SB 610 WATER SUPPLY ASSESSMENT

Tesoro del Valle Phases B and C

(Revised TTM 51664-1)

August 2017

NCWD

NEWHALL COUNTY WATER DISTRICT

Prepared By:

Newhall County Water District
23780 N. Pine Street
Santa Clarita, California 91322-0970
(661) 259-3610

Table of Contents

EXECUTIVE SUMMARY 1

1.0 INTRODUCTION 2

1.1 Background 2

1.2 Purpose 3

1.3 District's 2015 Urban Water Management Plan 3

1.4 District Policies, Required Regulatory Approvals and Permits 6

1.5 Information Relied Upon in Preparation of this WSA 6

2.0 EXISTING WATER RESOURCES 9

2.1 Imported Supplies 9

2.1.1 SWP Table A Amount 9

2.1.2 Existing Additional Water Sources 11

2.2 Groundwater 13

2.2.1 Water Code §10910(f)(1) 14

2.2.2 Water Code §10910(f)(2) 14

2.2.3 Water Code §10910(f)(3) 14

2.2.4 Water Code §10910(f)(4) 15

2.2.5 Water Code §10910(f)(5) 15

2.3 Recycled Water 17

3.0 PLANNED WATER RESOURCES 18

3.1 Transfers and Exchanges 18

3.2 Additional Banking Programs 18

3.3 Increased Dry-Year Saugus Formation Pumping 19

3.4 Additional Recycled Water 19

3.5 Water Conservation 20

4.0 WATER USE 23

4.1 Historical Water Use 23

4.2 Water Use of the Proposed Project 25

4.3 Future Water Use 26

5.0 NORMAL, SINGLE-DRY, AND MULTIPLE-DRY YEAR PLANNING 29

5.1 Summary of Existing and Planned Supplies 29

5.2 Normal Water Year 32

5.3 Single-Dry Year 35

5.4 Multiple-Dry Year 38

5.5 Multiple-Dry Year 41

6.0 CONCLUSION 44

List of Tables

2-1 Wholesale Supply Reliability (2015 UWMP)
3-1 20X2020 Target vs. Actual Conservation Savings
4-1 Historical Water Use for NCWD
4-2 Historical Water Use for the Santa Clarita Valley Region
4-3 Water Use Estimate for the Proposed Project
4-4 Current and Projected Water Demands for NCWD
4-5 Regional Projected Water Demands
5-1 Summary of Existing and Planned Supplies
5-2 Projected Average/Normal Year Supplies and Demands
5-3 Projected Single-Year Dry Year Supplies and Demands
5-4 Projected Four-Year Dry Year Supplies and Demands
5-5 Projected Three-Year Dry Year Supplies and Demands

List of Figures

1-1 Tesoro del Valle Development

EXECUTIVE SUMMARY

The Tesoro del Valle Phases B and C (Proposed Project) Water Supply Assessment is a supplement to Los Angeles County's full environmental review of the Proposed Project. The Water Supply Assessment (WSA) is a long-term assessment with a 20-year outlook. The specific purpose of this WSA is to comply with the requirements of Senate Bill 610 (SB 610) with respect to the water demands of the Proposed Project and answer the basic question:

Will the water supplier's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection meet the projected water demand of the Proposed Project, in addition to the water supplier's existing and planned future uses, including agricultural and manufacturing uses?

SB 610, the water supply "assessment", and Senate Bill 221 (SB 221), the water supply "verification", are companion measures which seek to promote more collaborative planning between local water suppliers and cities and counties. According to the California State Legislature, SB 221 is intended as a "fail safe" mechanism to ensure that collaboration on finding the needed water supplies to serve a new large subdivision occurs when it should – before construction begins.

SB 610 provides that if the projected water demand associated with the Proposed Project was accounted for in the Urban Water Management Plan (UWMP) adopted by the retail water purveyor, then relevant information from that document may be incorporated into the WSA. The timing of the Proposed Project places it within the timeframe for calculating "planned future uses" within the 2050 water supply projection included in the 2015 UWMP. In July, 2015, the Department of Water Resources (DWR) provided the most recent analysis of delivery reliability estimates to the State Water Project contractors (DWR Capability Report (DCR), 2015). In NCWD's judgment, the 2015 UWMP updated with the recent DWR Capability Report and the latest information available regarding water supply provides the best basis for this WSA.

The Proposed Project will be implementing a number of water conservation measures, including compliance with landscape efficiency measures of the Model Water Efficient Landscape Ordinance updated by the State as required by AB 1881 and Executive Order B-29-15 issued by Governor Jerry Brown on April 1, 2015. This includes reduced water allowances for landscape irrigation, requirements for enhanced irrigation technology, prohibition of turf in street medians or parkways, and numerous other restrictions that lower overall water demand of the Proposed Project. In addition, the Proposed Project will comply with all conservation requirements imposed by NCWD on its existing customers and at a minimum the Proposed Project must comply with the County of Los Angeles Department of Public Works Title 31 concerning drought tolerant landscaping.

In addition, as it relates to future planning and availability of supplies, the WSA must consider these sources and prior planning. As is referenced throughout this WSA and in the 2015 UWMP, NCWD, CLWA and the other water purveyors have gone to great lengths to prepare for dry periods and create long-term, sustainable supplies. As a result of this proactive planning and investment, the SCV has fared remarkably well during this historic drought. The State's most recent emergency conservation regulations allowed urban water suppliers to analyze their specific sources of supply and how these supplies will meet project demands over the next three years. This "self-certification" showed that NCWD had adequate supplies to meet demands under the then current emergency conservation regulations. An additional benefit of

this ongoing planning effort is illustrated by the creation of the SCV Water Committee (Committee). Currently, this Committee meets monthly to discuss the current drought and evaluate the short-term supply strategy.

Originally, the Tesoro de Valle project was approved in 1999 and was proposed to consist of four phases (A through D). Phase A was built out in 2005 and no project work in Phase D (located east of San Francisquito Creek) is currently planned. The principal change in the project as currently proposed is a significant reduction in the development footprint of 710.85 acres for Phases B and C that covered much of the project site. The currently proposed project has reduced impacts to a total of approximately 395 acres, clustered near the southern portion of the site near Phase A. As discussed in detail in this WSA, NCWD's total projected water supplies available during the ensuing twenty years will meet the projected water demands associated with the Proposed Project and existing and other planned uses within NCWD's service area through build-out. The estimated water demand associated with the full build out of the Proposed Project has been accounted for in NCWD's subsequent planning documents, including NCWD's 2015 UWMP.

The Proposed Project will use future as well as current water supplies, and therefore will require an SB 221 water supply verification to be completed by NCWD prior to construction. Furthermore, this Water Supply Assessment shall expire and be of no further force and effect after (3) three years from the date of submittal.

1.0 INTRODUCTION

1.1 Background

The 1,263-acre project site is located in the Santa Clarita Valley in an unincorporated portion of Los Angeles County north of the City of Santa Clarita. The Proposed Project site is north and west of Phase A of the Tesoro del Valle development, just northerly of Avenida Rancho Tesoro and westerly of Casa Luna Place. The Proposed Project comprises the northern portion of the previously approved 1,795-acre Tesoro del Valle Project. The previous approval included 1,791 dwelling units, approximately 6.2 acres of commercial use, 61.8 acres of active parks, a 13.9 acre recreation center, an elementary school site, Tesoro Historical site (Harry Carey Ranch), and riding/hiking /equestrian trails. Area A of the Tesoro del Valle Project is currently built out and contains 1,077 dwelling units.

The Proposed Project involves the development of Areas B and C with up to 820 dwelling units, including a combination of up to 455 single-family residential units and 365 senior residential units. As part of the Proposed Project, Area D would remain undeveloped.

Figure 1-1 shows the Proposed Project location and water service area boundaries.

Newhall County Water District (NCWD) has been identified as the water purveyor for the Proposed Project. NCWD distributes a combination of imported water from the Castaic Lake Water Agency (CLWA) and groundwater from local wells. NCWD is one of four water purveyors in the Santa Clarita Valley and currently supplies a population of approximately 44,000 with over 9,600 service connections.

The Tesoro del Valle Phases B and C (Proposed Project) Water Supply Assessment is a supplement to Los Angeles County's full environmental review of the Proposed Project. The

WSA is a long-term assessment with a 20-year outlook. However, the District must also consider the current conditions. Thus, as the State and region emerge from historic drought, the District reserves the right and has the authority to withhold water service based on the immediate water supply conditions at the time of service connection in accordance with applicable law. The District does not have discretionary authority over the Proposed Project.

1.2 Purpose

Legislation places additional requirements upon NCWD as the water purveyor for the Proposed Project. Senate Bill 610 (SB 610) added Water Code sections 10910-10915 effective January 1, 2002, regarding land use and planning as well as water supply availability. Once it is determined a project is subject to the California Environmental Quality Act, and that the project meets specified thresholds, SB 610 requires cities and counties to identify any public water system that may supply water for the project and to request that public water systems prepare a water supply assessment to be included in any environmental document prepared for the project. The assessment includes, among other information, an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the Proposed Project and water received in prior years pursuant to those entitlements, rights, and contracts.

SB 610, the water supply "assessment", and Senate Bill 221 (SB 221), the water supply "verification", are companion measures which seek to promote more collaborative planning between local water suppliers and cities and counties. According to the California State Legislature, SB 221 is intended as a "fail safe" mechanism to ensure that collaboration on finding the needed water supplies to serve a new large subdivision occurs when it should – before construction begins.

The purpose of this Water Supply Assessment (WSA) is to comply with the requirements of SB 610 with respect to the water demands of the Proposed Project and answer the basic question:

Will the water supplier's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection meet the projected water demand of the Proposed Project, in addition to the water supplier's existing and planned future uses, including agricultural and manufacturing uses?

1.3 District's 2015 Urban Water Management Plan

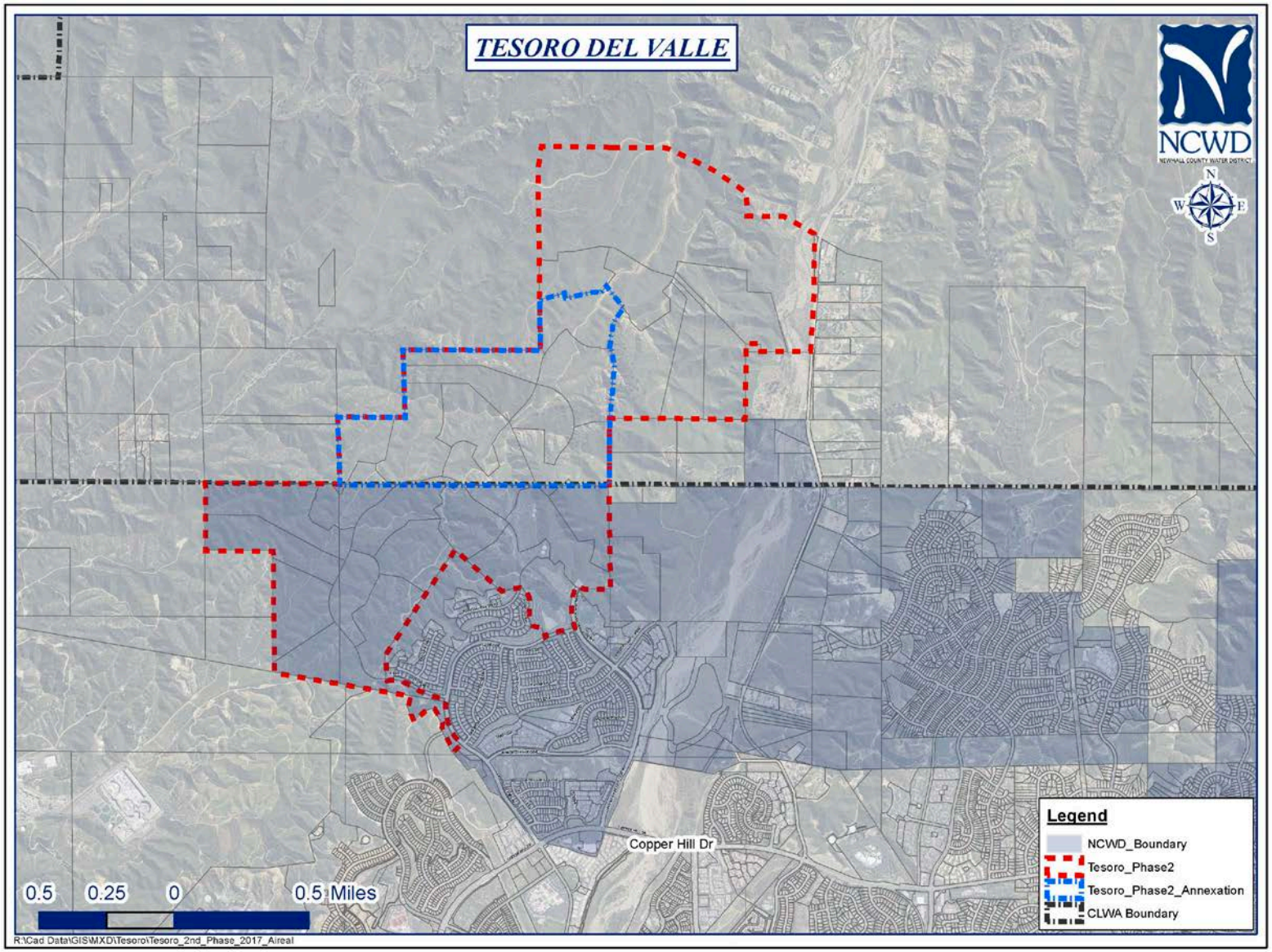
SB 610 provides that if the projected water demand associated with the Proposed Project was accounted for in the 2015 Urban Water Management Plan (2015 UWMP) adopted by the retail water purveyor, then relevant information from that document may be incorporated into the SB 610 WSA. The 2015 UWMP was adopted by NCWD on June 14, 2016, and appropriately filed with the California Department of Water Resources (DWR). The 2015 UWMP was a regional planning effort by NCWD, CLWA, and the other Santa Clarita Valley water purveyors that built upon previous documents, specifically the 2010 UWMP. The 2015 UWMP includes the following eight major sections:

1. Introduction
2. Water Use
3. Water Resources
4. Recycled Water
5. Water Quality

6. Reliability Planning
7. Water Demand Management Measures
8. Water Shortage Contingency Planning

The timing of the Proposed Project places it within the timeframe for calculating "planned future uses" within the 2050 water supply projection included in the 2015 UWMP. The 2015 UWMP projects an annual growth rate in water demand of approximately 1.1 percent through 2050 for the Santa Clarita Valley. The 2015 UWMP anticipates increases in the number of commercial accounts and demand in acre-feet through 2050. The Proposed Project falls within the demand anticipated for projects within NCWD's service area through 2050 (see Table 2-4 in the 2015 UWMP). In NCWD's judgment, the 2015 UWMP provides the best basis for this WSA.

Figure 1 – 1


TESORO DEL VALLE
NCWD
N
W
E
S
Copper Hill Dr
0.5
0.25
0
0.5 Miles
Legend
NCWD_Boundary
Tesoro_Phase2
Tesoro_Phase2_Annexation
CLWA Boundary
R:\Cad Data\GIS\MXD\Tesoro\Tesoro_2nd_Phase_2017_Aireal

1.4 NCWD Policies, Regulatory Approvals and Permits

NCWD Policies: The Proposed Project will be subject to all NCWD policies, rules and regulations that govern development and connection to the NCWD water system. It will be the responsibility of the Proposed Project applicant to make appropriate financial and contractual arrangements with NCWD to assure the necessary improvements are made to the water supply infrastructure. Following the receipt of the appropriate application, arrangements can be made for the installation of water facilities required to meet the needs of the Proposed Project.

Water service to the Proposed Project shall be subject to availability of water. In relying upon this WSA, the Proposed Project applicant is aware of the restrictions contained herein and the reliance of NCWD on groundwater and water supplied by the State Water Project. While there is currently no prohibition against establishing additional connections, NCWD has the authority to reduce and restrict service connections in accordance with applicable law. This WSA does not constitute any guarantee that, at the time of connection, water service will be available for the Proposed Project and, further, that NCWD does not guarantee any specific quantities, pressures or flows with respect to water service.

At any time prior to connection and upon a finding by the District's Board of Directors that NCWD is unable to serve the Proposed Project in accordance with applicable law, NCWD may revoke this WSA.

Annexation Requirements: Only portions of the Proposed Project are currently within the boundaries of NCWD and CLWA (see Figure 1-1, above). The portions of the Proposed Project outside the boundaries must be annexed to CLWA and NCWD prior to receiving eligibility for service. The former property owner of the Proposed Project (Montalvo Properties, LLC) entered into an Annexation Agreement with CLWA dated September 30, 2013, which set forth the terms and conditions of annexation of the portion of the Proposed Project that is currently outside the boundary of CLWA and NCWD. A First Amendment to Annexation Agreement, dated October 16, 2014, extended the deadlines provided in the Annexation Agreement to better define the Project. A Second Amendment to Annexation Agreement dated February 4, 2016 stated that Montalvo had sold the property to a third party (BLC Tesoro LLC) and that BLC Tesoro LLC would be requesting approval from the County for changes to the previously approved project. This Second Amendment also extended the deadline for the conditions of the Annexation Agreement to be met to September 30, 2018. A Third Amendment to the Annexation Agreement, which will confirm the water demand and clarify the annexation timing, is currently being considered.

Reference is made to the Annexation Agreement including Amendments thereto for details regarding the conditions of annexation. Once the annexation to CLWA is complete, that same portion of the Proposed Project will be annexed to NCWD for providing retail water service.

Regulatory Approvals and Permits: Provision of water service is contingent upon the Proposed Project applicant meeting the requirements of any other governmental entity having jurisdiction over the Proposed Project. The Division of Drinking Water and the County of Los Angeles will issue permits and regulatory approvals for constructing the necessary improvements to supply and deliver water to the Proposed Project.

1.5 Information Relied Upon in Preparation of this WSA

The following list identifies the documentation that has been relied upon in the preparation of this WSA. Copies of the referenced documents are available for review at NCWD by contacting

Eunie Kang, (661) 259-3610, and can be obtained upon the payment of the costs of reproduction. These documents are part of NCWD's record of proceedings for the preparation of this WSA:

1. *2015 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 Kennedy Jenks Consultants, Luhdorff & Scalmanini, Nancy Clemm, Stacy Miller Public Affairs, June 2016. (2015 UWMP)
2. *Analysis of Groundwater Supplies and 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 Luhdorff & Scalmanini, August 2005. (Basin Yield Study, 2005)
3. *Analysis of Groundwater Supplies and 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, GSI Water Solutions, and Luhdorff & Scalmanini, August 2009. (Basin Yield Study, 2009)
4. *Interim Remedial Action Plan, prepared for CLWA by Kennedy/Jenks Consultants, December 2005.*
5. *Santa Clarita Valley Water Report 2016*, prepared for CLWA, Los Angeles County Waterworks District No. 36, Newhall County Water District, and Valencia Water Company by Luhdorff and Scalmanini, Consulting Engineers, July 2017. (SCVWR, 2016)
6. *2001 Update Report: Hydrogeologic Conditions in the Alluvial and Saugus Formation Aquifer Systems,* prepared for Santa Clarita Valley Water Purveyors by Richard C. Slade and Associates, LLC, July 2002. (Slade, 2002)
7. *Revised Draft Additional Analysis to the Newhall Ranch Specific Plan and Water Reclamation Plant Final Environmental Impact Report,* prepared for Los Angeles County Department of Regional Planning, November 2002. (Newhall Ranch, 2002)
8. CLWA Capital Improvement Program prepared by Kennedy/Jenks Consultants, 2003.
9. *Water Supply Reliability Plan Draft Report* prepared for CLWA by Kennedy/Jenks Consultants, September 2003.
10. *Memorandum of Understanding Between the Santa Clara River Valley Upper Basin Water Purveyors and United Water Conservation District*, August 2001. (MOU, 2001)
11. *Groundwater Management Plan - Santa Clara River Valley Groundwater Basin, East Subbasin*, prepared for CLWA by Luhdorff & Scalmanini Consulting Engineers, December 2003.
12. *Regional Groundwater Flow Model for the Santa Clarita Valley: Model Development and Calibration*, prepared for Upper Basin Water Purveyors (CLWA, CLWA Santa Clarita Water Division, Newhall County Water District and Valencia Water Company) by CH2MHill, April 2004.
13. *Analysis of Perchlorate Containment in Groundwater Near the Whittaker-Bermite Property, Santa Clarita, California*, prepared for Upper Basin Water Purveyors in Support of the Department of Health Services 97-005 Permit Application by CH2MHill, December 2004.
14. *Analysis of Near-Term Groundwater Capture Areas for Production Wells Located Near the Whittaker-Bermite Property (Santa Clarita, California)*, prepared for Upper Basin Water Purveyors in support of the amended 2000 UWMP by CH2MHill, December 21, 2004.
15. *Mitigated Negative Declaration – Groundwater Containment, Treatment and Restoration Project*, CLWA, August 2005.
16. Water Supply Contract Between the State of California Department of Water Resources and CLWA, 1963 (plus amendments, including the "Monterey Amendment," 1995, and Amendment No. 18, 1999, the transfer of 41,000 acre-feet of entitlement from Kern County Water Agency to CLWA).

17. 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.

18. 2002 *Draft Recycled Water Master Plan* prepared for CLWA by Kennedy/Jenks Consultants.

19. *Final Program Environmental Impact Report – Recycled Water Master Plan*, prepared for CLWA by Bon Terra Consulting, March 2007.

20. 2016 *Draft Recycled Water Master Plan* prepared for CLWA by Kennedy/Jenks Consultants.

21. 2003 Semitropic Groundwater Storage Program prepared for CLWA by Kennedy/Jenks Consultants.

22. *Final Environmental Impact Report – Supplemental Water Project Transfer of 41,000 acre-feet of State Water Project Table A Amount,* prepared for CLWA by Science Applications International Corporation, December 2004.

23. *Final Environmental Impact Report - Rosedale-Rio Bravo Water Storage District (RRBWSD) Water Banking and Exchange Program,* prepared for CLWA by Science Applications International Corporation, October 2005.

24. *Final Environmental Impact Report – Castaic Lake Water Agency Water Acquisition from the Buena Vista Water Storage District and Rosedale-Rio Bravo Water Storage District (RRBWSD) Water Banking and Recovery Program,* prepared for CLWA by Science Applications International Corporation, October 2006.

25. *California Department of Water Resources, California's Groundwater, Bulletin 118, Santa Clara River Valley Groundwater Basin, Santa Clara River Valley East Subbasin,* February, 2004.

26. *California Department of Water Resources, Groundwater Basins in California, Bulletin 118-80,* January 1980. (DWR Bulletin 118-80, 1980)

27. *California Department of Water Resources, The State Water Project Final Delivery Capability Report 2015,* July 2015. (DWR Delivery Capability Report, 2015)

28. *California Department of Water Resources*, *Draft Environmental Impact Report, Monterey Amendment to the State Water Project Contracts (Including Kern Water Bank Transfer) and Associated Actions as Part of a Settlement Agreement* October 2007. (Monterey Plus, 2007)

29. *Additional CEQA Findings Regarding the Newhall Ranch Final Additional Analysis to the Partially Certified Final EIR for the Newhall Ranch Specific Plan and Water Reclamation Plant.* Los Angeles County, March 2003. (Newhall Ranch, 2003)

30. *Santa Clarita Valley Water Use Efficiency Strategic Plan*, prepared for Santa Clarita Valley Family of Water Suppliers (CLWA, CLWA Santa Clarita Water Division, Los Angeles County Waterworks District No. 36, Newhall County Water District and Valencia Water Company) by Maddaus Water Management, June 2015. (WUESP, 2015)

31. *Santa Clarita Valley Water Reconnaissance Study*, prepared for Santa Clarita Valley Family of Water Suppliers (CLWA, CLWA Santa Clarita Water Division, Los Angeles County Waterworks District No. 36, Newhall County Water District and Valencia Water Company) by Carollo Engineers, Inc, June 2015. (Recon Study, 2015)

2.0 EXISTING WATER RESOURCES

The first substantive requirement of the SB 610 WSA is the identification and description of the existing water supply sources in the public water system that will serve the Proposed Project. Water Code §10910(d) requires the WSA to include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the Proposed Project, and a description of the quantities of water received in prior years by the public water system.

The current water supply for the Santa Clarita Valley is derived from three primary sources:

1. Imported State Water Project (SWP) Water and Additional Reliability Supplies
2. Groundwater from the Alluvial Aquifer and Saugus Formation
3. Recycled Water

These sources of water supply can be characterized as 1) *imported supplies*, transported via the SWP and consisting of SWP Table A Amounts and additional reliability supplies; and 2) *local supplies*, consisting of groundwater and recycled water. All of these sources are necessary to meet the regional demands identified in the 2015 UWMP.

Demand-side management programs (conservation) are considered an important component of water supply. The conservation efforts of NCWD, CLWA and the other water purveyors are important in reducing water demands on a long-term basis and a discussion of these efforts is included in Section 3.5 of this WSA.

The following information is taken from the 2015 UWMP except as noted.

2.1 Imported Supplies

2.1.1 SWP Table A Amount

Since 1980, local supplies in the Santa Clarita Valley have been supplemented with imported water from the SWP. The SWP contractual Table A Amount, depending on annual allocation, currently meets around half of local demand in normal years. “Table A Amount” refers to the maximum amount of water a SWP contractor may request each year from the SWP. Table A is used in determining each contractor’s proportionate share, or allocation, of the total SWP water supply DWR determines to be available each year. The reliability of SWP supplies is subject to both annual hydrology and planned improvements to the system. The Table A Amount is not equivalent to actual deliveries of water in any given year.

The following information responds to specific requirements of Water Code §10910(d) regarding the identification of existing water supply entitlements, water rights and water service contracts relevant to the identified water supply for the Proposed Project:

Wholesaler’s entitlements to its supplies: CLWA has an annual Table A contract from the State Water Project in the amount of 95,200 acre-feet (af). This Table A Amount is a maximum and does not reflect the actual amount of water available to CLWA from the State Water Project, which varies from year to year. In an effort to assess the impact of these varying conditions on SWP supply reliability, the Department of Water Resources (DWR) issues a “State Water Project Delivery Capability Report”. The most recent State Water Project Capability Report was completed in July, 2015 (DWR Capability Report (DCR), 2015). The DWR Capability Report indicated that the SWP, using existing facilities operated under current regulatory and

operational constraints, and with all contractors requesting delivery of their full Table A amounts in most years, could deliver just over 60 percent of total Table A amounts on a long-term average basis. This analysis also projected that SWP deliveries during multiple-year dry periods could average from about 20% to 33 percent of total Table A amounts and could possibly be as low as 5 percent during an unusually dry single year, which is based on the actual worst allocation in 2014. The estimated projected deliveries from the 2015 UWMP are shown below in Table 2-1.

Table 2-1
Wholesale Supply Reliability (AF) (2015 UWMP)[a][b]

Wholesaler	2015	2020	2025	2030	2035-2050
DWR (SWP Supply)					
Average/Normal Years[c]					
Table A Supply	59,000	58,800	58,500	58,300	58,100
% of Table A Amount[d]	62%	62%	61%	61%	61%
Single-Dry Year					
Table A Supply[e]	10,500	9,800	9,000	8,300	7,600
% of Table A Amount[d]	11%	10%	9%	9%	8%
Table A Supply[f]	4,800	4,800	4,800	4,800	4,800
% of Table A Amount[d]	5%	5%	5%	5%	5%
Multi-Dry Years					
Four-Year Period[g]					
Table A Supply	31,400	31,400	31,400	31,400	31,400
% of Table A Amount[d]	33%	33%	33%	33%	33%
Three-Year Period[h]					
Table A Supply	20,000	19,800	19,500	19,300	19,000
% of Table A Amount[d]	21%	21%	20%	20%	20%

Notes:
[a] Supplies to CLWA are based on DWR analyses presented in its 2015 DCR, assuming existing SWP facilities and current regulatory and operational constraints (except as otherwise indicated in Note f).
[b] Table A supplies include supplies allocated in one year that are carried over for delivery the following year.
[c] Based on average deliveries over a repeat of the study's historic hydrologic period of 1922 through 2003.
[d] Supply as a percentage of CLWA's Table A Amount of 95,200 af.
[e] Based on a repeat of the worst case historic single dry year of 1977 (from 2015 DCR).
[f] Based on worst case actual allocation of 2014.
[g] Supplies shown are annual averages over four consecutive dry years, based on a repeat of the historic four-year dry period of 1931-1934.
[h] Supplies shown are annual averages over three consecutive dry years, based on a repeat of the historic three year dry period of 1990-1992.

Other Sources of SWP Water: Each long-term water supply contract describes various sources of SWP water available to SWP contractors to supplement their Table A water: (a) Article 21 water; (b) carryover water; and (c) turn back pool water.

Article 21 water (so named because it is described in Article 21 of the water supply contracts) is water that SWP contractors may receive on a short-term basis in addition to their Table A water, if they request it. DWR makes Article 21 water available to SWP contractors during periods when the supply of SWP water exceeds the cumulative delivery requests scheduled by the SWP contractors. Article 21 water may become available during drier year types, not just during wetter years.

Carryover water is SWP water that is allocated to a SWP contractor and approved for delivery to that contractor in a given year, but not used by the end of the year. This water is exported from the Delta, but instead of being delivered to the SWP contractor, it is stored in the SWP's share

of the San Luis Reservoir, when space is available, for the contractor to use in the following year.

SWP contractors also may offer a portion of their Table A water that has been allocated in the current year and exceeds their needs to a "turn back pool," where another contractor may purchase it. Contractors that sell their extra Table A water in a turn back pool receive payments from contractors that buy this water through the turn back pool.

The availability of Article 21 water and turn back pool water is uncertain. When available, these supplies provide additional water that CLWA may be able to use, either directly to meet demands or for later use after storage in its groundwater banking programs. To the extent CLWA is able to make use of these supplies when available, CLWA may be able to improve the reliability of its SWP supplies beyond the amounts reflected in the adopted UWMP for the Santa Clarita Valley.

While not specifically provided for in the SWP water supply contracts, in single-dry years, DWR has created dry year water purchase programs for contractors needing additional supplies. Through these programs, water is purchased by DWR from willing sellers in areas that have available supplies and is then sold by DWR to contractors willing to purchase those supplies. The availability of these supplies is uncertain. However, CLWA's access to these supplies when they are available would enable it to improve the reliability of its dry-year supplies beyond the amounts reflected in the adopted UWMP.

2.1.2 Existing Additional Water Sources

The following existing additional water sources are available to meet demands when necessary and are discussed in the 2015 UWMP (pgs. 6-4 – 6-7).

- **Buena Vista/Rosedale-Rio Bravo Water Storage District Water:** In early 2007, CLWA finalized a Water Acquisition Agreement with the Buena Vista Water Storage District (Buena Vista) and the Rosedale-Rio Bravo Water Storage District (Rosedale-Rio Bravo) in Kern County. Under this Program, Buena Vista's high flow Kern River entitlements (and other acquired waters that may become available) are captured and recharged within 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.

- **Nickel Water:** The Newhall Ranch Specific Plan and Water Reclamation Plant Revised Draft Additional Analysis, November 2002 describes an additional source of water that has been acquired by the Newhall Ranch Specific Plan applicant for use. The Newhall Ranch Specific Plan applicant has secured 1,607 af of water under contract with Nickel Family LLC in Kern County. This water is 100 percent reliable on a year-to-year basis, and not subject to the annual fluctuations that can occur to the SWP in dry year conditions (Newhall Ranch, 2002). Although this water is not available to the Proposed Project, it adds to the ability to meet total demands, including those of the Proposed Project.

- **Yuba Accord Water:** In 2008, CLWA entered into the Yuba Accord Agreement allowing for the purchase of water from the Yuba County Water Agency through DWR. Under this agreement, an average of 1,000 afy of non-SWP supply is available to CLWA in dry years through 2025. Under certain hydrologic conditions, additional water may be available to CLWA from this program. Since this water originates north of the Delta, is subject to losses associated with transporting through the Delta.

- **Flexible Storage Accounts:** The 2015 UWMP describes that as a part of its Water Supply Contract with DWR, CLWA has access to a portion of the storage capacity of Castaic Lake. This Flexible Storage Account allows CLWA to borrow up to 4,684 af of the storage in Castaic Lake. Any amount that CLWA borrows must be replaced by CLWA within five years of its withdrawal. CLWA manages this storage by keeping the account full in normal and wet years and then delivering that stored amount (or portion of it) during dry periods. The account is refilled during the next year that adequate SWP supplies are available to CLWA to do so. CLWA has negotiated with Ventura County water agencies to obtain the use of their Flexible Storage Account. This allows CLWA access to another 1,376 af of storage in Castaic Lake. CLWA access to this additional total additional storage is available on a year-to-year basis through 2015. CLWA has recently negotiated an extension of this program for an additional 10 years, making it available through 2025. In 2014, CLWA used a net of 4,041 af of this storage resulting in an available balance of 2,019 af. The water used in 2014 from this program has been replaced thus CLWA currently has 6,060 af of water available to it.

- **Semitropic Water Storage District Banking:** CLWA has two existing contracts with the Semitropic Water Storage District and currently has stored 35,970 af of water. In 2015, CLWA entered into an agreement with Semitropic to participate in the Stored Water Recovery Unit (SWRU). Under this agreement, the two short-term accounts containing 35,970 af were transferred into this new program. Under the SWRU agreement, CLWA can store and recover additional water within a 15,000 af account. The term of the Semitropic Banking Program extends through 2035 with the option for a 10 year renewal. CLWA may withdraw 5,000 afy from its account. Current operational planning includes 5,000 afy of supplies that would be available in both single-dry year and multiple-dry year periods through 2045.

- **Rosedale-Rio Bravo Water Storage District Water Banking:** CLWA has a water banking and exchange program with the Rosedale-Rio Bravo Water Storage District (RRBWSD) under which CLWA has stored 94,178 af of water as of February, 2016. This program currently permits storage and pump-back capacity of 20,000 afy, with up to 100,000 af of storage capacity. CLWA's existing firm withdrawal capacity in this program is 3,000 afy. In 2015, CLWA in cooperation with RRBWSD and Irvine Ranch Water District initiated construction of additional facilities to increase firm extraction capacity up to 10,000 afy. It is anticipated these supplies will be available by 2017.

- **Rosedale-Rio Bravo Water Storage District Exchange Program:** CLWA executed a ten-year water 2-for-1 exchange program with RRBWSD in 2011, where CLWA can recover one acre-foot of water for each two acre-feet delivered (less losses). In 2011, CLWA delivered 15,602 af to the program, delivered another 3,969 af in 2012 and, after program losses, has 9,509 af of recoverable water. For multiple-dry year periods, the entire amount would be accessible and used during the four-year period. The average supply during this period would be one fourth of the total available, or about 2,375 af through 2021.

- **West Kern Water District Exchange Program:** CLWA also has a two-for-one exchange program with the West Kern Water District in Kern County and delivered 5,000 af in 2011, resulting in a recoverable total of 2,500 af. CLWA recovered 2,000 af of this water in 2014, leaving a balance of 500 af that can be recovered through 2021. The average amount available during a multiple-dry year period is approximately 125 af a year for four years through 2021.

- **Newhall Land – Semitropic Water Storage District Banking:** The Newhall Ranch Specific Plan project applicant has entered into an agreement to reserve and purchase water storage capacity of up to 55,000 af in the Semitropic Water Storage District Groundwater

Banking Project (Newhall Ranch, 2003). Sources of water that could be stored include, but are not limited to, the Nickel Water. The stored water can be extracted in dry years in amounts up to 4,950 afy. Presently, there is 33,953 af of water stored in the Semitropic Groundwater Storage Bank by The Newhall Land and Farming Company for the Newhall Ranch Specific Plan. Newhall Ranch is located within the CLWA service area. Delivery of stored water from the Newhall Land Semitropic Groundwater Bank requires further agreements between CLWA and Newhall Land. This supply is assumed to be available to VWC and is planned to be used in only dry years.

2.2 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). In 2003, CLWA in cooperation with the 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. In addition, NCWD is in the process of forming a Groundwater Sustainability Agency with Castaic Lake Water Agency, Santa Clarita Water Division, Los Angeles County Water Works District No. 36, the County of Los Angeles and the City of Santa Clarita. The following important studies have been prepared that serve to substantiate and ensure the sustainability of local groundwater resources:

1. The report titled *Hydrogeologic Conditions in the Alluvial and Saugus Formation Aquifer Systems,* prepared by Richard C. Slade and Associates (Slade, 2002) updates prior reports and includes a detailed review of the hydrologic conditions and description of groundwater resources available to NCWD and other large municipal and agriculture groundwater producers, including SCWD, Valencia, The Newhall Land and Farming Company and the Wayside Honor Ranch operating within the Santa Clara River Valley East Subbasin. This is 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 a condition of overdraft. 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, 2005).

2. In August 2005 and again in 2009, work was completed in support of a Memorandum of Understanding (MOU) entered into by NCWD, CLWA and the other water purveyors and United Water Conservation District (MOU, 2001). The MOU is a commitment by the water purveyors to expand on the previous knowledge of groundwater conditions 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 is, therefore, sustainable (Basin Yield Study, 2005). The primary conclusion was again confirmed with the completion of an updated basin yield analysis in 2009 (Basin Yield Study, 2009).

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

2.2.1 Water Code §10910(f)(1)

Review of relevant information contained in the Urban Water Management Plan.

Refer to Chapter 3, Water Resources and Appendix C, Groundwater Resources and Yield in the Santa Clarita Valley 2015 UWMP for an overview description of the local Alluvial and Saugus Formation aquifer systems, as well as historical and projected production consistent with the groundwater operating plan.

2.2.2 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.

The 2015 UWMP describes that the sole source of local groundwater for urban water supply in the Santa Clarita Valley is the groundwater Basin identified in the DWR Bulletin 118, 2003 Update as the Santa Clara River Valley Groundwater Basin, East Subbasin (Basin) (Basin No. 4-4.07). The Basin is comprised of two aquifer systems, the Alluvium and the Saugus Formation. The Alluvium generally underlies the Santa Clara River and its several tributaries, and the Saugus Formation underlies practically the entire Upper Santa Clara River area. There are also some scattered outcrops of Terrace deposits in the Basin that likely contain limited amounts of groundwater. Since these deposits are located in limited areas situated at elevations above the regional water table and are also of limited thickness, they are of no practical significance as aquifers and consequently have not been developed for any significant water supply.

Neither aquifer system is in overdraft at the present time (Slade, 2002) (Basin Yield Study, 2009) (SCVWR, 2016). In 2003, CLWA with the cooperation of the retail water purveyors completed and adopted a Groundwater Management Plan in accordance with Water Code §10753. The management objectives of the Plan are 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.

2.2.3 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 (2012 to 2016), NCWD's production was approximately 1,435 af from the Alluvial Aquifer and approximately 3,860 af from the Saugus Formation. A summary of the past 37 years of total groundwater production from the Alluvial Aquifer and Saugus Formation is set forth in Section 4.0 of this WSA.

Total pumping from the Alluvial Aquifer in 2016 was 28,849 af, a decrease of 1,843 af from the preceding year (SCVWR, 2016). Of the total Alluvial pumping in 2016, 15,244 af was for municipal water supply, and the balance, of 13,605 af was for agriculture and other (minor) miscellaneous uses (SCVWR, 2016).

Over the last three decades, since the inception of SWP deliveries in 1980, total pumping from the Alluvial Aquifer has ranged from a low of about 20,200 af (in 1983) to slightly more than 43,400 af (in 1999) (SCVWR, 2016).

Total pumping from the Saugus Formation in 2016 was 11,839 af, which is approximately 559 af more than pumped in the prior year (SCVWR, 2016). Of the total Saugus Formation pumping in 2016, most (11,085 af) was for municipal water supply, and the balance (754 af) was for agricultural and other (minor) uses (SCVWR, 2016). Saugus pumping has remained stable, at an average of about 7,300 afy, since 1980 (SCVWR, 2016). On a long-term average basis since the importation of SWP water, total pumping from the Saugus Formation has ranged from a low of about 3,700 afy (in 1999) to a high of nearly 14,917 afy in (1991). These numbers are at the lower end of the estimated range of the operational yield of the Saugus Formation (2015 UWMP).

2.2.4 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 3-7 in the 2015 UWMP for a summary 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 should fall within the purveyors' operating plan as described in the Basin Yield Study (Basin Yield Study, 2009) and reported annually in the Santa Clarita Valley Water Report (SCVWR, 2016).

2.2.5 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.

NCWD has determined that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the Proposed Project was addressed in the 2015 UWMP. Therefore, as provided in Water Code §10910(f)(5), NCWD incorporates the following 2015 UWMP's conclusions and additional information regarding the adequacy of the groundwater supply.

For municipal water supply, with existing wells and pumps, the three retail water purveyors with Alluvial wells (NCWD, SCWD, and VWC) have a combined pumping capacity from active wells of 41,920 gallons per minute (gpm), which translates into a current full-time Alluvial source capacity of 67,650 afy. This is more than sufficient to meet the municipal, or urban, component of groundwater supply from the Alluvium, which is currently 24,000 to 26,000 afy of the total planned Alluvial pumping of 30,000 to 40,000 afy. (The balance of Alluvial pumping in the operating plan is for agricultural and other, including small private, pumping.)

It should be noted that the Alluvial wells in the eastern portion of the Valley have historically experienced a number of alternating wet and dry hydrologic conditions during which groundwater level declines have been followed by returns to high or mid-range historic levels. When water levels are low, well yields and pumping capacities in this area can be impacted. The affected purveyors typically respond by shifting a fraction of the Alluvial pumping that would normally be supplied by the eastern areas to areas further west, where well yields and pumping

capacities remain fairly constant because of smaller groundwater level fluctuations in response to wet and dry hydrologic periods.

Groundwater produced by NCWD consistently meets drinking water standards set by EPA and DDW. However, the 2015 UWMP goes on to explain that ammonium perchlorate (perchlorate) has been a concern with respect to the groundwater quality since it was detected in four wells in the eastern part of the Saugus formation in 1997 and later in two wells (2002 and 2005) in the Alluvial formation. In August 2010, perchlorate was detected in VWC's Saugus Well 201.

For municipal water supply for Saugus production wells there is a combined pumping capacity from active wells of 19,050 gpm, which translates into a full-time Saugus source capacity of 30,700 AFY. These capacities include two Saugus wells contaminated by perchlorate (Saugus 1 and 2), which have now been returned to service with treatment facilities for use of the treated water for municipal supply under permit from the Division of Drinking Water (DDW). They reflect the most recent replacement well, VWC's Well 207, in a non-impacted part of the basin. Also included is the capacity from VWC Well 205, although this well has been voluntarily shutdown to assist in managing the migration of the perchlorate plume as a result of the perchlorate contamination in VWC Well 201 (per Table 3-9, 2015 UWMP). Excluded from these capacities is VWC Well 201, which represents a pumping capacity of 2,400 gpm.

VWC has already completed significant updated groundwater modeling analysis of the Saugus Formation, and is currently working with expert consultants to restore Well 201 as a drinking water source through installation of wellhead treatment. In addition, a process with DDW is already underway to add wellhead treatment to Well 201 so it can be returned to service. VWC has completed installation of wellhead treatment and is currently going through start-up testing and is planning to return Well 201 to operation by 2017. DDW is working with VWC to accomplish this goal. In addition, VWC's updated groundwater modeling analysis has shown that returning Well 201 to service is an important component of the strategy to contain perchlorate in the Saugus Formation. In particular, pumping Well 201 on a sustained, continuous basis at close to its full capacity (up to 2,400 gallons per minute), can provide hydraulic containment of perchlorate present in the Saugus Formation groundwater west of the Whittaker-Bermite site, and provide protection of downgradient production wells including VWC Well 205. When VWC Well 201 is brought back online (with adequate treatment), the combined existing supply capacity increases to 34,570 afy.

In terms of adequacy and availability, the current combined active Saugus groundwater source municipal well capacity of 30,700 afy (VWC Well 201 not included) is sufficient to meet the planned use of Saugus groundwater in normal years of 7,500 to 15,000 afy. To accommodate the longer-term demands, additional Saugus wells are planned outside the area impacted by perchlorate and expected to have a combined capacity of 14,000 afy, increasing the Saugus Formation production capacity to 48,570 afy (VWC Well 201 included). This increase will be more than sufficient to meet the planned use 31,650 to 35,000 afy of Saugus groundwater during dry and multiple-dry year periods.

Of the seven wells (one voluntarily) removed from active water supply service upon the detection of perchlorate, two wells (one voluntarily) remain out of service. NCWD, CLWA and the other purveyors have developed an implementation plan that will restore this well capacity. The implementation plan includes a combination of treatment facilities and replacement wells. Treatment facilities for two of the impacted wells (Saugus 1 and 2) were constructed and both wells were returned to service in January 2011. A third well, SCWD's Stadium Well was sealed

and its capacity was replaced by a new well. Additional production restoration (replacement) wells to recover the total lost capacity of the impacted wells are currently in the planning stages.

Groundwater is also tested for two types of organic compounds, volatile organic compounds (VOCs) and non-volatile synthetic organic compounds (SOCs). These organic compounds are synthetic chemicals produced from industrial and agricultural uses. Tetrachloroethylene (PCE) and trichloroethylene (TCE) have been detected in trace levels below the Maximum Contaminant Level (MCL) in various drinking water wells (including, Saugus Well Nos. 1 and 2 and Valencia Water Company Wells 201 and 205) in the Santa Clarita Valley. In addition, analyses of water taken from monitoring wells have shown organic compounds (including PCE and TCE) at levels above MCLs. Local drinking water wells are tested at least annually for VOCs and periodically for SOCs.

In July 2015, CLWA conducted a study which concluded the likely source of the VOC detections is from either Whittaker-Bermite or the Saugus Industrial Center and additional monitoring is necessary to identify the specific source(s). In light of the preceding, and taking into account the ongoing evolving process of investigating and treating impacted groundwater in the Santa Clarita Valley with regard to the adequacy of groundwater as the local component of water supply in this WSA, the non-impacted groundwater supply is sufficient to meet near-term water requirements as described above. Afterwards, once treatment facilities and/or additional replacement wells are installed, the total groundwater capacity will be sufficient to meet the full range of normal and dry-year conditions as provided in the operating plan for groundwater supply.

2.3 Recycled Water

CLWA currently has a contract with the Los Angeles County Sanitation District for 1,600 afy of recycled water that became available in 2003 (Reference Table 4-2 in Section 4.0 of this WSA for historical recycled water deliveries). Currently, NCWD does not have any infrastructure in place to utilize recycled water. However, NCWD does indirectly benefit because any recycled water use will allow for an offset of potable water supplies (including groundwater and SWP water) to be used in other areas of the Santa Clarita Valley, including the Proposed Project.

Recycled Water Master Plans for the CLWA service area were completed in 1993 and 2002. In 2007, CLWA completed CEQA analysis of the 2002 Recycled Water Master Plan (RWMP). Analysis consisted of a Programmatic EIR covering the various phases for a recycled water system as outlined in the RWMP. The Programmatic EIR was certified by the CLWA Board of Directors in March 2007. CLWA and the purveyors have recently completed the RWMP update in October 2016. The plan is currently going through the CEQA public review process. The plan identifies current available recycled water supplies of 7,040 af and future available supplies of 17,140 af. However, it is important to note that on March 9, 2016 Judgement was entered by the Los Angeles Superior Court in Affordable Clean Water Alliance v. Santa Clarita Valley Sanitation District of Los Angeles for the SCVSD to reanalyze the amount of discharge to the Santa Clara River (SCR) needed to avoid harm to biological resources in the SCR.

CLWA constructed Phase I of the 2002 RWMP which is designed to deliver up to 1,600 afy of water. In 2015, Valencia Water Company (VWC) delivered a total of 450 af of recycled water. Phase 2 is planned to expand recycled water use within Santa Clarita Valley and consists of four projects currently in various stages of planning.

3.0 PLANNED WATER RESOURCES

This WSA includes additional information related to obtaining planned additional water supplies. Potential future water sources discussed in the 2015 UWMP include acquisition of additional imported water supplies, recycled water, desalination, storm water runoff, increased dry year Saugus pumping, and additional SWP reliability projects. Demand side management programs (conservation) are also considered an important component of water supply resulting from efforts by NCWD, CLWA and the other water purveyors to reduce water demands on a long term basis.

The 2015 UWMP specifically identifies the following future sources of supply consisting of water transfers, additional groundwater banking programs, increased dry year Saugus pumping and additional recycled water as necessary to meet the total projected demands through 2050.

3.1 Transfers and Exchanges

As indicated in the 2015 UWMP, CLWA, as a SWP contractor, can acquire new imported water supplies on behalf of NCWD through direct transfers or by contributing to the construction of new desalination facilities in other areas in exchange for imported water. One of the most important aspects of any resource planning process is flexibility. A flexible strategy minimizes unnecessary or redundant investments (or stranded costs). The voluntary transfer of water between willing sellers and buyers can be an effective means of achieving flexibility. However, not all water transfers have the same effectiveness in meeting resource needs. Through the resource planning process and ultimate implementation, several different types of water transfers could be undertaken. The most viable types of water transfers are core and option transfers and, as such, represent CLWA's long-term strategy. The most recent costs for this type of transfer are estimated to be about $700 per af (2015 UWMP).

3.2 Additional Banking Programs

Rosedale-Rio Bravo Water Storage District Water Banking – As discussed in Section 2.1.2, CLWA has an existing firm withdrawal capacity in the RRBWSD of 3,000 afy. In addition, CLWA has the right under contract to develop four additional wells, bringing the firm recovery capacity to 20,000 afy. This additional capacity is anticipated to be available by 2030. Under single and multiple-dry year periods, it is assumed only firm withdrawal capacity would be available, with the existing 3,000 afy available through 2050, planned expansions of an additional 7,000 afy available through 2025, and an additional 10,000 afy available by 2030.

Additional Planned Banking – CLWA has identified a need for additional banking programs to replace the Semitropic Banking Program that will expire in 2045. While a specific banking program has not yet been identified, CLWA's plans call for development of additional groundwater banking programs with pumpback capacity of at least an additional 5,000 af for use in single and multiple-dry year periods.

The 2015 UWMP discusses water banking storage and pumpback capacity both north and south of the Tehachapi Mountains, the latter of which would provide an emergency supply in case of catastrophic outage along the California Aqueduct. With short-term storage now existing in the Semitropic program and long-term storage now existing with RRBWSD, CLWA has shifted attention to identification of programs south of the Tehachapi Mountains. Groundwater banking and conjunctive-use programs enhance the reliability of both the existing and future supplies.

3.3 Increased Dry-year Saugus Formation Pumping

The 2015 UWMP concludes (pg. 3-39) that pumping from the Saugus Formation in a given year is tied directly to the availability of other water supplies, particularly from the SWP. During average-year conditions within the SWP system, Saugus pumping ranges between 7,500 and 15,000 afy. Planned dry-year pumping from the Saugus Formation ranges between 15,000 and 35,000 afy Existing Saugus pumping capacity, after VWC Wells 201 and 205 are returned to service by 2017, is sufficient to achieve about 34,570 afy (Table 3-8, 2015 UWMP). This capacity is slightly less than the upper end of the Saugus operating plan. To provide for operational flexibility and maintenance outages, it is planned that future Saugus pumping capacity (new wells) will be added to achieve the full range of the Saugus operating plan.

As mentioned in Section 2.2.5 of this WSA, the combined active municipal Saugus well pumping capacity is 19,050 gpm (30,700 afy). This capacity includes VWC Well 205 which has been voluntarily shut off due to perchlorate contamination in VWC Well 201. These capacities also include two Saugus wells contaminated by perchlorate (Saugus 1 and 2), which have now been returned to service with treatment facilities for use of the treated water for municipal supply under permit from the DDW. They also reflect the most recent replacement well, VWC's Well 207, in a non-impacted part of the basin. VWC Well 201 represents a total of 2,400 gpm of pumping capacity (for a dry-year production capacity of 3,777 AFY). VWC is pursuing the installation of treatment at Well 201 with a completion date projected by 2017. In order to accommodate longer-term dry-year needs, NCWD, CLWA and the other retail water purveyors are planning to install additional Saugus wells in the vicinity of Magic Mountain. These wells will be designed to have a combined capacity of 14,000 afy. Returned capacity from VWC Well 201 and the additional capacity from new Saugus wells will be needed to achieve 35,000 afy in certain dry years.

3.4 Additional Recycled Water

As discussed in Section 2.3, the 2015 Recycled Water Master Plan (RWMP) was recently completed and the associated Programmatic Environmental Impact Report (PEIR) is currently posted for public comment. Various recycled water phases are included in the RWMP and the potential of a groundwater recharge project.

Additional increases in recycled water beyond 1,600 afy would require a new contract with Santa Clarita Valley Sanitation District (SCVSD). Increases would also be dependent on the amount of effluent available after required discharge to the Santa Clara River meets anticipated instream flow requirements to protect biological resources in the river. Specifically, the use of recycled water is limited and can be affected by various state water laws, codes, and regulatory and court decisions.

Currently, the SCVSD discharges approximately 19.5 MGD of tertiary treated recycled water in to the Santa Clara River (SCR). Based on the information provided in the SCVSD's Chloride Compliance Facilities Plan (Facilities Plan) and the Final Environmental Impact Report (FEIR) for the Facilities Plan, SCVSD would discharge approximately 13 MGD of recycled water to the SCR. The 2015 RWMP assumes this amount will be met by maintaining 8.5 MGD (9,520 afy) of discharge to the river by the Valencia Water Reclamation Plant (VWRP) and 4.5 MGD (5,040 afy) of discharge from the Saugus WRP (SWRP). Recycled water supplies that are not obligated to be discharged to the river have been identified as supplies that could be available for non-potable reuse within the Santa Clarita Valley. The Facilities Plan and FEIR were challenged in court by the Affordable Clean Water Alliance (ACWA) under the basis that the SCVSD did not adequately analyze the environmental impacts of the minimum recycled water

discharge requirement. The trial court did not determine the minimum discharge of 13 MGD would necessarily impact the environment (specifically the federally protected unarmored threespine stickleback fish species). The court ruled on March 9, 2016, the SCVSD's technical analyses regarding the discharge of 13 MGD require additional detail and on June 2, 2016 the Superior Court issued a subsequent ruling that the SCVSD cannot take further action on its modified chloride compliance report until it completes the additional environmental review. Such studies may result in higher or lower quantities of water being available.

Water Reuse Reconnaissance Study: NCWD, CLWA and the other water purveyors have also completed a "Water Reuse Reconnaissance Study" (Study) (Recon Study, 2015) to, among other things; determine the most beneficial way to reuse recycled water in the SCV. The Study was designed to provide a planning basis from which to move forward with one or more water supply augmentation strategies to provide between 5,000 afy and 15,000 afy of additional supply to the Santa Clarita Valley. The Study consisted of a comprehensive data review, groundwater basin modeling and analyses, and water strategy concepts development. The following four concepts were analyzed; (1) groundwater replenishment with recycled water, (2) aquifer storage and recovery, (3) enhanced stormwater capture, and (4) groundwater pumping redistribution. The following two concepts were recommended for further development and feasibility analysis/facility planning: (1) groundwater replenishment with recycled water, and (2) aquifer storage and recovery (ASR) of imported water. If these two project concepts can be fully implemented, the additional yield of groundwater resources is estimated to be on the order of 10,000 afy. In addition, ongoing replenishment of the alluvial aquifer will allow groundwater levels to remain higher and should allow for more normal pumping during dry-year conditions. Further feasibility analysis and facility planning is currently being conducted.

3.5 Water Conservation

In the 2015 UWMP, water demands were analyzed under two scenarios. One scenario assumed water conservation savings from passive conservation measures (i.e., plumbing codes), and the other looked at savings based on both passive and active water conservation programs as laid out in the Santa Clarita Valley Water Use Efficiency Strategic Plan. Therefore, it is critical, if the Proposed Project is to avoid significant cumulative impacts to water supply, that it incorporates water conservation measures into the design.

The Proposed Project plans to implement a number of water conservation measures that were not included in the original design for the approved Tesoro del Valle Development. For example, all appliances such as showerheads, lavatory faucets and sink faucets shall comply with efficiency standards set forth in Title 20, California Administrative Code Section 1604(f). Title 24 of the California Administrative Code Section 1606(b) prohibits the installation of fixtures unless the manufacturer has certified to the California Energy Conservation compliance with the flow rate standards. Low flush toilets shall be installed as specified in California State Health and Safety Code Section 17921.3. Irrigation shall be designed, installed, operated and maintained to prevent the waste of water. "Drip" irrigation and other water conservation techniques such as soil moisture sensors and automatic irrigation systems shall be incorporated in the parks and publicly maintained landscape areas. Landscaping shall emphasize, drought-tolerant vegetation (xeriscaping). Plants of similar water use shall be grouped to reduce over-irrigation of low-water-using plants. Those areas not designed in xeriscape shall be gauged to receive irrigation using the minimal requirements. Additionally, the Proposed Project must comply with landscape efficiency measures of the updated Model Water Efficient Landscape Ordinance updated by the State as required by AB 1881 and Executive Order B-29-15 issued by Governor Jerry Brown on April 1, 2015.

The Proposed Project will comply with all conservation requirements imposed by NCWD on its existing customers and at a minimum the Proposed Project must comply with the County of Los Angeles Department of Public Works Title 31 concerning drought tolerant landscaping.

20X2020 Water Conservation Plan: In February 2008, Governor Schwarzenegger introduced a seven-part comprehensive plan for improving the Sacramento-San Joaquin Delta. As part of this effort, the Governor directed state agencies to develop a plan to reduce statewide per capita urban water use by 20 percent by the year 2020. NCWD, CLWA and the other water purveyors have recently completed a 2015 Water Use Efficiency Strategic Plan (WUESP, 2015) which provides a detailed update of the programs necessary to achieve the SCV's water conservation goals and guides the future investment in water conservation. See Table 3-1 below for NCWD's current 20X2020 target requirement versus actual conservation savings.

Table 3-1
20X2020 Target vs. Actual Conservation Savings

	Target[(1)]	Actual[(2)]
Gallons per Capita per Day	190	163
Percentage	20%	31%

Notes:
(1) Target to be achieved by the year 2020
(2) Results as of November 2016

Emergency Drought Regulations: In April of 2015 California Governor Jerry Brown issued an Executive Order (Order) in regards to the current drought. The Order required, for the first time in the state's history, mandatory conservation for all residents and directed several state agencies, including the State Water Board (Board), to take immediate action to safeguard the state's potable urban water supplies in preparation for a possible fifth year of drought.

To reduce water use by 25 percent statewide, the regulation adopted by the Board placed each urban water supplier into one of eight tiers which are assigned a conservation standard, ranging between four percent and 36 percent. NCWD was required to cut its usage by 28 percent between June 1, 2015 and February 28, 2016 over the same period of 2013. In May 2016, the Board revised the Emergency Drought Regulations per the May 9, 2016 Executive Order B-37-16 issued by Governor Brown. This Order and subsequent revised emergency regulations (extended through January 2017) recognize the differing water supply conditions for many communities. The revised emergency regulations allowed for urban water suppliers to "self-certify" supply reliability for three additional years of drought. In addition to the urban water supplier's self-certification, wholesale water providers (i.e., CLWA) were required to identify sources of supply for their respective urban water suppliers. NCWD, CLWA, and the other local purveyors identified enough sources of supply to meet the expected demand per the emergency regulations (Article 22.5 Drought Emergency Water Conservation.) In addition, EO B-37-16 requires the implementation of permanent conservation measures. Five state agencies (the Department of Water Resources, the State Water Resources Control Board, the California Public Utilities Commission, the California Department of Food and Agriculture, and the California Energy Commission), collectively referred to as EO Agencies have prepared a draft document titled "*Making Water Conservation a California Way of Life"*, which lays out a plan to implement this order. On April 7, 2017, Governor Brown issued Executive Order B-40-17, lifting California's drought emergency in all but four counties (Fresno, Kings, Tulare, and Tuolumne). In addition, the Executive Order pertaining to *"Making Water Conservation a California Way of*

Life" would remain in effect and the State Water Resources Control Board and California Department of Water Resources shall continue the development of permanent prohibitions on wasteful water use and requirements for reporting water use by urban water agencies.

4.0 WATER USE

4.1 Historical Water Use

NCWD's water use for the last 37 years is shown in Table 4-1. Table 4-2 illustrates the region's water use for the same period.

Table 4-1
Historical Water Use for Newhall County Water District
(acre-feet) (SCVWR, 2016)

Year	*State Water Project*	*Alluvium*	*Saugus Formation*	**Total**
1980	0	1,170	2,363	**3,533**
1981	0	1,350	2,621	**3,971**
1982	0	1,178	2,672	**3,850**
1983	0	1,147	2,787	**3,934**
1984	0	1,549	2,955	**4,504**
1985	0	1,644	3,255	**4,899**
1986	0	1,842	3,548	**5,390**
1987	22	2,127	3,657	**5,806**
1988	142	2,283	4,041	**6,466**
1989	428	2,367	4,688	**7,483**
1990	796	1,936	4,746	**7,478**
1991	675	1,864	4,994	**7,533**
1992	802	1,994	5,160	**7,956**
1993	1,075	1,977	5,068	**8,120**
1994	906	2,225	5,103	**8,234**
1995	1,305	1,675	4,775	**7,755**
1996	1,213	1,803	4,871	**7,887**
1997	1,324	2,309	5,168	**8,801**
1998	1,769	1,761	4,557	**8,087**
1999	5,050	1,676	2,622	**9,348**
2000	6,024	1,508	2,186	**9,718**
2001	5,452	1,641	2,432	**9,525**
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	5,129*	**9,676**
2012	2,965	2,631	4,873*	**10,469**
2013	4,488	1,405	4,668*	**10,561**
2014	3,942	1,383	4,520*	**9,845**
2015	2,478	1,131	4,491*	**8,100**
2016	2,876	626	4,758*	**8,257**

*Includes treated groundwater sold to NCWD by CLWA from the restoration of Saugus Well Nos. 1 and 2.

Table 4-2
Historical Total Water Use for the Santa Clarita Valley Region (acre-feet) (SCVWR, 2016)

Year	*State Water Project*	*Alluvium*	*Saugus Formation*	*Recycled Water*	**Total**
1980	1,125	31,456	4,589	-	**37,170**
1981	5,816	30,793	4,970	-	**41,579**
1982	9,659	21,868	4,090	-	**35,617**
1983	9,185	20,286	3,852	-	**33,323**
1984	10,996	27,318	4,449	-	**42,763**
1985	11,823	25,347	4,715	-	**41,885**
1986	13,759	24,205	5,485	-	**43,449**
1987	16,285	22,642	5,561	-	**44,488**
1988	19,033	21,648	6,928	-	**47,609**
1989	21,618	23,721	7,759	-	**53,098**
1990	21,613	23,876	8,861	-	**54,350**
1991	7,968	27,187	14,917	-	**50,072**
1992	14,898	27,591	10,924	-	**53,413**
1993	13,836	30,126	10,610	-	**54,572**
1994	14,700	33,133	12,025	-	**59,858**
1995	17,002	34,464	8,560	-	**60,026**
1996	18,873	38,438	8,186	-	**65,497**
1997	23,215	39,599	7,745	-	**70,559**
1998	20,266	36,648	5,555	-	**62,469**
1999	27,302	43,406	3,716	-	**74,424**
2000	32,582	39,649	4,080	-	**76,311**
2001	35,369	37,273	4,140	-	**76,782**
2002	41,768	38,103	5,160	-	**85,031**
2003	44,419	33,577	4,207	700	**82,904**
2004	47,205	33,757	6,503	448	**87,914**
2005	38,034	38,648	6,453	438	**83,573**
2006	40,646	43,061	7,312	419	**91,438**
2007	45,332	38,773	7,684	470	**92,260**
2008	41,705	41,716	6,918	311	**90,650**
2009	38,546	39,986	7,678	328	**86,538**
2010	30,578	41,159	8,092	336	**80,165**
2011	30,808	40,748	8,273*	373	**80,244**
2012	35,558	40,701	8,719*	428	**85,406**
2013	43,281	36,892	9,038*	400	**89,611**
2014	33,092	36,896	10,601*	474	**81,063**
2015	24,148	30,692	11,280*	450	**66,570**
2016	31,130	28,849	11,839*	507	**72,325**

*Includes treated groundwater sold by CLWA from the restoration of Saugus Well Nos. 1 and 2

4.2 Water Use of the Proposed Project

Tesoro del Valle Phases B and C Water Demand: In 2016, NCWD's service area-wide demands were approximately 8,260 af (SCVWR, 2016). The estimated water demand for the Proposed Project is approximately 700 afy and NCWD has accounted for that water demand in its planning documents prepared since 1992.

The Proposed Project involves the buildout of Phases B and C of the Tesoro de Valle Project site. The project's grading footprint impacts 393.6 acres on which 820 homes would be constructed, consisting of 455 single-family detached homes and 365 age-qualified senior homes. Additionally, the project consists of the development of private parks and recreation areas; public and private trails; public and private open space; public and private roadways; and utility infrastructure. Residential indoor demands are estimated to be 182 afy, residential outdoor irrigation to be 102 afy and non-residential parks and open space demands are estimated at 412 afy, for a total demand of 697 afy (Table 4-3). The total demand of 697 afy includes temporary slope irrigation and complies with AB 1881 (2006) and sets a Maximum Applied Water Allowance (MAWA). The total net demand required for this project is 639 afy, which is calculated by subtracting out the temporary slope irrigation and then adding in system losses of 4.5% to this subtotal (Table 4-3).

Table 4-3
Tesoro del Valle Phases B and C Water Demand Table

LAND USE	Dwelling Units (DU)	Area (acre)	Demand Factor (af/DU)	Average Demand (afy)
INDOOR Single Family Residential				
Low Density (Residential Lots)	455		0.27	125
Low/Medium Density (Senior Villa Lots)	365		0.16	57
	820			**182**
OUTDOOR Residential and Non-Residential				
Residential Irrigation	820		0.12	102
Non-Residential Irrigation		173	2.38	412
	820	**173**		**514**
Total Demand				**697**
Temporary Slope Irrigation				86
Total Demand Subtotal (Less Temporary Slope Irrigation)				**611**
Water Loss (4.5%) of Total Demand Subtotal				28
Total Net Demand				**639**

4.3 Future Water Use

The amount of water delivered by NCWD in the recent and future projections by customer are summarized in Table 4-4 below. Table 4-5 summarizes the region's projected water demand as discussed in the 2015 Urban Water Management Plan.

Table 4-4
NCWD Current and Projected Water Deliveries by Customer Type[a][b]
(2015 UWMP)

Year	Water Use Sector	Single Family Residential	Multi-Family Residential	Commercial	Industrial	Institutional	Irrigation	Other	Non-Revenue Water[c]	Total
2015	No. of accounts	8,700	300	400	0	100	300	100	-	9,900
	Deliveries (AF)	5,500	1,300	400	100	100	2,000	0	600	10,000
2020	No. of accounts	9,200	300	600	0	100	300	200	-	10,700
	Deliveries (AF)	5,200	1,400	400	300	100	2,100	0	700	10,100
2025	No. of accounts	10,000	400	800	0	100	400	200	-	11,900
	Deliveries (AF)	5,500	1,300	500	300	100	2,200	100	700	10,700
2030	No. of accounts	10,900	400	900	0	100	400	300	-	13,000
	Deliveries (AF)	5,800	1,300	600	300	100	2,300	100	800	11,200
2035	No. of accounts	11,800	400	1,100	0	100	400	400	-	14,200
	Deliveries (AF)	6,100	1,300	600	300	100	2,500	100	800	11,800
2040	No. of accounts	12,700	400	1,200	0	100	500	400	-	15,300
	Deliveries (AF)	6,500	1,300	700	300	100	2,800	100	800	12,600
2045	No. of accounts	13,600	400	1,400	0	100	500	500	-	16,500
	Deliveries (AF)	6,900	1,300	800	300	100	3,000	100	900	13,400
2050	No. of accounts	14,500	400	1,500	0	100	600	500	-	17,600
	Deliveries (AF)	7,400	1,300	900	300	100	3,000	100	900	14,200

Notes:
(a) Values rounded to the nearest hundred.
(b) From MWM 2016.
(c) NRW is water that has been produced and is "lost" before it reaches the customer. Losses can be real losses (through leaks, sometimes also referred to as physical losses) or apparent losses (for example through theft or metering inaccuracies).

Table 4-5
Regional Projected Water Demands [a][b][c][d][e]

	2020	2025	2030	2035	2040	2045	2050	Annual Increase
Water Demands								
LACWWD 36[f]	2,300	2,700	3,100	3,500	3,900	4,300	4,700	2.5%
NCWD	10,100	10,700	11,200	11,800	12,600	13,400	14,200	1.2%
SCWD	28,400	29,100	29,900	32,400	32,400	33,900	36,000	0.8%
VWC[g]	28,100	32,100	36,600	40,000	39,600	39,300	39,000	1.1%
Total Demand	68,900	74,600	80,800	86,100	88,500	90,900	93,900	1.10%

Notes:
(a) Values rounded to the nearest hundred.
(b) From MWM 2016.
(c) Reflects existing and projected demands in CLWA service area only. CLWA's Annexation Policy requires annexing parties to provide additional fully reliable supplies.
(d) Demands exclude non-purveyor demands. Similarly, supplies evaluated in this UWMP exclude non-purveyor supplies.
(e) Demands include savings from plumbing code and standards and active conservation as assumed in the 2015 WUESP.
(f) LACWWD 36 future demand was based on growth projection factor and not on land use as was done for the three other purveyors. LACWWD 36 is included for purposes of providing regional completeness; however, it is not required to prepare an UWMP.
(g) Refer to GSI 2016 for detail on specific future developments included in the analysis.

5.0 NORMAL, SINGLE-DRY, AND MULTIPLE-DRY YEAR PLANNING

The following sections summarize the existing and planned supplies and how they will be utilized during Normal, Single-Dry, and Multiple-Dry Years. The text and tables were taken from the 2015 UWMP.

5.1 Summary of Existing and Planned Supplies

A summary of existing and planned water supplies is presented in Table 5-1 below. Table 5-1 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 NCWD, CLWA and the other water purveyors the option of drawing on multiple sources of supply in response to changing conditions such as varying weather patterns (average/normal years, single dry years, multiple dry years), fluctuations in delivery amounts of SWP water, natural disasters and contamination with substances such as perchlorate. It is the stated goal of NCWD, 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 planning period in combination with conservation of non-essential demand during certain dry years, the water supply plan described in the 2015 UWMP successfully achieves this goal.

TABLE 5-1
SUMMARY OF CURRENT AND PLANNED WATER SUPPLIES AND BANKING PROGRAMS[a]

		2015	2020	2025	2030	2035	2040	2045	2050
Existing Supplies									
Existing Groundwater[b]									
Alluvial Aquifer		24,100	24,100	24,100	24,100	24,100	24,100	24,100	24,100
Saugus Formation		7,445	7,445	7,445	7,445	7,445	7,445	7,445	7,445
	Total Groundwater	**31,545**	**31,545**	**31,545**	**31,545**	**31,545**	**31,545**	**31,545**	**31,545**
Recycled Water[c]	**Total Recycled**	**450**	**450**	**450**	**450**	**450**	**450**	**450**	**450**
Imported Water									
State Water Project[d]		59,000	58,800	58,500	58,300	58,100	58,100	58,100	58,100
Flexible Storage Accounts[e]		6,060	6,060	6,060	4,680	4,680	4,680	4,680	4,680
Buena Vista-Rosedale		11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000
Nickel Water -Newhall Land[f]		1,607	1,607	1,607	1,607	1,607	1,607	1,607	1,607
Yuba Accord Water[g]		1,000	1,000	1,000	-	-	-	-	-
	Total Imported	**78,667**	**78,467**	**78,167**	**75,587**	**75,387**	**75,387**	**75,387**	**75,387**
Existing Banking Programs									
Rosedale Rio-Bravo[h]		3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Semitropic[h]		5,000	5,000	5,000	5,000	5,000	5,000	5,000	-
Semitropic -Newhall Land[h][i]		4,950	4,950	4,950	4,950	4,950	4,950	4,950	4,950
Rosedale Rio-Bravo Exchange[j]		9,500	9,500						
West Kern Exchange[j]		500	500						
	Total Bank/Exchange	**22,950**	**22,950**	**12,950**	**12,950**	**12,950**	**12,950**	**12,950**	**7,950**
Total Existing Supplies		**133,612**	**133,412**	**123,112**	**120,532**	**120,332**	**120,332**	**120,332**	**115,332**
Planned Supplies									
Future Groundwater[k]									
Alluvial Aquifer[l]		-	2,000	4,000	5,000	7,000	7,000	7,000	7,000
Saugus (Restored)[m]		-	3,230	3,230	3,230	3,230	3,230	3,230	3,230
Saugus Formation (New)[n]		-	-	-	-	-	-	-	-
	Total Groundwater	-	**5,230**	**7,230**	**8,230**	**10,230**	**10,230**	**10,230**	**10,230**

TABLE 5-1 CON'T
SUMMARY OF CURRENT AND PLANNED WATER SUPPLIES AND BANKING PROGRAMS[a]

Recycled Water[o]	**Total Recycled**	-	**565**	**5,156**	**7,627**	**9,604**	**9,604**	**9,604**	**9,604**
Planned Banking Supplies									
Rosedale Rio-Bravo Bank(p)		-	7,000	7,000	17,000	17,000	17,000	17,000	17,000
Additional Bank(q)		-	-	-	-	-	-	-	5,000
	Total Banking	-	**7,000**	**7,000**	**17,000**	**17,000**	**17,000**	**17,000**	**22,000**
Total Planned Supplies		-	**12,795**	**19,386**	**32,857**	**36,834**	**36,834**	**36,834**	**41,834**

Notes:

(a) The values shown under "Existing Supplies" and "Planned Supplies" are projected to be available in average/normal years to CLWA and the retail water purveyors. The values shown under "Existing Banking and Exchange Programs" and "Planned Banking Programs" are the maximum capacity of program withdrawals, and would typically be used only during dry years.

(b) Existing groundwater supplies represent the quantity of groundwater anticipated to be pumped with existing wells. As indicated in Tables 3-8 and 3-9, and in Tables 3-4 and 3-5 of the 2009 Groundwater Basin Yield Analysis, individual purveyors may have well capacity in excess of quantities shown in this table. As indicated in Table 3-10, existing and planned groundwater pumping remain within the groundwater operating plan shown on Table 3-5.

(c) Existing recycled water is actual use in 2015. CLWA currently has 1,600 AFY under contract.

(d) SWP supplies are based on average deliveries from DWR's 2015 DCR.

(e) Includes both CLWA and Ventura County entities flexible storage accounts. Extended term of agreement with Ventura County entities expires after 2025.

(f) Existing Newhall Land supply committed under approved Newhall Ranch Specific Plan. Assumed to be transferred to CLWA or VWC during Newhall Ranch development, and available for annual purchase prior to that.

(g) Supply shown is amount available in dry periods, after delivery losses. This supply would typically be used only during dry years and is available through 2025.

(h) Supplies shown are annual amounts that can be withdrawn using existing firm withdrawal capacity and would typically be used only during dry years.

(i) Existing Newhall Land supply. Assumed to be transferred to CLWA or VWC during Newhall Ranch development, with firm withdrawal capacity made available to CLWA prior to that.

(j) Supplies shown are totals recoverable under the exchange and would typically be recovered only during dry years.

(k) Planned groundwater supplies represent new groundwater well capacity that may be required by an individual purveyor's production objectives in the Alluvial Aquifer and the Saugus Formation. When combined with existing purveyor and non-purveyor groundwater supplies, total groundwater production remains within the sustainable ranges identified in Table 3-8 of 2009 Groundwater Basin Yield Analysis. As indicated in Table 3-10, existing and planned groundwater pumping remain within the basin operating plan shown on Table 3-5.

(l) Represents a shift in current agricultural pumping by Newhall Land and Farming to VWC due to the development of Newhall Ranch.

(m) VWC Well 201 is planned to be returned to service by 2017 with treatment under a permit from the DDW.

(n) Up to four new and replacement wells are planned to provide additional dry-year supply and would typically be used only during dry years.

(o) Planned recycled water is total projected recycled water demand from Table 4-3 less existing use. Recycled water demand projection is based on implementation of complete build-out system described in the RWMP Update and reflects demands that can cost-effectively be served. Refer to Section 4, including Section 4.4, for further discussion and information regarding factors having the potential to affect the reliability of recycled water supplies.

(p) Firm withdrawal capacity under existing Rosedale Rio-Bravo Banking Program to be expanded by 7,000 AFY by 2017 (for a combined total of 10,000 AFY) and an additional 10,000 AFY by 2030.

(q) Additional banking program with firm withdrawal capacity of 5,000 AFY by 2050.

5.2 Normal Water Year

Table 5-2 summarizes the water suppliers' supplies available to meet demands over the planning period during an average/normal year. As presented in the table, the water suppliers' water supply is broken down into existing and planned water supply sources, including wholesale (imported) water, local supplies and banking programs. Demands are shown with and without the urban demand reduction resulting from SBX7-7 conservation objectives.

TABLE 5-2
PROJECTED AVERAGE/NORMAL YEAR SUPPLIES AND DEMANDS (AF)

	2020	2025	2030	2035	2040	2045	2050
Existing Supplies							
Existing Groundwater[a]							
Alluvial Aquifer	24,100	24,100	24,100	24,100	24,100	24,100	24,100
Saugus Formation	7,445	7,445	7,445	7,445	7,445	7,445	7,445
Total Groundwater	**31,545**	**31,545**	**31,545**	**31,545**	**31,545**	**31,545**	**31,545**
Recycled Water[b]	450	450	450	450	450	450	450
Imported Water							
State Water Project[c]	58,800	58,500	58,300	58,100	58,100	58,100	58,100
Flexible Storage Accounts[d]	-	-	-	-	-	-	-
Buena Vista-Rosedale	11,000	11,000	11,000	11,000	11,000	11,000	11,000
Nickel Water -Newhall Land[e]	1,607	1,607	1,607	1,607	1,607	1,607	1,607
Yuba Accord[d]	-	-	-	-	-	-	-
Total Imported	**71,407**	**71,107**	**70,907**	**70,707**	**70,707**	**70,707**	**70,707**
Banking and Exchange Programs[d]							
Rosedale Rio-Bravo Bank	-	-	-	-	-	-	-
Semitropic Bank	-	-	-	-	-	-	-
Semitropic -Newhall Land Bank	-	-	-	-	-	-	-
Rosedale Rio-Bravo Exchange	-	-	-	-	-	-	-
West Kern Exchange	-	-	-	-	-	-	-
Total Banking	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Existing Supplies	**103,402**	**103,102**	**102,902**	**102,702**	**102,702**	**102,702**	**102,702**
Planned Supplies							
Future Groundwater[f]							
Alluvial Aquifer[g]	2,000	4,000	5,000	7,000	7,000	7,000	7,000
Saugus Formation (Restored)[h]	3,230	3,230	3,230	3,230	3,230	3,230	3,230
Saugus Formation (New)[i]							
Total Groundwater	**5,230**	**7,230**	**8,230**	**10,230**	**10,230**	**10,230**	**10,230**

TABLE 5-2 CON'T
PROJECTED AVERAGE/NORMAL YEAR SUPPLIES AND DEMANDS (AF)

	2020	2025	2030	2035	2040	2045	2050
Recycled Water[j]	565	5,156	7,627	9,604	9,604	9,604	9,604
Banking Programs[d]	-	-	-	-	-	-	-
Total Planned Supplies	**5,795**	**12,386**	**15,857**	**19,834**	**19,834**	**19,834**	**19,834**
Total Existing and Planned Supplies	**109,197**	**115,488**	**118,759**	**122,536**	**122,536**	**122,536**	**122,536**
Demands[k]							
Demand w/ Plumbing Code Savings	76,700	84,800	92,700	100,000	103,400	106,800	110,400
Demand w/ Plumbing Code Savings and Active Conservation	68,900	74,600	80,800	86,100	88,500	90,900	93,900

Notes:

(a) Existing groundwater supplies represent the quantity of groundwater anticipated to be pumped with existing wells. As indicated in Tables 3-8 and 3-9, and in Tables 3-4 and 3-5 of the 2009 Groundwater Basin Yield Analysis, individual purveyors may have well capacity in excess of quantities shown in this table. As indicated in Table 3-10, existing and planned groundwater pumping remain within the groundwater operating plan shown on Table 3-5.

(b) Existing recycled water is actual use in 2015.

(c) SWP supplies from Table 3-2, based on average deliveries from 2015 DCR..

(d) Not needed in average/normal years.

(e) Existing Newhall Land supply committed under approved Newhall Ranch Specific Plan. Assumed to be transferred to CLWA or VWC during Newhall Ranch development, and available for annual purchase prior to that

(f) Planned groundwater supplies represent new groundwater well capacity that may be required by an individual purveyor's production objectives in the Alluvial Aquifer and the Saugus Formation. As indicated in Table 3-10, existing and planned groundwater pumping remain within the groundwater operating plan shown on Table 3-5.

(g) Represents a shift in current agricultural pumping by Newhall Land and Farming to VWC due to the development of Newhall Ranch.

(h) VWC Well 201 is planned to be returned to service by 2017 with treatment under a permit from the DDW.

(i) Up to four new and replacement wells are planned to provide additional dry-year supply and would typically be used only during dry years.

(j) Planned recycled water is total projected recycled water demand from Table 4-3 less existing use from the 2015 UWMP.

(k) Demands are Regional Summary demands from the 2015 UWMP.

5.3 Single-Year Dry Year

The water supplies and demands for the water suppliers over the planning period were analyzed in the event that a single-dry year. Single-dry year projects SWP supplies based on the worst case allocation of 5% which occurred in 2014. Table 5-3 summarizes the existing and planned supplies available to meet demands during a single-dry year. Demand projections are shown with plumbing code savings and with plumbing code savings and active conservation.

TABLE 5-3
PROJECTED SINGLE-YEAR DRY YEAR SUPPLIES AND DEMANDS (AF)

	2020	2025	2030	2035	2040	2045	2050
Existing Supplies							
Existing Groundwater[a]							
Alluvial Aquifer	20,350	20,350	20,350	20,350	20,350	20,350	20,350
Saugus Formation	19,865	19,865	19,865	19,865	19,865	19,865	19,865
Total Groundwater	**40,215**	**40,215**	**40,215**	**40,215**	**40,215**	**40,215**	**40,215**
Recycled Water[b]	450	450	450	450	450	450	450
Imported Water							
State Water Project[c]	4,800	4,800	4,800	4,800	4,800	4,800	4,800
Flexible Storage Accounts[d]	6,060	6,060	4,680	4,680	4,680	4,680	4,680
Buena Vista-Rosedale	11,000	11,000	11,000	11,000	11,000	11,000	11,000
Nickel Water -Newhall Land[e]	1,607	1,607	1,607	1,607	1,607	1,607	1,607
Yuba Accord[f]	-	-	-	-	-	-	-
Total Imported	**23,467**	**23,467**	**22,087**	**22,087**	**22,087**	**22,087**	**22,087**
Banking Programs							
Rosedale Rio-Bravo Bank[g]	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Semitropic Bank[h]	5,000	5,000	5,000	5,000	5,000	5,000	-
Semitropic -Newhall Land Bank[i]	4,950	4,950	4,950	4,950	4,950	4,950	4,950
Rosedale Rio-Bravo Exchange[j]	-	-	-	-	-	-	-
West Kern Exchange[j]	-	-	-	-	-	-	-
Total Banking	**12,950**	**12,950**	**12,950**	**12,950**	**12,950**	**12,950**	**7,950**
Total Existing Supplies	**77,082**	**77,082**	**75,702**	**75,702**	**75,702**	**75,702**	**70,702**
Planned Supplies							
Future Groundwater[k]							
Alluvial Aquifer[l]	2,000	4,000	5,000	7,000	7,000	7,000	7,000
Saugus Formation (Restored Wells)[m]	3,775	3,775	3,775	3,775	3,775	3,775	3,775
Saugus Formation (New Wells)[n]	9,560	9,560	9,560	9,560	9,560	9,560	9,560
Total Groundwater	**15,335**	**17,335**	**18,335**	**20,335**	**20,335**	**20,335**	**20,335**

TABLE 5-3 CON'T
PROJECTED SINGLE-YEAR DRY YEAR SUPPLIES AND DEMANDS (AF)

	2020	2025	2030	2035	2040	2045	2050
Recycled Water[o]	565	5,156	7,627	9,604	9,604	9,604	9,604
Planned Banking Programs							
Rosedale Rio-Bravo Bank[p]	7,000	7,000	17,000	17,000	17,000	17,000	17,000
Additional Bank[q]	-	-	-	-	-	-	5,000
Total Banking	**7,000**	**7,000**	**17,000**	**17,000**	**17,000**	**17,000**	**22,000**
Total Planned Supplies	**22,900**	**29,491**	**42,962**	**46,939**	**46,939**	**46,939**	**51,939**
Total Existing and Planned Supplies	**99,982**	**106,573**	**118,664**	**122,641**	**122,641**	**122,641**	**122,641**
Demands[r]							
Demand w/ Plumbing Code Savings	84,400	93,300	102,000	110,000	113,700	117,500	121,400
Demand w/ Plumbing Code Savings and Active Conservation	75,800	82,100	88,900	94,700	97,400	100,000	103,300

Notes:
(a) Existing groundwater supplies represent the quantity of groundwater anticipated to be pumped with existing wells. As indicated in Tables 3-8 and 3-9 and Tables 3-4 and 3-5 of the 2009 Groundwater Basin Yield Analysis, individual purveyors may have well capacity in excess of quantities shown in this table. As indicated in Table 3-11, existing and planned groundwater pumping remain within the groundwater operating plan shown on Table 3-5.
(b) Existing recycled water is actual use in 2015.
(c) SWP supplies from Table 3-2, based on worst case actual allocation of 2014
(d) Includes both CLWA and Ventura County entities flexible storage accounts. Extended term of agreement with Ventura County entities expires after 2025.
(e) Existing Newhall Land supply committed under approved Newhall Ranch Specific Plan. Assumed to be transferred to CLWA or VWC during Newhall Ranch development, and available for annual purchase prior to that.
(f) For single dry year, it was assumed that no water would be available under Yuba Accord.
(g) CLWA has an existing firm withdrawal capacity of 3,000 AFY and a storage capacity of 100,000 AF. There is currently 94,178 AF of recoverable water in storage
(h) CLWA has a maximum firm withdrawal capacity of 5,000 AFY and a storage capacity of 15,000 AF. Additionally, CLWA has 35,970 AF of recoverable water stored which may be recovered using this withdrawal capacity.
(i) Newhall Land has a maximum withdrawal capacity of 4,950 AFY and a storage capacity of 55,000 AF. At the end of 2015 there was 32,507 AF of recoverable water. This is an existing Newhall Land supply, assumed to be transferred to CLWA or VWC during Newhall Ranch development, with firm withdrawal capacity made available to CLWA prior to that. Delivery of stored water from this program is assumed available to VWC.
(j) Exchange recovery assumed to be unavailable in single dry year. Term of exchange program is through 2021.
(k) Planned groundwater supplies represent supplies from new groundwater wells that may be required by an individual purveyor's production objectives in the Alluvial Aquifer and the Saugus Formation, including 3,775 AFY of restored production from VWC Well 201 and approximately 9,560 AFY from replacement and new Saugus Formation wells. When combined with existing purveyor and non-purveyor groundwater supplies, total groundwater production is consistent with the 1977 single dry-year levels identified in Table 3-8 of the 2009 Groundwater Basin Yield Analysis. As indicated in Table 3-11, existing and planned groundwater pumping remain within the groundwater operating plan shown on Table 3-5.
(l) Represents a shift in current agricultural pumping by Newhall Land and Farming to VWC due to the development of Newhall Ranch.
(m) VWC Well 201 is planned to be returned to service by 2017 with treatment under a permit from the DDW.
(n) Up to four new and replacement wells are planned to provide additional dry-year supply and would typically be used only during dry years.
(o) Planned recycled water is total projected recycled water demand from Table 4-3 less existing use. Refer to Section 4, including Section 4.4, for further discussion and information regarding factors having the potential to affect the availability of recycled water supplies.
(p) Firm withdrawal capacity under existing Rosedale Rio-Bravo Banking Program to be expanded by 7,000 AFY by 2017 (for a total of 10,000 AFY) and an additional 10,000 AFY by 2030.
(q) Additional banking program with firm withdrawal capacity of 5,000 AFY by 2050.
(r) Demands are Regional Summary demands from Table 2-28. Includes a 10 percent increase in demand during dry years.

5.4 Four-Year Dry Year

The water supplies and demands for the water suppliers' water supply over the planning period were analyzed in the event that a four-year multiple-dry year event occurs, similar to the drought that occurred during the years 1931 to 1934. Table 5-4 summarizes the existing and planned supplies available to meet demands during multiple-dry years. Demand projections are shown with plumbing code savings and with plumbing code savings and active conservation.

TABLE 5-4
PROJECTED FOUR-YEAR DRY YEAR SUPPLIES AND DEMANDS (AF)

	2020	2025	2030	2035	2040	2045	2050
Existing Supplies							
Existing Groundwater[a]							
Alluvial Aquifer	20,350	20,350	20,350	20,350	20,350	20,350	20,350
Saugus Formation	15,825	15,825	15,825	15,825	15,825	15,825	15,825
Total Groundwater	**36,175**	**36,175**	**36,175**	**36,175**	**36,175**	**36,175**	**36,175**
Recycled Water[b]	450	450	450	450	450	450	450
Imported Water							
State Water Project[c]	31,400	31,400	31,400	31,400	31,400	31,400	31,400
Flexible Storage Accounts[d]	1,515	1,515	1,170	1,170	1,170	1,170	1,170
Buena Vista-Rosedale	11,000	11,000	11,000	11,000	11,000	11,000	11,000
Nickel Water -Newhall Land[e]	1,607	1,607	1,607	1,607	1,607	1,607	1,607
Yuba Accord[f]	1,000	1,000	-	-	-	-	-
Total Imported	**46,522**	**46,522**	**45,177**	**45,177**	**45,177**	**45,177**	**45,177**
Banking and Exchange Programs							
Rosedale Rio-Bravo Bank[g]	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Semitropic Bank[h]	5,000	5,000	5,000	5,000	5,000	5,000	-
Semitropic -Newhall Land Bank[i]	4,950	4,950	4,950	4,950	4,950	4,950	4,950
Rosedale Rio Bravo Exchange[j]	2,375	-	-	-	-	-	-
West Kern Exchange[j]	125	-	-	-	-	-	-
Total Banking /Exchange	**15,450**	**12,950**	**12,950**	**12,950**	**12,950**	**12,950**	**7,950**
Total Existing Supplies	**98,597**	**96,097**	**94,752**	**94,752**	**94,752**	**94,752**	**89,752**
Planned Supplies							
Future Groundwater[k]							
Alluvial Aquifer[l]	2,000	4,000	5,000	7,000	7,000	7,000	7,000
Saugus Formation (Restored)[m]	3,775	3,775	3,775	3,775	3,775	3,775	3,775
Saugus Formation (New)[n]	11,100	11,100	11,100	11,100	11,100	11,100	11,100
Total Groundwater	**16,875**	**18,875**	**19,875**	**21,875**	**21,875**	**21,875**	**21,875**
Recycled Water[o]	565	5,156	7,627	9,604	9,604	9,604	9,604
Planned Banking Programs							
Rosedale Rio-Bravo Bank[p]	7,000	7,000	17,000	17,000	17,000	17,000	17,000
Additional Bank[q]	-	-	-	-	-	-	5,000
Total Planned Banking	**7,000**	**7,000**	**17,000**	**17,000**	**17,000**	**17,000**	**22,000**

TABLE 5-4 CON'T
PROJECTED FOUR-YEAR DRY YEAR SUPPLIES AND DEMANDS (AF)

Total Planned Supplies	**24,440**	**31,031**	**44,502**	**48,479**	**48,479**	**48,479**	**53,479**
Total Existing and Planned Supplies	**123,037**	**127,128**	**139,254**	**143,231**	**143,231**	**143,231**	**143,231**
Demands[r]							
Demand w/ Plumbing Code Savings	84,400	93,300	102,000	110,000	113,700	117,500	121,400
Demand w/ Plumbing Code Savings and Active Conservation	75,800	82,100	88,900	94,700	97,400	100,000	103,300

Notes:

(a) Existing groundwater supplies represent the quantity of groundwater anticipated to be pumped with existing wells. As indicated in Tables 3-8 and 3-9, and in Tables 3-4 and 3-5 of the 2009 Groundwater Basin Yield Analysis, individual purveyors may have well capacity in excess of quantities shown in this table. As indicated in Table 3-12A, existing and planned groundwater pumping remain within the groundwater operating plan shown on Table 3-5.

(b) Existing recycled water is actual use in 2015.

(c) SWP supplies from Table 3-2, based on 1931-1934 supplies from 2015 DCR.

(d) Includes both CLWA and Ventura County entities flexible storage accounts. Extended term of agreement with Ventura County entities expires after 2025.

(e) Existing Newhall Land supply committed under approved Newhall Ranch Specific Plan. Assumed to be transferred to CLWA or VWC during Newhall Ranch development, and available for annual purchase prior to that.

(f) For the multiple-dry year period, it was assumed that CLWA would purchase the maximum it could, an estimated average of 1,000 AFY (after losses) during the four-year period, through 2025.

(g) CLWA has an existing firm withdrawal capacity of 3,000 AFY and a storage capacity of 100,000 AF. There is currently 94,178 AF of recoverable water in storage.

(h) CLWA has a maximum firm withdrawal capacity of 5,000 AFY and a storage capacity of 15,000 AF. Additionally, CLWA has 35,970 AF of recoverable water stored which may be recovered using this withdrawal capacity.

(i) Newhall Land has a maximum withdrawal capacity of 4,950 AFY and a storage capacity of 55,000 AF. At the end of 2015 there was 32,507 AF of recoverable water. This is an existing Newhall Land supply, assumed to be transferred to CLWA or VWC during Newhall Ranch development, with firm withdrawal capacity made available to CLWA prior to that. Delivery of stored water from this program is assumed available to VWC.

(j) Exchange recovery was assumed to occur sometime during the four-year dry period, for an average annual supply of one-fourth of the total recoverable water available (total recoverable is 9,509 AF from Rosedale-Rio Bravo and 500 AF from West Kern exchange programs).

(k) Planned groundwater supplies represent supplies from new groundwater wells that may be required by an individual purveyor's production objectives in the Alluvial Aquifer and the Saugus Formation, including 3,775 AFY of restored production from VWC Well 201 and approximately 11,100 AFY from replacement and new Saugus Formation wells. When combined with existing purveyor and non-purveyor groundwater supplies, total groundwater production is consistent with the 1931-1934 multiple dry-year levels identified in Table 3-8 of the 2009 Groundwater Basin Yield Analysis. As indicated in Table 3-12A, existing and planned groundwater pumping remain within the groundwater operating plan shown on Table 3-5.

(l) Represents a shift in current agricultural pumping by Newhall Land and Farming to VWC due to the development of Newhall Ranch.

(m) VWC Well 201 is planned to be returned to service by 2017 with treatment under a permit from the DDW.

(n) Up to four new and replacement wells are planned to provide additional dry-year supply and would typically be used only during dry years.

(o) Planned recycled water is total projected recycled water demand from Table 4-3 less existing use. Refer to Section 4, including Section 4.4, for further discussion and information regarding factors having the potential to affect the availability of recycled water supplies.

(p) Firm withdrawal capacity under existing Rosedale Rio-Bravo Banking Program to be expanded by 7,000 AFY by 2017 (for a total of 10,000 AFY) and an additional 10,000 AFY by 2030.

(q) Additional banking program with firm withdrawal capacity of 5,000 AFY by 2050.

(r) Demands are Regional Summary demands from Table 2-28. Includes a 10 percent increase in demand during dry years.

5.5 Three-Year Dry Year

The water supplies and demands for the water suppliers' water supply over the planning period were analyzed in the event that a three-year multiple-dry year event occurs, similar to the drought that occurred during the years 1931 to 1934. Table 5-5 summarizes the existing and planned supplies available to meet demands during multiple-dry years. Demand projections are shown with plumbing code savings and with plumbing code savings and active conservation.

TABLE 5-5
PROJECTED THREE-YEAR DRY YEAR SUPPLIES AND DEMANDS (AF)

	2020	2025	2030	2035	2040	2045	2050
Existing Supplies							
Existing Groundwater[a]							
Alluvial Aquifer	20,350	20,350	20,350	20,350	20,350	20,350	20,350
Saugus Formation	15,525	15,525	15,525	15,525	15,525	15,525	15,525
Total Groundwater	**35,875**	**35,875**	**35,875**	**35,875**	**35,875**	**35,875**	**35,875**
Recycled Water[b]	450	450	450	450	450	450	450
Imported Water							
State Water Project[c]	19,800	19,500	19,300	19,000	19,000	19,000	19,000
Flexible Storage Accounts[d]	2,020	2,020	1,560	1,560	1,560	1,560	1,560
Buena Vista-Rosedale	11,000	11,000	11,000	11,000	11,000	11,000	11,000
Nickel Water -Newhall Land[e]	1,607	1,607	1,607	1,607	1,607	1,607	1,607
Yuba Accord[f]	1,000	1,000	-	-	-	-	-
Total Imported	**35,427**	**35,127**	**33,467**	**33,167**	**33,167**	**33,167**	**33,167**
Banking and Exchange Programs							
Rosedale Rio-Bravo Bank[g]	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Semitropic Bank[h]	5,000	5,000	5,000	5,000	5,000	5,000	-
Semitropic -Newhall Land Bank[i]	4,950	4,950	4,950	4,950	4,950	4,950	4,950
Rosedale Rio Bravo Exchange[j]	3,167	-	-	-	-	-	-
West Kern Exchange[j]	167	-	-	-	-	-	-
Total Banking /Exchange	**16,284**	**12,950**	**12,950**	**12,950**	**12,950**	**12,950**	**7,950**
Total Existing Supplies	**88,036**	**84,402**	**82,742**	**82,442**	**82,442**	**82,442**	**77,442**
Planned Supplies							
Future Groundwater[k]							
Alluvial Aquifer[l]	2,000	4,000	5,000	7,000	7,000	7,000	7,000
Saugus Formation (Restored)[m]	3,775	3,775	3,775	3,775	3,775	3,775	3,775
Saugus Formation (New)[n]	10,550	10,550	10,550	10,550	10,550	10,550	10,550
Total Groundwater	**16,325**	**18,325**	**19,325**	**21,325**	**21,325**	**21,325**	**21,325**

TABLE 5-5 CON'T
PROJECTED THREE-YEAR DRY YEAR SUPPLIES AND DEMANDS (AF)

	2020	2025	2030	2035	2040	2045	2050
Recycled Water[o]	565	5,156	7,627	9,604	9,604	9,604	9,604
Planned Banking Programs							
Rosedale Rio-Bravo Bank[p]	7,000	7,000	17,000	17,000	17,000	17,000	17,000
Additional Bank[q]	-	-	-	-	-	-	5,000
Total Planned Banking	**7,000**	**7,000**	**17,000**	**17,000**	**17,000**	**17,000**	**22,000**
Total Planned Supplies	**23,890**	**30,481**	**43,952**	**47,929**	**47,929**	**47,929**	**52,929**
Total Existing and Planned Supplies	**111,926**	**114,883**	**126,694**	**130,371**	**130,371**	**130,371**	**130,371**
Demands[r]							
Demand w/ Plumbing Code Savings	84,400	93,300	102,000	110,000	113,700	117,500	121,400
Demand w/ Plumbing Code Savings and Active Conservation	75,800	82,100	88,900	94,700	97,400	100,000	103,300

Notes:
(a) Existing groundwater supplies represent the quantity of groundwater anticipated to be pumped with existing wells. As indicated in Tables 3-8 and 3-9, and in Tables 3-4 and 3-5 of the 2009 Groundwater Basin Yield Analysis, individual purveyors may have well capacity in excess of quantities shown in this table. As indicated in Table 3-12B, existing and planned groundwater pumping remain within the groundwater operating plan shown on Table 3-5.
(b) Existing recycled water is actual use in 2015.
(c) SWP supplies from Table 3-2, based on 1931-1934 supplies from 2015 DCR.
(d) Includes both CLWA and Ventura County entities flexible storage accounts. Extended term of agreement with Ventura County entities expires after 2025.
(e) Existing Newhall Land supply committed under approved Newhall Ranch Specific Plan. Assumed to be transferred to CLWA or VWC during Newhall Ranch development, and available for annual purchase prior to that.
(f) For the multiple-dry year period, it was assumed that CLWA would purchase the maximum it could, an estimated average of 1,000 AFY (after losses) during the four-year period, through 2025.
(g) CLWA has an existing firm withdrawal capacity of 3,000 AFY and a storage capacity of 100,000 AF. There is currently 94,178 AF of recoverable water in storage.
(h) CLWA has a maximum firm withdrawal capacity of 5,000 AFY and a storage capacity of 15,000 AF. Additionally, CLWA has 35,970 AF of recoverable water stored which may be recovered using this withdrawal capacity.
(i) Newhall Land has a maximum withdrawal capacity of 4,950 AFY and a storage capacity of 55,000 AF. At the end of 2015 there was 32,507 AF of recoverable water. This is an existing Newhall Land supply, assumed to be transferred to CLWA or VWC during Newhall Ranch development, with firm withdrawal capacity made available to CLWA prior to that. Delivery of stored water from this program is assumed available to VWC.
(j) Exchange recovery was assumed to occur sometime during the four-year dry period, for an average annual supply of one-fourth of the total recoverable water available (total recoverable is 9,509 AF from Rosedale-Rio Bravo and 500 AF from West Kern exchange programs).
(k) Planned groundwater supplies represent supplies from new groundwater wells that may be required by an individual purveyor's production objectives in the Alluvial Aquifer and the Saugus Formation, including 3,775 AFY of restored production from VWC Well 201 and approximately 11,100 AFY from replacement and new Saugus Formation wells. When combined with existing purveyor and non-purveyor groundwater supplies, total groundwater production is consistent with the 1931-1934 multiple dry-year levels identified in Table 3-8 of the 2009 Groundwater Basin Yield Analysis. As indicated in Table 3-12A, existing and planned groundwater pumping remain within the groundwater operating plan shown on Table 3-5.
(l) Represents a shift in current agricultural pumping by Newhall Land and Farming to VWC due to the development of Newhall Ranch.
(m) VWC Well 201 is planned to be returned to service by 2017 with treatment under a permit from the DDW.
(n) Up to four new and replacement wells are planned to provide additional dry-year supply and would typically be used only during dry years.
(o) Planned recycled water is total projected recycled water demand from Table 4-3 less existing use. Refer to Section 4, including Section 4.4, for further discussion and information regarding factors having the potential to affect the availability of recycled water supplies.
(p) Firm withdrawal capacity under existing Rosedale Rio-Bravo Banking Program to be expanded by 7,000 AFY by 2017 (for a total of 10,000 AFY) and an additional 10,000 AFY by 2030.
(q) Additional banking program with firm withdrawal capacity of 5,000 AFY by 2050.
(r) Demands are Regional Summary demands from Table 2-28. Includes a 10 percent increase in demand during dry years.

6.0 CONCLUSION

Based on the analysis set forth in this WSA and as supported by the documents relied on for its preparation, NCWD's total projected water supplies available during the ensuing twenty years will meet the projected water demands associated with the Proposed Project and existing and other planned uses within NCWD's service area. This determination is consistent with current information and NCWD's 2015 UWMP.

In addition, the Proposed Project will use future as well as current water supplies, and therefore will require an SB 221 water supply verification to be completed by NCWD in accordance with Government Code Section 66473.7(b).

This Water Supply Assessment shall expire and be of no further force and effect after three (3) years from the date of submittal.