Appendix D
WATER SUPPLY ASSESSMENT

UPDATED WATER SUPPLY ASSESSMENT

Henry Mayo Newhall Memorial Hospital Master Plan

Prepared for:

The City of Santa Clarita

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1.0 INTRODUCTION

This report provides information necessary to complete a Water Supply Assessment ("WSA") for the Henry Mayo Newhall Memorial Hospital Master Plan ("project"). The WSA has been prepared pursuant to the requirements of Senate Bill 610 (Costa; Chapter 643, Stats. 2001) ("SB 610"), which requires public water agencies, parties or purveyors that may supply water to certain proposed development projects to prepare a WSA for use by the city or county in environmental documentation for such projects, pursuant to the California Environmental Quality Act ("CEQA").[1] This WSA contains information from the 2005 Urban Water Management Plan ("2005 UWMP"), which was adopted by Castaic Lake Water Agency ("CLWA"), Valencia Water Company ("Valencia") and other water purveyors.[2] It also includes recently published information provided by the California Department of Water Resources ("DWR") concerning the reliability of water supplies delivered to CLWA from the State Water Project ("SWP").

The project site is located within Valencia's service area and Valencia is the operator of the public water system that will provide water to the proposed project. [3, 4]

An SB 610 WSA is required for any "project" that is subject to CEQA[5] and proposes, among other things, a commercial office building having more than 250,000 square feet of floor space.[6] Therefore, the project is a qualifying project under this definition.[7] This WSA will provide information to the City of Santa Clarita ("the City") for its consideration in making a determination as to whether there is a sufficient water supply available to serve the project, in

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1 SB 610 amended section 21151.9 of the California Public Resources Code, and amended sections 10631, 10656, 10910, 19811, 19812, and 19815, repealed section 10913, and added and amended section 10657, of the California Water Code.

2 The 2005 UWMP is currently subject of an on-going legal challenge in the form of a petition for writ of mandate and complaint for declaratory and injunctive relief filed in February 2005 by California Water Impact Network and Friends of the Santa Clara River in Los Angles County Superior Court. In August 2007, the Superior Court ruled in favor of CLWA and the retail water purveyors affirming that the 2005 UWMP was properly prepared based on substantial evidence in the record. In October 2007, the Petitioners filed a notice of appeal and this action is pending.

3 For purposes of this WSA, Valencia is the "public water system," as defined by Water Code §10912 (c), because it has 3,000 or more service connections and provides piped water to the public for human consumption.

4 Water Code §10910 (b).

5 Public Resources Code §21080.

6 Water Code §10912(a)(3). This section also includes other types of development that are defined as a "project" by this section of the code.

7 Water Code §10912(a)(3). This section also includes other types of development that are defined as a "project" by this section of the code.

addition to existing and planned future uses in the Santa Clarita Valley.[8] The City requested that Valencia prepare this WSA.

1.1 Henry Mayo Newhall Memorial Hospital Master Plan

The Henry Mayo Newhall Memorial Hospital ("HMNMH") Master Plan site encompasses approximately 32 acres of land generally located north of the intersection of McBean Parkway and Orchard Village Road, and east of the Interstate 5 freeway in the City of Santa Clarita. The project area is within the existing HMNMH medical campus located at 23845 McBean Parkway. The project consists of a long range master plan for the medical campus to be built out over the next 20 to 25 years, and will include additional in-patient, outpatient and associated medical facilities, as well as adequate parking facilities. The project will add a total of approximately 335,500 square feet of gross floor area to the existing medical campus. At build out, the master plan envisions up to 660,335 sq ft gross floor area at the medical campus. The average water demand used by the existing medical campus is approximately 125 acre-feet per year ("afy"). Valencia estimates the project will require additional 80 afy of water for a total water demand of 205 afy at build-out.

1.2 Purpose of WSA

The purpose of the WSA is to provide the City with an analysis of whether Valencia's water system has sufficient projected water supplies to meet the projected demands of the project, in addition to existing and planned future uses in the Santa Clarita Valley.[9] Specifically, this WSA evaluates whether the total projected water supply determined to be available during normal, single dry, and multiple dry water years over the next 25 years, will meet the projected water demand associated with the proposed project, in addition to existing and planned future water uses, including agriculture and manufacturing uses.[10] If the water supply is anticipated to be insufficient, the WSA must describe measures being taken to obtain an adequate supply.[11] The WSA is required to be included in the Environmental Impact Report ("EIR") prepared by the City for the proposed project pursuant to CEQA.[12]

8 Water Code §10911(c).

9 Water Code §10910(c).

10 Water Code §10910(c)(4).

11 Water Code §10911(a).

12 Water Code §10911(b), (c).

1.3 Castaic Lake Water Agency

CLWA is a public water agency that serves an area of 195 square miles in Los Angeles and Ventura counties. CLWA is a water wholesaler that provides about half of the water used by Santa Clarita households and businesses. CLWA operates two potable water treatment plants, storage facilities, and over 17 miles of transmission pipelines. CLWA supplements local groundwater supplies with SWP water and other imported water from Northern and Central California. This water is treated and delivered to the local water retailers in the Santa Clarita Valley. The four retail purveyors served by CLWA are Valencia, Los Angeles County Water District #36, Newhall County Water District ("NCWD") and Santa Clarita Water Division of CLWA ("SCWD").

CLWA also delivers highly treated recycled water from one of the two existing water reclamation plants in the Santa Clarita Valley owned by the Sanitation Districts of Los Angeles County. The recycled water is used to meet a portion of the non-potable water demands (golf courses and landscape irrigation, etc.) in the Santa Clarita Valley.

1.4 Valencia Water Company

Valencia is an investor-owned water utility regulated by the California Public Utilities Commission ("CPUC"). Valencia's current service area includes a mix of residential and commercial land uses, mostly comprised of single-family homes, apartments, condominiums and a number of local shopping centers and neighborhood commercial developments. Valencia supplies water from groundwater wells, CLWA imported water and recycled water. The City of Santa Clarita and Los Angeles County special irrigation districts are the largest overall water users for irrigation purposes. Magic Mountain Amusement Park is the largest individual commercial water user. The service area includes three golf courses, the Valencia Industrial Center, and the Valencia Commerce Center. All water services are metered, with the exception of fire services.

1.5 2005 Urban Water Management Plan

The California Urban Water Management Planning Act ("UWMP Act") requires most water utilities to update and submit an Urban Water Management Plan ("UWMP") every five years. In 2005, the Valley's UWMP was updated by CLWA, in cooperation with Valencia and the other retail water purveyors. The 2005 UWMP was adopted by CLWA's Board of Directors in November 2005 and by Valencia's Board of Directors in December 2005. The 2005 UWMP is a compilation of information collected from various water resource documents listed in Section

1.6. The 2005 UWMP contains information on water use, water resources, recycled water, water quality, reliability planning, demand management measures, best management practices and water shortage contingency planning.

This WSA also includes current information prepared by DWR regarding the reliability of imported water supplies delivered from the SWP. 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 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 Draft Reliability Report issued in December 2007 by DWR reduces the long term reliability of SWP supply from 77% to 66%. Using this lower figure and updating information related to other sources of supply, Tables 1, 2, 3 and 4 shown in this WSA are consistent with the latest information regarding the long term reliability of SWP supply and other sources of supply.[13]

The projected water demand for this project is estimated to be 80 acre-feet per year and was accounted for in the 2005 UWMP. The timing of the project places it within the timeframe for calculating "planned future uses" within the 25 year water supply projection included in the 2005 UWMP. This information is incorporated by reference in this WSA. The build-out of the project is anticipated to be completed over the next 20-25 years and SB 610 requires the WSA to document the water demand for existing uses, planned future uses and the proposed development. Water Code §10910(c)(2) states that if the proposed project was accounted for in the most recently adopted UWMP, the public water system may incorporate the requested information from the UWMP in preparing the WSA. The 2005 UWMP projects an annual growth rate in water demand of approximately 2.2 percent over a 25-year period for the Santa Clarita Valley. The project's associated water demand was included by Valencia in the water demand projections contained in the 2005 UWMP (see Table 2-6 in the 2005 UWMP) and, therefore, is accounted for in the 2005 UWMP.

[13] The information presented in Tables 1-4 is based on the 2005 UWMP, with the additional information provided by the Draft SWP Reliability Report (and changes and updated information regarding other sources of supply). The discussion of water supply in a WSA and in environmental documents should be tempered, though, by noting that while the Draft SWP Reliability Report represents a reasonable scenario as required by CEQA, 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. CLWA and the retail water purveyors will continue to work diligently with Los Angeles County and the City of Santa Clarita in preparing a water conservation ordinance and the enforcement mechanisms to aggressively implement water conservation in the CLWA service area.

1.6 Documents Relied upon in Preparing this WSA

The following list identifies the documentation that has been relied upon in the preparation of this WSA. The documents are incorporated by reference in this WSA as if fully set forth herein. Copies of the referenced documents are available for review at Valencia Water Company by contacting Robert J. DiPrimio, (661) 295-6501, and can be obtained upon the payment of the costs of reproduction:

- *2005 Urban Water Management Plan*, prepared for Castaic Lake Water Agency, CLWA's Santa Clarita Division, Newhall County Water District, Valencia Water Company, Los Angeles County Waterworks District No. 36, prepared by Black & Veatch, Nancy Clemm, Kennedy Jenks Consultants, Jeff Lambert, Luhdorff & Scalmanini, Richard Slade and Associates, November 2005.
- *2007 Santa Clarita Valley Water Report*, April 2008, prepared by Luhdorff and Scalmanini, Consulting Engineers for CLWA, Los Angeles County Waterworks District #36, Newhall County Water District, and Valencia Water Company (SCVWR 2008).
- *Draft State Water Project Delivery Reliability Report*, California Department of Water Resources, December 2007, including *The State Water Project Delivery Reliability Report 2005, Final, April 2006.*
- Letter to Bruce W. McClendon, Director of Planning Los Angeles County Department of Regional Planning from Dan Masnada, General Manager of CLWA, Subject: Availability of Future Water Supply in the Santa Clarita Valley, dated February 5, 2008.
- Water Supply Contracts Between the State of California Department of Water Resources and CLWA, 1963 (plus amendments, including the "Monterey Amendment," 1995, and Amendment No. 19, May 2003, which addresses the determination of dependable annual supply of State Water Project water to be made available by existing Project facilities.
- Draft and Final Environmental Impact Reports - Supplemental Water Project Transfer of 41,000 Acre-Feet of State Water Project Table A Amount, prepared by Science Applications International Corporation for CLWA, June 2004. [14]

[14] CLWA's contract rights to SWP water total 95,200 afy, including a water transfer of 41,000 afy approved in 1999 from Wheeler Ridge-Maricopa Water Storage District, a member unit of the Kern County Water Agency. CLWA's EIR prepared in connection with the 41,000 water transfer was challenged in *Friends of the Santa Clara River v. Castaic Lake Water Agency* (Los Angeles Superior Court, Case Number PC018110). CLWA has not been enjoined from using any water that is part of the 41,000 afy transfer. CLWA has since prepared and circulated a new draft EIR for the transfer. CLWA approved and certified the new EIR for the transfer on December 22, 2004. Two challenges to the new EIR were filed in January 2005 in the Ventura County Superior Court (*Planning and Conservation League v. CLWA* and *California Water Impact Network v. CLWA*). The matters were consolidated and transferred to Los Angeles Superior Court. In April 2007, the Court ruled that the 2004 EIR was properly prepared with one exception: it failed to show the analytical route as to how and why the EIR's three water supply allocation scenarios are relevant and would occur. PCL and CWIN filed Notices of Appeal in July 2007. CLWA and two Kern County Water Agencies filed notices of cross appeals. The new certified EIR remains valid unless affected by a future judgment or order of the court.

- Draft and Final Environmental Impact Reports – *Castaic Lake Water Agency Water Acquisition from the Buena Vista Water Storage District and Rosedale-Rio Bravo Water Storage District Water Banking and Recovery Program,* prepared by Science Applications International Corporation for CLWA, October 2006.[15]
- Draft and Final Environmental Impact Reports - *Recycled Water Master Plan,* prepared by Bon Terra Consulting for CLWA, March 2007.
- *Recycled Water Master Plan* prepared by Kennedy/Jenks Consultants for CLWA, May 2002.
- Draft and Final Environmental Impact Reports – *Castaic Lake Water Agency/Rosedale – Rio Bravo Water Storage District Water Banking and Exchange Program,* prepared by Science Applications International Corporation for CLWA, October 2005.
- 2002 Semitropic Groundwater Storage Program and Point of Delivery Agreement among the Department of Water Resources of the State of California, CLWA and Kern County Water Agency.
- 2003 Semitropic Groundwater Storage Program and Point of Delivery Agreement among the Department of Water Resources of the State of California, CLWA and Kern County Water Agency.
- CLWA Capital Improvement Program, Kennedy/Jenks Consultants, 2007.
- *Groundwater Management Plan - Santa Clara River Valley Groundwater Basin, East Subbasin*, prepared for CLWA by Luhdorff & Scalmanini Consulting Engineers, December 2003.
- *Regional Groundwater Flow Model for the Santa Clarita Valley: Model Development and Calibration,* prepared by CH2MHill for Upper Basin Water Purveyors (CLWA, CLWA Santa Clarita Water Division, Newhall County Water District and Valencia Water Company), April 2004.
- *Analysis of Groundwater Basin Yield, Upper Santa Clara River Groundwater Basin, East Subbasin, Los Angeles County, California,* prepared in support of the August 2001 Memorandum of Understanding between the Upper Basin Water Purveyors and the United Water Conservation District, prepared by CH2MHill in cooperation with Luhdorff & Scalmanini, August 2005 ("Basin Yield Study").
- Mitigated Negative Declaration – *Groundwater Containment, Treatment and Restoration Project*, prepared by Kennedy/Jenks Consultants for Castaic Lake Water Agency, September 2005.

[15] A CEQA action was filed by California Water Impact Network (CWIN) in November 2006 challenging the adequacy of CLWA's EIR that acquired 11,000 af from the Buena Vista Water Storage District and Rosedale-Rio Bravo Water Storage District. In November 2007, a Los Angeles Superior Court ruled in favor of CLWA on all points. In January 2008, CWIN filed a notice of appeal and at present the matter is pending.

- *Interim Remedial Action Plan,* to facilitate and restore pumping of groundwater from two Saugus Formation production wells impacted by perchlorate, prepared by Kennedy/Jenks Consultants for Castaic Lake Water Agency and approved by the Department of Toxic Substances Control, December 2005.
- *Impact and Response to Perchlorate Contamination, Valencia Water Company Well Q2,* prepared by Luhdorff & Scalmanini Consulting Engineers, April 2005 ("Q2 Report").
- *Analysis of Perchlorate Containment in Groundwater Near the Whittaker-Bermite Property, Santa Clarita, California,* prepared by CH2MHill for the Upper Basin Water Purveyors in Support of the Department of Health Services 97-005 Permit Application, December 2004 and UWMP.
- *2001 Update Report, Hydrogeologic Conditions in the Alluvial and Saugus Formation Aquifer Systems,* prepared by Richard C. Slade & Associates LLC, July 2002 ("Slade 2002").
- *Newhall Ranch Revised Additional Analysis, Volume VIII (Final Revised Text, Figures and Tables),* prepared by Impact Sciences Inc., for Los Angeles County, dated May 2003.
- *Nickel Water contract and environmental documentation* (*see*, Newhall Ranch Revised Draft Additional Analysis, Volume II, prepared by Impact Sciences, Inc., for Los Angeles County, November 2002, Appendix 2.5(b), (c)).

2.0 WATER SUPPLY ASSESSMENT

The preparation of this WSA relies upon information from numerous water resource and planning documents listed in Section 1.6 and the 2005 UWMP. **Based on this supporting information, Valencia concludes that there is sufficient water supply available for the project at buildout, in addition to existing and other planned future uses in the Santa Clarita Valley.**

Valencia and CLWA have existing water entitlements, rights, and contracts to meet future demand as needed over time, and have committed sufficient capital resources and planned investments in various water programs and facilities to serve all of its existing and planned customers. Valencia also has identified operational strategies combined with a prudent and flexible management approach to ensure water reliability.

In 2007, Valencia's service area-wide demands were approximately 32,800 af, and the total municipal demand for both imported, groundwater and non potable recycled water in CLWA's service area was approximately 77,500 af. Based on information provided by the project's consultant, Valencia has estimated that the project will require approximately 80 afy of water at build-out.

Provided below is a summary of water supply and demand projections presented in the 2005 UWMP that address the requirements of SB 610 for this project. The 2005 UWMP contains information about water use (Chapter 2), water resources (Chapter 3), recycled water (Chapter 4), water quality (Chapter 5), reliability planning (Chapter 6), Demand Management measures (Chapter 7) and shortage contingency planning (Chapter 8).

2.1 Average/Normal Year, Single Dry Year and Multiple Dry Year Water Assessment

The amount of available water supply is summarized in Table 1 below. Table 1 is not intended to be an operational plan for how supplies would be used in a particular year, but rather identifies the complete range of water supplies available under a range of hydrologic conditions. Diversity of supply allows Valencia and the purveyors the option of drawing on multiple sources of supply in response to changing conditions such as varying climatic conditions (average/normal years, single dry years, multiple dry years), natural disasters and contamination with substances such as perchlorate.

It is the stated goal of Valencia, CLWA and the other retail water purveyors to deliver a reliable and high quality water supply for their customers, even during dry periods. Based on conservative water supply and demand assumptions over the next 25 years in combination with conservation of non-essential demand during certain dry years, the water supply plan described in the 2005 UWMP successfully achieves this goal.

Table 1 Summary of Current and Planned Water Supplies and Banking Programs

Water Supply Sources (1)	Supply (af)					
	2007	2010	2015	2020	2025	2030
Existing Supplies						
Wholesale (Imported)	*75,680*	*78,667*	*79,667*	*79,287*	*80,287*	*80,287*
SWP Table A Supply (2)	60,000	60,000	61,000	62,000	63,000	63,000
Buena Vista-Rosedale (7)	11,000	11,000	11,000	11,000	11,000	11,000
Nickel Water - Newhall Ranch	0	1,607	1,607	1,607	1,607	1,607
Flexible Storage Account (CLWA) (3)	4,680	4,680	4,680	4,680	4,680	4,680
Flexible Storage Account (Ventura County) (3) (4)	0	1,380	1,380	0	0	0
Local Supplies						
Groundwater	*40,000*	*46,000*	*46,000*	*46,000*	*46,000*	*46,000*
Alluvial Aquifer	35,000	35,000	35,000	35,000	35,000	35,000
Saugus Formation	5,000	11,000	11,000	11,000	11,000	11,000
Recycled Water	1,700	1,700	1,700	1,700	1,700	1,700
Total Existing Supplies	117,380	126,367	127,367	126,987	127,987	127,987
Existing Banking Programs (3)						
Semitropic Water Bank (5)	50,870	50,870	0	0	0	0
Rosedale-Rio Bravo (8)	20,000	20,000	20,000	20,000	20,000	20,000
Semitropic Water Bank - Newhall Ranch (9)	0	4,950	4,950	4,950	4,950	4,950
Total Existing Banking Programs	70,870	75,820	24,950	24,950	24,950	24,950
Planned Supplies						
Local Supplies						
Groundwater	*0*	*10,000*	*10,000*	*20,000*	*20,000*	*20,000*
Restored wells (Saugus Formation)	0	10,000	10,000	10,000	10,000	10,000
New Wells (Saugus Formation)	0	0	0	10,000	10,000	10,000
Recycled Water - CLWA (6)	0	0	1,600	6,300	11,000	15,700
Recycled Water - Newhall Ranch	0	0	1,500	2,500	3,500	5,400
Total Planned Supplies	0	10,000	13,100	28,800	34,500	41,100
Planned Banking Programs (3)						
Additional Planned Banking	0	0	20,000	20,000	20,000	20,000
Total Planned Banking Programs	0	0	20,000	20,000	20,000	20,000

Source: 2005 UWMP, Draft 2007 SWP Reliability Report

Notes:

(1) The values shown under "Existing Supplies" and "Planned Supplies" are supplies projected to be available in average/normal years. The values shown under "Existing Banking Programs" and "Planned Banking Programs" are either total amounts currently in storage, or the maximum capacity of program withdrawals.

(2) SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of average deliveries projected to be available, based on Tables 6-5 and 6-14 of DWR's "Draft State Water Project Delivery Reliability Report 2007".

(3) Supplies shown are total amounts that can be withdrawn, and would typically be used only during dry years.

(4) Initial term of the Ventura County entities' flexible storage account is ten years (from 2006 to 2015).
(5) Supplies shown are the total amount currently in storage, and would typically be used only during dry years. Once the current storage amount is withdrawn, this supply would no longer be available and in any event, is not available after 2013.
(6) Recycled water supplies based on projections provided in Chapter 4, Recycled Water.
(7) CLWA originally acquired this supply primarily to meet the potential demands of future annexations to the CLWA service area. This acquisition is consistent with CLWA's annexation policy under which it will not approve potential annexations unless additional water supplies are acquired. However, due to the 2007 Wanger court ruling, this supply may be needed to address demands in the existing service area, which is reflected in this table. Ultimate disposition of this supply is subject to approval by the CLWA Board of Directors.[16]
(8) CLWA has banked 64,900 af as of 12/31/07 in the Rosedale-Rio Bravo Water Banking and Recovery Program.
(9) As of 12/31/07, there is 18,828 af of water stored in the Newhall Ranch Semitropic Groundwater Storage Bank stored by the Newhall Land and Farming Company for the Newhall Ranch Specific Plan. Stored water can be extracted from the bank in dry years in amounts up to 4,950 afy.

The subject of perchlorate contamination and its impact on groundwater supplies was extensively discussed in the 2005 UWMP. The source of the contamination is believed to be the Whittaker-Bermite property located in the center of the Santa Clarita Valley and used as a munitions manufacturing facility for over 50 years. Significant progress has been made toward characterizing the extent of perchlorate contamination, along with implementing necessary measures for on-site and off-site containment and treatment. The reliability analysis provided in the 2005 UWMP takes into account the impact on water supply operations while the planning, design and construction of perchlorate treatment, containment and other restoration activities are implemented. For additional information on this topic, see Chapters 5 and 6, Appendixes D and E in the 2005 UWMP and the latest Santa Clarita Valley Water Report.

[16] On August 31, 2007, U.S. District Court Judge Oliver W. Wanger issued a preliminary injunction, which included a series of restrictions on the operations of the pumps that supply water from the Bay-Delta to the SWP system. In January 2008, DWR provided the most recent analysis of delivery reliability estimates to the SWP Contractors (DWR Draft Delivery Reliability Report, December 2007). DWR's Reliability Report addresses the effect that the injunction will have on SWP water availability. Based on this new information, CLWA has determined that, while the injunction is in effect, there are adequate water supplies to meet demand as forecasted in the 2005 UWMP through the year 2030. (See, CLWA letter to Los Angeles County, Department of Regional Planning, dated February 5, 2008.)

2.1.1 Normal Water Year

Table 2 summarizes the water supplies available to Valencia, CLWA and the other retail water purveyors over the 25 year planning period during an average/normal year. The water supplies are broken down into existing and planned water supply sources, including wholesale (imported) water, local supplies, transfers, and banking programs. Demands are shown with and without the effects of an assumed 10 percent urban demand reduction resulting from conservation.

Table 2 Projected Average/Normal Year Supplies and Demand

Water Supply Sources	Supply (af)				
	2010	2015	2020	2025	2030
Existing Supplies					
Wholesale (Imported)	*73,007*	*73,707*	*74,407*	*75,107*	*75,407*
SWP Table A Supply (1)	60,400	61,100	61,800	62,500	62,800
Buena Vista-Rosedale (4)	11,000	11,000	11,000	11,000	11,000
Nickel Water - Newhall Ranch	1,607	1,607	1,607	1,607	1,607
Flexible Storage Account (CLWA) (2)	0	0	0	0	0
Flexible Storage Account (Ventura County) (2)	0	0	0	0	0
Local Supplies					
Groundwater	*46,000*	*46,000*	*46,000*	*46,000*	*46,000*
Alluvial Aquifer	35,000	35,000	35,000	35,000	35,000
Saugus Formation	11,000	11,000	11,000	11,000	11,000
Recycled Water	1,700	1,700	1,700	1,700	1,700
Total Existing Supplies	120,707	121,407	122,107	122,807	123,107
Existing Banking Programs					
Semitropic Water Bank (2)	0	0	0	0	0
Rosedale-Rio Bravo (2)	0	0	0	0	0
Semitropic Water Bank - Newhall Ranch	0	0	0	0	0
Total Existing Banking Programs	0	0	0	0	0
Planned Supplies					
Local Supplies					
Groundwater	*0*	*0*	*0*	*0*	*0*
Restored wells (Saugus Formation) (2)	0	0	0	0	0
New Wells (Saugus Formation) (2)	0	0	0	0	0
Recycled Water - CLWA (3)	0	1,600	6,300	11,000	15,700
Recycled Water - Newhall Ranch	0	1,500	2,500	3,500	5,400
Total Planned Supplies	0	3,100	8,800	14,500	21,100
Planned Banking Programs					
Additional Planned Banking (2)	0	0	0	0	0
Total Planned Banking Programs	0	0	0	0	0
Total Existing and Planned Supplies and Banking	120,707	124,507	130,907	137,307	144,207
Total Estimated Demand (w/o conservation) (5)	100,050	109,400	117,150	128,400	138,300
Conservation (6)	(8,600)	(9,700)	(10,700)	(11,900)	(12,900)
Total Adjusted Demand	91,450	99,700	106,450	116,500	125,400

Source: 2005 UWMP, Draft 2007 SWP Reliability Report

Notes:

(1) SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of average deliveries projected to be available, based on Tables 6-5 and 6-14 of DWR's "Draft State Water Project Delivery Reliability Report 2007".
(2) Not needed during average/normal years.
(3) Recycled water supplies based on projections provided in Chapter 4, Recycled Water.
(4) CLWA originally acquired this supply primarily to meet the potential demands of future annexations to the CLWA service area. This acquisition is consistent with CLWA's annexation policy under which it will not approve potential annexations unless additional water supplies are acquired. However, due to the 2007 Wanger court ruling, this supply may be needed to address demands in the existing service area, which is reflected in this table. Ultimate disposition of this supply is subject to approval by the CLWA Board of Directors.
(5) Demands are for uses within the existing CLWA service area. Demands for any annexations to the CLWA service area are not included.
(6) Assumes 10 percent reduction on urban portion of total demand resulting from conservation best management practices, as discussed in Chapter 7.

2.1.2 Single-Dry Year

Table 3 summarizes the existing and planned water supplies available to Valencia, CLWA and the other retail water purveyors over the 25 year planning period should a single-dry event occur, similar to the drought that occurred in California in 1977. Demand during single-dry years was assumed to increase by 10 percent. During prolonged dry periods, experience indicates that a reduction in demand of 10 percent is achievable through the implementation of conservation best management practices.

Table 3 Projected Single-Dry Year Supplies and Demands

Water Supply Sources	Supply (af)				
	2010	2015	2020	2025	2030
Existing Supplies					
Wholesale (Imported)	*24,567*	*24,767*	*23,587*	*23,887*	*23,987*
SWP Table A Supply (1)	5,900	6,100	6,300	6,600	6,700
Buena Vista-Rosedale (5)	11,000	11,000	11,000	11,000	11,000
Nickel Water - Newhall Ranch	1,607	1,607	1,607	1,607	1,607
Flexible Storage Account (CLWA)	4,680	4,680	4,680	4,680	4,680
Flexible Storage Account (Ventura County) (2)	1,380	1,380	0	0	0
Local Supplies					
Groundwater	*47,500*	*47,500*	*47,500*	*47,500*	*47,500*
Alluvial Aquifer	32,500	32,500	32,500	32,500	32,500
Saugus Formation	15,000	15,000	15,000	15,000	15,000
Recycled Water	1,700	1,700	1,700	1,700	1,700
Total Existing Supplies	73,767	73,967	72,787	73,087	73,187
Existing Banking Programs					
Semitropic Water Bank (3)	17,000	0	0	0	0
Rosedale-Rio Bravo (6)	20,000	20,000	20,000	20,000	20,000
Semitropic Water Bank - Newhall Ranch	0	0	0	0	0
Total Existing Banking Programs	37,000	20,000	20,000	20,000	20,000
Planned Supplies					
Local Supplies					
Groundwater	*10,000*	*10,000*	*20,000*	*20,000*	*20,000*
Restored wells (Saugus Formation)	10,000	10,000	10,000	10,000	10,000
New Wells (Saugus Formation)	0	0	10,000	10,000	10,000
Recycled Water - CLWA (4)	0	1,600	6,300	11,000	15,700
Recycled Water - Newhall Ranch	0	1,500	2,500	3,500	5,400
Total Planned Supplies	10,000	13,100	28,800	34,500	41,100
Planned Banking Programs					
Additional Planned Banking (7)	0	20,000	20,000	20,000	20,000
Total Planned Banking Programs	0	20,000	20,000	20,000	20,000
Total Existing and Planned Supplies and Banking	120,767	127,067	141,587	147,587	154,287
Total Estimated Demand (w/o conservation) (8) (9)	110,100	120,300	128,900	141,200	152,100

Source: 2005 UWMP, Draft 2007 SWP Reliability Report

Notes:

(1) SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of single dry year deliveries projected to be available, based on Tables 6-5 and 6-14 of DWR's "Draft State Water Project Delivery Reliability Report 2007".

(2) Initial term of the Ventura County entities' flexible storage account is ten years (from 2006 to 2015).

(3) The total amount of water currently in storage is 50,870 af, available through 2013. Withdrawals of up to this amount are potentially available in a dry year, but given possible competition for withdrawal capacity with other Semitropic banking partners in extremely dry years, it is assumed here that about one third of the total amount stored could be withdrawn.
(4) Recycled water supplies based on projections provided in Chapter 4, Recycled Water.
(5) CLWA originally acquired this supply primarily to meet the potential demands of future annexations to the CLWA service area. This acquisition is consistent with CLWA's annexation policy under which it will not approve potential annexations unless additional water supplies are acquired. However, due to the 2007 Wanger court ruling, this supply may be needed to address demands in the existing service area, which is reflected in this table. Ultimate disposition of this supply is subject to approval by the CLWA Board of Directors.
(6) CLWA has banked 64,900 af as of 12/31/07 in the Rosedale-Rio Bravo Water Banking and Recovery Program.
(7) Assumes additional planned banking supplies available by 2014.
(8) Assumes increase in total demand of 10 percent during dry years.
(9) Demands are for uses within the existing CLWA service area. Demands for any annexations to the CLWA service area will be added if and when such annexations are approved. Currently proposed annexations have a demand for about 4,000 afy and, given supplies CLWA is in the process of acquiring, potential future annexations with demands up to an additional 7,000 afy could eventually be approved (see Footnote 5).
(10) Assumes 10 percent reduction on urban portion of total normal year demand resulting from conservation best management practices ([urban portion of total normal year demand x 1.10] * 0.10), as discussed in Chapter 7.

2.1.3 Multiple Dry Years

Table 4 summarizes the existing and planned water supplies available to Valencia, CLWA and the other retail water purveyors over the 25 year planning period should a four year multiple dry year event occur, similar to the drought that occurred in California during the years 1931 to 1934. Demand during dry years was assumed to increase by 10 percent. During prolonged dry periods, experience indicates that a reduction in demand of 10 percent is achievable through the implementation of conservation best management practices.

Table 4 Projected Multiple-Dry Year Supplies and Demands

Water Supply Sources (1)	2010	2015	2020	2025	2030
Existing Supplies					
Wholesale (Imported)	*47,017*	*46,317*	*45,277*	*44,477*	*44,277*
SWP Table A Supply	32,900	32,200	31,500	30,700	30,500
Buena Vista-Rosedale (6)	11,000	11,000	11,000	11,000	11,000
Nickel Water - Newhall Ranch	1,607	1,607	1,607	1,607	1,607
Flexible Storage Account (CLWA) (3)	1,170	1,170	1,170	1,170	1,170
Flexible Storage Account (Ventura County) (3)	340	340	0	0	0
Local Supplies					
Groundwater	*47,500*	*47,500*	*47,500*	*47,500*	*47,500*
Alluvial Aquifer	32,500	32,500	32,500	32,500	32,500
Saugus Formation (4)	15,000	15,000	15,000	15,000	15,000
Recycled Water	1,700	1,700	1,700	1,700	1,700
Total Existing Supplies	96,217	95,517	94,477	93,677	93,477
Existing Banking Programs					
Semitropic Water Bank (3)	12,700	0	0	0	0
Rosedale-Rio Bravo (7) (8)	5,000	15,000	15,000	15,000	15,000
Semitropic Water Bank - Newhall Ranch	0	0	0	0	0
Total Existing Banking Programs	17,700	15,000	15,000	15,000	15,000
Planned Supplies					
Local Supplies					
Groundwater	*6,500*	*6,500*	*6,500*	*6,500*	*6,500*
Restored wells (Saugus Formation) (4)	6,500	6,500	5,000	5,000	5,000
New Wells (Saugus Formation) (4)	0	0	1,500	1,500	1,500
Recycled Water (5)	0	1,600	6,300	11,000	15,700
Recycled Water - Newhall Ranch	0	1,500	2,500	3,500	5,400
Total Planned Supplies	6,500	9,600	15,300	21,000	27,600
Planned Banking Programs					
Additional Planned Banking (8) (9)	0	5,000	15,000	15,000	15,000
Total Planned Banking Programs	0	5,000	15,000	15,000	15,000
Total Existing and Planned Supplies and Banking	120,417	125,117	139,777	144,677	151,077
Total Estimated Demand (w/o conservation) (10) (11)	110,100	120,300	128,900	141,200	152,100
Conservation (12)	(9,500)	(10,700)	(11,700)	(13,100)	(14,200)
Total Adjusted Demand	100,600	109,600	117,200	128,100	137,900

Source: 2005 UWMP, Draft 2007 SWP Reliability Report

Notes:

(1) Supplies shown are annual averages over four consecutive dry years (unless otherwise noted).
(2) SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of average deliveries projected to be available during the worst case four-year drought of 1931-1934 as provided in Tables 6-5 and 6-14 of DWR's "Draft State Water Project Delivery Reliability Report 2007."
(3) Based on total amount of storage available divided by 4 (4-year dry period). Initial term of the Ventura County entities' flexible storage account is ten years (from 2006 to 2015).
(4) Total Saugus pumping is the average annual amount that would be pumped under the groundwater operating plan, as summarized in Table 3-6 ([11,000+15,000+25,000+35,000]/4).
(5) Recycled water supplies based on projections provided in Chapter 4, Recycled Water.
(6) CLWA originally acquired this supply primarily to meet the potential demands of future annexations to the CLWA service area. This acquisition is consistent with CLWA's annexation policy under which it will not approve potential annexations unless additional water supplies are acquired. However, due to the 2007 Wanger court ruling, this supply may be needed to address demands in the existing service area, which is reflected in this table. Ultimate disposition of this supply is subject to approval by the CLWA Board of Directors.
(7) CLWA has banked 64,900 af as of 12/31/07 in the Rosedale-Rio Bravo Water Banking and Recovery Program.
(8) Average dry year period supplies could be up to 20,000 af for each program depending on storage amounts at the beginning of the dry period.
(9) Assumes additional planned banking supplies available by 2014.
(10) Assumes increase in total demand of 10 percent during dry years.
(11) Demands are for uses within the existing CLWA service area. Demands for any annexations to the CLWA service area will be added if and when such annexations are approved. Currently proposed annexations have a demand for about 4,000 afy and, given supplies CLWA is in the process of acquiring, potential future annexations with demands up to an additional 7,000 afy could eventually be approved (see Footnote 6).
(12) Assumes 10 percent reduction on urban portion of total normal year demand resulting from conservation best management practices ([urban portion of total normal year demand x 1.10] * 0.10), as discussed in Chapter 7.

3.0 IDENTIFICATION OF EXISTING WATER SUPPLY SOURCES

3.1 Annual Existing Water Supply Entitlements, Water Rights, or Water Service Contracts

The first substantive "content" requirement for a WSA is the identification and description of the existing water supply sources in the public water system that will serve the project. Water Code §10910(d) requires that the WSA identify any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and describe the quantities of water received in prior years by the public water system. The identification of existing water supplies must be demonstrated by providing information related to the following:

- Written contracts or other proof of entitlement to an identified water supply;
- Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system;
- Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply; and
- Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.

The current water supplies available for the project and the Santa Clarita Valley as a whole are derived from five primary sources:

- Groundwater from the Alluvial aquifer
- Groundwater from the Saugus Formation
- SWP supplies and other imported sources
- Dry year Groundwater Banking Programs
- Recycled Water

Within the CLWA service area, these sources of water supply can be characterized as: (1) *local supplies*, consisting of groundwater and recycled water; and (2) *imported supplies*, transported via the SWP consisting of SWP contract amounts, other imported water sources and dry year supplies delivered from groundwater banking programs. As required by SB 610 (Water Code §10910(d)), Chapter 2 of the 2005 UWMP and the SCVWR 2008 summarizes the quantities of water used by each of the water purveyors in the Santa Clarita Valley to meet water demands since importation of SWP water began in 1980. Also, Section 1.6, above, contains a list of

documents identifying the existing water supply entitlements, water rights, or water service contracts relevant to meet the project's water demand as well as future estimated demands reported in the 2005 UWMP.

Potential future water sources include acquisition of additional imported water supplies, recycled water, desalination, storm water runoff, increased short term pumping from the Saugus Formation during dry years and additional groundwater banking programs. Demand side management programs (conservation) are also considered an important component of water supply resulting from efforts by CLWA, Valencia and the other retailers to reduce water demands on a long term basis.

3.2 Groundwater

Water Code §10910(f) requires a WSA to include specific information describing groundwater resources if the water supply for a proposed project includes groundwater. Over the last 25 years, the water purveyors have developed a groundwater operating plan that includes municipal, agricultural and other smaller uses while maintaining the local Basin in a sustainable condition (i.e., no long term depletion of groundwater or interrelated surface water). This has resulted in preparation of the following important studies funded by the purveyors to ensure sustainability of the local groundwater resources:

1. Slade (2002) updates prior reports and includes a detailed review of the hydrologic conditions and description of groundwater resources available to Valencia and other large municipal and agriculture groundwater producers, including SCWD, NCWD, The Newhall Land and Farming Company ("Newhall") and the Wayside Honor Ranch operating within the Santa Clara River Valley East Subbasin, one of several subbasins identified along the Santa Clara River in Los Angeles and Ventura counties by Updated Bulletin 118 of the California Department of Water Resources. The shallow aquifer system is designated the Alluvial aquifer and the deeper aquifer is designated the Saugus Formation. Slade reported that both aquifer systems were in good operating condition and not in an overdraft condition. Also included are hundreds of other small scale water producers that account for less than 1 percent of total production from these aquifer systems (SCVWR 2008).
2. In 2003, CLWA in cooperation with Valencia and the other retail water purveyors completed and adopted a Groundwater Management Plan in accordance with Water Code §10753. Among the elements of the adopted Plan is the preparation of annual groundwater management reports, such as the Santa Clarita Valley Water Report, that provides information about local groundwater conditions, SWP supplies, water conservation and recycled water. The Plan also contemplated preparing other technical reports to address specific aspects of basin management. Recently, technical reports have been prepared on the development and calibration of a numerical groundwater flow

model, an analysis of perchlorate containment in groundwater and a groundwater yield study of the Upper Basin.

3. In August 2005, work was completed in support of a Memorandum of Understanding (MOU) entered into by the Valencia, CLWA and the other water purveyors and United Water Conservation District. The MOU is a commitment by the water purveyors to expand on the previous knowledge of groundwater conditions in the Upper Basin and, using a regional groundwater flow model, evaluate the long-term sustainability of the purveyor's groundwater operating plan under a range of existing and potential future hydrologic conditions. The primary conclusion of the modeling analysis is that the groundwater operating plan will not cause detrimental short-term or long-term effects to the groundwater and surface water resources in the Santa Clarita Valley and, therefore, is sustainable (Basin Yield Study, 2005).

The following sub-parts respond to specific requirements of Water Code §10910(f):

3.2.1 Water Code §10910(f)(1). Review of relevant information contained in the urban water management plan.

The 2005 UWMP contains relevant information about groundwater resources available for the project in Chapter 3, Water Resources and Appendix C, Groundwater Resources and Yield. This includes a description of the local Alluvial and Saugus Formation aquifer systems, their respective yields as well as historical and projected production consistent with the purveyor's groundwater operating plan.

3.2.2 Water Code §10910(f) (2). Description of any groundwater basin or basins from which the proposed project will be supplied, including information concerning adjudication and overdraft.

Slade (2002) provides a detailed description of the Santa Clara River Valley East Sub-basin ("Basin") and the two aquifer systems, the Alluvial aquifer and the Saugus Formation. The Basin is about 22 miles long east to west and 13 miles wide. The Alluvial Aquifer has an estimated storage capacity of about 240,000 acre-feet (af) of water and approximately 1.65 million af of potentially usable groundwater is present from depths of 300 to 2,500 feet in the Saugus Formation (Slade 2002).

In 2003, CLWA with the cooperation of Valencia and the other retail water purveyors completed and adopted a Groundwater Management Plan in accordance with Water Code §10753. The management objectives of the Plan is to ensure the ongoing use of local groundwater by

maintaining the Basin in good operating condition (no overdraft), protecting water quality and preventing adverse impacts to surface waters. The groundwater basin has not been adjudicated and has not been identified as overdrafted or projected to be overdrafted by the Department of Water Resources (DWR Bulletin 118, California's Groundwater, 2003, page 98).

The most current analysis and update of operational yield for both aquifers is included in the Basin Yield Study completed by CH2MHill/Scalmanini in 2005. The report analyzes the operational yield of both aquifers and other parameters of production capacity. The study concluded neither aquifer system is in overdraft and the purveyor's groundwater operating plan as described in the Groundwater Management Plan is sustainable (SCVWR 2008) (Basin Yield Study, 2005).

3.2.3 Water Code §10910(f)(3). Description and analysis of the amount and location of groundwater pumped by the public water system for the past 5 years from any groundwater basin from which the proposed project will be supplied.

During the past 5-year period, Valencia's production averaged approximately 11,764 afy from the Alluvial aquifer and approximately 2,072 afy from the Saugus Formation. See Table II-5 in the SCVWR 2008 for a summary of the historical groundwater production for the past five years by the retail water purveyors.

Total pumpage from the Alluvial aquifer in 2007 was approximately 38,777 af. Of the total Alluvial pumpage in 2007, 25,632 af was for municipal water supply, and the balance, about 13141 af, was for agriculture and other (minor) miscellaneous uses (SCVWR 2008). Since 1980, when imported water deliveries began from the SWP, total pumpage from the Alluvial aquifer has ranged from a low of about 20,200 afy (in 1983) to slightly more than 43,400 afy (in 1999) (SCVWR 2008).

Total pumpage from the Saugus Formation in 2007 was 7,684 af (SCVWR 2008). Of the total Saugus Formation pumpage in 2007, 6,058 af was for municipal water supply, and the balance 1,627 af was for agricultural and other (minor) uses (SCVWR 2008). Groundwater pumpage from the Saugus peaked in the early 1990s and then declined steadily. On a long-term average basis since the importation of SWP water, total pumpage from the Saugus Formation has ranged from a low of 3,716 afy (in 1999) to a high of 14,917 afy in (1991). (SCVWR 2008)

3.2.4 Water Code §10910(f)(4). Description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system from any basin from which the proposed project will be supplied.

See Table 3-8 in the 2005 UWMP for a summary of the range of groundwater production projected by the retail water purveyors. To ensure sustainability, the purveyors have committed that the annual use of groundwater pumped collectively in any given year will not exceed the purveyors' operating plan as described in the Basin Yield Study (August 2005) and reported annually in the Santa Clarita Valley Water Report.

3.2.5 Water Code §10910(f)(5). Analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project.

As stated previously, the water purveyors have developed a groundwater operating plan to meet the requirements of municipal, agricultural and other smaller uses while maintaining the local Alluvial Aquifer and Saugus Formation in a sustainable condition (i.e., no long term depletion of groundwater or interrelated surface water). The groundwater operating plan is based on the concept that pumping can vary from year to year to allow increased groundwater use in dry year periods and increased recharge during wet periods and collectively assure that the groundwater Basin is adequately replenished through various wet/dry cycles. A description of the groundwater operating plan is found in the 2005 UWMP and the Basin Yield Study (August 2005). Based on these studies, the groundwater Basin is in good operating condition (not in a condition of overdraft). The purveyor's groundwater operating plan is a reliable long term component of water supply for the Santa Clarita Valley.

As stated in this WSA, an analysis and discussion regarding the discovery and impact of perchlorate contamination on the sufficiency of groundwater supplies is contained in the 2005 UWMP and most recent Santa Clarita Valley Water Report. The reliability analysis contained in the 2005 UWMP takes into account the impact of perchlorate on water supply operations while the planning, design and construction of treatment and other restoration activities are implemented.

3.2.6 Sustainability of Existing Groundwater Supplies and Projected Supplies

Groundwater supplies were reviewed in the 2005 UWMP and evaluated in the Basin Yield Study (August 2005) to determine whether supply projections were realistic over varying hydrologic conditions. The review made the following critical findings:

(1) Both the Alluvial aquifer and the Saugus Formation are reasonable and sustainable sources at the yields represented in the 2005 UWMP over the next 25 years;

(2) The yields are not overstated and will not deplete or "dry up" the groundwater basin; and

(3) There is no need to reduce the yields for purposes of planning in the context of the 2005 UWMP.

Additionally, the 2005 UWMP and Basin Yield Study (August 2005) concluded that both aquifers are in good operating condition (not in a condition of overdraft) and are not projected to become overdrafted.