored in the Semitropic Groundwater Storage Bank (4,950 af), and recycled water (500 af), the total available water supplies for 2009 are nearly 115,000 af. As a result, CLWA and the Purveyors anticipate having more than adequate supplies to meet all water demands in 2009.

In August 2007, a federal court ruled that certain operational changes were required of the SWP in order to protect the endangered Delta smelt. Thereafter, DWR prepared an update to its 2005 SWP Delivery Reliability Report, which is issued biennially to indicate how much SWP water is available during varying hydrologic scenarios (i.e., normal and dry years). The SWP Delivery Reliability Report 2007, issued in August 2008, by DWR, reduced the long-term reliability of SWP supply from 77 percent to a range of 66 to 69 percent. The discussion of SWP supply should be tempered, though, by noting that while the Draft SWP Delivery Reliability Report 2007 represents a reasonable scenario with respect to long-term reliability, recent reductions in supply close the gap between the available supply and demand in the future, thereby making the CLWA service area more subject to shortages in certain dry years. Accordingly, the reduction in SWP supply reinforces the need to continue diligent efforts to conserve potable water and increase the use of recycled water, both to meet the goals in the 2005 UWMP and to maximize utilization of potable water supplies. Additionally, as part of the court order, the US Fish and Wildlife Service (USFWS) was required to issue a Biological Opinion (BO) with mitigation measures to protect the Delta smelt. The USFWS issued the BO in December 2008 and the mitigation requirements may force additional pumping restrictions of the operation of the State Water Project.

CLWA and the retail water Purveyors are working with Los Angeles County and the City of Santa Clarita in preparing a water conservation ordinance and the enforcement mechanisms to aggressively implement water use efficiency in the CLWA service area. In terms of short-term water supply availability, CLWA has determined that, while current operational changes of the SWP are in effect, there are sufficient supplemental water supplies, including SWP water, to augment local groundwater and other water supplies such that overall water supplies will be

sufficient to meet projected 2009 water requirements as reflected herein, without the need for mandatory rationing through the summer of 2009. CLWA, the Purveyors, the City of Santa Clarita and Los Angeles County have reconvened the Santa Clarita Valley Drought Committee to determine, in part, if measures greater than voluntary conservation will be required later in the year if dry conditions persist

In any given year, SWP supplies may be reduced due to dry weather conditions or regulatory factors. During such an occurrence, the remaining water demands are planned to be met by a combination of alternate supplies such as returning water from CLWA's accounts in the Semitropic Groundwater Storage Program and the Rosedale-Rio Bravo Water Banking and Exchange Program, deliveries from CLWA's flexible storage account in Castaic Lake Reservoir, local groundwater pumping, short-term water exchanges, and participation in DWR dry-year water purchase programs in accordance with the 2005 Urban Water Management Plan. The banked excess 2002 and 2003 SWP Table A water in Semitropic represents nearly 51,000 af of recoverable water for drought water supply; as noted above, recovery of 4,950 af of that stored water is planned as part of 2009 imported water supplies. The banked excess SWP Table A water in 2005 and 2006, augmented by banked water acquired through the Buena Vista/Rosedale-Rio Bravo Water Acquisition Agreement in 2005, 2006 and 2007, represent a total of 64,900 af of recoverable water for drought water supply from the Rosedale-Rio Bravo Banking and Exchange Program.

Drought periods may affect available water supplies in any single year and for a duration usually not longer than three consecutive years. It is important to note that hydrologic conditions vary from region to region throughout the state. Dry conditions in Northern California affecting SWP supply may not affect local groundwater and other supplies in Southern California, and the reverse situation can also occur (as it did in 2002 and 2003). For this reason, CLWA and the Purveyors have emphasized developing a water supply portfolio that is diverse, especially in dry years. Diversity of supply is considered a key element of reliability, giving Valley water Purveyors the ability to draw on multiple sources of supply to ensure reliable service during dry years, as well as during normal and wet years.