

## **Appendix C**

### **Rohnert Park Final Water Supply Assessment (Summary)**

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**Source:** Winzler & Kelly, Consulting Engineers, with Luhdorff & Scalmanini, Consulting Engineers, January, 2004, adopted by the Rohnert Park City Council, January 25, 2005.

## **Executive Summary**

### **ES.1 Purpose**

This Water Supply Assessment (WSA) has been prepared to assist the City of Rohnert Park (City) in satisfying the requirements of Senate Bill 610 (SB 610) and City Resolution Number 2004-95 (The Water Policy Resolution). The stated intent of SB 610 is to strengthen the process by which local agencies determine the adequacy and sufficiency of current and future water supplies to meet current and future demands. The WSA :

- Provides information on the City's water supplies consistent with Water Code Sections 10620 et. seq. (the Urban Water Management Act) and 10910 et. seq. (Water Supply Planning to Support Existing and Planned Future Uses);
- Provides information on current water demands and projected water demands based on the City's General Plan and specific project proposals currently under review by the City;
- Compares water supplies and water demands for the normal, single dry and multiple dry years;
- Provides the data to make the sufficiency findings required by the California Environmental Quality Act (CEQA).

The City has commissioned the preparation of this WSA in its role as Lead Agency under CEQA for various planned development projects. Table ES-1, on the following page, provides an index of the requirements for Water Supply Assessments and the location of each required discussion in this report.

### **ES.2 Approval**

The City Council may approve the WSA, after hearing all testimony and evidence presented at a hearing. Upon the conclusion of the hearing, the City Council may determine, based on the entire record, whether projected water supplies will be sufficient to satisfy the demands of proposed projects, in addition to existing and planned future uses. The City must include the assessment in the environmental documents prepared for designated projects pursuant to the CEQA.

### **ES.3 Projects Under Consideration**

The WSA includes water demands that will occur as the City reaches buildout under its General Plan. Because the City uses groundwater, the WSA considers the demands of other pumpers in the groundwater basin. The WSA is triggered by six planning applications that meet the definition of a "project" under SB 610 or that require review under the Water Policy Resolution or both. These six projects include

- University District Specific Plan Area Development
- Northeast Specific Plan Area Development
- Southeast Specific Plan Area Development
- Northwest Specific Plan Area Development
- Wilfred Dowdell Specific Plan Area Development
- Stadium Lands Development

**Table ES-1**  
**Index of SB 610 Requirements**

<b>Requirements for all Water Supply Assessments</b>		
<b>Required Element</b>		<b>Location in Document</b>
Description of Service Area		Section 2.2
Population Projections in 5-year Increments		Table 4-1
Description and Quantification of Water Supplies		
	Sonoma County Water Agency Supply	Section 2.3
	Recycled Water Supply	Section 2.4
	Groundwater Supply	Section 3
Description of Supply Reliability to Climatic Conditions		
	Sonoma County Water Agency Supply	Section 2.3
	Recycled Water Supply	Section 2.4
	Groundwater Supply	Section 3
Description of Contingency Plans		Sections 2.3, 4.4*
Description of Demand Management Potential		Section 4.4
Description of Conjunctive Use Potential		Section 5.5
Projection of Water Demands in 5-year Increments		Table 4-2
Description of Projects & Programs Undertaken to meet Demands		Section 5.6
Description of Demand Management Measures Employed		Section 4.4 **

\* Contingency Planning Discussion incorporates the 2000 Urban Water Management Plan by SCWA as allowed by SB 610

\*\* Demand Management Discussion incorporates City's reporting under the CUWCC MOU as allowed by SB610

<b>Additional Requirements for Water Supply Assessment that involve Groundwater</b>		
<b>Required Element</b>		<b>Location in Document</b>
Discussion of adopted Groundwater Management Plans		Section 3.1.1
Description of the groundwater basin		Section 3.2, 3.3, 3.5, 3.6, 3.7
Description of any court orders that affect legal rights to pump		Section 3.1.1
Information on condition of the basin and efforts limit overdraft		Section 3.5, 3.8
Detailed description and analysis of pumping over past 5 years		Section 3.4
Analysis of the sufficiency of the groundwater basin to meet demands		Section 3.9

<b>Additional Requirements for Water Supply Assessments prepared by the Lead Agency under CEQA</b>		
<b>Required Element</b>		<b>Location in Document</b>
Determination of Supply Sufficiency under Normal, Single & Multiple Dry Years		Tables 5-1 and 5-2
Identification of Water Supply Entitlements & Rights and water received under rights		
	Sonoma County Water Agency Supply	Section 2.3
	Recycled Water Supply	Section 2.4
	Groundwater Supply	Section 3
Description of groundwater basin and information regarding overdraft		Section 3
Analysis of the sufficiency of the groundwater basin to meet demands		Section 3.9
Information related to capital outlay programs for financing delivery of water supply		Section 5.6
Information on permits needed and regulatory requirements associated with water supply		Section 5.7

### ES.4 Summary of Supplies

The City has three sources of water supply. These are the Sonoma County Water Agency's System, recycled water and local groundwater.

#### ES.4.1 Sonoma County Water Agency

The Sonoma County Water Agency's (Agency's) Russian River System is described in detail in the Agency's 2000 Urban Water Management Plan (UWMP), which in accordance with SB 610 is incorporated by reference. As part of developing the 2000 UWMP, the Agency updated its operations model which predicts the amount of water available to its system in a Normal Year, a Single Dry Year and Multiple Dry Years. The Agency has a current water right of 75,000 acre-feet per year (AFY). Table ES -2 presents a summary of the supply available to Agency's system and the Agency's rights and illustrates that currently the Agency has more water available to its system, even in dry years, than it has the right to divert.

**Table ES-2**

#### **Agency Supply under Various Hydrologic Conditions**

<b>Agency Supply Under Various Conditions (AFY)</b>	<b>Total Supply*</b>
<b>Available to the Agency's System</b>	
Normal Water Year	211,945
Single Dry Water Year	86,955
Multiple Dry Water Year 1	126,885
Multiple Dry Water Year 2	126,685
Multiple Dry Water Year 3	126,485
<b>Permitted Water Rights</b>	
Current	75,000

\*2000 Urban Water Management Plan Table 6-1

The Agency provides wholesale water supply to eight Prime Contractors (Forestville Water District, Santa Rosa, Rohnert Park, Cotati, Petaluma, Sonoma, North Marin Water District and Valley of the Moon Water District, hereinafter the Contractors). The *Eleventh Amended Agreement for Water Supply* (11<sup>th</sup> Amended Agreement) describes the business relationship between the Agency and its Contractors including each Contractors' allocation of water. The City has an allocation of 7,500 AFY and a peak month pumping allocation of 15.0 million gallons per day (mgd) under the 11<sup>th</sup> Amended Agreement.

The 11<sup>th</sup> Amended Agreement is premised on the completion of the Agency's Water Supply and Transmission System Project (the WSTSP) which was planned in the 1990's. The WSTSP included numerous improvements to the Agency's system and increase in total water rights from 75,000 AFY to 101,000 AFY.

Due to both legal challenges and changes in circumstances, Agency's Board of Directors has elected to prepare a new EIR that will provide the public and decision-makers with an

environmental document that not only addresses legal deficiencies but also more closely reflects the Agency's and its customers' current water supply circumstances. This direction defined a new project, the Water Supply, Transmission, and Reliability Project, commonly referred to as the Water Project.

The Agency and its Contractors have entered into a *Memorandum of Understanding Regarding Water Transmission System Capacity Allocation During Temporary Impairment* (Temporary Impairment MOU) which went into effect in March of 2001 and expires in September of 2005. The Agency and its contractors are currently negotiating a new MOU. Under the Temporary Impairment MOU, the City's peak month allocation is reduced to 5.3 mgd.

Notwithstanding the City's contracted water allocation of 7,500 AFY and taking into account the Agency's water rights, the current condition of the Agency's system, the City's plans and the plans of other water contractors as represented to the Agency, the City is basing this Water Supply Assessment on receipt of 6,476 AFY from the Agency's system during the Normal Water Year. This figure is consistent with the City's recent communications to the Agency regarding its development plans and potential for recycled water use.

The Agency's water rights decision requires a reduction in diversions of 30% when the volume of water stored in Lake Sonoma is less than 100,000 AF. It is unlikely this cut in diversions would be triggered after a single dry year.<sup>1</sup> However, if the Agency saw indications that a hydrologic cycle similar to either the single or multiple dry years was beginning, it is likely that Agency would work with its contractors to implement water shortage provisions consistent with Section 3.5 of the 11<sup>th</sup> Amended Agreement in order to avoid the need for immediate large cutbacks. Section 3.5 of the 11<sup>th</sup> Amended Agreement provides a qualitative description of water allocation provisions not numerical allocations. Because there is no formally adopted numerical allocation of water, the WSA estimates water supply available from the Agency in single dry year will be 70% of the City's allocation or 5,250 AFY. (A 30% curtailment, while unlikely, is used). The analysis estimates water supply available from the Agency in multiple dry years will be 80% of the City's allocation or 6,000 AFY consistent with the contingency plan developed in the UWMP.

Table ES-3 presents a summary of the water available to the Agency's system in normal, single and multiple dry years and how this water is anticipated to be allocated to the City given the Agency's current and proposed water rights and the agreements between the Agency and its Contractors.

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<sup>1</sup> Personal Communication, Christopher Murray, Sonoma County Water Agency

<sup>3</sup> Incremental Recycled Water Program - Recycled Water Master Plan, February 2004.

**Table ES-3**  
**Summary of Agency Water Supply**

<b>Agency Supply Under Various Conditions (AFY)</b>	<b>Total Supply</b>	<b>Rohnert Park Supply</b>
<b>Available to the Agency's System</b>		
Normal Water Year	211,945	7500*
Single Dry Water Year	86,955	5,250
Multiple Dry Water Year 1	126,885	6,000
Multiple Dry Water Year 2	126,685	6,000
Multiple Dry Water Year 3	126,485	6,000
<b>Current Water Supply System Conditions</b>	<b>75000**</b>	<b>6476***</b>

\* Supply Contracted to the City under 11th Amended Agreement

\*\* Agency's Current Water Right

\*\*\* Estimate based on City Analysis of April 1, 2004 Data

#### **ES.4.2 Recycled Water**

The City is the largest urban recycled water user in Sonoma County with a current average use of over 1,000 AFY. Planned recycled water use will reach over 1,300 AFY. Expansion to the City's recycled water system has been documented in the Incremental Recycled Water Program EIR prepared by the Subregional Water Recycling System.<sup>3</sup> Expansion of the recycled water system will enable additional schools, parks, and other private and public properties to receive recycled water. In addition the Community Fields, described in the General Plan and all new parks and irrigated buffer areas associated with the Specific Plan Areas will use recycled water. The City is actively entertaining proposals to use recycled water for residential irrigation purposes within each of the Specific Plan Areas further offsetting demands on either the Agency supply or groundwater supply. The City has adopted a Water Waste Ordinance which requires the use of recycled water when it is available and of appropriate quality.

The Subregional System has a great deal of operational flexibility and the system is able to reliably deliver recycled water to customers under a the full range of hydrologic conditions. This is principally accomplished by reducing discharge of recycled water during drier hydrologic cycles.

#### **ES.4.3 Groundwater**

The City pumps groundwater from 42 wells located in the Laguna de Santa Rosa watershed of the Santa Rosa Plain Subbasin of Santa Rosa Valley Groundwater Basin. All wells are located inside the City limits. Groundwater supply sufficiency was evaluated for a study area that encompasses the upper portion of the Laguna de Santa Rosa watershed (above the Stony Point Road gauge). The 2004 Water Policy Resolution

specifies that new projects will not be approved if they contribute to the City exceeding an average annual groundwater pumping rate of 2.3 mgd (2,577 AFY). This WSA considers 2,577 AFY as the amount of groundwater available to the City for the sufficiency analysis.

The City's wells are located in a very complex aquifer system. Well profiles were used to divide the aquifer into four vertical zones, which do not represent laterally extensive aquifers but are strictly depth based for purposes of evaluating hydrogeologic conditions. The vertical zones of the aquifer system were designated:

- shallow (0 to 200 foot depth),
- intermediate (200 to 600 foot depth),
- deep (600 to 800 foot depth), and
- lower (depths greater than 800 feet).

All of the City's wells are perforated primarily in the intermediate zone.

#### **ES 4.3.1 Groundwater Pumpage**

City pumpage data from 1970 to the present and pumpage data and estimates from other pumpers in the basin were evaluated to determine the relationship between historical groundwater level trends and the total pumpage in the study area. Annual pumpage data were obtained for Sonoma State University (SSU) and the City of Cotati. Pumpage estimates for 1970 through 2003 were derived for private, commercial, and agricultural pumpers based on population census data, planned land use, and/or water use estimates because metered data are not available.

In 2003, total City pumpage was 3,556 AFY and the estimate of pumpage from all other pumpers in the study area is 3,522 AFY. One of the requirements for a WSA is an evaluation of water supply sufficiency based on a 20-year projection. Future pumpage was projected to 2025, and it was assumed that build-out of the Specific Plan Areas would have occurred by that time. The maximum City pumpage in 2025 was assumed to be 2,577 AFY, consistent with the 2004 Water Policy Resolution. Based on data provided by other public agencies, pumpage from the City of Cotati and SSU is projected to increase from approximately 412 to 602 AFY. Agricultural pumpage was assumed to remain at 2003 levels (about 1,400 AFY). Private and commercial pumpage are projected to experience the largest increase, from about 1,700 to 2,760 AFY. The total 2025 projected pumpage for the study area (City and non City) is 7,350 AFY, a slight increase (approximately 270 AFY) from the total current pumpage but a notable decrease from recent historical pumping (i.e., average pumpage during 1990-1997 was 8,700 AFY).

#### **ES 4.3.2 Groundwater Levels**

Water level hydrographs constructed from the available groundwater level data were categorized according to zone(s) of predominant completion in order to assess water level trends by zone.

Hydrographs for most shallow zone wells located near the City exhibit a stable long-term groundwater level trend from about 1975 to present. Regardless of increases or decreases in pumpage in the central Rohnert Park area, or the occurrence of dry, normal, or wet

years, spring water levels in the shallow zone generally showed little response to changed conditions. Groundwater levels in Agency monitoring wells located outside the study area declined by about two to three feet during the 1987-1991 dry period. Groundwater levels subsequently recovered during the 1994-1998 wet period.

Hydrographs for intermediate zone wells, from which the majority of the City's pumpage occurs, show that changes in pumpage have a greater effect on intermediate zone groundwater levels than changes in climatic conditions (i.e., water year type). Spring groundwater elevations in the central Rohnert Park wells were generally stable from 1977 to 1981, declined from 1982 to 1990 as pumpage increased, and gradually increased from 1990 to 1997 when pumpage for the study area averaged about 8,700 AFY. Groundwater levels were stable from 1997 to 2003 and exhibited a marked recovery when total pumpage decreased to about 7,100 AFY in 2003. Water level recovery since 1990 indicates that the water level decline during 1982 to 1990 was not an indication of overdraft conditions. There is also no indication of generally declining groundwater levels elsewhere in the subbasin in any zone, i.e., there is no indication that overdraft has occurred on a subbasin scale.

Groundwater elevation contours for Spring 2004 were prepared for the shallow and intermediate zones. The shape of the shallow zone contours and directions of groundwater flow are similar to those shown for 1951 (Cardwell, 1958). The direction of groundwater flow in the shallow zone in the Rohnert Park area is generally westerly, and there is groundwater outflow in this zone to the rest of the Santa Rosa Plain.

The data also indicate a groundwater divide in the general vicinity of the watershed boundary. North of this divide, the direction of groundwater flow is generally northwesterly and toward the City. South of the divide, the groundwater flow direction in the Petaluma Valley Groundwater Basin is southeasterly toward Petaluma. Groundwater elevations for the intermediate and deeper zones in Spring 2004 in the central and western portions of the City are significantly lower than in the shallow zone. The direction of groundwater flow is generally toward the City and toward a cone of depression present beneath the western portion of the City. Unlike the shallow zone, the intermediate zone groundwater elevation contours show a gradient for inflow into the study area from the west.

#### **ES.4.3.3 Groundwater Quality**

Groundwater produced from City wells meets primary state drinking water standards. Overall mineral content, as indicated by specific conductance (electrical conductance; EC), ranges from 270 to 620  $\mu\text{mhos/cm}$ , while the average EC levels are 300  $\mu\text{mhos/cm}$  in intermediate zone wells and about 430  $\mu\text{mhos/cm}$  in wells completed in multiple zones. All EC values are below the recommended secondary Maximum Contaminant Level (MCL) of 900  $\mu\text{mhos/cm}$ . No serious or widespread issues that affect community water supplies due to organic chemical sources are known to be present in the City.



#### **ES.4.3.4 Soil Recharge Characteristics**

In 1975 and 1982, the California Department of Water Resources (DWR, 1975 and 1982) assessed areas of natural recharge in Sonoma County. Based on soil recharge characteristics (primarily soil permeability and slope), and mapping of these characteristics by three broad categories using criteria similar to those developed by the U.S. Geological Survey (USGS), less than five percent of the WSA study area would be classified as a “recharge area” (the category with the highest recharge potential). The USGS and DWR recharge classifications are useful for identifying areas with the highest recharge rates, but these classifications oversimplified recharge conditions by ignoring much of the variability in soil permeability and slope within the study area.

In order to update the DWR recharge analysis, Geographic Information System (GIS) techniques were used for the WSA to delineate areas with different recharge properties based on soil characteristics and topography. The updated information was then used to assess the potential loss of recharge due to proposed development of the Specific Plan Areas. New development involves buildings, paving, and other features that affect groundwater recharge. Areas with the highest recharge rates occur east of the City primarily along streambeds, at the heads of alluvial fans, and on some portions of the Sonoma Volcanics. In contrast, soils beneath the City are predominantly Clear Lake Clays with low permeability and poor recharge characteristics.

The City’s General Plan specifies that future development within the Urban Growth Boundary will incorporate buffer areas and open space along the three creek corridors where recharge occurs. Thus, protective measures have been incorporated in the General Plan, its Environmental Impact Report and its Mitigation Monitoring Program, and the affect on areas of high recharge is anticipated to be minimal.

#### **ES.4.3.5 Groundwater Recharge Estimates**

Previously, estimates of groundwater recharge in Sonoma County have been developed by various methods. For purposes of the Draft Environmental Impact Report (DEIR) for the Rohnert Park General Plan, PES Environmental, Inc. (PES) developed a groundwater flow model that was used to estimate recharge for a 17,700 acre study area that included the City (Dyett & Bhatia, 2000). The PES model was based on a simplified conceptualization of the aquifer system; from the model results, PES estimated that the average annual recharge rate during 1970-1999 was 1.6 mgd (about 1,800 AFY). This was a low estimate due to many factors, including model boundaries that exclude most of the areas with the highest recharge potential in the WSA study area.

Subsequently, Todd Engineers prepared a water budget for a study area almost identical to that used for the groundwater portion of this WSA (Todd, 2004). This water budget was prepared for the Canon Manor West DEIR and provided a comprehensive estimate of all inflows to and outflows from the study area during 1986-2001. The Todd water budget includes recharge from direct precipitation, streams, irrigation return flows, and septic systems. The average annual groundwater recharge for the study area during the 1986-2001 period of analysis was estimated to be about 8,300 AFY.

The analysis of the relationship between groundwater levels and pumpage conducted for the WSA resulted in an estimated average recharge rate of at least 8,400 AFY during 1990-1997, a period of stable to slightly increasing groundwater levels. Since 1990-1997 was a wetter than average period, the long-term average recharge rate would be expected to be less than 8,400 AFY. The WSA estimate is similar to the recharge estimate derived from the Todd water budget for 1986-2001.

**ES.4.3.6 Groundwater Sufficiency**

Analyses of the historical groundwater level and pumpage data have allowed the development of an estimated range of pumpage within which the City and other pumpers in the study area could operate without causing persistent groundwater level declines. Based on evaluation of historical groundwater levels and pumpage, the estimated total watershed pumpage that would not be expected to cause long-term groundwater declines ranges from 7,100 to 8,700 AFY. The projected total 2025 study area pumpage is 7,350 AFY, with 2,577 AFY of that pumpage projected for use by the City as one of the sources of supply to meet its 20-year water demands. The projected total 2025 pumpage is a slight increase from the total current pumpage but is less than recent historical pumping. As a result, the projected 2025 pumpage falls within the range of historically sustainable pumpage.

The evaluation of groundwater conditions and supply sufficiency for this WSA demonstrates that the groundwater supplies available during normal, single-dry, and multiple-dry years within a 20-year projection will meet the projected demand associated with the proposed subdivisions, in addition to existing and other planned groundwater uses in the study area.

**ES 4.4 Summary of Available Supplies**

Table ES-4 below, summarizes the water supplies available to the City under a range of hydrologic conditions. This summary includes the City’s estimate of Agency allocation under current water supply conditions.

**Table ES-4**

**Total Water Supply Available to the City**

<i>Total Water Supply Available to City in AFY</i>	<i>Current Water Supply Conditions</i>	<i>Single Dry Year</i>	<i>Multiple Dry Years</i>			<i>Full Agency Allocation</i>
Sonoma County Water Agency	6,476	5,250	6,000	6,000	6,000	7,500
Recycled Water	1,302	1,302	1,302	1,302	1,302	1,302
Groundwater	2,577	2,577	2,577	2,577	2,577	2,577
<b>Totals</b>	<b>10,355</b>	<b>9,129</b>	<b>9,879</b>	<b>9,879</b>	<b>9,879</b>	<b>11,379</b>

**ES.5 Summary of Demands**

In 2000, the City adopted its General Plan. The General Plan sets land-use patterns and population goals. The City is anticipating potential development within five designated Specific Plan Areas (SPAs); the Northwest Area, the Wilfred-Dowdell Area, the Northeast Area, the University District and the Southeast Area. In addition, the City is anticipating infill development, consisting largely of non-residential land uses.

The City has an adopted Growth Management Ordinance that is intended to provide for orderly build-out of residential development over the General Plan planning horizon. In its simplest form, the Growth Management Ordinance has the effect of limiting the number of residential building permits issued to 225 per year. Population and Demand projections reflect the rate of development allowed by the Growth Management Ordinance. Table ES-5 below presents the anticipated development pattern in 5-year increments from 2005 until 2025.

**Table ES-5**

**Projected Development Pattern**

<i>Customer Type</i>	<i>Unit</i>	<i>Current</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>	<i>2020</i>	<i>2025</i>
SFR Detached	EA	7,492	7,492	8,352	8,737	8,993	8,993
SFR Attached	EA	3,039	3,039	3,518	3,631	3,744	3,744
MFR & Mobile	EA	6,035	6,035	6,696	7,336	7,867	7,867
Comm/Retail	AC	311	322	407	437	467	467
Industrial	AC	320	328	371	436	500	500
Office	AC	47	47	54	68	77	77
Public	AC	93	93	93	93	93	93
<b>Subtotal</b>							
Irrigation-potable	AC	70	70	28	28	28	28
Irrigation-recycled	AC	452	452	536	546	546	546

Projected water demands are based on the unit demand rates consistent with existing City data and good engineering practices. Demand classes are consistent with guidance provided by Department of Water Resources for SB 610 reporting. The City is a signatory to the California Urban Water Conservation Council's MOU and is actively engaged in water conservation efforts. The City expects to see a 10% voluntary reduction in overall demands throughout the buildout cycle, consistent with conservation implementation. Table ES-6 reflects water demands under normal conditions.

**Table ES-6**  
**Water Demand Projections**

<i>Customer Type</i>	<i>Unit</i>	<i>Current*</i>	<i>2005</i>	<i>2010</i>	<i>2015</i>	<i>2020</i>	<i>2025</i>
SFR Detached	AFY	3,241	3,241	3,285	3,437	3,538	3,538
SFR Attached	AFY	983	983	1,115	1,145	1,181	1,181
MFR & Mobile	AFY	1,009	1,076	1,171	1,275	1,368	1,368
Comm/Retail	AFY	680	704	890	955	1,021	1,021
Industrial	AFY	524	537	607	714	819	819
Office	AFY	51	51	59	74	84	84
Public	AFY	102	102	102	102	102	102
<b>Subtotal</b>		<b>6,591</b>	<b>6,694</b>	<b>7,229</b>	<b>7,702</b>	<b>8,112</b>	<b>8,112</b>
Irrigation-potable	AFY	159	159	85	85	85	85
Irrigation-recycled	AFY	1,040	1,040	1,256	1,302	1,302	1,302

The City has adopted an Ordinance establishing a Water Shortage Emergency Plan. This ordinance provides for 20% and 30% reductions as necessary to respond to curtailed supply in the event of a drought. Table ES-7 outlines the anticipated water demands at General Plan buildout for the normal water year and with the 20% and 30% curtailments

**Table ES-7**  
**Water Demands with Demand Management**

<b>Water Demands with Management</b>	<b>Demand at Buildout</b>	<b>20% Reduction</b>	<b>30% Reduction</b>
<b>Water Demand in AFY</b>			
Total Non-Irrigation Demands	8,112	7,301	6,490
Irrigation from the Potable System	85	76	68
Irrigation from the Recycled Water System	1,302	1,302	1,302
<b>Total</b>	<b>9,499</b>	<b>8,679</b>	<b>7,859</b>

**ES.6 Sufficiency**

The groundwater analysis confirms the groundwater supply is sufficient to meet City demands and those of other pumpers in the basin. The City intends to pursue a conjunctive use strategy with its three supply sources. During Normal and Above Normal Water years under this strategy, the City would meet demands using its Agency allocation and recycled water first, minimizing its demands on groundwater and allowing the groundwater basin to recharge during these periods.

In dry and multiple dry years, the City will continue to use recycled water to the maximum extent possible. During these periods, the City anticipates some cutbacks in its Agency allocation may occur as provided for under the 11<sup>th</sup> Amended Agreement. The

City will implement demand curtailment measures consistent with its Water Shortage Emergency Plan and the City will utilize its groundwater resources.

Table ES-8 provides supply and demand information for the Normal Water Year in 5-year increments from 2005 to 2025. This analysis is presented reflecting the impaired condition of the Agency's system for the entire planning period.

**Table ES-8**

**Normal Year Sufficiency Analysis**

Normal Year Supply and Demand Comparison	Current*	2005	2010	2015	2020	2025
<b>Water Demand in AFY</b>						
Total Non-Irrigation Demands	6,591	6,694	7,229	7,702	8,112	8,112
Irrigation from the Potable System	159	159	85	85	85	85
Irrigation from the Recycled Water System	1,040	1,040	1,256	1,302	1,302	1,302
<b>Total</b>	<b>7,789</b>	<b>7,893</b>	<b>8,570</b>	<b>9,068</b>	<b>9,499</b>	<b>9,499</b>
<b>Water Supplies in AFY</b>						
SCWA Supply	3,194	6,476	6,476	6,476	6,476	6,476
Groundwater Supply	3,556	2,577	2,577	2,577	2,577	2,577
Recycled Water Supply	1,040	1,040	1,256	1,302	1,302	1,302
<b>Total</b>	<b>7,790</b>	<b>10,093</b>	<b>10,309</b>	<b>10,355</b>	<b>10,355</b>	<b>10,355</b>
<b>Sufficiency (Supply Less Demand)</b>	<b>0</b>	<b>2,200</b>	<b>1,739</b>	<b>1,267</b>	<b>856</b>	<b>856</b>

\* Current Sufficiency Calculation reflects actual demand and actual supply through December 2003.

Table ES-9 outlines the supply and demand patterns at buildout under Normal, Single Dry and Multiple Dry Years. In all cases, supply is sufficient to meet demand.

**Table ES-9**

**Dry Year Sufficiency Analysis**

Dry Year Supply Demand Comparison	Normal	Single Dry	Multiple Dry		
			1	2	3
<b>Water Demand in AFY</b>					
Total Non-Irrigation Demands	8,112	6,490	7,301	7,301	7,301
Irrigation from the Potable System	85	68	76	76	76
Irrigation from the Recycled Water System	1,302	1,302	1,302	1,302	1,302
<b>Total</b>	<b>9,499</b>	<b>7,859</b>	<b>8,679</b>	<b>8,679</b>	<b>8,679</b>
<b>Water Supplies in AFY</b>					
Agency Supply*	6,476	5,250	6,000	6,000	6,000
Groundwater Supply	2,577	2,577	2,577	2,577	2,577
Recycled Water Supply	1,302	1,302	1,302	1,302	1,302
<b>Total</b>	<b>10,355</b>	<b>9,129</b>	<b>9,879</b>	<b>9,879</b>	<b>9,879</b>
<b>Sufficiency (Supply Less Demand)</b>	<b>856</b>	<b>1,269</b>	<b>1,200</b>	<b>1,200</b>	<b>1,200</b>

### **ES.7 Actions Required to Make the Water Supply Available**

The City has adopted a Water Waste Ordinance that prohibits waste of water and requires the use of recycled water when it is available. The City has also adopted a Water Shortage Emergency Plan Ordinance that gives it the authority to implement demand management. These policy tools are in place and can be used to achieve the demand management and recycled water supplies outlined in this assessment.

The City's water model indicates a need to extend a new water transmission main from the Agency aqueduct to the proposed East-side developments and to make several other modifications to the distribution system to provide adequate water service. These improvements are under design. The City has approved Mitigation Fees to fund this construction. Work is expected to be complete in 2006.

The Santa Rosa Subregional Water Reclamation System has approved a Programmatic EIR for its long-term Incremental Recycled Water Program (IRWP). Expansion of the recycled water system serving Rohnert Park is included in the IRWP. The City has applied for a State grant to complete the planning of the recycled water system expansion.

The recycled water system expansion will include the construction of a recycled water storage reservoir (with approximately 300 AF of capacity) and extension of the recycled water transmission system to connect the new reservoir to the existing recycled water system. The City is current negotiations with the proponents of the University District Specific Plan and the Subregional system to move forward with the project implementation. The proponents of the University District Specific Plan have acquired and are proposing to contribute a site for the reservoir. Conceptual design has also been completed by the proponents. The conceptual design and siting will be presented to the Subregional System.

The City has approved a Public Facilities Finance Plan and adopted Mitigation Fees to fund this construction. The plan will be revised as necessary to incorporate the full scope of the project. Work is expected to be complete in 2008.

The City has initiated a number of activities to manage its groundwater supply and ensure supply sufficiency. These include:

- Decreased groundwater use and increased use of Agency water;
- Expansion of its groundwater monitoring program;
- Expansion of its water conservation program;
- Continuation and expansion of its recycled water use for irrigation;
- Protection of groundwater recharge areas;
- Support of the planned joint United States Geologic Survey and Agency Santa Rosa Plain Subbasin study.

The Agency anticipates issuing a new Notice of Preparation for the Water Project EIR in 2005 and anticipates it will release its Draft EIR for public review by May 2006, after completion of its Urban Water Management Plan 2005. A Final EIR is scheduled for

completion in May 2007, and EIR certification and project approval could be considered by the Board by the early summer of 2007.

Completion of the Water Project will allow the City to access its full 7,500 AFY allocation of Agency supply. The WSA documents that the City has adequate supply even without the completion of the Water Project.