City of Santa Rosa
California

Final 2010 Urban Water Management Plan

CITY OF SANTA ROSA
2010 URBAN WATER MANAGEMENT PLAN

Prepared by:

City of Santa Rosa
Utilities Department

In conjunction with:

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&

Maddaus Water Management

June 2011

City of Santa Rosa

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City of Santa Rosa
2010 Urban Water Management Plan

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Acronyms

AB 32 – Global Warming Solutions Act of 2006
AF - Acre-feet
AFY – Acre-feet per year
Agency – Sonoma County Water Agency
AWWA – American Water Works Association
Base GPCD – base daily per capita water use
BMP – Best Management Practice
CDFG – California Department of Fish and Game
CEQA – California Environmental Quality Act
CFR – Code of Federal Regulations
CFS – Cubic Feet per Second
CII – Commercial, Industrial, Institutional
CIMIS – California Irrigation Management Information System
City – City of Santa Rosa
COE – Corps of Engineers
CSG – California Geological Survey
CUWCC – California Urban Water Conservation Council
DMM – Demand Management Measures
DOI – Department of Interior
DPH – Department of Public Health
DWR – Department of Water Resources
EIR – Environmental Impact Report
EIS – Environmental Impact Statement
EPA – Environmental Protection Agency
ESA – Endangered Species Act
ESU – Evolutionarily Significant Unit
ETo – Reference Evapotranspiration
^{o}F – degree Fahrenheit
FERC – Federal Energy Regulatory Commission
GHG – Green House Gas
GPCD – Gallons per capita per day
GPF – Gallons per flush
GPM – Gallons per minute
H_2S – Hydrogen Sulfide
IRWP – Incremental Recycled Water Program
LID – Low Impact Development
MCL – Maximum Contaminant Level
MG – Million gallons
MGD – Million gallons per day
MOU – Memorandum of Understanding
NCRWQCB – North Coast Regional Water Quality Control Board
NMFS – National Marine Fisheries Service
PG&E – Pacific Gas and Electric Company
Plan – Urban Water Management Plan
P.O.W.E.R. – Public Officials for Water and Environmental Reform
PVP – Potter Valley Project
RPA – Reasonable and Prudent Alternative
RPM – Reasonable and Prudent Measures
SB – Senate Bill
SIC – Standard Industrial Classifications
Shortage Methodology – Water Shortage Allocation Methodology
State Water Board – State Water Resources Control Board
Subregional System – Subregional Water Reuse System
UGB – Urban Growth Boundary
UFW – Unaccounted for Water
ULFT – Ultra Low Flow Toilet
USFWS – United States Fish and Wildlife Service
USGS – United States Geological Survey
UWMP Act – Urban Water Management Planning Act
Water Shortage Plan – Urban Water Shortage Contingency Plan
WC Act – Water Conservation Act of 2009
WELO – Water Efficient Landscape Ordinance

Executive Summary

The Urban Water Management Planning Act (UWMP Act) requires water suppliers that provide over 3,000 acre-feet per year or have over 3,000 connections to prepare and submit to the State Department of Water Resources (DWR) an Urban Water Management Plan every 5 years. The City of Santa Rosa's (City) 2010 Urban Water Management Plan (Plan) has been prepared in accordance with the UWMP Act, as defined by the California Water Code, Division 6, Part 2.6, Sections 10610 through 10656, and the newly adopted Water Conservation Act of 2009 (WC Act).

The City is a retail water supplier to approximately 52,000 residential and commercial accounts located within Santa Rosa's service area. This Plan addresses the City water system and includes a description of the water supply sources, historical and projected water use, and a comparison of water supply to water demands during normal, single-dry, and multiple-dry years. This Plan also addresses new water use efficiency legislation, including the City's 2015 and 2020 water use targets, as required by the WC Act, and the implementation plan for meeting the City's 2015 and 2020 water use targets.

ES.1 Service Area Overview

The City of Santa Rosa is the largest city between Portland, Oregon and San Francisco, California. Within the City's service area, employment is diversified across the public sector and the service and manufacturing industries, with a broad spectrum of commercial services such as technology, engineering, and construction. The City's climate is influenced by the Pacific Ocean and is divided into wet and dry seasons. Approximately 93 percent of the annual precipitation normally falls during the wet season, October to May, with a large percentage of the rainfall typically occurring during three or four major winter storms.

The City has received the majority of its potable water supply from the Sonoma County Water Agency (Agency) since the early 1960s. The Agency provides water principally from the Russian River to the majority of the retail water providers in Sonoma County, and to a lesser degree in Marin County. The City also receives water supply from its own groundwater wells and provides recycled water from its own Subregional WateReuse System (Subregional System) to some Santa Rosa irrigators.

The City receives Agency water through a series of turnouts, check valves, and direct connections serving City pump stations along the Agency's Santa Rosa and Sonoma Aqueducts. There are 59 physical connections between the City's distribution system and the Agency's system, including 39 pressure reducing valves, 16 check valves, and 4 pumping stations. The City's major water distribution facilities consist of 25 treated water reservoirs, 20 water pump stations, and 1 well treatment facility.

ES.2 Demand and Supply Projections

To determine projected demands through 2035, the City hired Maddaus Water Management to perform the demand analysis. The projected deliveries are based on the population and employment projections in the City's 2035 General Plan and include implementation of the National Plumbing Code, State Plumbing Code, and water conservation savings from conservation Best

Management Practices implemented through 2009, as well as unaccounted for water (UFW). Table ES-1 summarizes the total actual water use for the City in 2010 and the total demand projection for the City from 2015 to 2035. Lasting effects of the drought, water shortage and economic recession, as well as a cool summer, significantly affected the City's 2010 water use and therefore, the City's 2010 water use is not representative of normal water use characteristics for the City.

Table ES-1
Total Demand with Plumbing Code and Unaccounted for Water[1]

	2010	2015	2020	2025	2030	2035
Total Demand with Plumbing Code and UFW[2]	19,298	28,303	29,514	30,758	32,101	33,518

[1] Units are acre-feet per year.

[2] Demand includes savings from Plumbing Code implementation and does not include additional savings from future conservation or recycled water implementation. Future Recycled Water (750AFY) and Future Water Conservation savings are listed in Table ES-2 and are further described in Sections 4.7.4 (Recycled Water) and 6.9 (Water Conservation). These projected savings can be deducted from Total Demand with Plumbing Code and UFW to determine projected net water deliveries.

To meet the projected demands, the City currently has three sources of existing water supply: entitlement from the Agency, groundwater, and recycled water. The City currently receives the majority of its potable water supply from the Agency under the provisions of the Restructured Agreement for Water Supply, which was executed in June 2006. In addition to Agency supply, in July 2005, the City received permission from the California Department of Public Health (DPH) to use two of its groundwater wells, formerly permitted as standby emergency wells, for full-time, active potable water supply. This supply source is permitted for regular production and can provide up to 2,300 acre-feet per year (AFY) to the City. The City is also the owner and operator of the Subregional System, which produces recycled water. The City has historically used approximately 350 AFY of recycled water for landscape irrigation and has recently expanded the recycled water system within the City limits to provide an additional approximately 60 AFY of recycled water for landscape irrigation purposes. In addition, the City has a very aggressive water conservation program which reduces current potable water demand and ensures that future water use is efficient. Table ES-2 details the existing and projected water supplies available to the City.

Table ES-2
Water Supplies — Current and Projected[1]

Water Supply Sources	2010	2015	2020	2025	2030	2035
Sonoma County Water Agency[2]	18,514	25,343	26,082	26,835	27,896	29,041
Supplier-produced groundwater	902	2,300	2,300	2,300	2,300	2,300
Recycled Water	204	350	350	1,100	1,100	1,100
Future Water Conservation		1,110	1,581	1,883	2,164	2,437
Total	**19,620**	**29,103**	**30,313**	**32,118**	**33,460**	**34,878**

[1] Units are acre-feet per year.

[2] Sonoma County Water Agency projected supplies based on projected potable demands as described in Section 3.6, minus future conservation savings, future recycled water supply (750 AFY), and groundwater supply.

[3] Future recycled water supply (750AFY) and future water conservation will offset future potable demand and reduce future water deliveries. These projected savings can be deducted from Total Demand with Plumbing Code and UFW listed in Table ES-1 to determine projected net water deliveries.

ES.3 Water Conservation Overview

The City has been and continues to be a leader in implementing innovative water conservation programs. Water conservation and demand management are an integral part of the City's water management strategy, integrating water conservation into future supply and demand solutions for both the water system and the wastewater treatment/reuse system. In 1998, the City became a signatory to the California Urban Water Conservation Council (CUWCC) Memorandum of Understanding (MOU) Regarding Urban Water Conservation dated September 1997 and is fully committed to implementing the CUWCC Best Management Practices (BMPs). To assist with water conservation implementation, the City has an aggressive, conservation-oriented water rate structure that encourages water conservation implementation. Table ES-3 provides the status of the City's CUWCC BMP implementation.

Table ES-3

California Urban Water Conservation Council BMP Implementation

Best Management Practices (BMPs)		Description	Previous BMP	On Track	Implemented By
Foundational	1 - Utility Operations Programs	1.1 – Operations Practice			
		1.1.1 – Conservation Coordinator	12	Yes	Santa Rosa
		1.1.2 – Water Waste Prevention	13	Yes	Santa Rosa
		1.1.3 – Wholesale Agency Assistance	10	N/A	Agency
		1.2 - Water Loss Control	3	Yes	Santa Rosa
		1.3 - Metering with Commodity Rates	4	Yes	Santa Rosa
		1.4 - Conservation Pricing	11	Yes	Santa Rosa
	2 - Educational Programs	2.1 - Public Information Programs	7	Yes	Santa Rosa
		2.2 - School Education Programs	8	Yes	Agency
Programmatic	3 - Residential	3A.1 - Residential Assistance Program	1 & 2	Yes	Santa Rosa
		3A.2 - Landscape Water Survey	1	Yes	Santa Rosa
		3A.3 – High-Efficiency Clothes Washer	6	Yes	Santa Rosa
		3A.4 -WaterSense Specification toilets	14	Yes	Santa Rosa
		3A.5 - WaterSense Specification for Residential Development	N/A	Yes	Santa Rosa
	4 - Commercial, Industrial, Institutional	4A.1 - Implement measures on CII list **OR**	9/9A	Yes	Santa Rosa
		4A.2 - Flex Track implementation	9/9A	Yes	Santa Rosa
	5 - Landscape	5A.1 - Dedicated Irrigation Meters	5	Yes	Santa Rosa
		5A.2 - CII Accounts w/o meters or with Mixed Use Meters	5	Yes	Santa Rosa

ES.4 Water Conservation Act of 2009 Targets and Compliance

In 2009, the WC Act was signed into law and set a goal of a 20 percent reduction in statewide urban per capita water use by 2020. The WC Act requires urban water retailers that must comply with the UWMP Act to set an interim community urban per capita water use target for 2015 and a final community urban per capita water use target for 2020. Due to the City's aggressive water

conservation implementation, the City is currently projected to meet both the 2015 and 2020 water use targets required by the WC Act. Table ES-4 shows the City's projected compliance daily per capita water use for 2015 and 2020, compared to the WC Act per capita water use targets.

Table ES-4
Compliance Daily Per Capita Water Use

	2015 daily per capita water use (gpcd)	2020 daily per capita water use (gpcd)
Total Projected Water Use	125	122
Adopted Per Capita Water Use Targets	136	127

ES.5 Plan Organization

The City's 2010 Plan is organized as follows:

- Section 1 provides background information on the Plan, an overview of how the Plan was prepared, an overview of coordination with other agencies, a description of public participation, and information on Plan adoption.
- Section 2 provides a description of the service area, climate, water supply facilities, and distribution system.
- Section 3 provides historical and projected water demands, baseline water use, per capita water use targets, per capita water use compliance, and an implementation plan as required by the WC Act.
- Section 4 describes surface water, groundwater, and recycled water supplies, desalination and transfer opportunities and future water projects.
- Section 5 describes water supply reliability and water shortage contingency planning.
- Section 6 addresses demand management measures.
- Section 7 provides an overview of anticipated impacts to water demand and water supplies due to climate change.
- Section 8 includes the completed UWMP checklist.
- Section 9 provides references used to develop this document.
- Appendices A through H provide relevant supporting documents.

Table ES-5 provides information on where the DWR recommended tables are located within the City's 2010 Plan.

Table ES-5
Location of DWR Recommended Tables

DWR Table Number and Title	2010 UWMP Section and Table Number	
Table 1. Coordination with Appropriate Agencies	Section 1	Table 1-1
Table 2. Population—Current and Projected	Section 2	Table 2-2
Table 3. Water Deliveries—Actual, 2005	Section 3	Table 3-1
Table 4. Water Deliveries—Actual, 2010	Section 3	Table 3-2
Table 5. Water Deliveries—Projected, 2015	Section 3	Table 3-3

Table ES-5 (con't) Location of DWR Recommended Tables		
DWR Table Number and Title	**2010 UWMP Section and Table Number**	
Table 6. Water Deliveries—Projected, 2020	Section 3	Table 3-4
Table 7. Water Deliveries—Projected, 2025, 2030 and 2035	Section 3	Table 3-5
Table 8. Low-Income Projected Water Demands	Section 3	Table 3-6
Table 9. Sales to Other Water Agencies	Section 3	Table 3-7
Table 10. Additional Water Uses and Losses	Section 3	Table 3-8
Table 11. Total Water Use	Section 3	Table 3-9
Table 12. Retail Agency Demand Projections Provided to Wholesale Suppliers	Section 3	Table 3-10
Table 13. Base Period Ranges	Section 3	Table 3-11
Table 14. Base Daily Per Capita Water Use—10- to 15-Year Range	Section 3	Table 3-12
Table 15. Base Daily Per Capita Water Use—5-Year Range	Section 3	Table 3-13
Table 16. Water Supplies—Current and Projected	Section 4	Table 4-1
Table 17. Wholesale Supplies—Existing and Planned Sources of Water	Section 4	Table 4-2
Table 18. Groundwater—Volume Pumped	Section 4	Table 4-6
Table 19. Groundwater—Volume Projected to be Pumped	Section 4	Table 4-7
Table 20. Transfer and Exchange Opportunities	Section 4	Table 4-8
Table 21. Recycled Water—Wastewater Collection and Treatment	Section 4	Table 4-10
Table 22. Recycled Water—Non-Recycled Wastewater Disposal	Section 4	Table 4-11
Table 23. Recycled Water—Potential Future Use	Section 4	Table 4-12 (Subregional System) Table 4-14 (City)
Table 24. Recycled Water—2005 UWMP Use Projection Compared to 2010 Actual	Section 4	Table 4-13
Table 25. Methods to Encourage Recycled Water Use	Section 4	Table 4-15
Table 26. Future Water Supply Projects	Section 4	Table 4-16
Table 27. Basis of Water Year Data	Section 5	Table 5-3
Table 28. Supply Reliability—Historic Conditions	Section 5	Table 5-1
Table 29. Factors Resulting in Inconsistency of Supply	Section 5	Table 5-4
Table 30. Water Quality—Current and Projected Water Supply Impacts	Section 5	Table 5-12
Table 31. Supply Reliability—Current Water Sources	Section 5	Table 5-2
Table 32. Supply and Demand Comparison—Normal Year	Section 5	Table 5-5
Table 33. Supply and Demand Comparison—Single-Dry Year	Section 5	Table 5-6
Table 34. Supply and Demand Comparison—Multiple-Dry Year Events	Section 5	Table 5-7
Table 35. Water Shortage Contingency—Rationing Stages to Address Water Supply Shortages	Section 5	Table 5-8
Table 36. Water Shortage Contingency—Mandatory Prohibitions	Section 5	Table 5-10
Table 37. Water Shortage Contingency—Consumption Reduction Methods	Section 5	Table 5-9
Table 38. Water Shortage Contingency—Penalties and Charges	Section 5	Table 5-11

ES.6 Plan Adoption

The Santa Rosa City Council adopted this Plan on June 14, 2011. A copy of the adoption resolution is included in Appendix A.

Within 30 days of Plan adoption, a copy of the Plan was submitted to DWR, the California State Library and the County of Sonoma.

Within 30 days of submitting the adopted Plan to DWR, copies of this Plan will be made available during normal business hours at the following locations:

- Local public libraries;
- Santa Rosa City Manager's Office; and
- Santa Rosa Municipal Services Center South Building.

A copy of the adopted Plan will also be available for review and download on the City's website: http://srcity.org/2010UWMP.

Should this Plan be amended or changed, copies of amendments or changes to the Plan shall be submitted to DWR, the California State Library, and any city or county within which the City provides water supplies within 30 days after adoption of the amendment(s).

1 Plan Preparation

The City of Santa Rosa prepared this update to its Urban Water Management Plan (Plan) during 2010 and the beginning of 2011. The Plan is scheduled to be adopted by the Santa Rosa City Council in June 2011 (See Appendix A). This Plan updates and supersedes all previous Plans prepared by the City of Santa Rosa (City). This Plan addresses the City water system and includes a description of the water supply sources, historical and projected water use, and a comparison of water supply to water demands during normal, single-dry, and multiple-dry years. This Plan also addresses new water use efficiency legislation, including the City's 2020 water use target in compliance with the Water Conservation Act of 2009 and implementation plan for meeting the City's 2020 water use target.

The City currently has three sources of existing water supply: entitlement from the Sonoma County Water Agency (Agency), groundwater, and recycled water. The City has received the majority of its potable water supply from the Agency since the early 1960s. The Agency provides water principally from the Russian River to the majority of the retail water providers in Sonoma County, and to a lesser degree in Marin County. The City also receives water supply from our own groundwater wells and provides recycled water from its own Subregional Water Reuse System (Subregional System) to some Santa Rosa irrigators.

This section provides background information on the Plan, an overview of how the Plan was prepared, an overview of coordination with other agencies, a description of public participation, and information on Plan adoption.

1.1 Urban Water Management Planning Act Background

The City Plan has been prepared in accordance with the Urban Water Management Planning Act (UWMP Act) and the Water Conservation Act of 2009 (WC Act). The UWMP Act is defined by the California Water Code, Division 6, Part 2.6, Sections 10610 through 10656. The UWMP Act became part of the California Water Code with the passage of Assembly Bill 797 during the 1983-1984 regular session of the California legislature. The UWMP Act requires every urban water supplier that provides water for municipal purposes to more than 3,000 connections, or supplying more than 3,000 acre-feet per year (AFY) of water annually, to adopt and submit a plan every five years to the California Department

Sonoma Marin Saving Water Partnership

In late 2010, the Water Contractors of the Sonoma County Water Agency (Agency), which include the cities of Cotati, Petaluma, Rohnert Park, Santa Rosa, Sonoma, Town of Windsor, and North Marin and Valley of the Moon Water Districts, joined together with the Agency and Marin Municipal Water District (MMWD) to form the Sonoma Marin Saving Water Partnership (Partnership).

The Partnership allows the Water Contractors, Agency, and MMWD to maximize cost-effective water conservation by identifying projects and programs that can be implemented regionally. The regional partnership commits each signatory to remain in good standing of the California Urban Water Conservation Council (CUWCC), to be on track with implementing the CUWCC Best Management Practices (BMPs), and to budget and spend $15 million over 10 years for implementing water conservation programs. Since the Partnership was formed, a regional water conservation educational campaign was launched and regional conservation programs are being promoted. Visit savingwaterpartnership.org for more information.

of Water Resources (DWR). Subsequent assembly bills have amended the UWMP Act.

The WC Act is defined by California Water Code, Division 6, Part 2.55, Section 10608. The WC Act became part of the California Water Code with the passage of Senate Bill x7-7 in an extraordinary session of the California Legislature in 2009. The WC Act sets forth water conservation requirements for both urban and agricultural water suppliers. The City does not supply water for agricultural customers, therefore only the urban requirements are addressed in this Plan. The WC Act requires urban water suppliers to set and adopt water supply targets for 2015 and 2020 that will assist the State of California in achieving a statewide reduction in per capita urban water use of 20% by the year 2020.

1.2 Previous Urban Water Management Plans

Prior to the 2005 Plan, the Agency prepared a Regional Urban Water Management Plan (Regional Plan) that served as the Plan for the Agency and its primary water contractors, which consisted of the cities Santa Rosa, Rohnert Park, Petaluma, Cotati and Sonoma and the North Marin, Valley of the Moon and Forestville Water Districts[1]. The Regional Plan described the availability of water supply sources, historical and projected water use, water conservation and recycled water activities, and a comparison of water supply to water demand in normal, single-dry and multiple-dry years. As required by Water Code Section 10632, the Regional Plan included the City's Urban Water Shortage Contingency Plan (Water Shortage Plan), which was first adopted in February 1992 and was revised and updated in 1996, 2002 and 2005.

In 2005, the City prepared its own Plan in conjunction with the Agency. The City also updated its Shortage Plan in 2006. The 2005 Plan, which included the and 2006 Shortage Plan, was adopted by the Santa Rosa City Council on June 27, 2006 and was deemed complete by DWR on January 12, 2007.

1.3 Resource Maximization and Import Minimization

As discussed in greater detail in Chapter 4, the City receives approximately 90% of its water supply from the Agency. Water management tools have been used and continue to be used by the City to maximize available water resources. Over the years, the City has developed local sources of water supply and implemented water conservation programs to diversify its water supply portfolio and increase water supply reliability. In July 2005, the City received permission from the California Department of Public Health (DPH) to use two of its groundwater wells, formally permitted as standby emergency wells, for supply; this supply source is now permitted for regular production and can provide up to 2,300 acre-feet per year (AFY) to the City.

The City has been committed to integrating water conservation and recycled water into future supply and demand. By reducing the demand of current water customers through water conservation implementation and expansion of recycled water use, and assuring that all new system uses are efficient, the amount of water the City will need through the purview of the current General Plan has been reduced by approximately 15 percent. A signatory of the California Urban Water Conservation Council's Memorandum of Understanding for Urban Water Conservation since 1998, the City has

[1] In 2006, the Agency entered into a new water supply agreement, the Restructured Agreement for Water Supply (Restructured Agreement), with the primary water contractors. The Forestville Water District is no longer a prime water contractor of the Agency and the Town of Windsor is now a prime water contractor.

completed implementation of all Urban Best Management Practices for water retailers and is projected to be in compliance with the requirements of the WC Act. A full discussion of the City's demand reduction efforts is included in Section 6 of this report.

1.4 Plan Coordination

The UWMP Act requires the City to coordinate the preparation of its Plan with other appropriate agencies and all departments within the City, including other water suppliers that share a common source, water management agencies, and relevant public agencies. The City coordinated the preparation of its Plan with the Agency, eight of its neighboring water providers that also utilize Agency water, the Santa Rosa Subregional System, and the City's Community Development Department and Department of Economic Development and Housing. In addition, the City coordinated the preparation of the water demand projections in this Plan with the 2035 Santa Rosa General Plan. As required by the UWMP Act, the City provided a 60-day written notification to the County of Sonoma regarding the review and consideration of amendments and changes to our Plan. A copy of the 60-day written notice is included in Appendix A.

Table 1-1 (DWR Table 1) provides a summary of the City's coordination with the appropriate agencies and the general public.

Table 1-1 (DWR Table 1)
Coordination with appropriate agencies

Coordinating Agencies	Participated in developing the plan	Commented on the draft	Attended public meetings	Was contacted for assistance	Was sent a copy of the draft plan	Was sent a notice of intention to adopt	Not involved / No information
Sonoma County Water Agency	x	x	x	x	x	x	
Sonoma County Permit and Resource Management Department					x	x	
Neighboring water providers[1]	x	x	x	x	x	x	
Santa Rosa Subregional Water Reuse System	x	x		x	x	x	
General public	x	x	x		x	x	

[1] Neighboring water agencies included the cities of, Rohnert Park, Petaluma, Cotati and Sonoma; Town of Windsor; and the North Marin, Marin Municipal, and Valley of the Moon Water Districts.

1.5 Public Participation and Plan Adoption

The City encouraged community and public interest involvement in the Plan update through outreach in our utility bill Connections newsletter, outreach on our website, numerous public meetings of the City's Water Conservation Subcommittee of the Board of Public Utilities, numerous updates on the Plan development at the City's Board of Public Utilities and City Council meetings, and through the public

hearings for adoption of the Water Use Targets and the Plan. Copies of the City's outreach efforts are included in Appendix A. Specifically, the City encouraged involvement of neighborhood associations, service groups, business leaders, local environmental groups, landscape professionals and associated groups.

Public hearing notifications for adopting the 2015 and 2020 water use targets and for adopting the Plan were published in *The Press Democrat*. Copies of the published Notice of Public Hearing are included in Appendix A. The public hearings provided an opportunity for all City water users and the general public to become familiar with the Plan and ask questions about its water supply in addition to the City's continuing plans for providing a reliable, safe, high-quality water supply. Copies of the draft Plan were made available for public inspection at the Santa Rosa City Manager's office and at the Santa Rosa Municipal Services Center South Building. The Plan was also available for review and download on the City's website: srcity.org/2010UWMP.

This Plan was adopted by the City Council on June 14, 2011. A copy of the adoption resolution is provided in Appendix A.

1.6 Plan Submittal and Implementation

Within 30 days of Plan adoption, a copy of this Plan will be submitted to DWR, the State Library and the County of Sonoma. Upon submittal to DWR, copies of this Plan will be available at local public libraries, the Santa Rosa City Manager's office, and the Santa Rosa Municipal Services Center South Building for public review during normal business hours. An electronic copy of this Plan will also be available for review and download on the City's website: srcity.org/2010UWMP.

This Plan will be the source document for any Senate Bill (SB) 610 Water Supply Assessments or SB 221 Water Supply Verifications required for any proposed projects between 2011 and 2015 that are subject to the California Environmental Quality Act (CEQA) and would demand an amount of water equivalent or greater than the amount of water required by a 500 dwelling unit project. This Plan will also be the source document for water demand projections and water supply availability for an update to the City's Water Master Plan, which was last updated in June 2006. Lastly, this Plan will provide guidance and direction on development of new local supplies and implementation of water conservation programs and recycled water expansion to meet the requirements of the WC Act.

1.7 Plan Organization

The following is a list of the remainder of the sections in this Plan:

- Section 2 provides a description of the service area, climate, water supply facilities, and distribution system
- Section 3 provides historical and projected water demands, baseline water use, per capita water use targets, per capita water use compliance, and an implementation plan as required by the WC Act
- Section 4 describes surface water, groundwater, recycled water supplies, desalination and transfer opportunities and future water projects
- Section 5 describes water supply reliability and water shortage contingency planning
- Section 6 addresses demand management measures

- Section 7 provides an overview of anticipated impacts to water demand and water supplies due to climate change
- Section 8 includes the completed UWMP checklist
- Section 9 provides references used to develop this document
- Appendices A through H provide relevant supporting documents

A complete list of all sections, subsections, tables and figures in this Plan are included in the Table of Contents at the beginning of the Plan.

2 System Description

This section describes the City's water system, including a description of the service area and its climate, and the water system facilities, including surface water supply facilities, groundwater supply facilities, and the distribution system.

2.1 Service Area Description

The City of Santa Rosa is the largest city between Portland, Oregon and San Francisco, California. Santa Rosa is the county seat for Sonoma County and is home to the region's state and federal offices. Santa Rosa is located at the intersection of Highway 101 and Highway 12 and is approximately 50 miles north of San Francisco and 30 miles east of the Pacific Ocean. Santa Rosa serves a four-county region as the hub for technology and entrepreneurial businesses, retail, banking and employment. Santa Rosa has a dynamic and well-balanced economy, anchored by tourism, high-tech manufacturing and retail.[2]

Within the City's service area, employment is diversified across the public sector and the service and manufacturing industries, with a broad spectrum of commercial services such as technology, engineering, and construction. Regionally, employment in the agricultural industry is related to vineyards, livestock, orchards, silage crops, and timber; however, none of these enterprises are served by the City water service. Recreation and tourism are small but growing industries in the region[3].

Land use within the City is primarily residential, but also includes agricultural, industrial, commercial, and recreational land uses. No agricultural uses are supplied with City potable water.

Figure 2-1 illustrates the location of the City's service area and the Agency's transmission system.

Quick Facts about the City of Santa Rosa

- Santa Rosa is the largest north bay city between Portland, Oregon and San Francisco, California.
- As of January 1, 2010, the population within the City's service area is 163,436 people.
- Per the Santa Rosa 2035 General Plan, the projected population for the urban growth boundary in 2035 is 233,520 people.
- Santa Rosa has a Mediterranean climate with average rainfall of 29.6 inches.
- Approximately 93% of the rainfall occurs in the months of October through May.

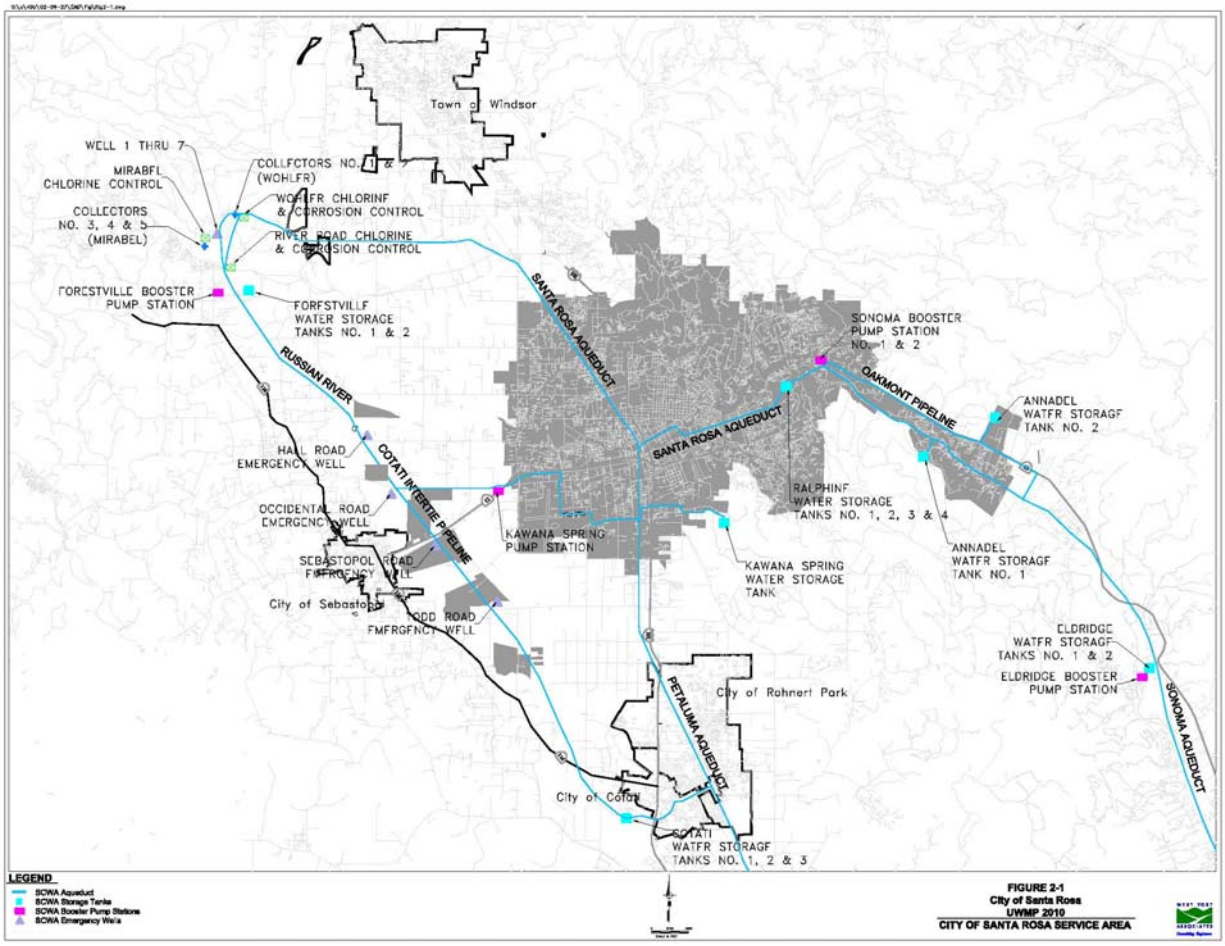
Quick Facts about the City of Santa Rosa Water System

- The City receives approximately 90% of its water supply from the Sonoma County Water Agency.
- The City provides water to over 52,000 customers in Santa Rosa. 91% are residential customers and 9% are commercial customers.
- The City has 25 water storage tanks, 20 water pump stations and 1 well treatment facility.
- The City's water system meets or exceeds all federal and state drinking water standards.

[2] City of Santa Rosa Website – Economic Profile - http://ci.santa-rosa.ca.us/departments/economicdev/econdevelop/Pages/EconomicProfile.aspx

[3] Sonoma County Water Agency, 2000 Urban Water Management Plan.

Figure 2-1- City of Santa Rosa Water Service Area



2.2 Climate

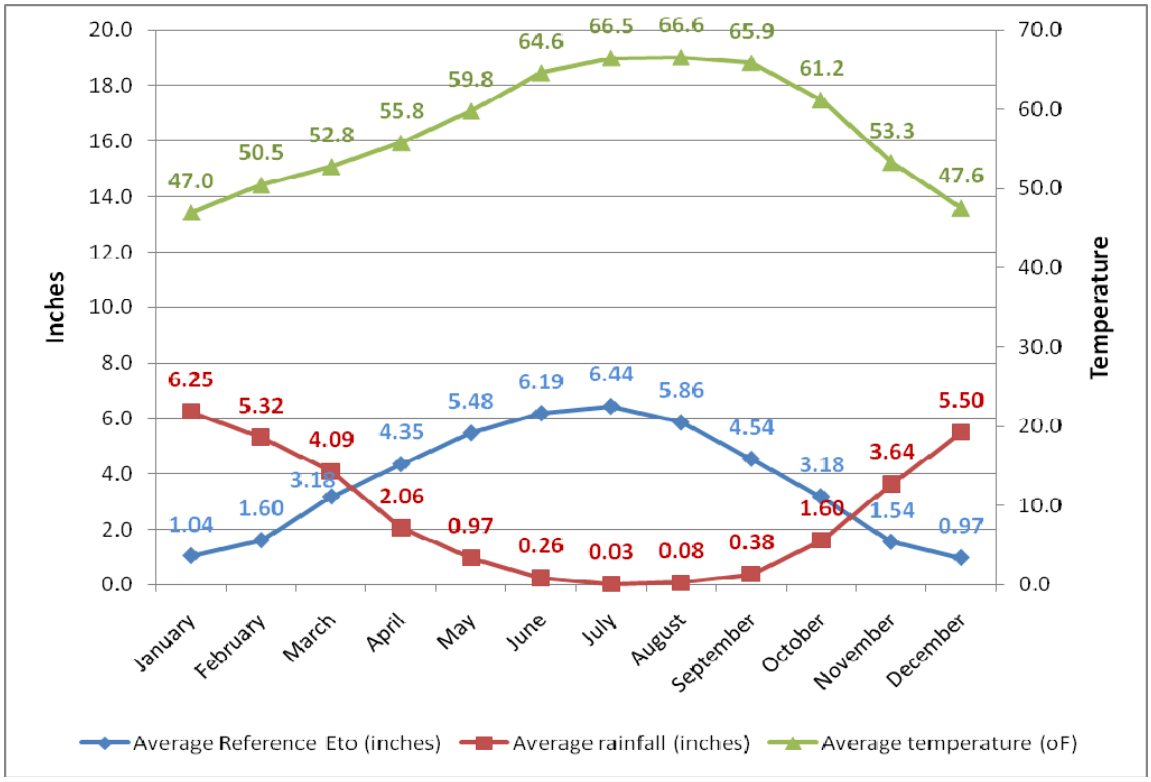
The City's climate is influenced by the Pacific Ocean and is divided into wet and dry seasons. Approximately 93 percent of the annual precipitation normally falls during the wet season, October to May, with a large percentage of the rainfall typically occurring during three or four major winter storms. Winters are cool, and below-freezing temperatures occasionally occur. Summers are warm and the frost-free season is fairly long. Average annual precipitation in the Santa Rosa area is 29.6 inches. Prevailing winds are from the west and southwest. Table 2-1 and Figure 2-2 summarizes monthly average reference evapotranspiration rates (ETo), rainfall, and temperatures for the City of Santa Rosa.

Table 2-1 Santa Rosa Climate			
	Average Reference ETo[1] (inches)	Average rainfall[b] (inches)	Average temperature[2] (°F)
January	1.04	6.25	47.0
February	1.60	5.32	50.5
March	3.18	4.09	52.8
April	4.35	2.06	55.8
May	5.48	0.97	59.8
June	6.19	0.26	64.6
July	6.44	0.03	66.5
August	5.86	0.08	66.6
September	4.54	0.38	65.9
October	3.18	1.60	61.2
November	1.54	3.64	53.3
December	0.97	5.50	47.6
Annual	44.37	30.18	57.6

[1] Data recorded from Santa Rosa station 83, CIMIS database (January 1990 – October 2010). ETo, or reference evapotranspiration, is the loss of water from evaporation and transpiration from plants.

[2] 1902-2010 data recorded at Santa Rosa Station 047965 from Western Regional Climate Center website: www.wrcc.dri.edu

Figure 2-2 – Average Santa Rosa Climate



2.3 Population

Table 2-2 (DWR Table 2) provides the current and projected population for the City's Urban Growth Boundary through the year 2035. The 2010 current service area population is derived from the State of California Department of Finance population estimate and provides the population currently served by the City's distribution system within the City's current jurisdictional boundary. The projected service area population comes from the City's 2035 General Plan and provides the population projections for the City's ultimate Urban Growth Boundary, which includes areas outside of the City's current distribution system. The City's ultimate service area is equivalent to the City's Urban Growth Boundary, and therefore, the City's distribution system will serve the Urban Growth Boundary at some point in the future, however, as noted in the City's 2035 General Plan, it is not possible to predict the specific location or distribution of growth; market trends and/or environmental constraints will direct this growth over time.

Table 2-2 (DWR Table 2)
Population — current and projected

	2010	2015	2020	2025	2030	2035	Data source
Current Service area population	163,436						Department of Finance – E4 report (As of Jan 1, 2010; report published May 2010)
Projected Service area population		194,851[1]	204,519[1]	214,186[1]	223,853[1]	233,520	City of Santa Rosa 2035 General Plan

[1] Per 2035 General Plan, population estimate for City's Urban Growth Boundary is 165,850 in 2000 and projected at 233,520 people in 2035. To derive 5 year intervals, a straight-line projection was developed from the 2000 estimate to the 2035 estimate.

2.4 Employment

Per the City's 2035 General Plan, the City's Urban Growth Boundary was estimated to have 97,980 jobs in 2007. Per the 2000 Census, education, health and social services jobs, manufacturing, retail and professional, scientific, administrative, and waste management jobs make up 57 percent of the jobs in the City. Major employers include Agilent Technologies, Amy's Kitchen, AT&T, City of Santa Rosa, County of Sonoma, JDS Uniphase, Kaiser Permanente, Medtronic Vascular, Santa Rosa City Schools, Santa Rosa Junior College, State of California and Sutter Medical Center. As the seat of Sonoma County government and a center of commerce, it is anticipated that Santa Rosa will continue to be the hub of medical, government, banking and other services for the county. Per employment trends, it is estimated that there will be an addition of 30,420 jobs within the City's Urban Growth Boundary by 2035. [4]

[4] City of Santa Rosa, Santa Rosa General Plan 2035, November 3, 2009.

2.5 Customer Base

The City currently serves approximately 52,000 water connections as of January 2011. Of those connections, 91% service residential demand while 9% service commercial demand. The City's water customers are segregated into the following large customer classes: single-family residential, multi-family residential, commercial/industrial/institutional and irrigation. The multi-family residential class can be further divided by number of living units. In the commercial customer class, all water customers have been classified according to the Standard Industrial Classification (SIC) system, which allows the commercial category to be sorted into sub-categories including: industrial, governmental institution, health care facility, and public safety. The City does not provide any water for agricultural purposes. Table 2-3 provides the numbers of accounts in each customer category currently served by the City.

Table 2-3
2010 Water Accounts

Customer Class	Number of Accounts in 2010	% of Total
Single-family Residential	43,494	83.3%
Multi-Family Residential	3,129	6.0%
Commercial/Institutional/Industrial	2,887	5.5%
Landscape Irrigation	1,695	3.2%
Other[1]	1,039	2.0%
Agricultural Irrigation	0	0.0%
Total	52,244	100%

[1] *Other accounts consist of private fire lines*

2.6 Water System Facilities Source Waters

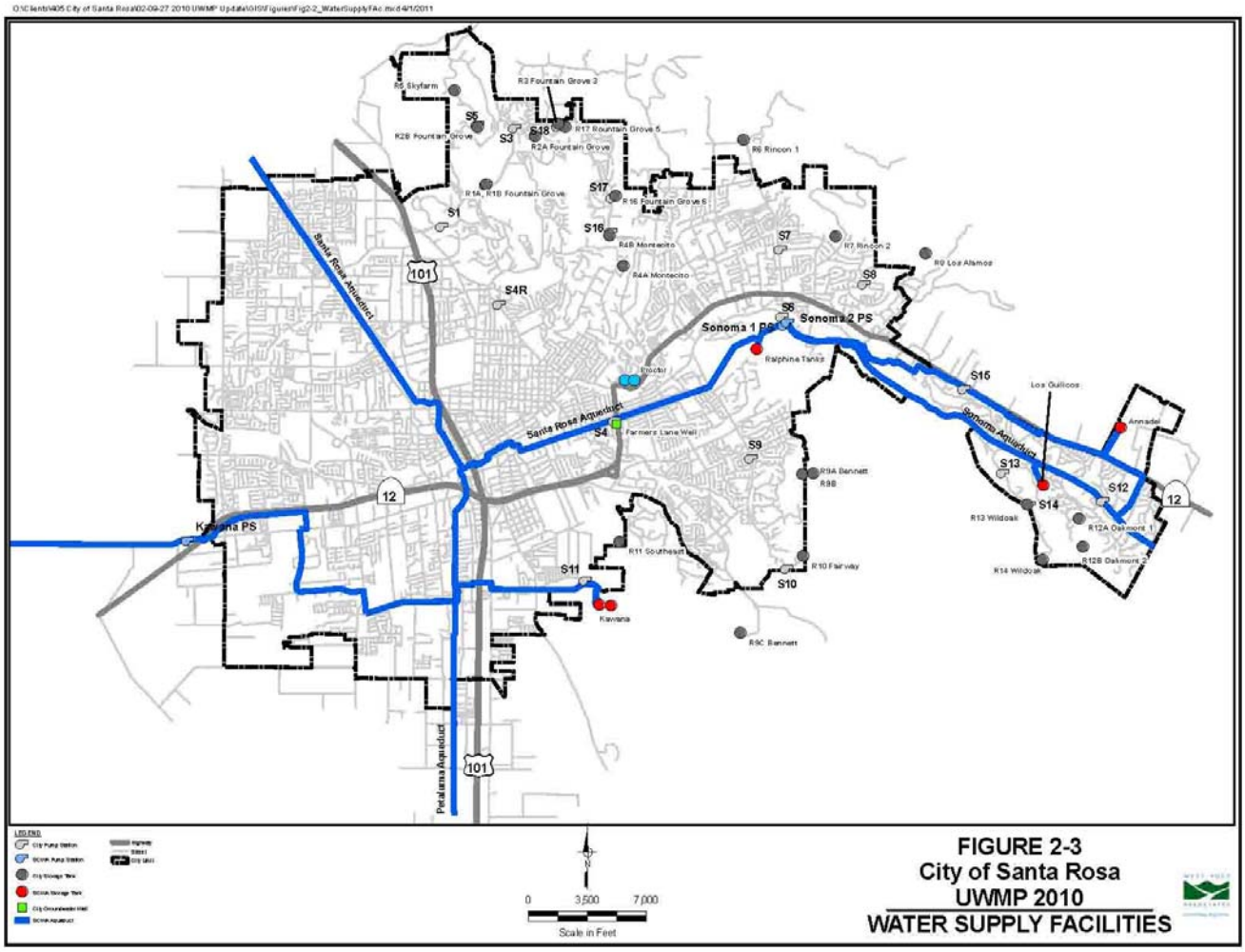
The City relied on the Agency's supplies for potable water exclusively from the early 1960's through 2007. The City maintains a local source of groundwater supply, which prior to 2007, had only been used for emergency purposes. Groundwater facilities are discussed in more detail in Section 4. The City maintains its own retail distribution system, including storage tanks and pumping stations, which are discussed in detail in Section 2.8. Figure 2-2 identifies the locations of the City's water system facilities relative to the Agency facilities. Additional details regarding sources of water are included in Section 4.

2.6.1 Surface Water System Facilities

The City's water supply from the Agency is predominantly surface water, which is diverted from the Russian River. The water supply from the Agency' is provided to the City via the Santa Rosa and Sonoma Aqueducts that deliver water to the City through turnouts. In addition to surface water diverted from the Russian River, the Agency's water supply is also supplemented from groundwater wells located in the Santa Rosa Plain sub-basin. A description of the Agency's supply quantity and quality are included in Section 4. A map

of the City's existing water system that depicts the locations of storage tanks, wells, and pumping stations is presented in Figure 2-2.

Figure 2-3 – Santa Rosa Water Supply Facilities



2.6.2 Groundwater Facilities

The City is located within the Santa Rosa Plain sub-basin of the Santa Rosa Valley Groundwater Basin, located at the confluence of the Santa Rosa, Bennett, and Rincon Valleys. Prior to the early 1960s, the City relied primarily on groundwater from this sub-basin for its water supply. The City's Urban Growth Boundary overlies portions of two groundwater basins: the Santa Rosa Valley Groundwater Basin (specifically two of its sub-basins: the Santa Rosa Plain Sub-basin and the Rincon Valley Sub-basin) and the Kenwood Valley Groundwater Basin. Although the City's Urban Growth Boundary overlies portions of the Rincon Valley Sub-basin and the Kenwood Valley Groundwater Basin, the City's groundwater supply is derived exclusively from the Santa Rosa Plain Sub-basin of the Santa Rosa Valley Groundwater Basin. The City does not derive any groundwater supply from the Rincon Valley Sub-basin or the Kenwood Valley Groundwater Basin.

The City maintains a total of six municipal groundwater wells within the Santa Rosa Plain Sub-basin of the Santa Rosa Valley Groundwater Basin. They are described as follows:

- Farmers Lane Wells No. 1 and 2: These two wells were changed from emergency to active status by DPH on July 20, 2005 and can be used to provide up to 2,300 AFY. These are the only potable groundwater sources used by the City. They have been used recently to supplement potable water supplies obtained from the Agency, particularly during high demand, peak summer periods;
- Carley Well and Peters Spring Well: These two wells are currently operated primarily to provide landscape irrigation to an adjacent park and school ground area, but these wells are also permitted by DPH to operate and provide potable supply during an emergency outage condition;
- Farmers Lane Well No. 3: This well is only operated to provide minor amounts of landscape irrigation water supply to areas adjacent to the well; and
- Leete Well: This well is only used to provide potable water during an emergency outage condition (as permitted by DPH).

Table 2-4 summarizes the current status of the City's active municipal wells and the respective groundwater pumping rates for each well.

Table 2-4
City of Santa Rosa Municipal Wells[1]

Well Name/ Number	Well Status	Capacity (Gallons Per Minute)[2]
Leete (W1)	Standby; used for emergency potable purposes only	250
Carley (W2-1)	Standby; used for emergency potable purposes and some landscape irrigation	700[2]
Peters Spring (W2-2)	Standby; used for emergency potable purposes and some landscape irrigation	500[2]
Farmers Lane (W4-1)	Active status[3]	900[2]
Farmers Lane (W4-2)	Active status[3]	1,500[2]
Farmers Lane (W4-3)	Not connected to City's potable water distribution system; used strictly for minor landscape irrigation purposes	300

[1] The City also has two other municipal wells that are either out of service or inactive: Freeway Well (W3) is out of service due to groundwater contamination caused by others; Sharon Park Well (W6) is inactive due to severe sanding.

[2] Due to hydraulic constraints of the treatment system and/or receiving distribution system, if both Farmers Lane wells or Carley and Peters Spring wells are operated simultaneously, the combined output of each pair of wells will be lower than the listed individual well capacities.

[3] Change in status approved by California Department of Public Health on July 20, 2005.

In addition to the potable supply provided by the two Farmers Lane wells, the Leete, Carley and Peters Spring wells provide the City with approximately 2.1 million gallons per day (mgd) of groundwater capacity on a stand-by emergency basis. Since the mid 1990's, Santa Rosa has had an adopted Capital Improvement Program for the development of the City's groundwater resources to provide an additional 8.7 mgd emergency groundwater supply suitable for potable use by the City.

2.7 Agency Groundwater Resources

The Agency supplements the Russian River water supply with three deep-water wells in the Santa Rosa Plain sub-basin. The Agency's three groundwater wells are located along the Agency's Cotati Aqueduct at Todd Road (SCWA-04), Sebastopol Road (SCWA-05), and Occidental Road (SCWA-06), on the west side of the Santa Rosa Plain Sub-basin. All three wells are drilled to depths greater than 1,000 feet.[5] Because these wells feed into the Agency's Cotati Aqueduct, which provides no supply to the City, little or no Agency groundwater is actually delivered to the City by the Agency to meet the City's 29,100 AFY of contractual supply entitlement. A full discussion of the Agency's groundwater wells is provided in the Agency's 2010 Urban Water Management Plan.

2.8 Distribution System

The City receives Agency water through a series of turnouts, check valves, and direct connections serving City pump stations along the Agency's Santa Rosa and Sonoma Aqueducts. There are 59 physical connections between the City's distribution system and the Agency's system, including 39 pressure reducing valves, 16 check valves, and 4 pumping stations.

Reservoir R1a and R1b

The City's major water distribution facilities consist of 25 treated water reservoirs and 20 water pump stations. These facilities and the distribution pipelines are described in this section.

Reservoir R-5

2.8.1 Storage

Twenty-five water storage tanks are sited throughout the City's water distribution system as shown on Figure 2-2. Individual reservoir storage capacities of current and future tanks range from 0.1 to 4.0 million gallons (MG) for a total capacity of 28.3 MG. Table 2-5 presents the characteristics of the City's storage facilities.

[5] City of Santa Rosa, Utilities Department Memorandum, Southwest Area Projects Water Supply Assessment Clarification, March 10, 2006.

Table 2-5 Characteristics of Existing Storage Facilities	
Reservoir	**Reservoir Capacity (Million Gallons)**
Aqueduct Zone	
A-1	0.00
A-2	0.00
A-3	0.00
A-4	0.00
A-5	0.00
A-6	0.00
A-8	0.00
Proctor Heights (two tanks)	5.20 (total for two tanks)
Aqueduct Zone Subtotal	**5.20**
Fountaingrove Pressure Zone	
R1A	0.5
R1B	0.5
R2A	1.0
R2B	1.5
R3	0.5
Fountaingrove Subtotal	**4.0**
Montecito Pressure Zone	
R4A	0.5
R4B	2.0
R16	0.25
R17	0.75
Montecito Subtotal	**3.5**
Skyfarm Pressure Zone	
R5	0.3
Skyfarm Subtotal	**0.3**
Rincon Valley Pressure Zone	
R6	4.0
R7	2.0
R8	0.75
Rincon Valley Subtotal	**6.75**
Bennett Valley Pressure Zone	
R9A	2.0
R9B	2.5
R9C	1.0
R10	0.2
R11	1.15
Bennett Valley Subtotal	**6.85**
Oakmont Pressure Zone	
R15	0.0
R12A	0.5
R12B	1.0
R13	0.1
R14	0.1
Oakmont Subtotal	**1.7**
Pressure Zones Subtotal	**23.1**
Aqueduct and Hillside Pressure Zones Total	**28.3**

2.8.2 Pump Stations

The City maintains and operates 20 water pump stations and 1 well treatment facility for delivery of water and to maintain water system pressure. Pump station capacity ranges from approximately 130 gallons per minute (gpm) to 5,000 gpm. The summary of the pump station characteristics is presented in Table 2-6.

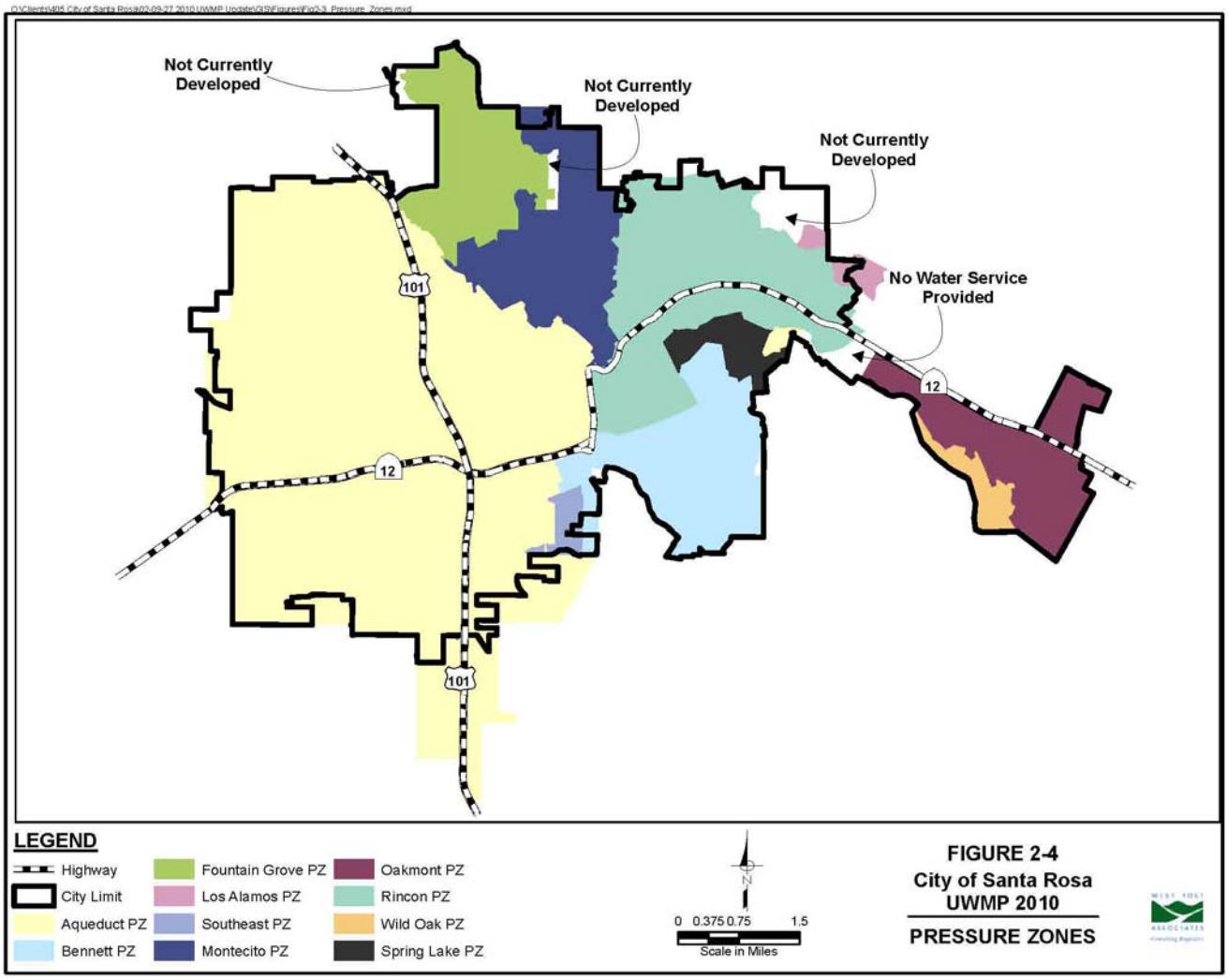
Table 2-6
Water System Pumping Facilities

Pump Station	Pressure Zone Served	Capacity (gpm)
S1	Fountaingrove I	2,850
S2	Fountaingrove II	2,110
S3	Fountaingrove III	1,050
S4	Montecito I	2,705
S4R	Montecito I	500
S4B	Montecito I	1,150
S5	Skyfarm	310
S6	Rincon Valley I	4,350
S7	Rincon Valley II	1,650
S8	Los Alamos	900
S9	Bennett Valley I	5,650
S10	Bennett Valley III	210
S11	Southeast	2,300
S12	Oakmont II	1,450
S13	Oakmont III	1,265
S14	Oakmont III	1,200
S15	Oakmont I	300
S16	Montecito II	1,100
S17	Montecito III	1,505
S18	Montecito III	1,505

2.8.3 Distribution Pipelines

The City's existing water distribution system is divided into 18 major pressure zones, and several smaller sub-zones, that are served by pipelines ranging in diameter from 4 to 24 inches. The majority of services are provided via 6-inch to 12-inch diameter mains. Pipe materials include asbestos cement, PVC, HDPE, ductile iron, cement mortar lined and coated steel. Figure 2-3 illustrates the pressure zones and system configuration.

Figure 2-4 – Santa Rosa Pressure Zones



3 System Demands

This section describes the City's historical, current and projected water system demands by customer category, and includes a calculation of the City's baseline, 2015 interim and 2020 final water use targets, as well as the City's implementation plan for meeting the 2015 interim and 2020 final water use targets.

3.1 Historical and Current Water Use By Customer Type

This section presents historical and current water use in the City by customer type. Tables 3-1 and 3-2 present actual water deliveries for the City in 2005 and 2010, respectively. Water uses in the City include single-family, multi-family, commercial, industrial, institutional, and landscape irrigation customers. The City does not have any agricultural customers.

Table 3-1 (DWR Table 3)
Water deliveries — actual, 2005

	2005				
	Metered		Not metered[1]		Total
Water use sectors	# of accounts	Volume[2]	# of accounts	Volume[2]	Volume[2]
Single-family	41,839	12,420	0	0	12,420
Multi-family	3,085	3,345	0	0	3,345
Commercial/Industrial/ Institutional[3]	2,768	3,456	0	0	3,456
Landscape	1,729	2,553	0	0	2,553
Agriculture	0	0	0	0	0
Total	49,421	21,774	0	0	21,774

[1] The City did not have and currently does not have any unmetered accounts.
[2] Units are acre-feet per year.
[3] In 2005, the City Commercial, Industrial and Institutional customers were all included in the same customer category.

Table 3-2 presents actual water deliveries for the City in 2010. 2010 water use is not representative of normal water use characteristics for the City. From 2007 to 2010, the City's water use was significantly affected by a number of factors described below:

- Drought conditions – In 2007 and 2008, dry year conditions caused the Agency to request voluntary 15% reductions in water use from all of the water contractors. The Agency implemented significant public education and outreach campaigns asking all customers to reduce their water use. In response, the City requested customers to voluntarily reduce their water use, implemented additional public outreach, implemented a water watch patrol, provided new "water on request" cards to restaurants and "towel and linen" cards to hotels and motels, and developed a water wise kit which was provided to all single-family residential and dedicated irrigation customers. Water use was reduced by approximately 15%.
- Water Shortage Conditions – In 2009, drought conditions caused the Agency to implement their Water Shortage Allocation Methodology and provide monthly allocations to each of its water contractors, including the City of Santa Rosa. The Agency implemented even greater public

education and outreach campaigns asking all customers to reduce their water use. In response, the City adopted Stage 1 of the City's Urban Water Shortage Contingency Plan, requesting customers to reduce their water use by 15%, prohibiting washing hard surfaces, requiring hose-end shut off nozzles on all garden hoses, and requiring restaurants to only serve water on request. The City implemented a significant public outreach and education program, increased the water watch patrol, and sent numerous customized letters to every customer informing them of the Stage 1 water requirements and providing information on ways to reduce their water use. Water use was reduced by approximately 25%.

- Economic Conditions – From 2007 to 2010, economic recession and high amounts of vacancy in existing residential and commercial customer accounts had a significant effect on water usage.

Lasting effects of the drought, water shortage and economic recession, as well as a cool summer, significantly affected the City's 2010 water use and therefore, the City's 2010 water use is not representative of normal water use characteristics for the City.

Table 3-2 (DWR Table 4)
Water deliveries — actual, 2010

	2010				
	Metered		Not metered[1]		Total
Water use sectors	# of accounts	Volume[2]	# of accounts	Volume[2]	Volume[2]
Single-family	43,494	9,860	0	0	9,860
Multi-family	3,129	3,204	0	0	3,204
Commercial	2,573	2,136	0	0	2,136
Industrial	66	356	0	0	356
Institutional/ governmental	248	221	0	0	221
Landscape	1,695	1,608	0	0	1,608
Agriculture	0	0	0	0	0
Total	51,205	17,385	0	0	17,385

[1] *The City does not have any unmetered accounts.*
[2] *Units are acre-feet per year.*

3.2 Future Water Use By Customer Type

This section presents projected water use in the City by customer type. The analysis presented here was performed by Maddaus Water Management, which was the same firm that performed the projected water use analysis for the 2005 Urban Water Management Plans for the City of Santa Rosa and Sonoma County Water Agency. The analysis is included in Appendix C.

Per page 12 of the Maddaus demand analysis, the demand projections used a 10-year average of the City's actual water use from 1997 to 2006 as representative of a normal year with respect to weather, drought, economy and residential and commercial vacancy. As noted in Section 3.1, water use data from 2007 to 2010 was not representative of normal water use characteristics and therefore was not included in the 10-year average used for the demand projections.

The projected deliveries include implementation of the National Plumbing Code, State Plumbing Code, and water conservation savings from conservation Best Management Practices implemented through 2009. The projected deliveries do not include water savings from future water conservation implementation beyond the National and State plumbing codes. These future water conservation savings are described in Section 6.

Tables 3-3 through 3-5 present the projected deliveries for the City of Santa Rosa for 2015 through 2035.

Table 3-3 (DWR Table 5)
Water deliveries — projected, 2015

	2015				
	Metered		Not metered[1]		Total
Water use sectors	# of accounts	Volume[2]	# of accounts	Volume[2]	Volume[2]
Single-family	41,630	13,001	0	0	13,001
Multi-family	3,400	3,927	0	0	3,927
Commercial, Industrial, Institutional/Government	2,994	3,923	0	0	3,923
Landscape	1,919	3,265	0	0	3,265
Agriculture	0	0	0	0	0
New Single-family	5,151	1,958	0	0	1,958
Total	55,094	26,074[3]	0	0	26,074[3]

[1] The City does not have any unmetered accounts.

[2] Units are acre-feet per year.

[3] Demand includes savings from Plumbing Code implementation and does not include additional savings from future conservation or recycled water implementation. Additional conservation savings are described in Section 6.9. Recycled water savings are described in Section 4.7.4.

Table 3-4 (DWR Table 6)
Water deliveries — projected, 2020

	2020				
	Metered		Not metered[1]		Total
Water use sectors	# of accounts	Volume[2]	# of accounts	Volume[2]	Volume[2]
Single-family	41,630	12,762	0	0	12,762
Multi-family	3,569	3,995	0	0	3,995
Commercial, Industrial, Institutional/Government	3,147	4,062	0	0	4,062
Landscape	2,015	3,427	0	0	3,427
Agriculture	0	0	0	0	0
New Single-family	7,756	2,944	0	0	2,944
Total	58,117	27,190[3]	0	0	27,190[3]

[1] The City does not have any unmetered accounts.

[2] Units are acre-feet per year.

[3] Demand includes savings from Plumbing Code implementation and does not include additional savings from future conservation or recycled water implementation. Additional conservation savings are described in Section 6.9. Recycled water savings are described in Section 4.7.4.

Table 3-5 (DWR Table 7) Water deliveries — projected 2025, 2030, and 2035						
	2025		2030		2035	
	Metered		Metered		Metered	
Water use sectors	# of accounts	Volume[1]	# of accounts	Volume[1]	# of accounts	Volume[1]
Single-family	41,630	12,540	41,630	12,372	41,630	12,244
Multi-family	3,737	4,065	3,906	4,160	4,075	4,273
Commercial, Industrial, Institutional/ Government	3,299	4,209	3,451	4,362	3,604	4,521
Landscape	2,110	3,589	2,205	3,751	2,300	3,913
Agriculture	0	0	0	0	0	0
New Single-family	10,382	3,935	13,028	4,931	15,695	5,932
Total	61,158	28,338[2]	64,220	29,576[2]	67,304	30,883[2]

[1] *Units are acre-feet per year.*

[2] *Demand includes savings from Plumbing Code implementation and does not include additional savings from future conservation or recycled water implementation. Additional conservation savings are described in Section 6.9. Recycled water savings are described in Section 4.7.4.*

3.3 Low Income Water Demands

The City does not have the ability to track water use by housing type and can only roughly estimate the amount of projected water use for low-income units based on assumptions regarding the amount of low-income housing that currently exists in the City. Per the City's Economic Development and Housing Department, the City's most current information on affordable housing units, which consists of very low-income and low-income housing units, is from May 2010. In May 2010, the City had a total of 4,086 affordable housing units in Santa Rosa. However, 33 of the units are included in a mobile home park that is served by groundwater pumped from a private well and not served water by the City of Santa Rosa and, therefore, not included in the projected water demands. Per the City's Economic Development and Housing Department, it is estimated that of the remaining 4,053 affordable housing units, 89 are single-family residential units and 3,964 are attached (multi-family) units.

The 89 affordable single-family residential units represent 0.2% of the total single-family residential accounts in 2010 (43,494 total single-family accounts in 2010 – see Table 3-2). Per page 15 of the Maddaus Demand Analysis, it is estimated that there are an average of 5.8 units per multi-family account. Therefore, it is estimated that in May 2010, 684 of the City's multi-family residential accounts were affordable housing units (3,964 units divided by 5.8 units per account = 683.4 accounts), or roughly 21.8% of the total multi-family residential accounts in 2010 (3,129 total multi-family accounts in 2010 – see Table 3-2).

As shown in Table 3-6, the City estimates that low-income units will continue to make up roughly 0.2% of the single-family accounts and associated water demands in the future and 21.8% of the multi-family accounts and associated water demands of multi-family residential in the future.

Table 3-6 (DWR Table 8) Low-income projected water demands					
Low-Income Water Demands[1]	**2015**	**2020**	**2025**	**2030**	**2035**
Single-family residential	0.2%	0.2%	0.2%	0.2%	0.2%
Multi-family residential	21.8%	21.8%	21.8%	21.8%	21.8%
% Total Residential Accounts[2]	1.7%	1.7%	1.7%	1.7%	1.7%

[1]Provide demands either as directly estimated values or as a percent of demand.

[2] In 2010, the City estimates a total of 772.4 low-income residential (single-family and multi-family) accounts out of a total of 46,623 residential (single-family and multi-family) accounts.

3.4 Water Sales to Other Agencies

The City is not a wholesale potable water provider and does not plan to be a potable water wholesaler in the future. As shown in Table 3-7, the City does not currently sell and does not plan to sell water to other agencies.

Table 3-7 (DWR Table 9) Sales to other water agencies							
Water distributed	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**	**2035**
Not Applicable	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

3.5 Additional Water Use and Unaccounted-for Water

At this time, the City does not currently use nor does it anticipate using in the future water for groundwater recharge, to prevent salt-water intrusion (saline barriers), or for other conjunctive uses. The City does not currently provide nor does it anticipate providing in the future raw water.

Unaccounted-for water use, or system loss, is the difference between water produced and water sold to the customers. Unaccounted-for water includes metered and unmetered water use, such as water used for fire protection and training, water system flushing, sewer cleaning, construction, system leaks, as well as water used by unauthorized connections. Unaccounted-for water use can also result from meter inaccuracies.

The City is the owner and operator of the Subregional System, which provides wastewater treatment for the cities of Cotati, Rohnert Park, Santa Rosa and Sebastopol, as well as the South Park Sanitation District and portions of unincorporated Sonoma County. The recycled water that the Subregional System provides is high-quality, tertiary-treated recycled water that is approved for many reuse purposes, including irrigation of landscapes, agricultural crops, vineyards, playgrounds, golf courses, and public parks. The City's current and historic use of recycled water has been limited to areas within close proximity to the Subregional System's distribution network. In December 2007, the City approved Phase 1 West of the Santa Rosa Urban Reuse Project, which is designed to provide up to an additional

750 AFY of recycled water to current and future approved water uses, primarily landscape irrigation. The City's existing and future recycled water supply is further described in Section 4.

Table 3-8 provides the quantity of the City's recycled water use and unaccounted-for system water losses for 2005 and 2010 and the estimated recycled water use and unaccounted-for system water losses for 2015 through 2035.

Table 3-8 (DWR Table 10)
Additional water uses and losses

Water use[1]	2005	2010	2015	2020	2025	2030	2035
Saline barriers	0	0	0	0	0	0	0
Groundwater recharge	0	0	0	0	0	0	0
Conjunctive use	0	0	0	0	0	0	0
Raw Water	0	0	0	0	0	0	0
Recycled Water[2]	86	204	350	350	1,100	1,100	1,100
System losses	1,122	1,913	2,229	2,324	2,420	2,525	2,635
Total	1,208	2,117	2,579	2,674	3,520	3,625	3,735

[1] Units are acre-feet per year.
[2] Recycled water use is discussed in Section 4.

3.6 Total Water Use

Past, present, and projected water use for the City's system, which is the sum of the totals from Tables 3-1 through 3-8, is provided in Table 3-9.

Table 3-9 (DWR Table 11)
Total water use (under average weather conditions)[1]

Water Use[1]	2005[2]	2010[2]	2015	2020	2025	2030	2035
Total water deliveries (from DWR Tables 3 to 7)	21,774	17,385[3]	26,074	27,190	28,338	29,576	30,883
Sales to other water agencies (from DWR Table 9)	0	0	0	0	0	0	0
Additional water uses and losses (from DWR Table 10):							
Recycled Water	86	204	350	350	1,100	1,100	1,100
Potable Water System Losses	1,122	1,913	2,229	2,324	2,420	2,525	2,635
Total Potable Water Use[4]	22,896	19,298[3]	28,303	29,514	30,758	32,101	33,518
Total Recycled Water Use	86	204	350	350	1,100	1,100	1,100
Total Water Use	22,982	19,502[3]	28,653	29,864	31,858	33,201	34,618

[1] Units are acre-feet per year.
[2] 2005 and 2010 values are actual water use.
[3] As noted in Section 3.1, 2010 water use is not representative of normal water use characteristics for the City.
[4] Demand includes savings from Plumbing Code implementation and does not include additional savings from future conservation or recycled water implementation. Additional conservation savings are described in Section 6.9. Recycled water savings are described in Section 4.7.4. These projected savings can be deducted from Total Potable Water Use to determine projected net water deliveries.

3.7 Demand on Wholesale Supply

The City currently receives the majority of its potable water supply from the Agency under the provisions of the Restructured Agreement for Water Supply (Restructured Agreement) dated June 2006. The remaining potable water supply is provided by the City's own groundwater wells. The City's contractual entitlement under the Restructured Agreement is 29,100 AFY. Should the Agency at any time not be able to provide the City its full entitlement, shortage provisions are outlined in Section 3.5 of the Restructured Agreement and the Agency's adopted Water Shortage Allocation Methodology (adopted per the requirements of Section 3.5). The Restructured Agreement section 3.5 provisions, and the Water Shortage Allocation Methodology, are designed to take the demand hardening[6] associated with water conservation into account. Based on the City's aggressive water conservation implementation, under the Water Shortage Allocation Methodology, it is anticipated that the City's allocation would be 29,100 AFY, the full entitlement of the Restructured Agreement. (Letter from Sonoma County, April 2006)

Table 3-10 provides the projected amount of water that the City expects to purchase from the Agency to meet water demands in the future. The remaining demand will be met with a combination of the City's own groundwater wells, water conservation implementation and recycled water implementation. The Agency's water supply, the City's groundwater and recycled water supply are further described in Section 4. The City's water conservation implementation is further described in Section 6.

Lake Sonoma. Photo courtesy of Sonoma County Water Agency.

As noted in Section 3.1 above, 2010 water use is not representative of normal water use characteristics for the City. 2010 water use is also not representative of normal water use for the Agency and its customers (Water Contractors), which include the City. From 2007 – 2010, the Agency's and the Water Contractors' water use was significantly affected by a number of factors including drought conditions, implementation of water shortage response plans, economic recession and increases in residential and commercial vacancy. Lasting effects of the drought, water shortage and economic recession, as well as a cool summer, significantly affected the Agency's and Water Contractors' 2010 water use such that 2010 water use is not representative of normal water use characteristics.

The methodology used by the Agency and Water Contractors for the demand projections for 2015 through 2035 is based on normal water use characteristics and does not incorporate the effects of the

[6] Demand hardening is a term used to refer to the inability to further reduce water use during a shortage or drought due to increased water use efficiency.

conditions described above. Because of this methodology, the 2015 water demand projections, in particular, may be slightly higher than what may likely occur. Due to the uncertainty regarding economic recovery, a range of 23,797 AFY to 25,343 AFY for the demand projection for 2015 has been provided by the City to the Agency. If the economic recovery is slower than expected, the lower end of the demand projection range, 23,797 AFY may be more likely to occur in 2015. If the economic recovery is strong, the higher end of the demand projection, 25,343 AFY as shown in Table 3-10 may be more likely to occur in 2015. The Water Contractors will be coordinating and working closely with the Agency to determine the timing of capital improvement projects that may need to come online in order to meet the water demand in response to the economy recovery.

Table 3-10 (DWR Table 12)
Retail agency demand projections provided to wholesale suppliers[1]

Wholesaler	Contracted Volume	2010	2015	2020	2025	2030	2035
Sonoma County Water Agency	29,100[2]	18,514[3]	25,343[4]	26,082	26,835	27,896	29,041

[1] *Units are acre-feet per year.*
[2] *Current contractual entitlement under the Restructured Agreement for Water Supply.*
[3] *As noted in Section 3.1, 2010 water use is not representative of normal water use characteristics for the City.*
[4] *As noted above, the demand projections for 2015 range from 23,797 AFY to 25,343 AFY depending on the strength and timing of economic recovery.*

3.8 Baselines and Targets

In 2009, Senate Bill x7-7, the Water Conservation Act (WC Act), was signed into law. The legislation set a goal of a 20% reduction in statewide urban per capita water use and requires urban water retailers that must comply with the Urban Water Management Planning Act (UWMP Act) to set an interim community urban per capita water use target for 2015 and a final community urban per capita water use target for 2020. The WC Act analysis presented here was performed by West Yost Associates and is included in Appendix D.

The WC Act requires each urban water retailer to determine their base daily per capita water use (base gpcd). The WC Act defines the base gpcd as an estimate of the urban retail water supplier's average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004 and no later than December 31, 2010. The WC Act also defines that for those urban water retailers that met at least 10% of their 2008 water demand using recycled water, the urban water retailer can extend the base gpcd calculation for a maximum of a continuous 15-year period, ending no earlier than December 31, 2004 and no later than December 31, 2010.

The WC Act also requires each urban water retailer to determine a 5-year base gpcd as an estimate of the urban retail water supplier's average gross water use, reported in gallons per capita per day and calculated over a continuous 5-year period ending no earlier than December 31, 2007 and no later than December 31, 2010.

Table 3-11 provides the City's information for the base gpcd calculation. In 2008, the City met 0.4% of its total demand through recycled water; therefore, the City's base gpcd is calculated over a 10-year period, from 1995 through 2004. The City's 5-year base gpcd is calculated for the period of 2003 through 2007. Detailed analysis of the City's 5-year and 10-year base gpcd calculations is included in the West Yost Analysis included in Appendix D.

Table 3-11 (DWR Table 13)
Base period ranges

Base	Parameter	Value	Units
10- to 15-year base period	2008 total water deliveries	23,405	*Acre-feet per year*
	2008 total volume of delivered recycled water	86	*Acre-feet per year*
	2008 recycled water as a percent of total deliveries	0.4%	percent
	Number of years in base period[1]	10	years
	Year beginning base period range	1995	
	Year ending base period range[2]	2004	
5-year base period	Number of years in base period	5	years
	Year beginning base period range	2003	
	Year ending base period range[3]	2007	

[1]If the 2008 recycled water percent is less than 10 percent, then the first base period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater, the first base period is a continuous 10- to 15-year period.

[2]The ending year must be between December 31, 2004 and December 31, 2010.

[2]The ending year must be between December 31, 2007 and December 31, 2010.

Table 3-12 provides the 10-year base gpcd calculation for the City for the period of 1995 through 2004. As shown, the City's 10-year base gpcd is 144 gpcd.

Table 3-12 (DWR Table 14) Base daily per capita water use — 10- to 15-year range				
Base period year		Distribution System Population[2]	Daily system gross water use (mgd)	Annual daily per capita water use (gpcd)
Sequence Year	Calendar Year			
Year 1	1995	126,495	19.56	155
Year 2	1996	129,028	20.85	162
Year 3	1997	131,848	20.88	158
Year 4	1998	139,862	19.26	138
Year 5	1999	143,009	20.71	145
Year 6	2000	146,871	20.81	142
Year 7	2001	149,648	21.42	143
Year 8	2002	152,053	19.92	131
Year 9	2003	154,027	20.53	133
Year 10	2004	154,944	21.42	138
			Base Daily Per Capita Water Use[1]	144

[1] *Add the values in the column and divide by the number of rows.*

[2] *Population Sources:*

- *1995-2000: California Department of Finance, E-4 Historical Population Estimates for City, County and the State, 1991-2000, with 1990 and 2000 Census Counts, Sacramento, CA, August 2007 (downloaded March 2011).*
- *2001-2010: California Department of Finance, E-4 Population Estimates for City, County and the State, 2001-2010, with 2000 Benchmark, Sacramento, CA, May 2010 (downloaded March 2011).*

Table 3-13 provides the 5-year base gpcd calculation for the City for the period of 2003 through 2007. As shown, the City's 5-year base gpcd is 134 gpcd.

Table 3-13 (DWR Table 15) Base daily per capita water use — 5-year range				
Base period year		Distribution System Population	Daily system gross water use (mgd)	Annual daily per capita water use (gpcd)
Sequence Year	Calendar Year			
Year 1	2003	154,027	20.53	133
Year 2	2004	154,944	21.42	138
Year 3	2005	155,589	20.44	131
Year 4	2006	156,431	21.25	136
Year 5	2007	157,126	21.00	134
			Base Daily Per Capita Water Use[1]	134

[1] *Add the values in the column and divide by the number of rows.*

3.9 Interim 2015 and Final 2020 Targets

The WC Act provides that urban water retailers must set an interim 2015 and final 2020 community water use target using one of four methodologies defined by the WC Act and the Department of Water Resources. The WC Act also requires each urban water retailer to calculate a minimum water use reduction requirement, defined as a 5% reduction of the 5-year base gpcd. As described in the West Yost Associates WC Act analysis, 2015 and 2020 targets were calculated for the City using each of the four methodologies. In addition, the minimum water use reduction target was also calculated for the City.

Table 3-14 summarizes the four methodologies, calculated interim 2015 and final 2020 water use targets, and the minimum water use reduction requirement for the City.

Table 3-14
Summary of WC Act Urban Water Use Targets

Target Method Number	Target Method Description	Base Daily Per Capita Water Use	Interim (2015) Target	Final (2020) Target
1	Uses historical gross water use and service area population to determine a base daily per capita water use. The Urban Water Use Target is 80 percent of this value. Based on 10-year running average per capita water use ending between 2004 and 2010. Gross water use is that total water supplied to the system less recycled, wholesale or agricultural deliveries.	144 gpcd	130 gpcd	115 gpcd
2	Uses performance standards for indoor water use, landscape irrigation use and commercial, institutional and industrial (CII) uses. Residential water use = 55 gpcd. Uses Model Water Efficient Landscape Ordinance for definitions and calculations. Uses estimated landscaped area and applies a Maximum Applied Water Allowance, calculated from the ordinance[1]. CII use based on historical CII per capita use less 10 percent.	144 gpcd[2]	129 gpcd	113 gpcd
3	Uses 95 percent of the applicable state hydrologic region target as defined in the state's draft 20x2020 Water Conservation Plan issued by DWR in April 2009. City of Santa Rosa is located in state hydrologic region number 1 (North Coast Region).	144 gpcd[2]	137 gpcd	130 gpcd
4	Results shown based on Provisional Method 4 released by DWR in February 2011. Provisional Method 4 is subject to change.	144 gpcd[2]	130 gpcd	116 gpcd
Minimum Required	Based on 95 percent of the 5-year running average per capita water use ending between 2007 and 2010.	134 gpcd	136 gpcd	127 gpcd

[1] Rigorous application of this method requires a data-intensive analysis using GIS, coupled with site visits to estimate appropriate irrigation areas. For preliminary screening purposes to evaluate use of the method, landscaped areas were estimated by West Yost based on historical irrigation water use and average water use factors (see additional discussion West Yost Associates Analysis in Appendix D).

[2] The baseline for this method is the same as Method 1 and is used to establish the interim target.

The WC Act requires each urban retail water agency to conduct a public hearing to select the method for determining the interim 2015 and final 2020 water uses targets, allow community input on the City's implementation plan for complying with the 2015 and 2010 water use targets, and to consider economic impacts of the City's implementation plan. On April 19, 2011, the Santa Rosa City Council held a public hearing to discuss the method for setting the City's 2015 and 2020 water use targets, to allow community input on the City's implementation plan for complying with the 2015 and 2020 water use targets and to consider the economic impacts of the City's implementation plan. Following the hearing, the Santa Rosa City Council selected Target Method 3, and incorporated the minimum reduction requirement, to set the City's targets as follows:

- Interim 2015 water use target = 136 gpcd
- Final 2020 water use target = 127 gpcd

3.10 Compliance Year 2015 and 2020 Water Use

The City projects that it will be in compliance with the WC Act interim 2015 and 2020 water use targets by continuing to implement water conservation programs for existing customers, continuing to implement water conservation requirements for new customers and continuing to operate the City's existing recycled water system. The City's Water Use Reduction Implementation Plan is described in Section 3.10. Table 3-15 shows the City's projected compliance daily per capita water use for 2015 and 2020, compared to the WC Act per capita water use targets.

Table 3-15
Compliance daily per capita water use

	2015 daily per capita water use (gpcd)	2020 daily per capita water use (gpcd)
Total Projected Water Use	125	122
Adopted Per Capita Water Use Targets	136	127

The WC Act also provides that urban water retail suppliers may plan, comply and report on the 2015 and 2020 water use targets on a regional basis, individual basis, or both. Per *Department of Water Resources Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use* (DWR Methodologies), the Water Contractors of the Agency (Water Contractors) are eligible to form a regional alliance because the Water Contractors are recipients of water from a common wholesale water supplier, the Agency. The Water Contractors have formed a regional alliance consisting of the following urban water suppliers: Cities of Santa Rosa, Rohnert Park, Sonoma, Cotati, and Petaluma, Town of Windsor, and North Marin, Marin Municipal and Valley of the Moon Water Districts. Upon evaluation, the Water Contractors have selected Option 1 as described in DWR Methodologies for calculating the regional alliance target. A copy of the letter to DWR regarding the formation of the regional alliance as well as the letter agreement forming the regional alliance is included in Appendix E.

Table 3-16 provides the individual and regional alliance interim 2015 and final 2020 water use targets for the Water Contractors. As shown in the table, the regional alliance interim 2015 and final 2020 water use targets are as follows:

- Interim 2015 water use target = 142 gpcd
- Final 2020 water use target = 129 gpcd

Table 3-16
Agency Service Area Regional 2020 Targets (DWR Methodology # 9)

Agency Water Contractor	2015			2020		
	Current Population[1]	Water Contractor Individual GPCD Target	Product of Individual Population Size and GPCD Target [(1) x (2)]	Current Population	Water Contractor Individual GPCD Target	Product of Individual Population Size and GPCD Target [(1) x (2)]
	(1)	(2)	(3)	(1)	(2)	(3)
Santa Rosa	163,436	136	22,227,296	163,436	127	20,756,372
North Marin	61,012	161	9,822,932	61,012	143	8,724,716
Petaluma	58,401	153	8,935,353	58,401	136	7,942,536
Rohnert Park	43,398	140	6,075,720	43,398	119	5,164,362
VOMWD	23,478	136	3,193,008	23,478	124	2,911,272
Sonoma	11,426	194	2,216,644	11,426	173	1,976,698
Cotati	7,711	134	1,033,274	7,711	130	1,002,430
Windsor	28,134	143	4,023,162	28,134	130	3,657,420
MMWD	190,600	137	26,074,080	190,600	124	23,634,400
Total	**587,596**		**83,601,469**	**587,596**		**75,770,206**
					2015	**2020**
			Regional GPCD Target [Total of (3) / Total of (1)]		142	129

[1] *Current population from Water Contractor or from Department of Finance when not available from Water Contractor.*

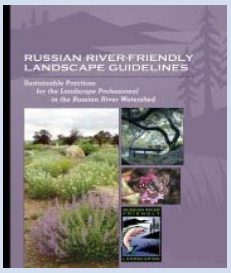
Participants in the regional alliance project that the regional alliance will be in compliance with its interim 2015 and 2020 water use targets. Table 3-17 provides the projected 2015 and 2020 compliance daily per capita water use for the Regional Alliance.

Table 3-17
Compliance daily per capita water use for Regional Alliance

	2015 daily per capita water use (gpcd)	2020 daily per capita water use (gpcd)
Total Projected Water Use	133	128
Regional Per Capita Water Use Targets	142	129

Russian River Friendly Landscape Guidelines

Santa Rosa is one of the founding members of the Russian River Watershed Association (RRWA), which is a coalition of nine agencies within the Russian River Watershed that have come together to coordinate regional programs for clean water, fisheries restoration and watershed enhancement. In 2010, RRWA adapted the Bay-Friendly Landscape Guidelines to the Russian River watershed, and published the Russian River-Friendly Landscape Guidelines.



Santa Rosa played a significant role in this adaptation, providing in kind services to develop the Guidelines. Russian River-Friendly landscaping is a whole system approach to the design, construction and maintenance of the landscape guided by 7 principles of sustainable landscaping. These seven principles are: Landscape Locally; Landscape for Less to the Landfill; Nurture the Soil; Conserve Water; Conserve Energy; Protect Water and Air Quality; and Create Wildlife Habitat. These principles are consistent with and demonstrate water use efficiency measures, green building principles, and assist with meeting the 2015 and 2020 water use efficiency goals.

3.11 Water Use Reduction Implementation Plan

In order to meet the City's interim 2015 and final 2020 water use targets, the Utilities Department will continue to implement water conservation programs for existing customers as described in Section 6. Future conservation efforts will focus first on sustaining the savings already achieved from existing conservation programs, such as the Green Exchange Rebate Program and Conservation Check-Up Program, and secondly on achieving additional savings from new and emerging technologies, such as "smart" irrigation controllers.

City of Santa Rosa customer landscape prior to participating in the Green Exchange Rebate Program.

City of Santa Rosa customer landscape after participating in the Green Exchange Rebate Program.

The City will also continue to implement existing water efficiency requirements for new customers, including plumbing code requirements and the Model Water Efficient Landscape Ordinance, and implement future water efficiency requirements for new development such as implementation of the CalGreen Building Code in 2011, which requires new residential and commercial development to achieve a 20% reduction in water use, and implementation of SB 407 Plumbing Fixture Retrofit on Resale or Remodel starting in 2014, which requires all existing facilities to meet a minimum level of indoor water use efficiency. Finally, the City will continue to operate the City's existing recycled water system. A description of the City's current and future recycled water use is included in Section 4.

4 System Supplies

This section describes the City's water supply portfolio, including surface water supply, groundwater supply, recycled water, and stormwater. This section includes a description of each water source, limitations on each water source, water quality information, and water exchange opportunities.

4.1 Water Sources

The City currently has three sources of existing water supply: entitlement from the Agency, groundwater, and recycled water. The City currently receives the majority of its potable water supply from the Agency under the provisions of the Restructured Agreement for Water Supply (Restructured Agreement), which was executed in June 2006. Approximately 95% of water delivered by the Agency is from surface water sources, with the remainder from groundwater.

In addition to Agency supply, in July 2005, the City received permission from California DPH to use two of its groundwater wells, formerly permitted as standby emergency wells, for full-time, active potable water supply. This supply source is permitted for regular production and can provide up to 2,300 AFY to the City.

The City is also the owner and operator of the Subregional System, which produces recycled water. The City has historically used approximately 350 AFY of recycled water for landscape irrigation and has recently expanded the recycled water system within the City limits to provide an additional approximately 60 AFY of recycled water for landscape irrigation purposes.

In addition, the City has a very aggressive water conservation program which reduces current potable water demand and ensures that future water use is efficient. The City's water conservation implementation is further described in Section 6. For purposes of this 2010 UWMP, the future water savings resulting from the implementation of future water conservation measures is considered as an additional supply available to the City.

Table 4-1 details the existing and projected water supplies available to the City.

Santa Rosa Water Supply

The City receives 90% of its water supply from the Sonoma County Water Agency. The remaining 10% comes from the City's Farmers Lane wells and from recycled water which is used for non-drinking water purposes, such as landscape irrigation.

The map below shows an overview of where the City's drinking water supply comes from.

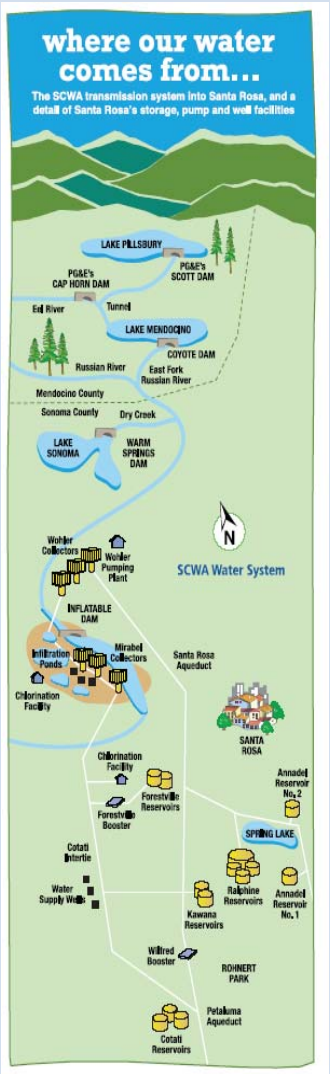


Table 4-1 (DWR Table 16) Water supplies — current and projected[1]							
Water Supply Sources							
Water purchased from[1]:	Wholesaler supplied volume (yes/no)	2010	2015	2020	2025	2030	2035
Wholesaler 1 – Sonoma County Water Agency[2]	Yes	18,514	25,343	26,082	26,835	27,896	29,041
Supplier-produced groundwater		902	2,300	2,300	2,300	2,300	2,300
Supplier-produced surface water		0	0	0	0	0	0
Transfers in		0	0	0	0	0	0
Exchanges In		0	0	0	0	0	0
Recycled Water[3]		204	350	350	1,100	1,100	1,100
Desalinated Water		0	0	0	0	0	0
Future Water Conservation[3]			1,110	1,581	1,883	2,164	2,437
Total		19,620	29,103	30,313	32,118	33,460	34,878

[1] *Units are acre-feet per year.*

[2] *Sonoma County Water Agency projected supplies based on projected potable demands as described in Section 3.6, minus future conservation savings, future recycled water supply (750 AFY), and groundwater supply.*

[3] *Future recycled water supply (750AFY) and future water conservation will offset future potable demand and reduce future water deliveries. These projected savings can be deducted from Total Potable Water Use listed in Table 3-9 to determine projected net water deliveries.*

The following discussion sections describe the existing and projected supply sources available to the City, including Agency supply, City groundwater, stormwater and recycled water.

4.2 Agency Water Supply

This section describes the City's wholesale water supply, which is purchased from the Agency, as well as the physical and legal constraints to this supply. The City and the Agency water supply facilities are described in Section 2.

4.2.1 Overview

The City receives its primary water supply from the Agency. The Agency is authorized to produce and deliver potable water for municipal and industrial purposes; prevent the waste or diminution of water supplies; control and conserve flood and storm waters to reduce potential damage to life and property; provide sanitary sewage services; and provide recreational services in connection with flood control and water conservation activities. The Agency operates under the direction of a Board of Directors that consists of the Sonoma County Board of Supervisors.

The Agency delivers water, on a wholesale basis, to customers through its water transmission system. The primary water customers, collectively known as the water contractors, consist of the cities of Santa Rosa, Rohnert Park, Petaluma, Cotati, and Sonoma; the Town of Windsor; and the North Marin, and Valley of the Moon Water Districts. The responsibility for supplying water to the water contractors is

entrusted to the Agency under the Restructured Agreement, which was executed in June 2006. The Agency also provides water on a wholesale basis to and/or has authorized the exercise of its water rights by additional water purveyors, including but not limited to Marin Municipal Water District; the Forestville Water District; and California-American, Lawndale Mutual, Penngrove, and Kenwood Water Companies.

The Agency's primary source of supply is the Russian River. The Agency manages water releases at Coyote Valley Dam, which creates Lake Mendocino on the East Fork Russian River, and Warm Springs Dam, which creates Lake Sonoma on Dry Creek (a tributary to the Russian River), to provide water supply and to maintain required minimum flows in the Russian River and Dry Creek. Flood control releases from Coyote Valley Dam are controlled by the United States Army Corps of Engineers (COE). Flows in the Russian River are augmented by Pacific Gas & Electric Company's (PG&E) Potter Valley Project, which diverts a portion of the Eel River flows to the East Fork of the Russian River. Water is collected from the Russian River at two sites, both located near Forestville, through three Ranney collectors at Wohler and three Ranney collectors at Mirabel. The Agency has constructed several infiltration ponds that surround the collectors. An inflatable dam on the Russian River raises the water level of the Russian River during periods of low flow, and diverts water through a dike into a system of ditches that supply the infiltration ponds that surround the Mirabel collectors. The backwater created by the dam also raises the upstream water level, which increases the rate of infiltration to the Wohler collectors. Permanent fish ladders provide fish passage around the dam when it is raised.

The Agency holds appropriative water rights to Russian River and Dry Creek water by virtue of an assignment to the Agency of Sonoma County's portion of the 1949 application to the State of California for the Coyote Valley Dam Project appropriative water rights, and the Agency's 1960 application for the Warm Springs Dam Project appropriative water rights. The combined water supply storage from these two projects exceeds 300,000 AFY. The combined limit on the Agency's annual Russian River diversions for off-stream use under its water rights permits (Permit Nos. 12947A, 12949, 12950, and 16596) is currently 75,000 AFY, with a maximum diversion rate of 180 cubic feet per second.

The Agency also has three deep-water wells that provide water supply. They are located near the Laguna de Santa Rosa and feed directly into the Agency's Russian River-Cotati Intertie Pipeline. The Agency estimates the future production capacity of these wells at 2,300 AFY. Table 4-2 summarizes the current and projected amount of water supply that the Agency will provide to the City.

Table 4-2 (DWR Table 17)
Wholesale supplies — existing and planned sources of water[1]

Wholesale sources	Contracted Volume	2015	2020	2025	2030	2035
Sonoma County Water Agency	29,100	25,343	26,082	26,835	27,896	29,041

[1] *Units are acre-feet per year*

4.2.2 Physical and Legal Conditions

Various conditions may influence the water supply available to the Agency. This section of the plan describes the water rights held by the Agency and the City's entitlement to the Agency's water supply.

This section also describes the various physical and legal conditions that may influence the water supply availability, including the Biological Opinion and future operation of the Potter Valley Project.

4.2.2.1 Agency Water Rights

Four State Water Resources Control Board (State Water Board) permits[7] currently authorize the Agency to store water in Lake Mendocino (up to 122,500 AF) and Lake Sonoma (up to 245,000 AF) and to divert and redivert 180 cubic feet per second (cfs) of water from the Russian River, up to 75,000 AFY. The permits also establish minimum instream flow requirements for fish and wildlife protection and Russian River recreational considerations. These minimum instream flow requirements vary according to the hydrologic cycle (i.e., dry water years versus normal water years) defined by the State Water Board's Decision 1610. The Agency meets the various instream flow requirements set by Decision 1610 by making releases from Coyote Valley Dam and Warm Springs Dam. The Agency has applied to the State Water Board to increase the Agency's Russian River rediversion right from 75,000 AFY to 101,000 AFY. In addition, as required by the Biological Opinion, the Agency has applied to the State Water Board to make changes to the minimum instream flow requirements of Decision 1610. The Biological Opinion requirements are discussed in Section 4.2.2.3.

4.2.2.2 Restructured Agreement

The Restructured Agreement, which was executed in 2006, provides for the finance, construction, and operation of existing and new diversion facilities, transmission lines, storage tanks, booster pumps, conventional wells, and appurtenant facilities. The Restructured Agreement currently provides the contractual relationship between the Agency and the City and includes specific rates of delivery and maximum amounts of water that the Agency is obligated to supply to the City. The Restructured Agreement defines the City's entitlements as 29,100 AFY and an average of 40.0 mgd from Reach 1, 2 and 3a of the Intertie Aqueduct, 40.0 mgd from the Santa Rosa Aqueduct, 4.0 mgd from the Sonoma Aqueduct, or a maximum combined average total of 56.6 mgd for a one-month period from all aqueducts.

Though the City's existing supply from the Agency is relatively reliable, the Restructured Agreement contains shortage provisions defined in Section 3.5 of that agreement. The shortage provisions are further defined in the Water Shortage Allocation Methodology (Shortage Methodology), which was adopted by the Agency Board in April 2006.[8] The Restructured Agreement Section 3.5 provisions, and the Shortage Methodology, are designed to take the demand hardening associated with water conservation into account. The City implemented an aggressive water conservation program over the past 20 years and has one of the lowest per capita water uses among all Agency customers. This is recognized by the Shortage Methodology, which encourages water conservation. Under the Shortage Methodology, if the Agency surface water rights and Russian River supply remain limited to 75,000 AFY for some time, and the water contractors' total demands reach the Agency's 75,000 AFY available supply, the City's allocation would still be 29,100 AFY, the City's full entitlement under the Restructured Agreement.[9]

[7] SWRCB Permits Numbers 12947A, 12949, 12950, and 16596.
[8] John O. Nelson Report, April 2006.
[9] Letter from Sonoma County Board of Supervisors, dated April 2006.

4.2.2.3 Threatened and Endangered Species – Biological Opinion

On October 31, 1996, the National Marine Fisheries Service (NMFS) published a final notice of determination listing Central California Coast coho salmon (coho salmon) as threatened and under the federal Endangered Species Act (ESA) within the Central California Coast Evolutionarily Significant Unit (ESU), which includes the Russian River. On August 18, 1997, NMFS published a final notice of determination listing Central California Coast steelhead (steelhead) as threatened under the ESA within the Central California Coast ESU, also including the Russian River. On September 16, 1999, NMFS listed the California Coast ESU of California Coastal Chinook salmon (Chinook salmon) as threatened.

In accordance with Section 7(a) (2) of the ESA, federal agencies must consult with the U.S. Fish and Wildlife Service (USFWS) and/or NMFS (depending on the species) to "insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat…." (50 Code of Federal Regulations (CFR) §402). The operation of Warm Springs and Coyote Valley Dams and the Agency's rubber dam and fish screens all fall within the provisions of Section 7.

In December 1997, the COE, as the federal sponsor of the above two flood control and water supply projects, and the Agency, as the local sponsor, entered into a Memorandum of Understanding (MOU) with NMFS to begin the Section 7 consultation process. As part of the Section 7 consultation, a Biological Assessment was prepared to study the impact of current and potential future operations of facilities on the listed species in the Russian River. The final Biological Assessment was completed in September 2004.

As part of the Section 7 consultation process, the NMFS formed Biological Review Teams to conduct a status review of the three listed fish species by assembling the best available information on the condition of the fish species and quantifying risks faced by each ESU. Using the results of the status review, NMFS reevaluated the listing of the three fish species. On June 28, 2005, NMFS issued a final rule confirming the endangered status of the coho salmon and maintaining the threatened status of Chinook salmon. On January 5, 2006, NMFS issued a final determination listing the steelhead as threatened.[10]

On September 24, 2008, NMFS issued the Biological Opinion. The Biological Opinion analyzed the impacts of the current operation of the Warm Springs and Coyote Valley Dams, as well as other facilities operated by the COE, the Agency, and the Russian River Flood Control and Water Conservation Improvement District in the Russian River Watershed for the next fifteen years. The Biological Opinion determined that the continued operation of some aspects of the flood control and water supply operations will have substantial adverse effects on both the coho salmon and steelhead, but are not likely to effect the survival and recovery of the Chinook salmon in the Russian River. The three areas of most concern are the high summertime flows in the Russian River and Dry Creek, the high velocity of

[10] National Marine Fisheries Service, Southwest Region; "Biological Opinion for Water Supply, Flood Control Operations, and Channel Maintenance conducted by the U.S. Army Corps of Engineers, the Sonoma County Water Agency, and the Mendocino County Russian River Flood Control and Water Conservation Improvement District in the Russian River watershed;" September 24, 2008.

water in Dry Creek in the summer, and the current practice of breaching the sandbar at the estuary during the summer months.[11]

NMFS collaborated with the COE and the Agency to develop a Reasonable and Prudent Alternative (RPA), including eight Reasonable and Prudent Measures (RPMs), to implement over a 15-year timeframe to avoid jeopardy to the coho salmon and steelhead. The RPMs include the following: interim and permanent changes to the summertime flows in the Russian River and Dry Creek; changing the management of the Jenner estuary; restoring fish habitat along Dry Creek; conducting a feasibility study of constructing a pipeline to deliver water from Lake Sonoma to the mainstem of the Russian River; strengthening and expansion of the existing coho broodstock program; installation of a new back-up water supply pipeline to the Warm Springs Hatchery and construction of additional rearing facilities for the coho broodstock program; and monitoring of habitat and fish in the Russian River, Dry Creek, and the Jenner estuary. The Biological Opinion also provides an Incidental Take Statement for the taking of the coho salmon, steelhead and Chinook salmon that may occur due to the implementation of the continued operations of the flood control and water supply operations and the associated RPMs.

The Biological Opinion requires the following temporary and permanent changes to the minimum instream flows in the Russian River and Dry Creek:

<u>During Normal Years</u>

- Reduce the minimum flow requirement for the Russian River from the East Fork to Dry Creek from 185 cfs to 125 cfs between June 1 and August 31; and from 150 cfs to 125 cfs between September 1 and October 31.
- Reduce the minimum flow requirement for the Russian River between the mouth of Dry Creek and the mouth of the Russian River from 125 cfs to 70 cfs.
- Reduce the minimum flow requirement for Dry Creek from Warm Springs Dam to the Russian River from 80 cfs to 40 cfs from May 1 to October 31.

<u>During Dry Years:</u>

- Reduce the minimum flow requirement for the Russian River between the mouth of Dry Creek and the mouth of the Russian River from 85 cfs to 70 cfs.

In September 2009, the Agency filed a petition with the State Water Board to permanently change the minimum instream flow requirements as outlined by the Biological Opinion. The petition is currently pending at the State Water Board and will not be acted on until the Agency has completed compliance with the California Environmental Quality Act (CEQA). Until the petition is acted upon by the State Water Board, the Agency will have to annually file a Temporary Urgency Change petition with the State Water Board to reduce the minimum instream flows during the months of May through October as required by the Biological Opinion.

The reduced flows required by the RPMs would provide enough water for the Agency to meet existing water demands. The RPMs provide for restoration of fish habitat in Dry Creek to allow for continued

[11] Sonoma County Water Agency "The Biological Opinion: Frequently Asked Questions."

flows to meet the water demands of the Agency.[12] The habitat restoration in Dry Creek will provide for flows of 130 to 175 cfs in Dry Creek. The Agency and NMFS anticipate the Dry Creek habitat restoration work will be successful.[13] However, if it is not sufficiently effective, the Biological Opinion requires the Agency to explore other alternatives, including a bypass pipeline. The Agency is currently conducting a feasibility study of a bypass pipeline and a draft feasibility study was released in April 2011. As described in the Agency's 2010 Urban Water Management Plan, the Biological Opinion requires that a determination regarding the effectiveness of the Dry Creek habit restoration be made by 2018. If it is determined that a bypass pipeline is needed in 2018, it is anticipated that it could be operational by approximately 2025-2026.

4.2.2.4 Future Operation of the Potter Valley Project

Diversions from the Eel River into the Russian River via Pacific Gas & Electric's (PG&E) Potter Valley Project (PVP) are regulated by a number of agencies including the Federal Energy Regulatory Commission (FERC), and NMFS. From 1908-1999, an estimated 160,000 AFY was diverted from the Eel River to the Russian River as a result of the operation of the PVP. The Eel River water is diverted through an inter-watershed tunnel to PG&E's hydroelectric facility in Potter Valley. Thereafter, the water flows down the east fork of the Russian River, is stored in Lake Mendocino, and is released to augment summer flows and maintain minimum instream flow requirements in the Russian River.

A new license issued by the FERC to PG&E for the PVP in 1983 required PG&E, in cooperation with the California Department of Fish and Game (CDFG), to carry out a 10-year fish monitoring study in cooperation with NMFS. After completion of the study, a proposed flow schedule reducing Eel River diversions to the Russian River by approximately 15 percent (in an effort to improve Eel River fisheries) was submitted to FERC. PG&E had been voluntarily implementing the recommended flow schedule since the summer of 1999. An Environmental Impact Statement (EIS) that presented the impacts of two proposed flow schedules was released in 1999. Since that time, other proposals have been submitted for FERC's consideration.

In April 1999, as an alternative to the PG&E/FERC proposal, the Department of Interior (DOI)/NMFS jointly submitted a flow proposal which would result in lower PVP imports to the Russian River. In May 2000, FERC issued its final EIS recommending the PG&E flow proposal with PVP Irrigation District modifications. In June 2004, FERC issued its final order on the flow regime based upon a Biological Opinion for the PVP issued by NMFS. The FERC order supported an approximately 15 percent reduction in summer flows, and was close to the voluntary flow schedule that has been in place since the summer of 1999.

In August 2006, NMFS and CDFG filed concerns with FERC regarding PG&E's implementation of the flow regime. On October 16, 2006, PG&E sent a letter to FERC acknowledging three errors in the implementation of the flow regime and associated flow requirements of the Biological Opinion RPA. In response, PG&E has adjusted implementation of the flow regime.[14] This change has led to an approximately 33 percent reduction in summer flows through the PVP to the Russian River. PG&E's license to operate the PVP expires in 2022. Per the Agency's 2010 Urban Water Management, future

[12] Sonoma County Water Agency "The Biological Opinion: Frequently Asked Questions."

[13] Source: Sonoma County Water Agency 2010 Urban Water Management Plan, Section 4.7.

[14] PG&E Letter to FERC, October 16, 2006.

Russian River supply availability is based upon the assumption that the PVP diversions permitted under the FERC license will continue.[15]

4.3 Groundwater Overview

The City is located within the Santa Rosa Plain sub-basin of the Santa Rosa Valley Groundwater Basin, located at the confluence of the Santa Rosa, Bennett, and Rincon Valleys. Prior to the early 1960s, the City relied primarily on groundwater from this sub-basin for its water supply. In the early 1960s, the Agency began supplying surface water to the City and other water contractors. From the 1980s until 2007, the City relied solely on surface water deliveries from the Agency to meet its water demands. In July 2005, the City received permission from the California Department of Public Health (DPH) to change the status of two of its groundwater wells, formerly permitted as standby emergency wells, to full-time active status. These wells are now permitted for regular production of up to 2,300 AFY of potable supply, and the City began using them for water supply in 2007. Including these two production wells, the City maintains a total of six municipal groundwater wells within the Santa Rosa Plain Sub-basin.

The City's Urban Growth Boundary (UGB) overlies portions of two groundwater basins: the Santa Rosa Valley Groundwater Basin (specifically two of its sub-basins: the Santa Rosa Plain Sub-basin and the Rincon Valley Sub-basin) and the Kenwood Valley Groundwater Basin. Figure 4-1 shows the City's UGB and underlying groundwater basins. Although the City's UGB overlies portions of the Rincon Valley Sub-basin and the Kenwood Valley Groundwater Basin, the City's groundwater supply is derived exclusively from the Santa Rosa Plain Sub-basin of the Santa Rosa Valley Groundwater Basin. The City does not derive any groundwater supply from the Rincon Valley Sub-basin or the Kenwood Valley Groundwater Basin. Table 4-3 provides an overview of the characteristics of the groundwater basins and sub-basins.

Table 4-3
Characteristics of Groundwater Basins/Sub-basins Underlying City of Santa Rosa Urban Growth Boundary[1]

Groundwater Basin Name	Sub-basin Name	DWR Basin Number	Surface Area
Santa Rosa Valley Groundwater Basin[2]	Santa Rosa Plain Sub-basin	1-55.01	80,000 acres (125 square miles)
	Rincon Valley Sub-basin	1-55.03	5,600 acres (9 square miles)
Kenwood Valley Groundwater Basin	None	2-19	5,120 acres (8 square miles)

[1] Source: Department of Water Resources Bulletin 118, Groundwater Basin Descriptions, updated February 27, 2004.

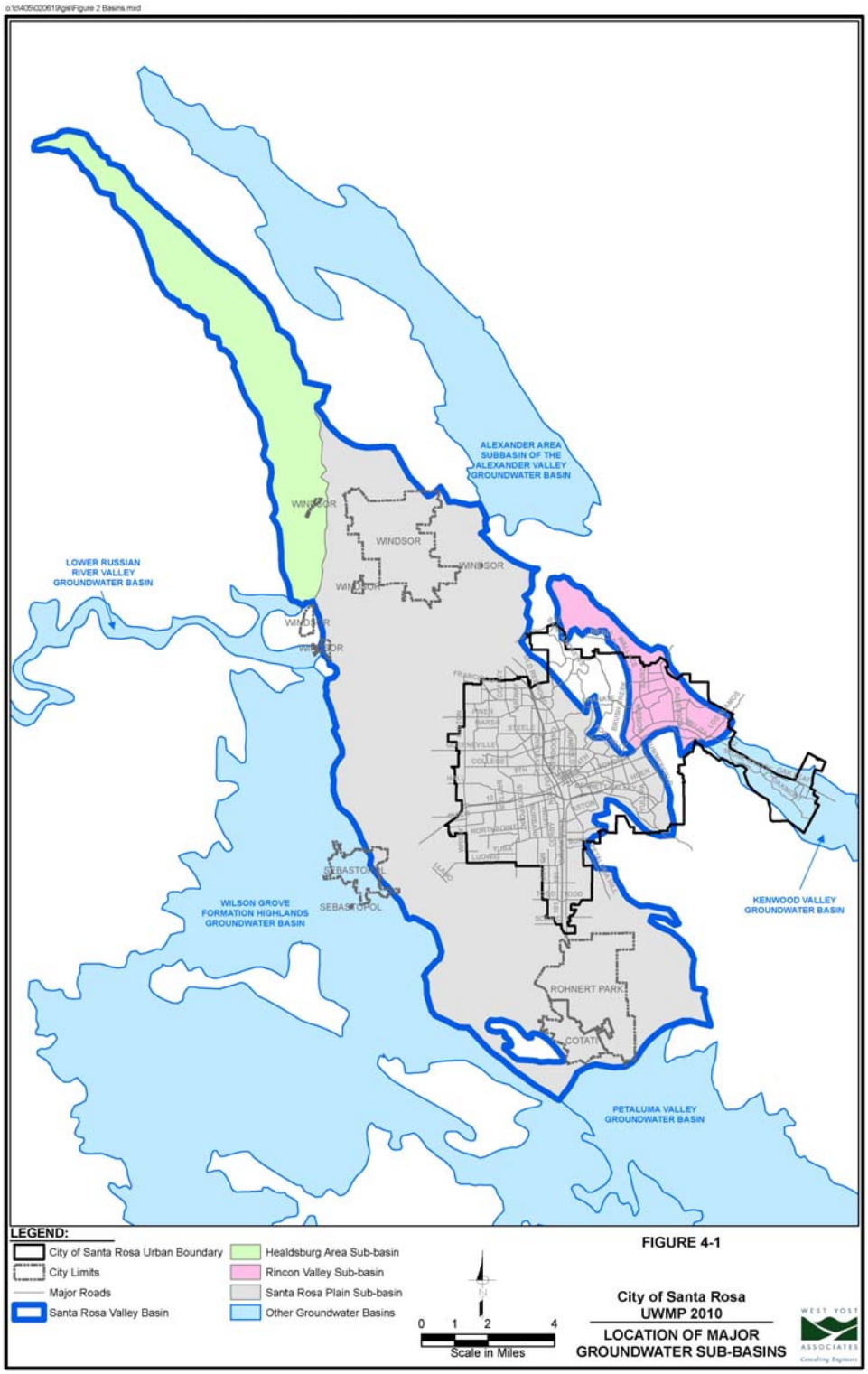
[2] As shown on Figure 4-1, the Santa Rosa Valley Groundwater Basin also has a third sub-basin named the Healdsburg Area Sub-basin, located north of the City of Santa Rosa. However, because the City of Santa Rosa does not overlie any portion of the Healdsburg Area Sub-basin, it is not included here.

Although the City's groundwater supply is derived exclusively from the Santa Rosa Plain Sub-basin of the Santa Rosa Valley Groundwater Basin, since the City's UGB overlies portions of the Rincon Valley Sub-basin and the Kenwood Valley Groundwater Basin, brief descriptions of the Rincon Valley Sub-basin and

15 Source: Sonoma County Water Agency 2010 Urban Water Management Plan, Section 4.1.2.

the Kenwood Valley Groundwater Basin are also provided. However, the remaining groundwater discussion will be solely on the Santa Rosa Plain Sub-basin.

Figure 4-1 - Location of Major Groundwater Sub-basins



4.3.1 Groundwater Basin Description

The following groundwater basin descriptions were derived from the California DWR Bulletin 118 (last updated in February 2004)[16], with additional information obtained from:

- Evaluation of Groundwater Resources in Sonoma County Volume 2: Santa Rosa Plain (DWR, 1982)
- Geologic Map of the Santa Rosa Quadrangle (California Geological Survey (CSG), 1999)

Santa Rosa Valley Groundwater Basin: The Santa Rosa Valley Groundwater Basin is one of the largest groundwater basins in DWR's North Coast Hydrologic Region and occupies a northwest-trending structural depression in the southern part of the Coast Ranges of Northern California in Sonoma County. This depression divides the Mendocino Range on the west from the Mayacamas and Sonoma Mountains on the east. The Santa Rosa Valley Groundwater Basin has three sub-basins: the Healdsburg Sub-basin, the Santa Rosa Plain Sub-basin, and the Rincon Valley Sub-basin. Neither the Santa Rosa Valley Groundwater Basin, nor any of its sub-basins, are adjudicated groundwater basins. The basin and its sub-basins have not been identified as over-drafted basins and are not anticipated to become over-drafted basins.

As shown on Figure 4-1, the City overlies a portion of the Santa Rosa Plain Sub-basin and the Rincon Valley Sub-basin. The Santa Rosa Plain Sub-basin (DWR Groundwater Basin Number 1-55.01) covers an area of 80,000 acres, or approximately 125 square miles. It is the largest sub-basin of the Santa Rosa Valley Groundwater Basin and is characterized by low relief with an average ground surface elevation of approximately 145 feet above mean sea level.

The Santa Rosa Plain Sub-basin is approximately 22 miles long and 0.2 miles wide at the northern end; approximately 9 miles wide through the Santa Rosa area; and about 6 miles wide at the south end of the plain near the City of Cotati. The Santa Rosa Plain Sub-basin is bounded on the northwest by the Russian River plain approximately one mile south of the City of Healdsburg and the Healdsburg Sub-basin. Mountains of the Mendocino Range flank the remaining western boundary. The southern end of the sub-basin is marked by a series of low hills, which form a drainage divide that separates the Santa Rosa Valley from the Petaluma Valley basin south of Cotati. The eastern sub-basin boundary is formed by the Sonoma Mountains south of Santa Rosa and the Mayacamas Mountains north of Santa Rosa.

The Santa Rosa Plain Sub-basin is drained principally by the Santa Rosa and Mark West Creeks that flow westward into the Laguna de Santa Rosa. The Laguna de Santa Rosa flows northward and discharges into the Russian River. Annual precipitation in the Santa Rosa Plain ranges from approximately 28 inches in the south to about 40 inches in the north.

The Rincon Valley Groundwater Sub-basin (DWR Groundwater Basin 1-55.03) occupies a small north to northwesterly trending structural trough located adjacent to the east side of the Santa Rosa Groundwater Sub-basin. Rincon Valley is approximately seven miles long, and has a width that varies from 0.5 to 2.5 miles. Rincon Valley encompasses an area of 5,600 acres, (approximately nine square miles) and is bounded by the Sonoma and Mayacamas Mountains, except to the southeast, where it is

[16] California Department of Water Resources, Bulletin 118 California's Groundwater, Individual Groundwater Basin Description for Santa Rosa Valley, Santa Rosa Plain Sub-basin, last update February 27, 2004.

bounded by the Kenwood Valley Groundwater Basin, and on the southwest, where it is bounded by the Santa Rosa Plain Groundwater Sub-basin. Rincon Valley is drained by Brush Creek, a tributary of Santa Rosa Creek.

The major geologic formations comprising the Santa Rosa Plain and Rincon Valley Groundwater Sub-basins are, from youngest to oldest, Younger Alluvium, Older Alluvium (alluvial fan deposits), the undifferentiated Glen Ellen, Huichica Formations and related continental deposits, the Sonoma Volcanics, the Wilson Grove (formerly Merced) Formation and the Petaluma Formation. The Tolay Volcanics may also be present in the subsurface. The groundwater sub-basins are floored by low permeability rocks of the Franciscan Formation. A description of each of these units and their hydrogeologic properties is provided in Table 4-4.

Kenwood Valley Groundwater Basin: The Kenwood Valley Groundwater Basin (DWR Basin Number 2-19) is located east of the Santa Rosa Valley and the City of Santa Rosa in Sonoma County and covers an area of approximately 5,120 acres, or approximately 8 square miles. Kenwood Valley occupies a portion of a small north to northwest-trending structural trough located to the southeast of the Rincon Valley Sub-basin. It is not an adjudicated groundwater basin. It has not been identified as an over-drafted basin and is not anticipated to become an over-drafted basin.

The Kenwood Valley Groundwater Basin is approximately 4 miles long along its eastern edge and varies in width from about 0.5 miles to 2 miles. The majority of the Kenwood Valley Groundwater Basin is bounded by the Napa-Sonoma Volcanic Highlands, except for the northwest side, where the Kenwood Valley is separated from the Rincon Valley Sub-basin by Santa Rosa Creek.

The Kenwood Valley Groundwater Basin is drained by the Santa Rosa and Sonoma Creeks. The principal water-bearing units in this groundwater basin are Alluvium and the Glen Ellen Formation (see descriptions above). This basin is tapped for domestic uses by the Kenwood Village Water Company for residents in the Kenwood area.

4.3.2 Groundwater Quality

On the western side of the Santa Rosa Plain Sub-basin, sodium and bicarbonate are the dominant cation and anion components in water from all depths. Moving south along the western boundary, the shallow waters have magnesium and calcium as the dominant cation and in the deep zone (below 150 feet) sodium dominates. In the vicinity of Windsor, magnesium chloride water is present in the shallow aquifer to a depth of about 100 feet. In the Santa Rosa area, groundwater at all depths is characterized primarily by sodium and magnesium bicarbonate types. In the Rohnert Park vicinity, groundwater in the deep zone (below 150 feet) is characterized by sodium and calcium bicarbonate type water.[17]

According to a DWR study of the basin, few wells tested for water quality contained constituents over the recommended concentration for drinking water. Many wells produced water with aesthetic problems such as elevated concentrations of iron, manganese, or high hardness. Private well owners questioned about groundwater quality reported many complaints about the color and/or taste of the water. Although high iron, manganese, and hardness have been reported in groundwater for some

[17] California Department of Water Resources, Evaluation of Ground Water Resources in Sonoma County Volume 2: Santa Rosa Plain, DWR Bulletin 118-4, 1982.

Table 4-4
Summary of Geological Units in the Santa Rosa and Rincon Valley Groundwater Sub-basins[1]

Geological Unit	Map Symbol[2]	Lithology	Specific Yield	Comments
Younger Alluvium	Q	Interbedded layers of sand, silt, clay, and gravel	Variable (3-15%)	May contain objectionable levels of iron and manganese above secondary drinking water standards.
Older Alluvium (Alluvial Fan Deposits)	Qo	Fine sand, silt, and silty clay, coarse sand and gravel, with gravel more abundant near fan heads	Moderate to high (8-17%)	Lenses of very fine sand. Minor amounts of methane gas. May contain objectionable levels of iron and manganese above secondary drinking water standards.
Glen Ellen and Huichica Formations and related, undifferentiated continental deposits	QT	Cemented gravel, sand, silt and clay, local interbedded tuff	Low (3-7%)	Generally low yields unless a substantial thickness of coarse gravel and sand is penetrated. May contain objectionable levels of iron and manganese above secondary drinking water standards.
Sonoma Volcanics	Psv	Volcanic flows, agglomerates, and tuffs	Highly Variable (0-15%)	Variable yields. Some water has high boron content. Some waters thermal. Zones of hydrogen sulfide (H_2S). May occasionally exceed secondary drinking water standards for iron and manganese.
Wilson Grove (formerly Merced) Formation	Pwg	Mostly marine coarse-to-fine grained sandstone with minor amounts of clay. Sandstone is typically yellow, gray, or buff-white in surface exposures and distinctively blue in subsurface cuttings.	High (10-20%)	Lenses of very fine sand. Drillers' well logs generally describe this unit as blue sand, blue sandstone, cemented sand, or blue rock with some intervals of blue clay. Zones of high concentration of methane gas. May occasionally exceed secondary drinking water standards for iron and manganese. Water not as hard as other formations.
Petaluma Formation	Pp	Mostly non-marine clay and shale with minor amounts of sandstone	Low (3-7%)	Generally low yields. Yields may be higher for wells penetrating lenses of coarse material. Wilson Grove and Petaluma formations deposited at about the same time – driller's logs indicate alternating layers of blue sandstone and blue clay. Zones of hydrogen sulfide (H_2S). May contain objectionable levels of iron and manganese.
Tolay Volcanics	Ttv	Volcanic flows, tuffs, breccias and agglomerates	Unknown	Variable yields. Fair to good water producer regionally.
Franciscan Complex	KJf	Mélange, including chert, sandstone, shale, greenstone, and serpentinite.	Very low (<3%)	Low yields. Poor quality water in thermal and serpentinite areas. Good quality locally.

[1] *Based on Table I in DWR Bulletin 118-4, Evaluation of Ground Water Resources Sonoma County, Volume 2: Santa Rosa Plain (September 1982).*
[2] *Geologic Map of the Santa Rosa Quadrangle; 1:250,000, California Geological Survey, 1999.*

portions of the Santa Rosa Plain Sub-basin, the overall quality of groundwater in the Santa Rosa Plain Sub-basin is good.[18]

Groundwater underlying the City's service area generally meets primary and secondary drinking water standards for municipal use. The City's Farmers Lane wells have historically exhibited slightly elevated concentrations of both iron and manganese, exceeding secondary drinking water standards. A treatment system for iron and manganese removal has been constructed at the site of the City's Farmers Lane wells to treat groundwater pumped from Farmers Lane Wells No. 1 and 2 before entering the City's distribution system.

4.3.3 Groundwater Level Trends

The DWR Bulletin 118 updated in February 2004 states that the Santa Rosa Plain Sub-basin "as a whole is about in balance, with increased groundwater levels in the northeast contrasting with decreased groundwater levels in the south." Review of spring groundwater levels in wells actively monitored by DWR generally supports these findings, in that a majority of the wells actively monitored by DWR located throughout the sub-basin have demonstrated either increasing or stable groundwater levels, indicating that the sub-basin is in balance and is not being over-drafted. An over-drafted groundwater basin would generally be characterized by groundwater levels that decline over a period of years and never fully recover, even in wet years. This is not the case for the Santa Rosa Plain Sub-basin. Also, all of the actively monitored wells in and around the vicinity of the City have demonstrated either stable or increasing spring groundwater levels.

Groundwater trend data from the existing monitoring wells located throughout the sub-basin indicate that levels within the main portion of the sub-basin have generally remained constant or have slightly increased over time, indicating that the sub-basin is in balance and is not being over-drafted.[19] In addition, groundwater level data for the City's municipal wells was compared to historical data. For the City's Carley Well, Peters Spring Well, and Farmers Lane Wells No. 1, 2 and 3, historical groundwater levels from the 1940's and 1950's were compared to current groundwater levels. Although the available data is limited, the data indicate for each of these wells that groundwater levels have increased significantly from 14 to 94 feet below groundwater surface in the 1940's and 1950's to essentially artesian conditions (e.g., groundwater level at or above ground surface). Currently, all of the City's municipal wells (except the Carley and Peters Spring Wells) are demonstrating artesian conditions, indicating an abundance of groundwater in the portion of the sub-basin underlying the City. (The Carley and Peters Spring wells currently have water levels within a few feet of the ground surface.)

Review of hydrographs near the City's Farmers Lane wells shows that groundwater elevations have been high (within 10 to 30 feet of the ground surface) and stable since at least 1989, indicating that groundwater recharge is taking place and that additional groundwater yield from this area is possible. Groundwater level data collected from the Farmers Lane Wells after the 2007 - 2010 summer pumpage periods shows that water levels quickly recover to artesian conditions after the wells are turned off. The hydrographs indicate that groundwater elevations to the east of the

[18] California Department of Water Resources, Bulletin 118 California's Groundwater, Individual Groundwater Basin Description for Santa Rosa Valley, Santa Rosa Plain Sub-basin, last update February 27, 2004.

[19] Source: City of Santa Rosa 2035 General Plan Water Supply Assessment, Section 2.4.4.1.3.

Farmers Lane wells are significantly higher than the ground surface at the Farmers Lane wells, which provides additional explanation for the artesian conditions at the Farmers Lane wells.[20]

4.3.4 Groundwater Storage and Budget

Over the years, several estimates have been made of the groundwater storage capacity of the Santa Rosa Plain Sub-basin. These estimates range from 948,000 AF to 4,313,000 AF. A brief description of each estimate follows:

- The United States Geological Survey (USGS) estimated the gross groundwater storage capacity for this basin to be about 948,000 AF based on the average specific yield of 7.8 percent for aquifer materials at depths of 10 to 200 feet.[21]

- The DWR performed a study of the area in 1982 and calculated the groundwater storage capacity for this basin to be 4,313,000 AF. This calculation was made using the TRANSCAP computer program, assuming aquifer thicknesses ranged from 50 to over 1,000 feet with an average thickness of approximately 400 feet.[22]

Using the water level information for the spring of 1980 and the product of the TRANSCAP computer program, the volume of groundwater in storage was estimated to be 3,910,000 AF.

According to the DWR Bulletin 118, a groundwater model for the Santa Rosa Plain Sub-basin was prepared by the DWR in 1982. The 15-year period from 1960-61 through 1974-75 was selected as the study period for the Santa Rosa Plain Sub-basin because it contained a mixture of wet and dry years approximating long-term climatic conditions. Average annual natural recharge for the period 1960 to 1975 was estimated to be about 29,300 AF. Average annual pumping during the same time period was estimated to be approximately 29,700 AF, indicating that the annual natural recharge and the annual pumping within the sub-basin were essentially in balance.

With respect to the area in the vicinity of the City's Farmers Lane wells, it has been estimated that the annual groundwater recharge to the area from which the Farmers Lane wells extract groundwater is on the order of 2,500 AFY, using historical rainfall data and an estimate of the potential recharge area.[23] This quantity of recharge is larger than the maximum quantity of groundwater the City plans to pump from the Farmers Lane wells, which is 2,300 AFY.

4.3.5 Groundwater Management

Several municipal water purveyors, including the City and private parties, use groundwater within the Santa Rosa Plain sub-basin. These municipal water purveyors and the County are working collectively to better understand and to ultimately try to manage the regional groundwater

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[20] Technical Memorandum, Evaluation of Potential Impacts Associated with Increased Groundwater Production from Farmers Lane Wells W4-1 and W4-2, prepared by West Yost & Associates, July 22, 2004.

[21] Cardwell, G.T., Geology and Ground Water in the Santa Rosa and Petaluma Valley Areas, Sonoma County, California, USGS Water Supply Paper 1427, 1958.

[22] California Department of Water Resources, Evaluation of Ground Water Resources in Sonoma County Volume 2: Santa Rosa Plain, DWR Bulletin 118-4, 1982.

[23] Technical Memorandum, Evaluation of Potential Impacts Associated with Increased Groundwater Production from Farmers Lane Wells W4-1 and W4-2, prepared by West Yost & Associates, July 22, 2004.

resources. As part of this joint effort, in 2005, the USGS, in partnership with the Agency, the cities of Santa Rosa, Rohnert Park, Cotati, and Sebastopol, the Town of Windsor, California American Water, and others, began a 5-year cooperative study. The objectives of this study are to: 1) Develop an updated assessment of the geohydrology, geochemistry and geology of the Santa Rosa Plain sub-basin; 2) Develop a groundwater flow model of the Santa Rosa Plain sub-basin; and 3) Evaluate the hydrogeologic impacts of alternative groundwater strategies for the Santa Rosa Plain sub-basin. The study is near completion and final results are scheduled to be released in fall 2011. The study results will be used by the Agency, City and other stakeholders to develop an AB3030 non-regulatory groundwater management plan for the Santa Rosa Plain sub-basin.

As noted above, the Santa Rosa Plain sub-basin is not adjudicated nor has it currently been identified as over-drafted or to become over-drafted by DWR.[24]

4.3.6 Existing Groundwater Pumpage

The City has a total of six municipal groundwater wells within the Santa Rosa Plain Sub-basin. These six wells are listed in Table 4-5 along with their current status. As shown in Table 4-5, two of the City's municipal wells are currently operated primarily to provide some landscape irrigation to an adjacent park and school landscaping, but are also available and approved by DPH for emergency potable use, on a standby status (Carley and Peters Spring Wells), two of the wells (Farmers Lane Wells No. 1 and 2) are on active status, one well is operated to provide minor amounts of landscape irrigation water supply only (Farmers Lane Well No. 3), and one well is used for emergency potable purposes only (Leete Well).

Table 4-5
City of Santa Rosa Municipal Groundwater Wells[1]

Well Name/Number	Well Status
Leete (W1)	Standby; used for emergency potable purposes only
Carley (W2-1)	Standby; used for emergency potable purposes and some landscape irrigation
Peters Spring (W2-2)	Standby; used for emergency potable purposes and some landscape irrigation
Farmers Lane (W4-1)	Active status[2]
Farmers Lane (W4-2)	Active status[2]
Farmers Lane (W4-3)	Not connected to City's potable water distribution system; used strictly for minor landscape irrigation purposes

[1] The City also has two other municipal wells that are either out of service or inactive: Freeway Well (W3) is out of service due to groundwater contamination caused by others; Sharon Park Well (W6) is inactive due to severe sanding.

[2] Change in status approved by California Department of Public Health on July 20, 2005.

24 California Department of Water Resources, Evaluation of Ground Water Resources in Sonoma County Volume 2: Santa Rosa Plain, DWR Bulletin 118-4, 1982.

In 2007, the City's Farmers Lane Wells No. 1 and 2 started providing supply to the City's potable water system to supplement supplies obtained from the Agency and to provide supply during high demand periods. Before the City obtained surface water supplies from the Agency, the Farmers Lane wells contributed a significant portion of the groundwater supplies required to meet the City's demands. Of the City's roughly 2,870 AFY of historical groundwater demand, it is estimated that the Farmers Lane Wells supplied about 1,720 AFY[25]. Table 4-6 details the amount of groundwater that the City has pumped in the last five years.

Table 4-6 (DWR Table 18)
Groundwater — volume pumped[1]

Basin name(s)	Metered or Unmetered	2006	2007	2008	2009	2010
Santa Rosa Plain Sub-basin	Metered	0	832	1,501	1,350	897
Total groundwater pumped		0	832	1,501	1,350	897
Groundwater as a percent of total water supply		0%	3.5%	6.4%	6.7%	4.6%

[1] *Units are acre-feet per year.*

4.3.7 Future Groundwater Pumpage

In the future, it is anticipated that the Farmers Lane wells may be operated as much as 40 to 60 percent of the time at a pumping rate of about 2,400 gpm, which would equate to an annual pumpage quantity of approximately 1,550 to 2,300 AFY. This projected pumpage quantity is less than the City's historical groundwater pumpage of 2,870 AFY. There are currently no plans for additional active City production wells within the Santa Rosa Plain Sub-basin or any new City production wells within the Rincon Valley Sub-basin or Kenwood Valley Groundwater Basin. Table 4-7 describes the amount of groundwater projected to be pumped by the City.

Table 4-7 (DWR Table 19)
Groundwater — volume projected to be pumped[1]

Basin name(s)	2015	2020	2025	2030	2035
Santa Rosa Plain Sub-basin	2,300	2,300	2,300	2,300	2,300
Total groundwater pumped	2,300	2,300	2,300	2,300	2,300
Percent of total water supply	8.2%	8.0%	7.6%	7.3%	7.1%

[1] *Units are acre-feet per year.*

4.3.8 Physical and Legal Conditions

The City's current groundwater supply from Farmers Lane wells is constrained by the existing pumping capacity and operations protocol which is based on an assumption that the Farmers Lane wells might be operated as much as 40 to 60 percent of the time at a pumping rate of 2,400 gpm. This estimated annual pumpage quantity is also constrained based on the limited information

[25] Technical Memorandum, Evaluation of Potential Impacts Associated with Increased Groundwater Production from Farmers Lane Wells W4-1 and W4-2, prepared by West Yost & Associates, July 22, 2004.

available regarding annual natural recharge to the area. Once the USGS Santa Rosa Plain Groundwater Study results are released, and the City has had an opportunity to review and better understand the hydrologic interfaces, this annual pumpage quantity might be increased. There are no other physical constraints on the groundwater basin from the City's existing groundwater pumpage.

There are no legal constraints on the City's ability to pump groundwater from future wells within the Santa Rosa Plain sub-basin.

4.4 Stormwater Capture

The City's storm water requirements prioritize the use of infiltration-based landscape features for storm water treatment. Low Impact Development (LID) features utilize the natural cleaning properties of soil, plants, and microbial activity to breakdown pollutants and allow for storm water to recharge groundwater aquifers and maintain stream flow. These LID features are required on new developments that create 10,000 square feet or more of impervious surface. Any increase in the amount of volume of runoff off of a developed site (for a storm up to 0.92 inches) must be infiltrated back into the soil or stored and reused on site. Additionally, runoff from all paved areas and rooftops must be filtered through these landscaped features to remove pollutants. These policies help to hydraulically mimic the undeveloped condition which provides aquifer recharge, preserves stream flow, cleans storm water, and reduces demand on potable water for irrigation.

4.5 Desalinated Water Opportunities

Due to the City's location in relation to sea water, as well as the water quality of the Santa Rosa Plain Sub-basin, desalinated water is not a viable option for the City's water supply.

4.6 Transfer Opportunities

Currently, the City does not transfer or exchange water with other entities and does not anticipate that transfers or exchanges will happen in the future. However, water transfers between the Agency's Water Contractors are authorized under the Restructured Agreement. Transfers and exchanges have happened between the Agency's Water Contractors in the past and it may be necessary in the future. Table 4-8 details the City's transfer/exchange opportunities.

Table 4-8 (DWR Table 20)
Transfer and exchange opportunities

Transfer agency	Transfer or exchange	Short term or long term	Proposed Volume
Not Applicable	N/A	N/A	N/A
Total			

4.7 Recycled Water Opportunities

The City of Santa Rosa Utilities Department is responsible for the operation and management of the Santa Rosa Subregional System. The Subregional System operates the Laguna and Oakmont Wastewater Treatment Plants, oversees the Industrial Pretreatment Program, and operates and maintains the recycled water system for more than 225,000 residents and 6,500 businesses for the northern California cities of Cotati, Rohnert Park, Santa Rosa, and Sebastopol; and the South Park Sanitation District and portions of unincorporated Sonoma County. As managing partner of the Subregional System, it is the City's responsibility to operate the system economically and safely, and to plan for future regulatory changes and growth.

Local water, wastewater, and planning agencies were consulted and participated in the development of the Subregional System's Incremental Recycled Water Program (IRWP), which is the planning document developed to continually optimize the use of recycled water and offset demands on the potable water system. The alternatives investigated for the IRWP are further discussed in Section 4.10. Table 4-9 lists the agencies that participated in the development of the IRWP.

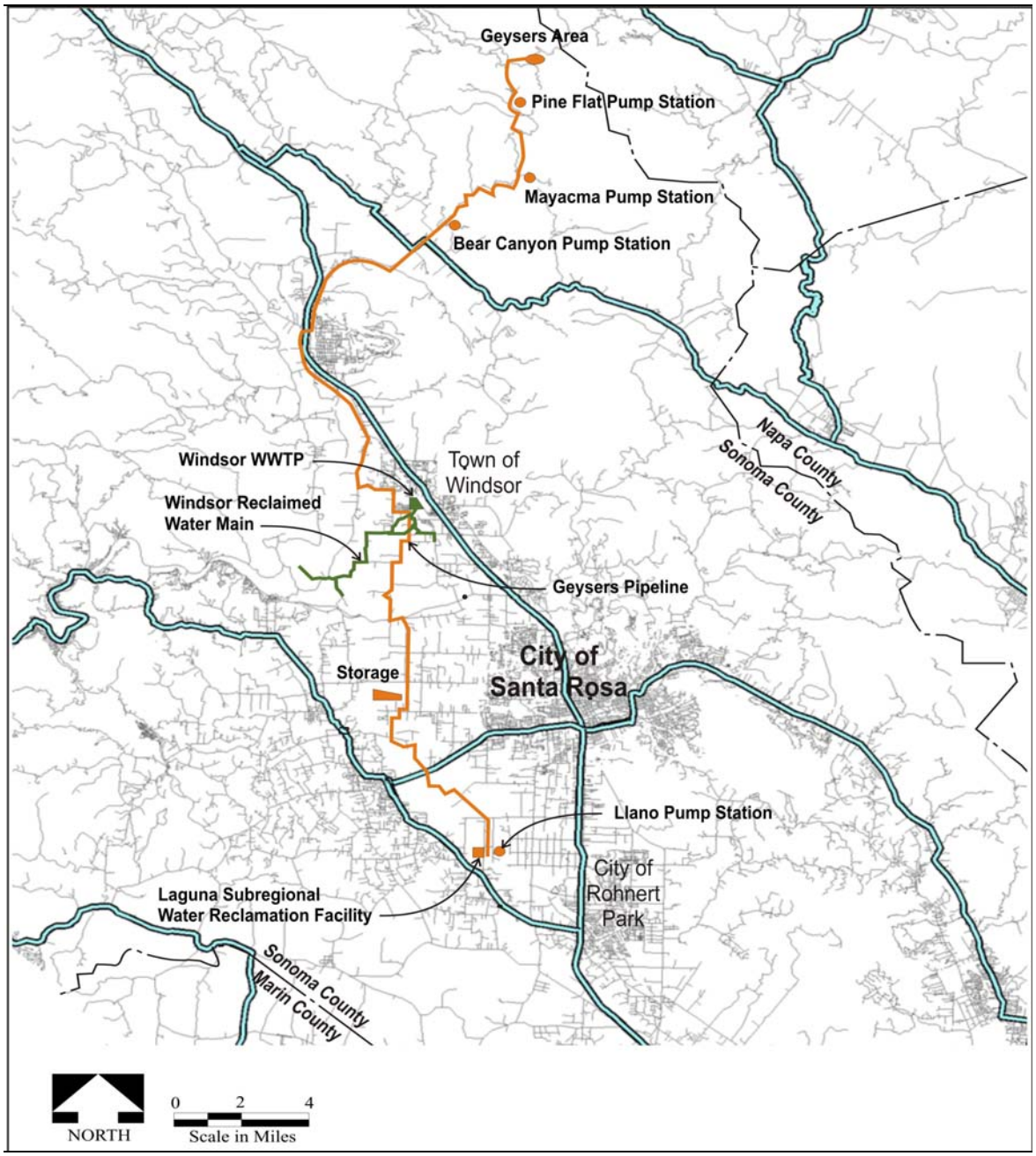
Table 4-9
Participating Agencies in Incremental Recycled Water Program (IRWP)

Agency Type	Agency Name	Participated
Water Agencies	Cities of Cotati, Rohnert Park, Santa Rosa, Sebastopol, and Windsor; Sonoma County Water Agency	X
Wastewater Agencies	Cities of Cotati, Rohnert Park, Santa Rosa, Sebastopol; South Park Sanitation District	X
Groundwater Agencies	None	
Planning Agencies	County of Sonoma; Cities of Cotati, Rohnert Park, Santa Rosa, and Sebastopol	X

4.7.1 Wastewater System Description

The City operates the Laguna and Oakmont Wastewater Treatment Plants for the Subregional System. Figure 4-2 depicts the location of the wastewater treatment facilities and reclamation facilities for all the partners in the Subregional System service area. The Laguna Wastewater Treatment Plant is a tertiary-level treatment facility that has an average daily dry weather flow of 15.5 million gallons per day and is permitted for 21.34 mgd average daily dry weather flow.

Figure 4-2 – Santa Rosa Subregional Water Reuse System



Source: City of Santa Rosa 2005 Urban Water Management Plan; Figure developed by Brown and Caldwell

The Plant takes wastewater from homes, businesses and industry located within the cities of Santa Rosa, Rohnert Park, Sebastopol and Cotati and the South Park Sanitation District. Over 500 miles of underground pipes bring wastewater to the treatment plant where water goes through three stages of treatment prior to disinfection, storage, and reuse. The water is treated to the highest level recognized in State water recycling regulations (Title 22).

The Oakmont Treatment Plant is a satellite tertiary-level treatment facility that had an average daily flow of 0.5 million gallons and is operated during summer months to provide recycled water to the Oakmont Golf Course. During the winter months, the wastewater flow that would have gone to the Oakmont Treatment Plant goes to the Laguna Treatment Plant. In 2010, the City determined that it was not economically feasible to continue to operate the Oakmont Treatment Plant. The Oakmont Treatment Plant is not being operated during 2011 while options are being evaluated for permanent closure and instead all wastewater is being treated at the Laguna Treatment Plant. The current and projected volume of collected and treated wastewater and the amount that meets the recycled water standard from the Laguna Treatment Plant are shown in Table 4-10. The City contributes approximately 75 percent of these wastewater quantities.

Table 4-10 (DWR Table 21)
Recycled water — wastewater collection and treatment[1,2]

Type of Wastewater	2005	2010	2015	2020	2025	2030	2035
Wastewater collected & treated in service area	24,858	23,047	24,882	26,718	28,553	30,388	32,223
Volume that meets recycled water standard	100%	100%	100%	100%	100%	100%	100%

[1] Units are acre-feet per year.
[2] Source: City of Santa Rosa August 2007 Update to Recycled Water Master Plan.

4.7.2 Wastewater Disposal and Recycled Water Uses

The Subregional System's primary point of discharge is via Delta Pond at the confluence of Santa Rosa Creek and the Laguna de Santa Rosa. The North Coast Regional Water Quality Control Board (NCRWQCB) regulates wastewater discharges from the Subregional System. Under the NCRWQCB guidelines, tertiary treated water can be discharged only between October 1 and May 15. Discharge cannot exceed five percent of the Russian River flow. The current and projected annual volume of discharged wastewater for the Subregional System is shown in Table 4-11.

Table 4-11 (DWR Table 22)
Recycled water — non-recycled wastewater disposal[1,2]

Method of disposal	Treatment Level	2010	2015	2020	2025	2030	2035
Russian River	Tertiary	288	600	911	1,223	1,534	2,286
	Total	288	600	911	1,223	1,534	2,286

[1] Units are acre-feet per year.
[2] Source: City of Santa Rosa August 2007 Update to Recycled Water Master Plan.

The Subregional System is one of the largest recyclers of water in the world. The recycled water that leaves the treatment plant is high-quality, tertiary treated water that is safe for many reuse purposes, including irrigation of landscapes, agricultural crops, vineyards, playgrounds, golf courses, and public parks. Depending upon the amount of rainfall in any given year, between 90 and 100 percent of the Subregional System's wastewater is recycled for urban and agricultural irrigation and for the Geysers Recharge Project. The Subregional System's existing urban reuse program irrigates

many schools, parks and businesses in Rohnert Park, including Sonoma State University. In Santa Rosa, recycled water is used for landscape irrigation at sites including Finley Park and A Place to Play sports complex. Since the Plant opened in 1968, its volume of treated effluent water has increased from 2 mgd to an average of 22 mgd. In 2010, approximately 6,000 acres of farmlands and vineyards were irrigated with recycled water for agricultural purposes. The irrigation system is supported by storage reservoirs that can hold over 1.7 billion gallons of water, which allows the system to meet peak, hot summer day irrigation requirements.

The Subregional System also supplies recycled water to the Geysers Recharge Project. The Geysers Recharge Project came into operation in 2003 and pumps, on average, 13 million gallons of recycled water per day to the Geysers steamfields in the Mayacamas Mountains. This geothermal operation injects the water through wells into the underground steamfield at depths of 4,000 to 11,000 feet, where it is heated to produce a clean, “dry” steam that is used to produce “clean” electricity for up to 100,000 households in the North Bay Area. Figure 4-3 depicts the location of the Geysers Recharge Project facilities.

4.7.3 Projected Uses of Recycled Water for Subregional System

Water Reuse is an increasingly complex system that must work continuously to balance the wastewater disposal needs of a growing population with new government regulations and the demands of recycled water users. As a result, in March 2004, the City approved the IRWP Master Plan. The IRWP investigated a number of potentially new, and the possible augmentation of existing, recycled water uses, including urban reuse, agriculture, Geysers Recharge Project, and created wetlands.

The volume of potential recycled water use for the Subregional System, based on the amount potentially available, is shown in Table 4-12. However, a major factor that determines the use of recycled water and implementation of recycled water projects is the financial feasibility. Recycled water distribution systems require additional pipelines, storage tanks, and pumps. Proximity to the production of the recycled water and the distribution system is a major factor in considering use of recycled water.

Figure 4-3 – Geysers Recharge Project

Source: City of Santa Rosa Geysers Brochure; Figure developed by Data Instincts

Table 4-12 (DWR Table 23) Recycled water — Subregional System potential future use[1,2]						
User type	**Feasibility**	**2015**	**2020**	**2025**	**2030**	**2035**
Agricultural irrigation[3]	Feasible	5,431	5,608	5,784	5,961	6,138
Landscape irrigation[4]	Feasible	900	900	1,700	1,700	1,700
Commercial irrigation[4]	Feasible	N/A	N/A	N/A	N/A	N/A
Golf course irrigation[4]	Feasible	N/A	N/A	N/A	N/A	N/A
Wildlife habitat	Unknown	0	0	0	0	0
Wetlands[5]	Unknown	0	0	0	0	0
Industrial reuse	Feasible	0	0	0	0	0
Groundwater recharge	Unknown	0	0	0	0	0
Seawater barrier[6]	Not Feasible	0	0	0	0	0
Geothermal/ Energy	Feasible	17,952	19,299	19,846	21,193	22,100
Indirect potable reuse	Unknown	0	0	0	0	0
	Total	24,283	25,807	27,330	28,854	29,938

[1] Units are acre-feet per year.
[2] Source: City of Santa Rosa August 2007 Update to Recycled Water Master Plan.
[3] Agricultural use offsets groundwater pumping. Includes areas outside of the City.
[4] Landscape irrigation includes irrigation at commercial facilities and golf courses.
[5] Wetlands were identified as a potential recycled water use in the IRWP, however, a project and associated volumes have not been identified. This type of use would not offset potable use.
[6] The City is not located next to the ocean or any areas that have seawater intrusion.

Projections for total recycled water use for the Subregional System were made in the City's 2005 UWMP. Table 4-13 shows a comparison of the total projected 2010 recycled water use from the City's 2005 UWMP with the Subregional System's actual recycled water use in 2010.

Table 4-13 (DWR Table 24) Recycled water — 2005 UWMP use projection compared to 2010 actual[1]		
Use type	**2010 actual use within Subregional System[2]**	**2005 Projection for 2010 within Subregional System[2]**
Agricultural irrigation	5,254	5,200
Landscape irrigation[3]	856	1,595
Commercial irrigation[3]	Included in landscape irrigation	Included in landscape irrigation
Golf course irrigation[3]	Included in landscape irrigation	Included in landscape irrigation
Wildlife habitat	0	0
Wetlands	0	0
Industrial reuse	0	0
Groundwater recharge	0	N/A
Seawater barrier[4]	Not Applicable	Not Applicable
Geothermal/Energy	14,761	12,300
Indirect potable reuse	0	N/A
Total	20,871	19,095

[1] Units are acre-feet per year.
[2] The recycled water projection from the 2005 UWMP was for the Subregional System.
[3] Landscape irrigation includes irrigation at commercial facilities and golf courses.
[4] The City is not located next to the ocean or any areas that have seawater intrusion.

4.7.4 Current and Projected Recycled Water for City

The City's current and historic use of recycled water has been limited to areas within close proximity to the Subregional System's distribution network. The City has historically used up to approximately 350 AFY of recycled water for urban landscape irrigation. In 2001, the City undertook the IRWP, which included plans for recycled water urban reuse efforts. The IRWP outlined a water recycling alternative that could replace the City's potable water sources (not including private groundwater supply sources) up to a maximum of 2,200 AFY upon implementation and 4,400 AFY by 2020 depending on wastewater disposal capacity need.

In April 2005, the City began work on the City's Urban Reuse Project expansion conceptual plan, which analyzed several alternatives for expanded urban reuse within the City service area. In September 2006, the City Board of Public Utilities approved contracts for pre-design of a phased urban reuse project with ultimate service to the majority of the south and west portions of the City, and a total delivery of 3,000 AFY to sites which would otherwise be served by potable water. In December 2007, the City approved the Santa Rosa Urban Reuse Project which could serve up to 3,000 AFY of recycled water to current and future approved water uses, primarily landscape irrigation. The cost of implementing the 3,000 AFY Santa Rosa Urban Reuse Project is estimated to be a total of $119 million, in 2006 dollars. This project will be implemented in phases, as needed for water supply offset and wastewater disposal capacity. The phased nature of the urban reuse alternative allows City policymakers to develop this water supply source incrementally as more

supply is needed, while continuing to evaluate other potentially more cost-effective water supply sources for future water supply needs.

The City selected Phase 1 West as the first phase of the project to be implemented. Phase 1 West is designed to provide up to 750 AFY of recycled water and the City initiated a small segment of this project in 2009. Based on the projected water supply and wastewater disposal capacity needs, it is anticipated that the City will only need to build Phase 1 West through 2035. This projected landscape irrigation demand within the City is summarized in Table 4-14.

Table 4-14 (DWR Table 23)
Recycled water — City potential future use[1]

User type	Feasibility	2015	2020	2025	2030	2035
Landscape irrigation[2]	Feasible	350	350	1,100	1,100	1,100
Total		350	350	1,100	1,100	1,100

[1] *Units are acre-feet per year.*

[2] *Landscape irrigation includes irrigation at commercial facilities and golf courses.*

4.7.5 Promotion of Recycled Water

In December 2007, the City approved the Santa Rosa Urban Reuse Project. To promote recycled water use, the City instituted incentives for retrofitting of existing potable water users to recycled water use. The incentives include a decreased user charge for recycled water customers and currently paying for the cost to retrofit existing potable water irrigation customers to recycled water use. In addition, the City adopted a Recycled Water Ordinance, granting the City the authority to require new connections to the water system to use recycled water for appropriate uses.

In addition, the City's wholesaler, the Agency, encourages recycled water use by collecting, as part of its water rates, funds to be held in a special reserve for projects carried out by its water customers. A total of $4,144,272 has been disbursed for recycled water projects between the program's inception on July 1, 2000 and June 30, 2010.[26]

Methods to encourage recycled water use and the projected amount of recycled water uses are listed in Table 4-15.

[26] Source: Sonoma County Water Agency, 2010 Urban Water Management Plan, Section 4.6.1.

Table 4-15 (DWR Table 25) Methods to encourage recycled water use						
Actions	**Projected Results[1]**					
	2010	**2015**	**2020**	**2025**	**2030**	**2035**
Financial incentives Rate Discount for recycled water Paying for portions of the retrofit of existing potable users to recycled water use	204	350	350	725	725	725
Mandatory Ordinance Mandatory hook up of new connections to recycled water	0	0	0	375	375	375
Total	204	350	350	1,100	1,100	1,100

[1] *Units are acre-feet per year.*

4.8 Future Water Projects

The City currently holds entitlement to 29,100 AFY from the Agency, can utilize up to 2,300 AFY of groundwater, and can utilize approximately 410 AFY from recycled water. Based on current demand projections and projected supplies, it appears that the City will have sufficient supplies available until about 2027. Beginning in about 2027, additional supply will be needed to meet the 2035 demand projections of this Plan. This additional supply will be provided by any combination of the following sources: possible further utilization of the City's own groundwater resources and further development of the City's recycled water supplies. Per the following discussion, plans are in place to develop these supply options.

The City is the owner and operator of the Subregional System, which treats wastewater for the cities of Santa Rosa, Sebastopol, Rohnert Park and Cotati, and the County Southpark Sanitation District. In December 2007, the City approved the Santa Rosa Urban Reuse Project which could serve up to 3,000 AFY of recycled water to current and future approved water uses, primarily landscape irrigation. Environmental requirements for this project have also been completed. In November 2003, the IRWP program Environmental Impact Report (EIR) was certified, and in March 2004 the Final Master Plan was adopted. The California Environmental Quality Act (CEQA) Checklist for the Urban Reuse project was approved by the City in December 2007. The cost of implementing the 3,000 AFY Santa Rosa Urban Reuse Project is estimated to be a total of $119 million, in 2006 dollars. This project will be implemented in phases as needed for water supply offset and wastewater disposal capacity. Based on the projected water supply and wastewater disposal capacity needs, it is anticipated that the City will only need to build Phase 1 West through 2035.

In addition to the two production wells (Farmers Lane Wells 1 and 2), described in Section 4.3.6, the City has approximately 2.1 mgd of groundwater capacity still on a stand-by emergency basis. Since the mid 1990's, Santa Rosa has had an adopted Capital Improvement Program for the development of the City's groundwater resources to provide an additional 8.7 mgd emergency groundwater supply suitable for potable use by the City. In evaluating sites for new emergency wells, the City is

also considering the potential for future additional production wells to meet peak demands. At this time, no specific groundwater projects have been identified.

As described in the Agency's 2010 UWMP, based on the water demand projections of the Agency's customers, additional water supply, additional water supply diversion facilities, and additional water supply transmission capacity will be needed in order to meet the 2035 water demand projections. The information for the Agency's projects is summarized in Table 4-16. Detailed descriptions of these projects are included in the Agency's 2010 UWMP, Section 4.7.

Future projects that may contribute to the City's water supply are summarized in Table 4-16.

Table 4-16 (DWR Table 26)
Future water supply projects[1]

Project name	Projected start date	Projected completion date	Potential project constraints	Normal-year supply[1]	Single-dry year supply[1]	Multiple-dry year first year supply[1]	Multiple-dry year second year supply[1]	Multiple-dry year third year supply[1]
Agency - Acquire Additional Water Rights[2]	2020	2027	CEQA	5,000	5,000	5,000	5,000	5,000
Agency – Mirabel West Wells[2]	2028	2030	CEQA Financial	7,800	0	7,800	7,800	7,800
Agency – South Transmission Section 1 (Cotati to Ely)[2]	2020	2022	CEQA Financial	N/A	N/A	N/A	N/A	N/A
Agency – South Transmission Section 1 (Ely to Kastania)[2]	2020	2022	CEQA Financial	N/A	N/A	N/A	N/A	N/A
Kastania-Ralphine-Sonoma BST Pipeline	2023	2025	CEQA Financial	N/A	N/A	N/A	N/A	N/A
Phase 1 West – Recycled Water Project	2020	2025	Financial	750	750	750	750	750
			Total[3]	**750**	**750**	**750**	**750**	**750**

[1] Units are acre-feet per year.

[2] Source: Sonoma County Water Agency 2010 Urban Water Management Plan, Section 4, Table 4-12.

[3] Total only includes the amount of water that will be directly available to the City. Agency supply is not included.

N/A- Transmission system projects are scheduled to provide water deliveries to specific portions of the Agency's transmission system and do not represent on their own an additional water supply.

5 Water Supply Reliability and Water Shortage Contingency Planning

This section provides a comparison of the City's projected water supply and demand from 2010 through 2035 during normal year, single-dry and multiple-dry years, as well as a description of future water quality. The water demands included in this section are described in Section 3 and the water supplies are described in Section 4. This section also provides an overview of the City's water shortage contingency planning and drought planning. A copy of the City's Urban Water Shortage Contingency Plan (Water Shortage Plan), which fully describes the City's plan for responding to drought and water shortage conditions, is included in Appendix G.

5.1 Water Supply Reliability

The reliability of the City's water sources is summarized in Table 5-1. The City's surface water supply from the Agency is subject to reductions during dry years (seasonal and climatic shortages) pursuant to State Water Board's Decision 1610[27]. When the Lake Sonoma (total volume 381,000 acre-feet (AF); water supply pool 212,000 AF) water volume is less than 100,000 AF prior to July 15th, a 30 percent reduction in diversions is required. Although this condition has not been experienced on the Russian River system, as described in the Agency's 2010 UWMP, the Agency's modeling simulations for single-dry years predict that storage levels in Lake Sonoma will drop below 100,000 acre-feet prior to July 15th, thus requiring demand curtailments per Decision 1610 for some portion of the year. The single-dry year reduction is estimated to be about 18 percent of normal demand by 2035.[28] The Agency does not project a shortfall during multiple-dry year conditions.[29] Allocation among the Agency's water contractors, including the City, during dry year conditions is governed by the Allocation Methodology of Section 3.5 of the Restructured Agreement which is described in detail in Section 4.2.2.2. Due to the City's extensive water conservation implementation which is recognized by the Allocation Methodology, it is not likely that single-dry year conditions would reduce the volume of surface water available to the City.

The City has used groundwater as a supplemental supply to help meet peak demands during the months of approximately April through November on an annual basis starting in 2007. Records from the City's monitoring wells in close proximity to the Farmers Lane Wells 1 and 2 show no decline in groundwater elevation and every year the wells return to artesian condition. For planning purposes, the City is using an annual maximum extraction volume of 2,300 AFY as the production capacity from the Farmers Lane wells. Due to the short nature of a single-dry year and the artesian condition of the City's Farmer Lane wells, it is not anticipated that groundwater supply would be impacted during a single-dry year. Similarly, due to the storage volume available within the groundwater basin, it is not anticipated that groundwater supply would be affected in multiple-dry years.

[27] SWRCB Decision 1610 was adopted in April 1986.

[28] Source: Sonoma County Water Agency 2010 Urban Water Management Plan, Section 6.

[29] Source: Sonoma County Water Agency 2010 Urban Water Management Plan, Section 6.3.

The reliability of recycled water is not anticipated to be affected by single-dry or multiple-dry years. The reliability of the City's water supply sources for single-dry and multiple-dry water years is summarized in Table 5-1 for historic conditions.

Table 5-1 (DWR Table 28)
Supply reliability — historic conditions

Water Supply Source[1]	Average / Normal Water Year	Single Dry Water Year	Multiple Dry Water Years			
			Year 1	Year 2	Year 3	Year 4
Sonoma County Water Agency	29,100	29,100	29,100	29,100	29,100	29,100
Groundwater	2,300	2,300	2,300	2,300	2,300	2,300
Recycled Water	410	410	410	410	410	410
Total	**31,810**	**31,810**	**31,810**	**31,810**	**31,810**	**31,810**
Percent of Average/ Normal Year:		**100%**	**100%**	**100%**	**100%**	**100%**

[1] *Units are acre-feet per year.*

The reliability of the City's water supply sources for single-dry and multiple-dry water years is summarized in Table 5-2 for projected conditions.

Table 5-2 (DWR Table 31)
Supply reliability — current water sources[1]

Water supply sources	Average / Normal Water Year Supply[2]	Multiple Dry Water Year Supply[2]		
		Year 2011	Year 2012	Year 2013
Sonoma County Water Agency	29,100	29,100	29,100	29,100
Groundwater	2,300	2,300	2,300	2,300
Recycled Water	410	410	410	410
Percent of normal year:	100%	100%	100%	100%

[1] *Units are acre-feet per year.*

[2] *See Table 5-3 (DWR Table 27) for basis of water type years.*

Table 5-3 lists the years in which the data in Tables 5-1 and 5-2 are based.

Table 5-3 (DWR Table 27)
Basis of water year data

Water Year Type	Base Year(s)
Average Water Year	1962
Single-Dry Water Year	1977
Multiple-Dry Water Years	1988 -1991

Factors resulting in inconsistency of the City's water supply are summarized in Table 5-4. A description of the factors resulting in the inconsistency of the Agency's supply, as well as the plans

and actions to address potential inconsistency, are fully described in the Agency's 2010 UWMP, Section 4.8 Water Supply Reliability. In addition, the City's alternatives to replace inconsistent sources may potentially include the development of additional groundwater wells, aquifer storage and recovery, use of recycled water, and increased conservation. Water quality issues are not anticipated to have a significant impact on the City's or the Agency's water supply reliability. If applicable in the future, chemical contamination and the lowering of maximum contaminant levels (MCLs) for naturally-occurring constituents can be mitigated by constructing new treatment facilities. However, these treatment facilities would have a significant cost.

Table 5-4 (DWR Table 29)
Factors resulting in inconsistency of supply

Water supply sources	Limitation quantification[1]	Legal	Environmental	Water quality	Climatic
Water Agency Supply	N/A	Current supply is available at a consistent level of use with regard to these factors. Future supply increase may not be consistent due to delays in construction, in approval of water rights application, or in environmental documentation[2]		None	Drought conditions could result in a reduction of surface water supply[2]
Groundwater	0	None	None	None	None
Recycled Water	0	None	None	None	None

[1] Units are acre-feet per year.
[2] Source: Sonoma County Water Agency 2010 UWMP, Table 4-18.

5.2 Drought Planning

The analysis compares the projected water supply and customer demands from 2015 to 2035, in five-year increments.

5.2.1 Normal Water Supply vs. Demand Comparison

The comparison of projected water supply and demand is presented in Table 5-5. As Table 5-5 shows, there is adequate water supply in normal years to meet demands through 2035.

Table 5-5 (DWR Table 32) Supply and demand comparison — normal year[1]					
	2015	2020	2025	2030	2035
Supply totals (from Table 4-1 (DWR Table 16))[2]	29,103	30,313	32,118	33,460	34,878
Demand totals (from Table 3-9 (DWR Table 11))[3]	28,653	29,864	31,858	33,201	34,618
Difference	450	449	260	259	260
Difference as % of Supply	1.6%	1.5%	0.8%	0.8%	0.8%
Difference as % of Demand	1.6%	1.5%	0.8%	0.8%	0.8%

[1] Units are in acre-feet per year.
[2] Supply Totals from Table 4-1 (DWR Table 16)
[3] Demand Totals from Table 3-9 (DWR Table 11)

5.2.2 Single-Dry Year Supply vs. Demand Comparison

Table 5-6 provides a comparison of a single-dry year water supply with projected total water use over the next 25 years, in five-year increments. As described in the Agency's 2010 UWMP, the Agency's model projects a shortfall in supply during a single-dry year. The single-dry year reduction is estimated to be about 18 percent of normal demand by 2035.[30] As described in Section 5.1, allocation among the Agency's Water Contractors, including the City, during dry year conditions is governed by the Allocation Methodology of Section 3.5 of the Restructured Agreement. Due to the City's extensive water conservation implementation which is recognized by the Allocation Methodology, it is not likely that single-dry year conditions would reduce the volume of surface water available to the City. In addition, due to the short duration of a single-dry year and the artesian conditions of the City's Farmers Lane wells, it is not anticipated that groundwater supply would be impacted during a single-dry year. If a shortfall in supply occurs during a single-dry year, the City would enact the appropriate stage of the City's Water Shortage Plan as described in Appendix G to reduce customer demands.

Table 5-6 (DWR Table 33) Supply and demand comparison — single-dry year[1]					
	2015	2020	2025	2030	2035
Supply totals (from Table 4-1 (DWR Table 16))[2]	29,103	30,313	32,118	33,460	34,878
Demand totals (from Table 3-9 (DWR Table 11)[3]	28,653	29,864	31,858	33.201	34,618
Difference	450	449	260	259	260
Difference as % of Supply	1.6%	1.5%	0.8%	0.8%	0.8%
Difference as % of Demand	1.6%	1.5%	0.8%	0.8%	0.8%

[1] Units are in acre-feet per year.
[2] Supply Totals from Table 4-1 (DWR Table 16).
[3] Demand Totals from Table 3-9 (DWR Table 11).

30 Source: Sonoma County Water Agency 2010 Urban Water Management Plan, Section 6.

5.2.3 Multiple-Dry Year Supply vs. Demand Comparison

Table 5-7 compares the total water supply available in multiple-dry water years with projected total water use over the next 25 years, in five-year increments. As described in the Agency's 2010 UWMP, the Agency does not project a shortfall during multiple-dry year conditions.[31] Drought conditions are not anticipated to reduce the City's groundwater supplies during multiple-dry years due to the quantities of groundwater storage available. If a shortfall in supply occurs during a multiple-dry year, the City would enact the appropriate stage of the City's Water Shortage Plan as described in Appendix G to reduce customer water demands.

Table 5-7 (Table 34)
Supply and demand comparison — multiple dry-year events[1]

		2015	2020	2025	2030	2035
Multiple-dry year first year supply	**Supply totals[2]**	29,103	30,313	32,118	33,460	34,878
	Demand totals[3]	28,653	29,864	31,858	33,201	34,618
	Difference	450	449	260	259	260
	Difference as % of Supply	1.6%	1.5%	0.8%	0.8%	0.8%
	Difference as % of Demand	1.6%	1.5%	0.8%	0.8%	0.8%
Multiple-dry year second year supply	**Supply totals[2]**	29,103	30,313	32,118	33,460	34,878
	Demand totals[3]	28,653	29,864	31,858	33,201	34,618
	Difference	450	449	260	259	260
	Difference as % of Supply	1.6%	1.5%	0.8%	0.8%	0.8%
	Difference as % of Demand	1.6%	1.5%	0.8%	0.8%	0.8%
Multiple-dry year third year supply	**Supply totals[2]**	29,103	30,313	32,118	33,460	34,878
	Demand totals[3]	28,653	29,864	31,858	33,201	34,618
	Difference	450	449	260	259	260
	Difference as % of Supply	1.6%	1.5%	0.8%	0.8%	0.8%
	Difference as % of Demand	1.6%	1.5%	0.8%	0.8%	0.8%

[1] *Units are in acre-feet per year.*

[2] *Supply Totals from Table 4-1 (DWR Table 16).*

[3] *Demand Totals from Table 3-9 (DWR Table 11).*

5.3 Water Shortage Contingency Planning

The City's Water Shortage Plan provides guidance on demand reduction strategies and implementation steps to respond to a catastrophic emergency. Summaries of and excerpts from the Water Shortage Plan are included below to describe how the City would respond to a catastrophic interruption of water supplies, including mandatory prohibitions and consumption reduction methods that would be put into place in response to a water shortage, as well as penalties and charges for excess use. The Water Shortage Plan, which fully describes the City's plan for

[31] Source: Sonoma County Water Agency 2010 Urban Water Management Plan, Section 6.3.

responding to water shortage conditions, including an analysis of impacts to revenues and expenditures and a draft water shortage emergency resolution, is included in Appendix G.

Water supplies may be interrupted in the future due to water supply contamination, major transmission pipeline break, regional power outage, or a natural disaster such as an earthquake. In the event of an emergency, the Utilities Department would respond as outlined in the current City of Santa Rosa Utilities Department Water System Emergency Response Plan. Actions that the City would take if these emergencies occurred today are outlined below.

5.3.1 No Water Available from the Agency

In the event that the Agency's Russian River supply becomes contaminated (i.e. due to a chemical spill or other environmental incident), it may be possible that no water would be available from the Agency for a period of time. In such a case, the City would need to rely on water from its distribution system storage facilities, Farmers Lane wells, and/or emergency wells.

If such an event were to occur, the City would need to implement one or more stages of the Water Shortage Plan to notify customers of the need to reduce water use until the Agency water supply could be restored.

5.3.2 Area-wide Electrical Power Failure

If an area-wide electrical power failure were to occur within the City's water service area, many of the City's pumping facilities could potentially be impacted. The City has stationary standby generators at 16 of its 20 booster pump stations. The other 4 booster pump stations either have receptacles for use with plug-in portable generators or have outlets for bypass pumping with portable water pumpers. In addition, the City has numerous pumper connectors and pressure regulating valves throughout the water system to move water from different pressure zones during an emergency.

The Agency's facilities may also be vulnerable to power outages; however, most of the Agency facilities which serve the City have backup power provisions.

5.3.3 Earthquake

Water system infrastructure, including pump stations, storage tanks, and pipelines, can be damaged during a strong earthquake. The City's facilities have been constructed in accordance with the applicable building codes to minimize potential damage during an earthquake. However, it is expected that some facilities may be damaged as the result of a strong earthquake. The City has planned for this potential outage scenario by constructing system redundancy into its water system. The City has multiple storage facilities and looped distribution pipelines, to allow potentially damaged portions of the City's system to be quickly isolated and repaired.

5.3.4 Demand Reduction Stages

Demand reduction strategies will be employed at all stages of a water shortage emergency. The City has determined the rationing stages for response to reduced supply in a water shortage emergency. Table 5-8 details these rationing stages.

Table 5-8 (DWR Table 35) Water shortage contingency — rationing stages to address water supply shortages			
Stage No.	**Water Supply Conditions**	**% Supply Shortage**	**Overall Demand Reduction Goal**
Stage 1 - Voluntary	Up to 10% Reduction in Agency Water Supply	Up to 10%	10%
Stage 1 – Mandatory	11 – 20% Reduction in Agency Water Supply	11 - 20%	20%
Stage 2 – Moderate	21 – 30% Reduction in Agency Water Supply	21 - 30%	30%
Stage 3 – Severe	31 – 40% Reduction in Agency Water Supply	31 - 40%	40%
Stage 4 – Critical	41 – 50%+ Reduction in Agency Water Supply	41 - 50%+	50%+

5.3.5 Consumption Reduction Methods

As outlined in the Water Shortage Plan, the City has identified five rationing states for responding to a reduction in water supply. The five rationing stages are: Stage 1 – Voluntary, Stage – 1 Mandatory, Stage 2 – Moderate, Stage 3 – Severe, and Stage 4 – Critical. For each stage, the City has determined an overall demand reduction goal for the City's system, which will be achieved with different reduction goals for each customer class. To achieve the overall reduction goal and customer class reduction goals, the City has defined consumption limits for each Stage. The City will assign a community-wide goal in Stage 1 – Voluntary and Stage 1 – Mandatory and allocations will be assigned for each customer within a customer class for Stages 2 through 4. In addition, a limitation on irrigation hours is implemented starting in Stage 1 – Mandatory and requirements for new construction to offset new demand is implemented starting in Stage 2. Table 5-9 summarizes the consumption reduction methods.

Table 5-9 (DWR Table 37) Water shortage contingency — consumption reduction methods		
Consumption Reduction Methods	**Stage When Method Takes Effect**	**Projected Reduction (%)**
Community-wide reduction target established, minimization of non-essential uses and water on request program for restaurants	1 – Voluntary	10%
Limitation on irrigation hours	1 – Mandatory	20%
Allocations are given to each customer class	2	30 – 50%
New construction must offset new demand	2	30 – 50%

5.3.6 Prohibitions on Water Use

In addition to consumption reduction methods, the City also prohibits certain water uses during each rationing stage. Table 5-10 lists the mandatory prohibitions and the stage in which the prohibitions become mandatory.

Table 5-10 (DWR Table 36) Water shortage contingency — mandatory prohibitions	
Examples of Prohibitions	**Stage When Prohibition Becomes Mandatory**
Water Waste Ordinance Prohibitions	During all water conditions
Using potable water for street washing	Stage 1 Voluntary
Hose end shut off nozzles required	Stage 1 Voluntary
Water served in restaurants on request only	Stage 1 Voluntary
Washing sidewalks, patios and other hard surfaces prohibited except for health and safety reasons and certain construction purposes	Stage 1 Voluntary
Irrigation limited to hours of 8 PM to 6 AM	Stage 1 Mandatory
Prohibition on operating ornamental fountains	Stage 2
Prohibition on filling new swimming pools	Stage 2
New construction must offset water demand	Stage 2
Prohibition on installing water using landscape in new construction	Stage 3
New construction must offset water demand two to one	Stage 3
Prohibition on filling existing swimming pools	Stage 3
Prohibition on installing water using landscapes	Stage 4
New construction must offset water demand three to one	Stage 4

5.3.7 Penalties and Charges

The City's water rate structure consists of a four-tiered water rate structure for Single-Family Residential customers, a commodity rate structure for Multi-Family Residential and Commercial, Industrial and Institutional customers, and a water-budget based tiered water rate structure for Dedicated Irrigation customers. The water rate structure also includes monthly fixed service charges, which vary with the size of the water meter. Water rates during a shortage will be based on modifications to the current rate structure in place at the time of the declared emergency. Changes to the water rate structure during each stage of rationing are designed to encourage customers to reduce water use commensurate with water allocations and reduction goals. Table 5-11 summarizes the penalties and charges that the City will implement during a water shortage and the stage that it will take effect. A description of the water shortage charges and penalties, including an analysis of the impacts to the City's revenues and expenditures during a water shortage, is detailed in the Water Shortage Plan included in Appendix G.

Table 5-11 (DWR Table 38) Water shortage contingency — penalties and charges	
Penalties or Charges	**Stage When Penalty Takes Effect**
Water Shortage Charge - Increased usage charge to encourage water conservation	2
Excess Use Charge – Penalty for excess use above allocation	3

5.4 Water Quality Impacts on Future Water Supply

The quality of the City's water deliveries is regulated by the California Department of Public Health (DPH), which requires regular collection and testing of water samples to ensure that the quality meets all regulatory standards and does not exceed MCLs. The Agency treats the water they provide to the City with gas chlorine for disinfection and with sodium hydroxide to adjust the pH for complying with Environmental Protection Agency (EPA) copper level regulations in drinking water. The City treats the groundwater for elevated levels of manganese. The City also treats the groundwater with sodium hypochlorite for disinfection purposes and to oxidize the manganese.[32] Both the City and the Agency perform water quality testing, which has consistently yielded results within the acceptable regulatory limits.[33]

The quality of the Agency's water supplies and the City's groundwater supply sources over the next 25 years is expected to be adequate and meet all regulatory standards. Surface and groundwater will continue to be treated to drinking water standards, and no impacts due to water quality deficiencies are foreseen to occur in the next 25 years. Table 5-12 summarizes the current and projected water supply changes due to water quality.

Table 5-12 (DWR Table 30) Water quality — current and projected water supply impacts[1]						
Water source	**2010**	**2015**	**2020**	**2025**	**2030**	**2035**
Agency Supply	0	0	0	0	0	0
Groundwater	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**

[1] *Units are acre-feet per year.*

[32] Source: City of Santa Rosa 2009 Water Quality Report

[33] Source for Agency water quality information: Sonoma County Water Agency, 2010 Urban Water Management Plan.

6 Demand Management Measures

This section describes the City's historical and existing water conservation program, status of implementation of the California Urban Water Conservation Council's (CUWCC) Best Management Practices (BMPs), referred to in the UWMP Act as Demand Management Measures (DMMs), and projected future conservation implementation.

6.1 Background

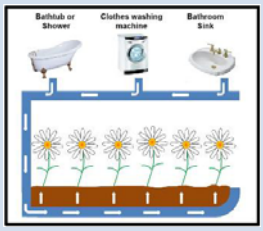
The City has been and continues to be a leader in implementing innovative water conservation programs. Water conservation and demand management are an integral part of the City's water management strategy. Santa Rosa is committed to integrating water conservation into future supply and demand solutions for both the water system and the wastewater treatment/reuse system. The City has been implementing water conservation programs since the 1976-1977 drought. In the early 1990's, the City further expanded the program with the creation and hiring of a full-time Water Conservation Coordinator. In 1998, the City became a signatory to the CUWCC Memorandum of Understanding (MOU) Regarding Urban Water Conservation dated September 1997.

The City is committed to implementation of the CUWCC BMPs /UWMP Act DMMs. The City has spent over $15 million on its water conservation programs, including replacement of approximately 50,000 toilets with ultra low-flow and high-efficiency toilets and implementation of innovative programs such as our Green Exchange irrigation upgrade and turf replacement program, rainwater rebate program, and graywater rebate program. As of June 2008, the City's water conservation implementation has resulted in water use savings of nearly 4,500 AFY, reducing the City's total water demand by approximately 15%[34]. In addition, the City was recognized by the Public Officials for Water and Environmental Reform (P.O.W.E.R) 2007 Water Conservation Scorecard as one of only two water retailers in the State of California that has successfully completed all 14 BMPs, as outlined in the 1998 CUWCC MOU, without an exemption.

To assist with water conservation implementation, the City has an aggressive, conservation-oriented water rate structure that encourages water conservation implementation. The City's water rate structure is designed to derive the overwhelming majority of water sales revenue from volumetric, as opposed to fixed, charges. Currently, the City receives approximately 81% of water sales revenue from volumetric charges and 19%

Graywater Reuse

In 2010, the City's Water-Use Efficiency Team introduced the Graywater System Rebate, which provides a cash incentive for installing graywater systems. Although there was a lot of interest, only two systems were rebated in the first year of the Program. To try to encourage more participation, a new workshop approach was developed.



In 2011, the Water Use Efficiency Team launched the Graywater Installation Workshop. Customers who were willing to install a Laundry to Landscape graywater system were offered a hands-on course to learn how to install, operate and maintain a graywater irrigation system. The workshop took place over two days. The first day provided information and helped participants create a graywater design. At the end of the day, participants were taken to a local irrigation supply house where they were provided a $75 voucher for purchasing the parts. The second day, participants installed the graywater systems at their homes. A total of 15 graywater systems were installed and due to the success, future workshops will be offered.

[34] Savings per CUWCC Coverage Calculator for FY07-08. In December 2008, the CUWCC significantly revised the CUWCC MOU and BMPs. The CUWCC has not completed developing the new reporting database for the new BMPs and, therefore, water conservation savings after FY07-08 are not yet available.

from fixed charges, which is significantly higher than the CUWCC's BMP 11 Conservation Pricing requirement, which requires 70% of water sales revenue be derived from volumetric charges. The City has a tiered water rate structure for Single-Family Residential customers and a water budget-based tiered water rate structure for Dedicated Irrigation customers that targets outdoor water use. The Dedicated Irrigation rate structure is based on landscape measurements for each customer site and real-time evapotranspiration (ETo) data from the City's California Irrigation Management Information System (CIMIS) station.

6.2 Demand Management Measures Overview

Previously, the CUWCC 14 BMPs and the UWMP Act DMMs were the same. In December 2008, the signatories to the CUWCC MOU approved an amendment that significantly changed the BMPs. The changes included moving away from the traditional 14 BMPs to grouping of BMPs by residential, commercial, institutional and industrial, and landscape program; creation of foundational BMPs that all CUWCC members must implement; and, in addition to standard coverage requirements, creation of both a flex track option and gallons per capita per day (gpcd) option for meeting coverage requirements. Table 6-1 lists the new CUWCC BMPs and how they correlate to the UWMP Act DMMs.

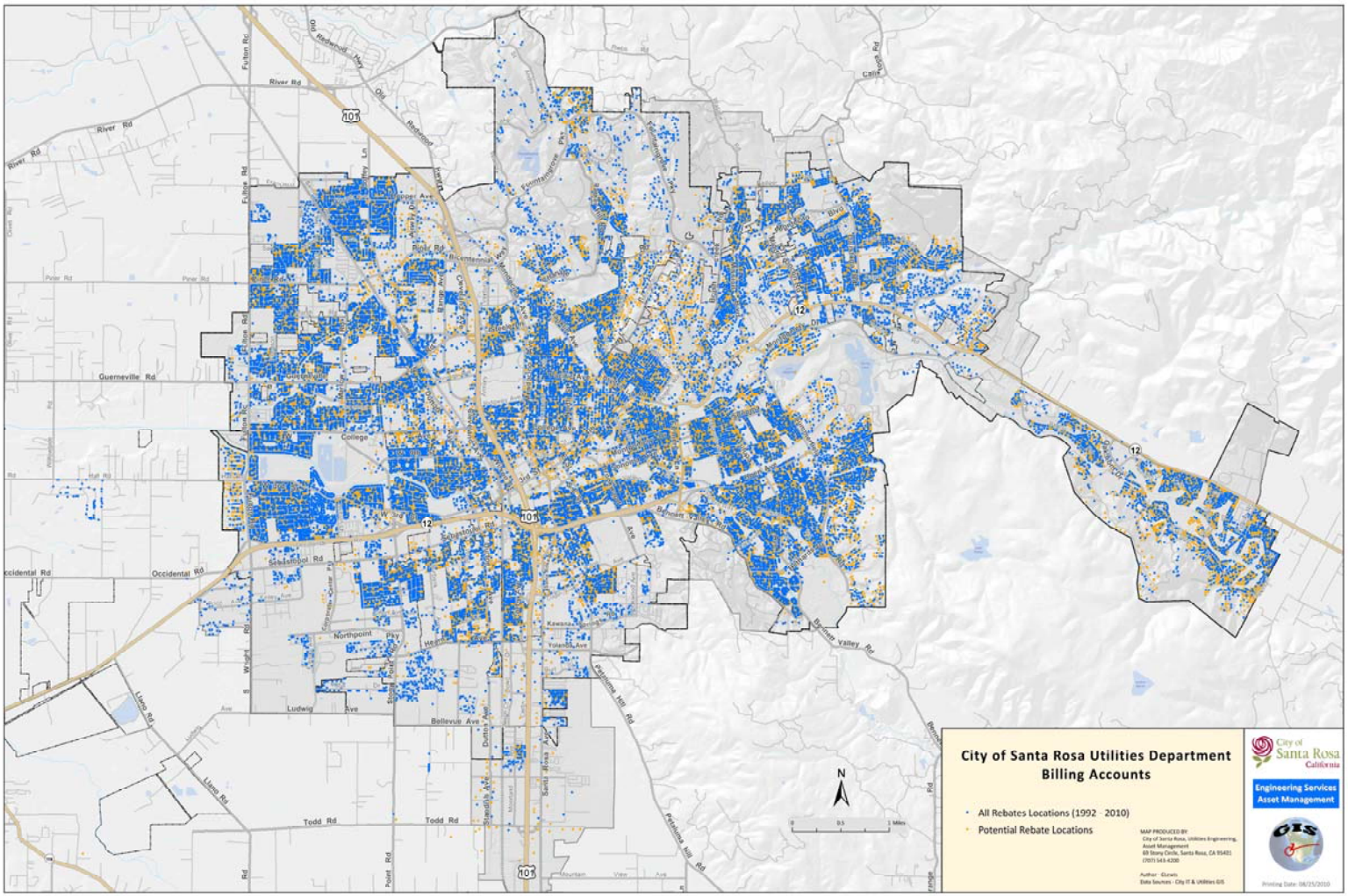
Table 6-1 (DWR Table E-1) Demand Management Measures and California Urban Water Conservation Council BMP names					
CUWCC BMP Organization and Names (2009 MOU)				UWMP Act DMMs	
Type	Category	BMP #	BMP name	DMM #	DMM name
Foundational	Operations Practices	1.1.1	Conservation Coordinator	L	Water conservation coordinator
		1.1.2	Water Waste Prevention	M	Water waste prohibition
		1.1.3	Wholesale Agency Assistance Programs	J	Wholesale agency programs
		1.2	Water Loss Control	C	System water audits, leak detection, and repair
		1.3	Metering with Commodity Rates for All New Connections and Retrofit of Existing Connections	D	Metering with commodity rates for all new connections and retrofit of existing connections
		1.4	Retail Conservation Pricing	K	Conservation pricing
	Education Programs	2.1	Public Information Programs	G	Public information programs
		2.2	School Education Programs	H	School education programs
Programmatic	Residential	3.1	Residential assistance program	A	Water survey programs for single-family residential and multi-family residential customers[1]
				B	Residential plumbing retrofit
		3.2	Landscape water survey	A	Water survey programs for single-family residential and multifamily residential customers[1]
		3.3	High-Efficiency Clothes Washing Machine Financial Incentive Programs	F	High-efficiency washing machine rebate programs
		3.4	WaterSense Specification (WSS) toilets	N	Residential ultra-low-flush toilet replacement programs
		3.5	WaterSense for New Development	N/A	N/A – Not Applicable
	Commercial, Industrial, and Institutional	4	Commercial, Industrial, and Institutional	I	Conservation programs for commercial, industrial, and institutional accounts
	Landscape	5	Landscape	E	Large landscape conservation programs and incentives

[1] Components of DMM A (Water survey programs for single-family residential and multi-family residential customers) applies to both BMP 3.1 (Residential assistance program) and BMP 3.2 (Landscape water survey).

6.3 Demand Management Measures Implementation

As part of the implementation of the BMPs, the City offers technical support, education, information and incentives to Single-Family Residential, Multi-Family Residential, Commercial, Industrial, and Institutional (CII) customers, and Dedicated Irrigation customers. Figure 6-1 illustrates the amount and location of participation in all of the City's water conservation programs since1995.

Figure 6-1 – Participation in All Water Conservation Programs from 1995 through July 2010



The City submits annual BMP activity reports to the CUWCC[35]. As of the writing of this section, in April 2011, the CUWCC annual reporting database and associated coverage reports were not available. However, the CUWCC has made available forms listing all of the data that will be required to be submitted for documenting compliance once the database is available. Copies of these forms with data for Fiscal Years 08/09 and 09/10 are included in Appendix H. The City is currently in compliance with all BMPs and is on track with the gpcd reporting option. The City's CUWCC coverage requirement under the gpcd option is 114 gpcd in 2018. To be on track with the gpcd option, the City's target is 134.5 gpcd in 2010. The City is currently on track with a 106 gpcd in 2010. A copy of the City's CUWCC gpcd coverage requirement and current gpcd information is included in Appendix H.

Table 6-2 shows the status of the implementation of the CUWCC BMPs. A detailed description of the City's implementation of the BMPs is described in the subsequent sections.

Table 6-2

California Urban Water Conservation Council BMP Implementation

Best Management Practices (BMPs)		Description	Previous BMP	On Track	Implemented By
Foundational	1 - Utility Operations Programs	1.1 – Operations Practice			
		1.1.1 – Conservation Coordinator	12	Yes	Santa Rosa
		1.1.2 – Water Waste Prevention	13	Yes	Santa Rosa
		1.1.3 – Wholesale Agency Assistance	10	N/A	Agency
		1.2 - Water Loss Control	3	Yes	Santa Rosa
		1.3 - Metering with Commodity Rates	4	Yes	Santa Rosa
		1.4 - Conservation Pricing	11	Yes	Santa Rosa
	2 - Educational Programs	2.1 - Public Information Programs	7	Yes	Santa Rosa
		2.2 - School Education Programs	8	Yes	Agency
Programmatic	3 - Residential	3A.1 - Residential Assistance Program	1 & 2	Yes	Santa Rosa
		3A.2 - Landscape Water Survey	1	Yes	Santa Rosa
		3A.3 – High-Efficiency Clothes Washer	6	Yes	Santa Rosa
		3A.4 -WaterSense Specification toilets	14	Yes	Santa Rosa
		3A.5 - WaterSense Specification for Residential Development	N/A	Yes	Santa Rosa
	4 - Commercial, Industrial, Institutional	4A.1 - Implement measures on CII list **OR**	9/9A	Yes	Santa Rosa
		4A.2 - Flex Track implementation	9/9A	Yes	Santa Rosa
	5 - Landscape	5A.1 - Dedicated Irrigation Meters	5	Yes	Santa Rosa
		5A.2 - CII Accounts w/o meters or with Mixed Use Meters	5	Yes	Santa Rosa

6.4 Foundational Best Management Practices Implementation

This section describes the City's implementation of the Foundational BMPs through the end of calendar year 2010.

[35] In December 2008, the CUWCC significantly revised the CUWCC MOU and BMPs. The CUWCC has not completed developing the new reporting database for the new BMPs and, therefore reporting for fiscal year 08/09 and 09/10 has not yet occurred.

6.4.1 Conservation Coordinator

Since January 1991, the City has had a full-time Water Conservation Program Coordinator overseeing the implementation of the City's water conservation programs. The City currently has 9.5 full-time staff implementing water conservation programs, including a Water Conservation Representative, three Water Conservation Technicians, a Senior Administrative Assistant and Water Conservation interns equivalent to 2.5 full-time employees.

Implementation Schedule: The City is in compliance with this BMP and will continue to implement this BMP.

Program Effectiveness Evaluation: There is no formal method used by the City to evaluate this measure. However, the success of the other conservation programs and BMPs directly relate to the effectiveness of the Water Conservation Program Coordinator and Water Conservation Staff.

6.4.2 Water Waste Prevention

The City adopted Water Waste Ordinance No. 3426 in May 1999. A copy of the Ordinance is included in Appendix F. The Ordinance prohibits waste of water due to plumbing leaks, unattended open hoses, broken sprinkler heads or irrigation lines, excessive irrigation running off property, and excessive irrigation spraying off property; non re-circulating ornamental fountains; and inefficient plumbing fixtures. The Ordinance gives the City the authority to discontinue service if water waste is not corrected.

The City's Water Watch Patrol.

The City has developed a process to address violations of the Ordinance and any reported water waste violation receives immediate response from City staff. If water waste is identified, a door tag is left at the property to notify the customer of the violation and follow-up technical assistance is provided, including offers of water conservation surveys and information on incentive programs to improve water-use efficiency. If corrective action is not implemented within the identified time frame, a notice of violation is sent to the customer specifying actions that must be taken within a particular time frame. Failure to comply can lead to the City discontinuing water service. During water shortage conditions, the City also implements a water waste patrol to identify and notify customers of violations of the Ordinance. The City maintains a database of water waste violations, including the customer account information, date of water waste and corrective actions taken to address the water waste violation.

In addition, the City has adopted ordinances to require efficient water use in new development. In 1991, the City adopted an efficient plumbing fixture ordinance, Ordinance No. 2889, mandating the installation of low-flow faucet aerators and showerheads and ultra-low-flow toilets (ULFTs) at all new and existing properties within the City. In 1992, the City adopted a Water Efficient Landscape Policy in response to Assembly Bill 325 (1991), requiring the installation of water-efficient landscaping for all new

development construction, excluding Single-Family Residential. In 2007, the City adopted a Single-Family Residential Landscape Policy, requiring the installation of water-efficient landscaping in all new Single-Family Residential development. In 2009, the City adopted a Water Efficient Landscape Ordinance (WELO), in response to AB 1881, incorporating and superseding both the Water Efficient Landscape Policy and Single-Family Residential Landscape Policy. The City's WELO requires water-efficient landscaping in all new and rehabilitated landscapes to be designed to a maximum applied water allowance of 60% ETo, exceeding the State's requirement of 70% ETo. A copy of the WELO is included in Appendix F. In 2010, the City adopted the CalGreen Building Code Requirements, requiring high-efficiency plumbing fixtures for all new construction and renovations of residential and commercial properties.

Implementation Schedule: The City is in compliance with the BMP and will continue to implement this BMP.

Program Effectiveness Evaluation: All water waste complaints and associated corrective actions are tracked in the City's database. New development is inspected for compliance with applicable plumbing and landscape ordinances to insure efficiency prior to finalization of building permits.

6.4.3 Wholesale Agency Assistance

This BMP does not apply to the City. The City is not a wholesale potable water provider and does not plan to be a potable water wholesaler in the future.

6.4.4 Water Loss Control

Unaccounted-for water use, or system water loss, is the difference between water produced and water sold to the customers. Unaccounted-for water includes metered and unmetered water use, such as water used for fire protection and training, water system flushing, sewer cleaning, construction, system leaks, as well as water used by unauthorized connections. Unaccounted-for water use can also result from meter inaccuracies. The City uses the American Water Works Association (AWWA) Standard Water Audit and Water Balance 3rd Edition M36 Publication, Water Audits and Loss Control Programs to determine and analyze the annual water loss for the system.

Water loss control – proactively replacing services.

The City implements a number of programs to control system water loss, including meter testing and calibration on a routine schedule based on meter size, hydrant maintenance to insure valves are exercised appropriately, metering of all City field crew trucks that use water as part of their routine maintenance activities and metering all construction use. The City's field crews also implement a leak detection program where field staff uses traditional sounding equipment to complete a survey of the City's distribution system annually. Any leaks that are detected are repaired immediately. The City maintains a database that records the date, time and location of the leak, as well as the repair information and

estimated amount of water lost due to the leak. In addition, as a preventative measure, the City implements a service replacement program for plastic services and certain copper services where the City has identified areas of high leaks from services.

The City's billing department notifies customers of potential property leaks by analyzing water use records for dramatic increases in water use and contacting customers individually and offering assistance. In addition, the City's Water Conservation Program analyzes dedicated irrigation customers water use records to determine which accounts have high water use and contacts those customers offering assistance.

Implementation Schedule: The City is compliant with this BMP and will continue to implement it.

Program Effectiveness Evaluation: The City's robust program has led to unaccounted-for-water being less than 10% over the past ten years.

6.4.5 Metering with Commodity Rates

The City is in compliance with this BMP. All connections are metered, all new connections are required to be metered, and the City reads meters and bills customers monthly. In addition, the City has a comprehensive meter maintenance and replacement program in place to assure proper meter calibration and registering. The City maintains an asset management database that maintains information on all of the meters in the City's system, including meter size, type, year installed, customer class served and maintenance performed.

Implementation Schedule: The City is compliant with this BMP and will continue to implement it.

Program Effectiveness Evaluation: It is estimated that metered accounts use 15 percent less water than unmetered accounts. It can be concluded that without metering, the City would need to provide 15 percent more water than what is currently provided to supply all connections.

6.4.6 Conservation Pricing

The City has an aggressive, conservation-oriented water rate structure that encourages water conservation implementation. The City's water rate structure is designed to derive the overwhelming majority of water sales revenue from volumetric charges. Currently, the City receives approximately 81% of water sales revenue from volumetric charges and 19% from fixed charges, which is significantly higher than the CUWCC's BMP 11 Conservation Pricing requirement of 70% of water sales revenue derived from volumetric charges. Customers are billed based on metered water use on a monthly basis.

In 2007, the City implemented an increasing block, tiered water rate structure for Single-Family Residential customers and an increasing block water budget-based tiered water rate structure for Dedicated Irrigation customers that targets outdoor water use. The Dedicated Irrigation water rate structure is based on individual landscape measurements and real-time ETo data from the City's CIMIS station.

The City's sewer charges are based on metered water use during winter months, when all water use is presumed to be indoor use, and customers are billed monthly.

Implementation Schedule: The City is in compliance with this BMP and will continue to implement this BMP.

Program Effectiveness Evaluation: The City has a low fixed charge and high commodity rate for water and bills water and sewer monthly based on water usage. Because of the high usage charge, customers can reduce their water and sewer bills by reducing their water use. A recent review of water use found that the City has one of the lowest gallons per capita per day water use in the region. This is attributed to our conservation programs and conservation pricing.

6.4.7 Public Information Programs

The City is compliant with this BMP by maintaining four distribution centers in City facilities, providing water conservation bill inserts in both English and Spanish, sending a Water Conservation Welcome Packet to all new accounts informing them of the City's water conservation programs, having a Water Conservation informational booth at the Downtown Market every summer, staffing booths at numerous public events, providing information in English and Spanish through our Water Conservation Website, providing speakers to organizations, providing technical workshops for customers, providing technical irrigation efficiency workshops for landscape contractors, supporting the statewide Water Awareness Month campaign each May with a variety of activities, and producing our annual Water SMART Expo, providing education and information about using water wisely.

Implementation Schedule: The City is compliant with this BMP and will continue to implement it.

Program Effectiveness Evaluation: The City receives feedback from customers, tracks visits to our website, and receives requests for presentations, information and materials from our customers.

6.4.8 School Education Programs

The City's water wholesaler, the Agency, implements a regional water education program on behalf of all of its retail water agencies. The Agency's Water Education Program is designed to help educators teach students the "value" of water as an important natural resource and to promote water conservation and watershed stewardship. The program includes classroom instructional presentations; field study opportunities; Project WET teacher trainings and workshops; free curriculum materials aligned with the California Content Standards; a lending library of videos, interactive models, and printed materials; production of a newsletter for teachers; and endorsement, participation, and financial sponsorship of events, assemblies, and workshops. All programs and materials are free to teachers in the service area.

In addition, the City offers tours of the Laguna Wastewater Treatment Plant, incorporating information on water conservation and recycled water use and holds an annual water conservation poster contest

for 3rd and 4th grade students. The water conservation posters are used to create an annual water conservation calendar produced by the Agency.

Implementation Schedule: The Agency will continue to implement this BMP on behalf of the City. The City will continue to offer treatment plant tours and the annual water conservation poster contest.

Program Effectiveness Evaluation: The Agency continues to receive more requests for classroom presentations than they are able to provide. The number of schools and students participating in the City's poster contest continues to increase every year.

6.5 Residential Best Management Practices Implementation

This section describes the City's implementation of the Residential BMPs through the end of calendar year 2010.

6.5.1 Residential Assistance Program

The City is in compliance with this BMP. The City implemented an innovative, comprehensive indoor audit and toilet, showerhead and faucet aerator replacement program entitled the "Go Low Flow" plumbing incentive program from 1995 through 2002. The "Go Low Flow" program was available to all utility customers and included an indoor audit and required replacement of high-flow fixtures with ULFTs, low-flow showerheads and faucet aerators. Based on the high level of participation in the "Go Low Flow" program, the City worked with the CUWCC to determine the statistical sample size needed to determine compliance with this BMP. The City performed a random inspection survey and found that 87% of all Single-Family Residential customers and at least 76% of Multi-Family Residential customers have received, installed, and retained low-flow showerheads and faucet aerators. In addition, through implementation of this program, over 19,000 Single-Family and Multi-Family Residential audits were completed and over 41,000 toilets were replaced in Single-Family and Multi-Family residences.

In 2004, the City developed and began implementing the residential "Conservation Check-Up" program, providing free water use surveys to all residential customers. The water use surveys are conducted by Water Conservation staff and include checking for interior and exterior property leaks, checking for ULFTs or high-efficiency toilets, low-flow shower heads, and low-flow faucets and distributing free low-flow showerheads and faucet aerators as needed. The survey also provides recommendations for improving irrigation efficiency, which is detailed in the Landscape Water Survey section. Customers are provided with a report of findings, water-use efficiency recommendations, and water conservation brochures and educational material at the end of the audit.

Starting in 2010, the City began developing a residential survey and qualification program to assist realtors and property owners with complying with new SB 407 legislation. SB 407 requires that when a property is sold, starting in January 2017, all Single-Family Residential properties, and, starting in January 2019, all Multi-Family Residential and CII properties, must disclose to the buyer whether or not indoor plumbing fixtures are efficient.

Implementation Schedule: The City has completed implementation of the "Go Low Flow" plumbing incentive program. The City will continue to implement this BMP through marketing of the "Conservation Check-Up" program to all residential customers and will continue to provide high-

efficiency showerheads and faucet aerators to all residential customers and through implementation of the residential survey and qualification program, tentatively scheduled to begin in 2011.

Program Effectiveness Evaluation: The "Go Low Flow" program was very effective for Single-Family and Multi-Family Residential customers, resulting in significant sustainable savings. The "Conservation Check-Up" program has been well received by participants in both customer classes and the City now requires water use surveys prior to participation in most rebate programs.

6.5.2 Landscape Water Survey

Performing a catch can test during a landscape survey.

The City is in compliance with this BMP. To achieve outdoor savings, the City complemented the "Go Low Flow Program" with education and information regarding irrigation efficiency, which included implementation of a "Water-Use Efficiency Calculator" that allowed customers to input landscape data to determine individual water budgets and compared this data to the customers' actual water usage. In 2004, the City developed and began implementing the residential "Conservation Check-Up" program, providing free water use surveys to all residential customers. In addition to the indoor survey described in the prior section, the "Conservation Check-Up" also provides recommendation for improving the efficiency of landscape water use by measuring landscape areas, testing irrigation systems for efficiency, recommending irrigation system repairs and improvements, and providing customers with an irrigation schedule based on their individual landscape and ETo data. By participating in this program, customers are also pre-qualified to participate in other landscape incentive programs, such as the Green Exchange Rebate Program, which provides a rebate for removing turf and replacing it with low water use alternatives and for improving the efficiency of irrigation systems, the Rainwater Harvesting Rebate Program, and Graywater Rebate Program.

Implementation Schedule: The City will continue to implement this BMP through marketing of the "Conservation Check-Up" program to all residential customers.

Program Effectiveness Evaluation: The "Conservation Check-Up" program has been well received by participants in both customer classes and the City now requires water use surveys prior to participation in most rebate programs.

6.5.3 High-Efficiency Clothes Washers

The City is in compliance with this BMP by offering a washing machine rebate program for Single-Family and Multi-Family Residential customers. The City has been implementing a washing machine rebate program since 1998, initially through a regional program administered by the Agency and then, starting in 2004, through a program administered by the City. The rebate incentive amount has varied over the years and the efficiency of qualifying washing machines has improved over the years. Currently, the City offers a rebate of $25 for the purchase of qualifying, high-efficiency clothes washers.

Implementation Schedule: The City is compliant with this BMP and will continue to implement it through the City's rebate program.

Program Effectiveness Evaluation: The City has provided washing machine rebates for qualifying, high-efficiency washing machines since 1998. Through 2010, the City has rebated over 10,000 residential high-efficiency clothes washing machines.

6.5.4 WaterSense Specification Toilets

The City is in compliance with this BMP. The City launched the "Go Low Flow" Plumbing Incentive Program in May 1995 and it ran through December 2002. A total of 41,981 residential toilets were replaced in this campaign – 29,941 toilets were replaced at Single-Family Residential accounts and 12,490 toilets were replaced at Multi-Family Residential accounts. Of the total estimated number of eligible 3.5 – 7 gallon per flush (gpf) toilets in residential accounts, the City replaced 47% of Single-Family Residential toilets and 60% of Multi-Family Residential toilets with ULFT's through this program.

In 2007, the City launched the high-efficiency toilet rebate program, offering a rebate of up to $150 per toilet for the replacement of 3.5 gpf or greater toilets with WaterSense qualified high-efficiency toilets. The program ran from July 2007 through June 2010 and the City replaced over 1,100 high-flow toilets with WaterSense qualified high-efficiency toilets.

Currently, the City offers a Residential Sustained Reduction Rebate to all residential customers, providing a rebate for sustained water reduction due to hardware changes, including high-efficiency toilets. The current rebate is $200 for every 1,000 gallons per month of sustained water savings.

Implementation Schedule: The City is in compliance with this BMP through implementation of the "Go Low Flow" and High-Efficiency Toilet Rebate programs. The City may implement the High-Efficiency Toilet Rebate program in the future depending on available funding. The City will continue to implement the Residential Sustained Reduction Rebate program.

Program Effectiveness Evaluation: The toilet replacement programs were extremely effective with high levels of participation among Single-Family and Multi-Family Residential customers.

6.5.5 WaterSense Specification for New Residential Development

In late 2010, the City adopted the minimum requirements and optional Tier 1 requirements of the CalGreen Building Code. These requirements apply to all new construction and renovations of residential and commercial properties, requiring high-efficiency plumbing fixtures. The minimum requirements and optional Tier 1 requirements are equivalent to, and in some instances exceed, the WaterSense Specifications for New Residential Development.

Implementation Schedule: The City is in compliance with this BMP through adoption of the CalGreen Building Code minimum requirements and optional Tier 1 requirements. New development is inspected for compliance with CalGreen Building Code requirements to insure indoor efficiency prior to finalization of building permits.

Program Effectiveness Evaluation: The CalGreen Building Code was just adopted in late 2010; therefore, the City has not been able to evaluate the effectiveness of the Code. It is anticipated that

new development built according to the CalGreen Building Code will use 20% less water than prior development.

6.6 Commercial, Industrial and Institutional Best Management Practices Implementation

This section describes the City's implementation of the CII BMPs through the end of calendar year 2010. The City is in compliance with this BMP. The City implemented the "Go Low Flow" plumbing incentive program for CII customers, providing indoor water audits and toilet, showerhead and faucet aerator replacement from 1995 through 2007. From 2007 through June 2010, the City offered a High-Efficiency Toilet Rebate program for CII customers. Through these programs, the City replaced over 6,500 high flow toilets with ULFTs and high-efficiency toilets, as well as associated showerheads and aerators.

The City also participated in the Rinse & Save pre-rinse spray nozzle replacement program, which was a regional program funded by the California Public Utilities Commission and administered by the CUWCC. The program replaced high water use pre-rinse spray nozzles with 1.6 gallons per minute high-efficiency pre-rinse spray nozzles at restaurants and commercial kitchens. Through this program, the City replaced over 400 pre-rinse spray nozzles.

Currently, the City offers many rebate and incentive programs for CII accounts, including a High-Efficiency Urinal Rebate Program, Sustained Reduction Rebate Program, Best Available Technologies Program, High-Efficiency Clothes Washer Rebate, Water Use Surveys, and Rainwater Harvesting Rebates.

In 2009, the City implemented a High-Efficiency Urinal Rebate Program for CII customers. The City provides a rebate of up to $450 per urinal with a qualifying high-efficiency urinal that uses 1 pint of water per flush or less. The City's Sustained Reduction Rebate program began in 1996 and offers CII customers a rebate for sustained water reduction due to process or hardware changes. The current rebate is $200 for every 1,000 gallons per month of sustained water savings. For new restaurant, commercial kitchen and laundromat customers, the City offers a Best Available Technologies program which allows customers who install the most efficient water technologies available, above and beyond what is required by current building codes, to pay a reduced sewer demand fee.

Since 2000, the City has offered a rebate program for the replacement of commercial washing machines with high-efficiency commercial washing machines. The current rebate is $350 per washing machine. The City also offers site surveys for CII customers, which include a review of all water uses, including plumbing, process and cooling water, and makes recommendations for efficiency improvements. Rainwater Harvesting Rebates are described in Section 6.8 – Additional Water Conservation Programs.

Implementation Schedule: The City is in compliance with this BMP and will continue to implement it by offering the High-Efficiency Urinal program, Sustained Reduction Rebate Program, Best Available Technologies program, High-Efficiency Clothes Washer Rebate, and Water Use Surveys.

Program Effectiveness Evaluation: The "Go Low Flow" and High Efficiency Toilet Rebate Programs as well as the Rinse & Save program were very effective for CII customers with high levels of participation. The current CII conservation programs have been well received with participation increasing in all programs over the years.

Qualified Water Efficient Landscaper Training

In 2004, the water agencies in Sonoma and Marin counties created a Landscape Water Advisory Group, working with landscape professionals, water providers and educators to develop ways to outreach to and educate landscapers on efficient water management. After reviewing the individual landscape water management trainings that were being offered, it was determined that creating an in-depth, low cost training program to educate landscapers would be the most efficient way to obtain improvements in landscape water use efficiency. Thus, the Qualified Water Efficient Landscaper (QWEL) Training was born.

QWEL is a 20 hour training program, offered in both English and Spanish, designed to provide a better understanding of landscape water management. Topics include overviews of irrigation systems, plant water needs, irrigation scheduling, water budgets and selling water management to customers. Participants must take and pass a final exam in order to be QWEL certified. Over 370 landscapers are now QWEL certified and the QWEL training program was the second landscape program to be a WaterSense labeled certification program by the U.S. Environmental Protection Agency. Visit www.qwel.net for more information.

6.7 Landscape Best Management Practices Implementation

This section describes the City's implementation of the Landscape BMPs through the end of calendar year 2010.

6.7.1 Accounts with Dedicated Irrigation Meters

The City is in compliance with this BMP. In 2006, the City completed measuring landscapes and assigning water budgets for 100% of the dedicated irrigation accounts. The individual water budgets are based on the square footage of plant type that is irrigated as well as real-time ETo data from the City's CIMIS station. In 2007, the City implemented a water budget-based tiered water rate structure for dedicated irrigation customers based on 70% of real-time ETo. Customers receive information on their water budgets on their monthly water bill and are billed based on how efficiently they water compared to their monthly water budget. Customers that have water use in Tier 3, the highest tier of the water rate structure, are contacted by technical staff and offered assistance to help improve their irrigation water-use efficiency.

The City provides free Landscape Water Use Surveys for all dedicated irrigation customers. The City publishes information about the landscape surveys on our website, in brochures and in letters to new water accounts. In addition, the City informs customers about these services at meetings, during our landscape workshops, and during phone conversations with customers. Technical staff performs these surveys, which include measuring landscape areas by plant type, checking irrigation systems for leaks, testing irrigation systems for efficiency, performing catch can tests on sprinkler systems, recommending irrigation system repairs and improvements, and providing customers with an irrigation schedule based on their individual landscape measurements and ETo data, as well as potential water and money savings from implementing efficiency upgrades.

Implementation Schedule: The City is in compliance with this BMP and will continue to implement it. The City will continue to bill dedicated irrigation customers based on a water budget-based tiered water rate structure. In addition, the City will continue to offer large landscape surveys for all dedicated irrigation customers.

Program Effectiveness Evaluation: One hundred percent of all dedicated irrigation accounts are billed monthly based on a water budget-based tiered water rate structure.

6.7.2 Commercial/Industrial/Institutional (CII) Accounts without Meters or with Mixed-Use Meters

The City has been requiring new CII development to install dedicated irrigation services since the 1980s. Because of this requirement, the City has a limited number of CII accounts with "mixed-use meters," serving both indoor and

outdoor water use on one meter. Approximately 10% of the City's CII accounts have mixed-use meters. To encourage the retrofitting of mixed-use meters to dedicated irrigation meters, the City developed and implements a Service Split Incentive Program. The Service Split Incentive Program provides financial incentives to offset the material and permitting cost of retrofitting mixed-use meters with a dedicated irrigation meter and an indoor meter.

Implementation Schedule: The City is in compliance with this BMP and will continue to implement the Service Split Incentive Program to CII accounts with mixed-use meters.

Program Effectiveness Evaluation: All service split rebates are tracked in the City's database and participants' water use is tracked to determine water savings.

6.7.3 Offer financial incentives to support landscape programs

The City offers rebates and financial incentives for reducing landscape water use and improving landscape water use efficiency. The City currently offers a Green Exchange Rebate Program and Water Management Rebate.

The Green Exchange Rebate Program provides rebates for implementing irrigation system upgrades and for removing turf and replacing it with low water use alternatives. The Green Exchange Program is available to all residential and CII water use customers. For residential customers, the City provides a rebate of $0.50 per square foot of turf removed up to a maximum of 500 square feet or $250 and up to $350 for qualifying irrigation equipment and hardware upgrades. For commercial customers, the City provides a rebate of $0.50 per square foot of turf removed up to a maximum of 5,000 square feet or $2,500 and up to $3,500 for qualifying irrigation equipment and hardware upgrades.

The Water Management Rebate is available to all Dedicated Irrigation Accounts, providing a rebate based on how closely their water use mirrors a calculated "irrigation water goal."

Implementation Schedule: The City is in compliance with this BMP and will continue to implement the Green Exchange Rebate Program and Water Management Program.

Program Effectiveness Evaluation: The Green Exchange Rebate Program has been extremely effective for residential and CII customers, providing for the removal of over 1.4 million square feet of turf, resulting in significant sustainable water savings of over 25 million gallons per year. Figure 6-2 details the participation in the Green Exchange Program, including the location and amount of turf removed through this program. The Water Management Program is a new program for the City that was initiated in 2010. The City will continue to evaluate the effectiveness of this program and adjust it as needed.

6.8 Additional Water Conservation Programs

The City offers many innovative water conservation programs, providing incentives for developing on-site alternative water supplies. Rainwater harvesting is the capture, storage and use of rainwater on-site. Rainwater systems range from simple catchment devices, such as rain barrels, to more complex systems such as cisterns and storage tanks. The City allows rainwater harvesting for reuse for irrigation purposes. Graywater is wastewater collected from showers, bathtubs, bathroom sinks, and clothes washing machines that is reused on-site instead of going into the sewer system. Graywater does not include water from toilets, kitchen sinks or dishwashers.

In 2009, the City developed and implemented a Rainwater Harvesting Rebate program, providing $0.25 per gallon of storage, limited to the amount of storage needed to meet the estimated peak month water use needs for the landscape.

To help address California's water shortage, the State of California adopted emergency graywater regulations to add Chapter 16A "Nonpotable Water Reuse Systems" to the 2007 California Plumbing Code. The intent of the regulations was to provide guidance for the safe use of graywater, provide greater flexibility to use graywater, and to conserve potable water and reduce sewer flows. The regulations were adopted by the California Building Standards Commission in 2009, and after further revisions, became effective in January 2010. In response, the City developed a Graywater Rebate Program to encourage the installation a graywater systems in compliance with the building code. The City provides two options for the Graywater Rebate Program, a $75 rebate for single-fixture graywater systems and a sustained reduction rebate of $200 for every 1,000 gallons per month of sustained water savings. The sustained reduction option would typically be used for multi-fixture and engineered systems.

Implementation Schedule: The City will continue to implement the Rainwater Harvesting Rebate and Graywater Rebate programs.

Program Effectiveness Evaluation: The Rainwater Harvesting Rebate and Graywater Rebate programs are new programs for the City. Through these rebate programs, five rainwater harvesting systems and two graywater reuse systems have been installed and numerous customers have requested information regarding graywater system installation. In response, the City is planning to conduct graywater installation workshops starting in 2011. The City will continue to evaluate the effectiveness of both of these programs and adjust them as needed.

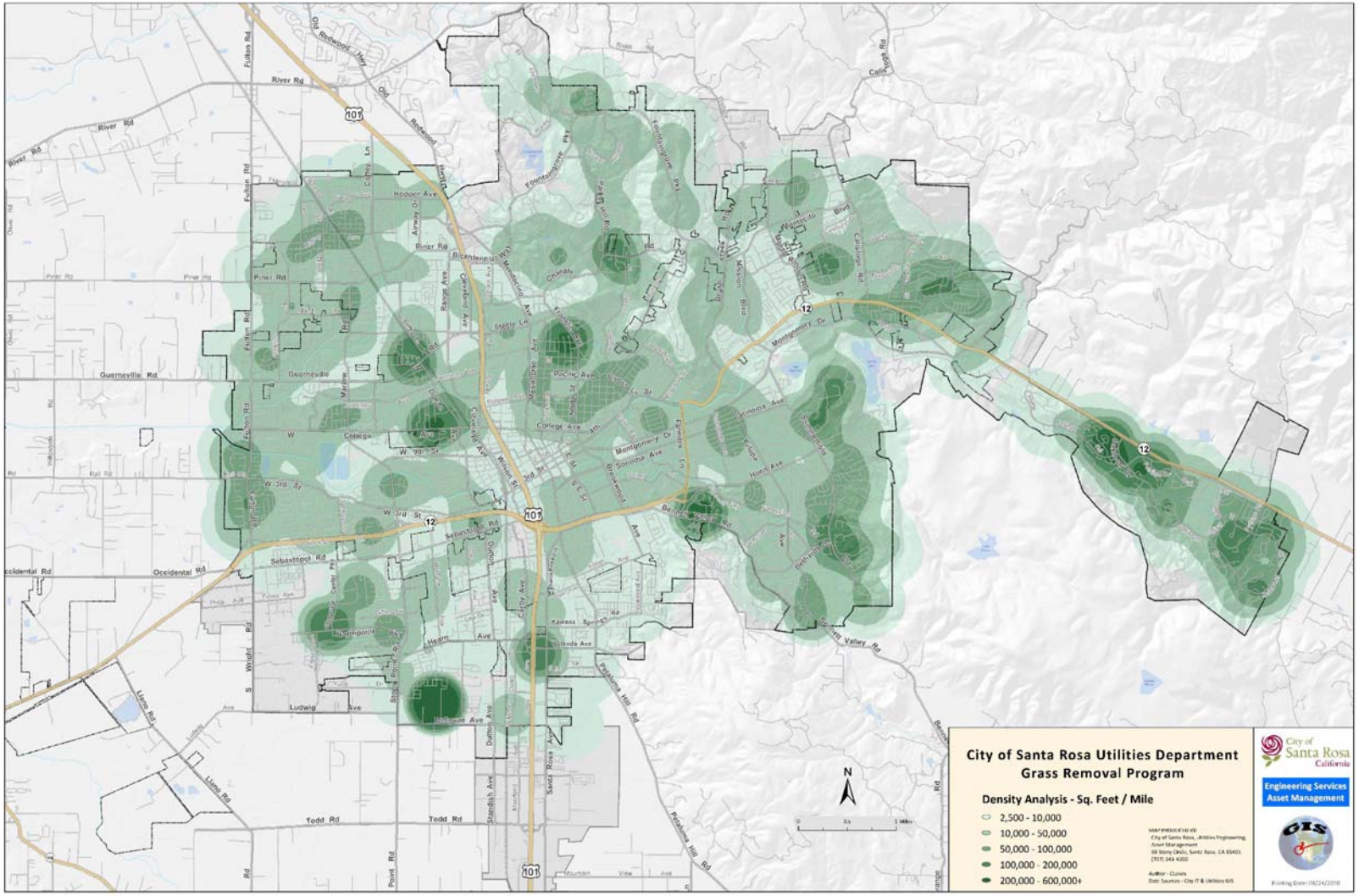
6.9 Future Water Conservation Savings

Future conservation efforts will focus first on sustaining the savings already achieved by the programs described previously, and second on achieving additional savings from new and emerging technologies, such as irrigation efficiency upgrades, rainwater harvesting, and graywater reuse. Actual sustainable savings are continuously being analyzed as part of the City's implementation of these measures and as part of the CUWCC water savings calculations. The actual savings realized from these measures will be updated as implementation continues. Based on the Maddaus Water Management analysis included in Appendix C, it is anticipated that the City will achieve an additional sustainable savings of approximately 2,400 AFY by 2035.

A rainwater harvesting system installed through the City's Rainwater Harvesting Rebate Program.

Funding for on-going conservation efforts is an integral component of the City budget. Annual funding includes approximately $600,000 per year to operate the Water Conservation Program. In addition, the City has a Capital Improvement Program to provide for the replacement of inefficient water using hardware with water conserving hardware. The on-going funding for the water conservation program is funded by water and wastewater demand fees as well as water rates.

Figure 6-2 – Green Exchange Program Participation



7 Climate Change

This section gives an overview of the anticipated affects of climate change on water supply, a summary of legislation and regulations guiding the State's response to Climate Change, and an overview of how the City is responding to climate change.

7.1 Overview of Climate Change affects on Water Supply

It should be noted that currently there are no specific requirements related to addressing the potential impacts of future climate change on water supplies or water supply reliability included in either the UWMP Act or the Water Conservation Act of 2009. However, within the next 20 years, DWR expects that water demand, water supply and quality, sea level, and the occurrence and severity of natural disasters will be affected by climate change as follows:

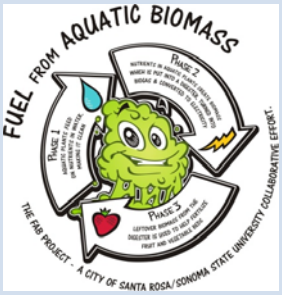
- Water Demand: Hotter days and nights, as well as a longer irrigation season, will increase landscaping and irrigation water needs, and power plants and industrial processes will have increased cooling water needs. Peak water demands may also be impacted.
- Water Supply and Quality: Reduced snowpack, shifting spring runoff to earlier in the year, more extreme weather events (including more intense rainfall over shorter periods making it harder to capture and store these supplies, and hotter, longer drought periods), increased potential for algal blooms, and increased potential for seawater intrusion—each has the potential to impact water supply, supply reliability and water quality.
- Sea Level Rise: It is expected that sea level will continue to rise, resulting in near shore ocean changes such as stronger storm surges, more forceful wave energy, and more extreme tides. This will also affect levee stability in low-lying areas and increase flooding.
- Natural Disaster: Natural disasters are expected to become more frequent as climate change brings increased climate variability, resulting in more extreme droughts and floods. This will challenge water supplier operations in several ways as wildfires are expected to become larger and hotter, droughts will become deeper and longer, and floods can become larger and more frequent.

7.2 Overview of State Regulation Regarding Climate Change

California is addressing the causes and impacts of climate change in a

Fuel from Aquatic Biomass

The City of Santa Rosa has been a leader in renewable energy and energy conservation since the late 1970's. In 2005, the City set a greenhouse gas (GHG) emission reduction target of 20% from year 2000 levels by 2010. The City has been taking steps to reduce GHG since that time. One innovative project is the Fuel from Aquatic Biomass (FAB) project.



The City's Laguna Treatment Plant, in collaboration with Sonoma State University, constructed wastewater channels to demonstrate the water-purifying capacity of aquatic vegetation in wastewater and the ability to produce renewable energy. The aquatic vegetation absorbs pollutants and provides biomass for the production of methane gas. Grants from the Bay Area Air Quality Management District and the California Energy Commission allowed the City to build two digesters that transform the aquatic vegetation into methane-rich biogas. The biogas is used for on-site power at the Laguna Treatment Plant. The FAB project has won numerous awards for its innovation in turning waste into fuel.

number of different forums. Assembly Bill 32 - the Global Warming Solutions Act of 2006 (AB 32) clearly identified climate change as a "serious threat to the economic well-being, public health, natural resources, and the environment of California." The California Air Resources Board completed the Climate Change Scoping Plan (2008) to support implementation of AB 32 and the California Natural Resources Agency issued the Climate Change Adaptation Strategy (2009) to identify how California will adapt to expected climate changes. The 2009 California Climate Adaptation Strategy summarizes the best known science on climate change impacts in seven specific sectors (including public health, biodiversity and habitat, ocean and coastal resources, water management, agriculture, forestry and transportation and energy infrastructure) and provides recommendations on how to manage against those threats. An October 2008 report by DWR called "Managing an Uncertain Future: Climate Change Adaptation Strategies for California's Water" discusses the need for California's water managers to adapt to impacts of climate change, some of which are already affecting our water supplies. The DWR report proposes ten adaptation strategies in four major categories: Investment, Regional, Statewide and Improving Management and Decision-Making Capacity.

7.3 Actions Regarding Climate Change

Responding to climate change generally takes two forms: mitigation and adaptation. Mitigation is taking steps to reduce the contribution to the causes of climate change by reducing greenhouse gas (GHG) emissions. Adaptation is the process of responding to the effects of climate change by modifying systems and behaviors to function in a warmer climate.

In the water sector, climate change mitigation is generally achieved by reducing energy use, becoming more efficient with energy use, and/or substituting fossil fuel-based energy sources for renewable energy sources. Because water requires energy to move, treat, use, and discharge, water conservation results in energy conservation. As each water supplier implements water conservation DMM/BMPs and determines its water conservation targets, it can calculate the conserved energy and the GHGs not-emitted as a side benefit. Additionally, water suppliers may want to reconsider DMM/BMPs that conserve water if they do so at a significant increase in GHG emissions. Also, water suppliers can adapt to climate change through the diversification of its water supply portfolio, increased conjunctive use and introduction or expansion of recycled water use.

7.4 City Actions Regarding Climate Change

The City of Santa Rosa's water conservation program has been very successful in reducing water demands, thus conserving energy as a result of decreased treatment and pumping requirements. The City's compliance with Senate Bill x7-7 and its interim and final per capita water use targets will ensure continued water conservation and energy conservation in the future. Also, the City's increased use of recycled water supplies in the coming years will help to diversify the City's water supplies and enhance the City's water supply reliability to "adapt" to the changing hydrologic conditions associated with climate change.

In addition, the City has established municipal and community-wide greenhouse gas reduction targets to help mitigate climate change. On August 5, 2005, the Santa Rosa City Council passed Resolution No. 26341 which establishes a municipal greenhouse gas reduction target of 20% from 2000 levels by 2010 and a community-wide greenhouse gas reduction target of 25% from 1990 levels by 2015. To meet these targets, the City has developed a comprehensive and integrated program of resource efficiency and greenhouse gas reduction strategies, including retrofitting all City facilities and operations to

improve energy efficiency, installing solar array systems to produce 531,000 kilo-watts of clean energy, and piloting a fuel from aquatic biomass project. The City's Utilities Department, which is the largest producer of green house gas emissions in the City due to energy needed to run the wastewater treatment facilities, is committed to providing a safe, economical, dependable and environmentally-friendly water supply, distribution system, wastewater collection system, and wastewater treatment facilities. To help reduce green house gas emissions and improve sustainability, the Department developed a "Guide to Best Practices for Sustainability" which outlines the Department's goals, current practices and future actions for energy efficiency, renewable energy, resource conservation and other strategies.

The City also implements an Environmentally Preferred Purchasing Policy, waste minimization program, and an education and outreach program regarding ways City residents can reduce their production of greenhouse gas emissions. In 2010, the City implemented the Clean Energy Advocate pilot program that provides education and assistance to City residents and businesses regarding renewable energy, energy efficiency and water efficiency and finalized an agreement with the County of Sonoma to participate in Property Assessed Clean Energy Programs.

The Agency is also incorporating climate change into their water supply planning activities. As described in the Agency's 2010 Urban Water Management Plan, the Agency has developed water supply strategies to meet future water supply needs. One of the water supply strategies is to evaluate potential climate change impacts on water supply and flood protection. The strategy includes immediate, near term and long term actions with regard to analyzing the impact of climate change on the Agency's water supply. A detailed description of the Agency's water supply strategies and actions with regard to climate change can be found in the Agency's 2010 Urban Water Management Plan.

8 Completed Urban Water Management Plan Checklist

This section provides the completed Urban Water Management Plan checklist organized according to subject matter. Table 8-1 is the completed checklist.

Table 8-1 (DWR Table I-2)

Urban Water Management Plan checklist, organized by subject

No.	UWMP requirement [1]	Calif. Water Code reference	Additional clarification	UWMP location
PLAN PREPARATION				
4	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	10620(d)(2)		Section 1.4
6	Notify, at least 60 days prior to the public hearing on the plan required by Section 10642, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Any city or county receiving the notice may be consulted and provide comments.	10621(b)		Section 1.4 (copies of notices in Appendix A)
7	Provide supporting documentation that the UWMP or any amendments to, or changes in, have been adopted as described in Section 10640 et seq.	10621(c)		Section 1.5 (copy of resolution in Appendix A)
54	Provide supporting documentation that the urban water management plan has been or will be provided to any city or county within which it provides water, no later than 60 days after the submission of this urban water management plan.	10635(b)		Section 1.6
55	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan.	10642		Section 1.5

56	Provide supporting documentation that the urban water supplier made the plan available for public inspection and held a public hearing about the plan. For public agencies, the hearing notice is to be provided pursuant to Section 6066 of the Government Code. The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water. Privately-owned water suppliers shall provide an equivalent notice within its service area.	10642		Section 1.5 (notice of public hearing in Appendix A)
57	Provide supporting documentation that the plan has been adopted as prepared or modified.	10642		Section 1.5 (copy of resolution in Appendix A)
58	Provide supporting documentation as to how the water supplier plans to implement its plan.	10643		Section 1.6
59	Provide supporting documentation that, in addition to submittal to DWR, the urban water supplier has submitted this UWMP to the California State Library and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. This also includes amendments or changes.	10644(a)		Section 1.6
60	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the urban water supplier has or will make the plan available for public review during normal business hours	10645		Section 1.6
SYSTEM DESCRIPTION				
8	Describe the water supplier service area.	10631(a)		Section 2.1
9	Describe the climate and other demographic factors of the service area of the supplier	10631(a)		Section 2.2
10	Indicate the current population of the service area	10631(a)	Provide the most recent population data possible. Use the method described in "Baseline Daily Per Capita Water Use." See Section M.	Section 2.3 (Table 2-2)
11	Provide population projections for 2015, 2020, 2025, and 2030, based on data from State, regional, or local service area population projections.	10631(a)	2035 and 2040 can also be provided to support consistency with Water Supply Assessments and Written Verification of Water Supply documents.	Section 2.3 (Table 2-2)

12	Describe other demographic factors affecting the supplier's water management planning.	10631(a)		Sections 2.4 and 2.5
SYSTEM DEMANDS				
1	Provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	10608.20(e)		Section 3.8
2	*Wholesalers:* Include an assessment of present and proposed future measures, programs, and policies to help achieve the water use reductions. *Retailers:* Conduct at least one public hearing that includes general discussion of the urban retail water supplier's implementation plan for complying with the Water Conservation Bill of 2009.	10608.36 10608.26(a)	Retailers and wholesalers have slightly different requirements—City held public hearing on April 19, 2011	Section 3.9 (notice of public hearing in Appendix A)
3	Report progress in meeting urban water use targets using the standardized form.	10608.40		Section 3.10
25	Quantify past, current, and projected water use, identifying the uses among water use sectors, for the following: (A) single-family residential, (B) multifamily, (C) commercial, (D) industrial, (E) institutional and governmental, (F) landscape, (G) sales to other agencies, (H) saline water intrusion barriers, groundwater recharge, conjunctive use, and (I) agriculture.	10631(e)(1)	Consider 'past' to be 2005, present to be 2010, and projected to be 2015, 2020, 2025, and 2030. Provide numbers for each category for each of these years.	Section 3.1 (Tables 3-1 and 3-2) and Section 3.2 (Tables 3-3, 3-4 and 3-5)
33	Provide documentation that either the retail agency provided the wholesale agency with water use projections for at least 20 years, if the UWMP agency is a retail agency, OR, if a wholesale agency, it provided its urban retail customers with future planned and existing water source available to it from the wholesale agency during the required water-year types	10631(k)	Average year, single dry year, multiple dry years for 2015, 2020, 2025, and 2030.	Section 3.7 (Table 3-10)
34	Include projected water use for single-family and multifamily residential housing needed for lower income households, as identified in the housing element of any city, county, or city and county in the service area of the supplier.	10631.1(a)		Section 3.3 (Table 3-6)
SYSTEM SUPPLIES				
13	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, and 2030.	10631(b)	The 'existing' water sources should be for the same year as the "current population" in line 10. 2035 and 2040 can also be provided.	Section 4.1 (Table 4-1)

14	Indicate whether groundwater is an existing or planned source of water available to the supplier. If yes, then complete 15 through 21 of the UWMP Checklist. If no, then indicate "not applicable" in lines 15 through 21 under the UWMP location column.	10631(b)	Source classifications are: surface water, groundwater, recycled water, storm water, desalinated sea water, desalinated brackish groundwater, and other.	Section 4.1
15	Indicate whether a groundwater management plan been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	10631(b)(1)		Section 4.3.5
16	Describe the groundwater basin.	10631(b)(2)		Section 4.3.1
17	Indicate whether the groundwater basin is adjudicated? Include a copy of the court order or decree.	10631(b)(2)		Section 4.3.1
18	Describe the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. If the basin is not adjudicated, indicate "not applicable" in the UWMP location column.	10631(b)(2)		Not Applicable
19	For groundwater basins that are not adjudicated, provide information as to whether DWR has identified the basin or basins as over-drafted or has projected that the basin will become over-drafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition. If the basin is adjudicated, indicate "not applicable" in the UWMP location column.	10631(b)(2)		Section 4.3.1
20	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	10631(b)(3)		Section 4.3.6 (Table 4-6)
21	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	10631(b)(4)	Provide projections for 2015, 2020, 2025, and 2030.	Section 4.3.7 (Table 4-7)
24	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	10631(d)		Section 4.6 (Table 4-8)
30	Include a detailed description of all water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and multiple-dry years, excluding demand management programs addressed in (f)(1). Include specific projects, describe water supply impacts, and provide a timeline for each project.	10631(h)		Section 4.13 (Table 4-16)
31	Describe desalinated water project opportunities for long-term supply, including, but not limited to, ocean water, brackish water, and groundwater.	10631(i)		Section 4.5

44	Provide information on recycled water and its potential for use as a water source in the service area of the urban water supplier. Coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	10633		Section 4.7
45	Describe the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.	10633(a)		Section 4.8
46	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	10633(b)		Section 4.8 (Table 4-10)
47	Describe the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.	10633(c)		Section 4.9
48	Describe and quantify the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.	10633(d)		Sections 4.10 and 4.11
49	The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	10633(e)		Section 4.10 (Table 4-12) (Subregional System) Section 4.11 (Table 4-13) (City)
50	Describe the actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.	10633(f)		Section 4.12 (Table 4-15)
51	Provide a plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.	10633(g)		Section 4.12 (Table 4-15)
WATER SHORTAGE RELIABILITY AND WATER SHORTAGE CONTINGENCY PLANNING [2]				
5	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	10620(f)		Section 1.3
22	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage and provide data for (A) an average water year, (B) a single dry water year, and (C) multiple dry water years.	10631(c)(1)		Section 5.1

23	For any water source that may not be available at a consistent level of use - given specific legal, environmental, water quality, or climatic factors - describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.	10631(c)(2)		Section 5.1 (Table 5-4)
35	Provide an urban water shortage contingency analysis that specifies stages of action, including up to a 50-percent water supply reduction, and an outline of specific water supply conditions at each stage	10632(a)		Section 5.3 (Table 5-8) Included in Water Shortage Contingency Plan (see Appendix G)
36	Provide an estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.	10632(b)		Section 5.1 (Table 5-2) Included in Water Shortage Contingency Plan (see Appendix G)
37	Identify actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.	10632(c)		Section 5.3 Included in Water Shortage Contingency Plan (see Appendix G)
38	Identify additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.	10632(d)		Section 5.3.6 (Table 5-10) Included in Water Shortage Contingency Plan (see Appendix G)
39	Specify consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.	10632(e)		Section 5.3.5 (Table 5-9) Included in Water Shortage Contingency Plan (see Appendix G)

40	Indicated penalties or charges for excessive use, where applicable.	10632(f)		Section 5.3.7 (Table 5-11) Included in Water Shortage Contingency Plan (see Appendix G)
41	Provide an analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.	10632(g)		Included in Water Shortage Contingency Plan (see Appendix G)
42	Provide a draft water shortage contingency resolution or ordinance.	10632(h)		Included in Water Shortage Contingency Plan (see Appendix G)
43	Indicate a mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.	10632(i)		Included in Water Shortage Contingency Plan (see Appendix G)
52	Provide information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments, and the manner in which water quality affects water management strategies and supply reliability	10634	For years 2010, 2015, 2020, 2025, and 2030	Section 5.4
53	Assess the water supply reliability during normal, dry, and multiple dry water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. Base the assessment on the information compiled under Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.	10635(a)		Section 5.2 (Tables 5-5, 5-6 and 5-7)
DEMAND MANAGEMENT MEASURES				
26	Describe how each water demand management measures is being implemented or scheduled for implementation. Use the list provided.	10631(f)(1)	Discuss each DMM, even if it is not currently or planned for implementation. Provide any appropriate schedules.	Section 6
27	Describe the methods the supplier uses to evaluate the effectiveness of DMMs implemented or described in the UWMP.	10631(f)(3)		Section 6

28	Provide an estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the ability to further reduce demand.	10631(f)(4)		Section 6
29	Evaluate each water demand management measure that is not currently being implemented or scheduled for implementation. The evaluation should include economic and non-economic factors, cost-benefit analysis, available funding, and the water suppliers' legal authority to implement the work.	10631(g)	See 10631(g) for additional wording.	Section 6; City of Santa Rosa is implementing all of the DMMs
32	Include the annual reports submitted to meet the Section 6.2 requirements, if a member of the CUWCC and signer of the December 10, 2008 MOU.	10631(j)	Signers of the MOU that submit the annual reports are deemed compliant with Items 28 and 29.	Included in Appendix H

[1] The UWMP Requirement descriptions are general summaries of what is provided in the legislation. Urban water suppliers should review the exact legislative wording prior to submitting its UWMP.

[2] The Subject classification is provided for clarification only. It is aligned with the organization presented in Part I of this guidebook. A water supplier is free to address the UWMP Requirement anywhere with its UWMP, but is urged to provide clarification to DWR to facilitate review.

9 References

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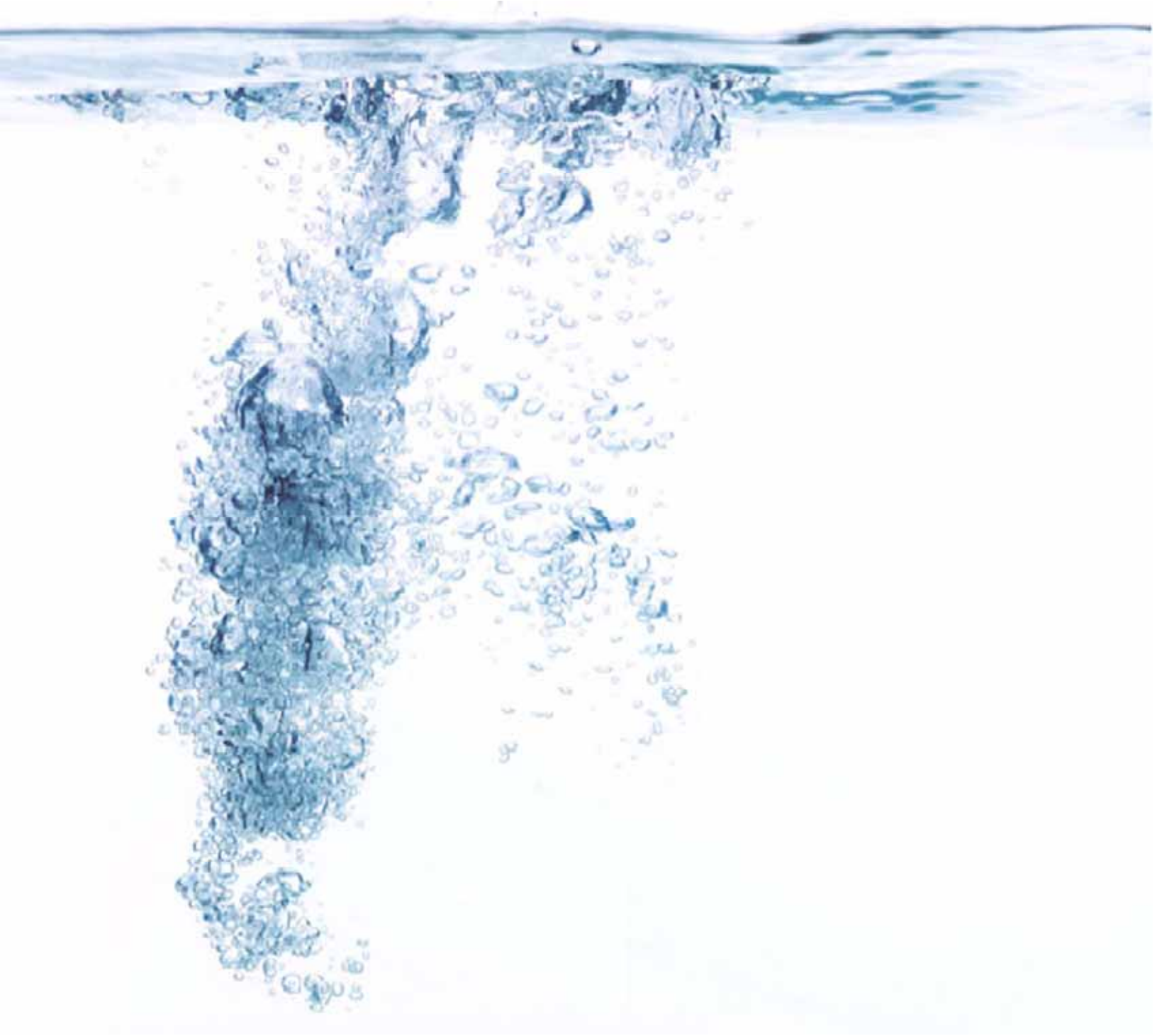
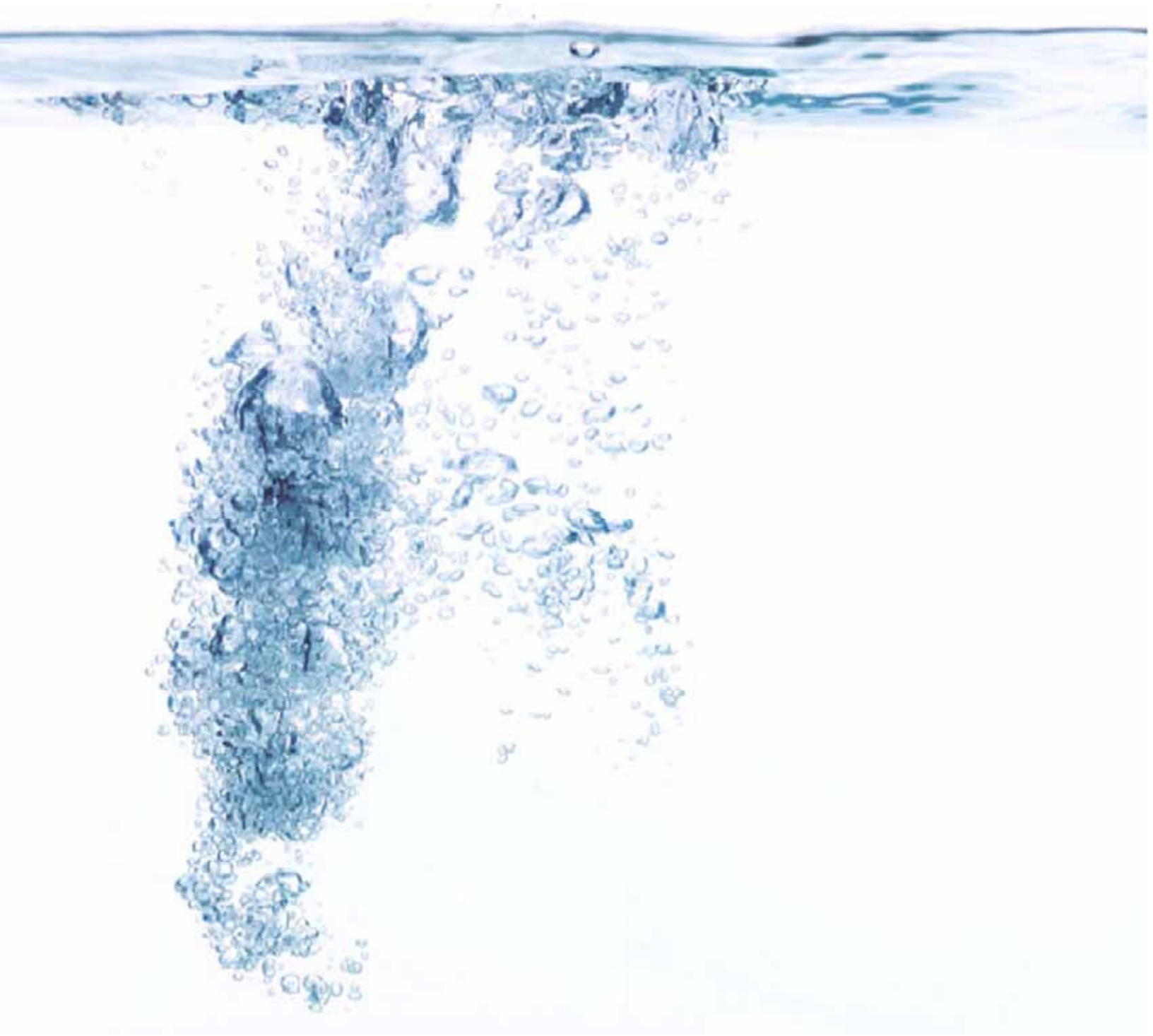
APPENDICES



APPENDIX A

Urban Water Management Plan Public Participation, Public Hearing and Adoption Resolution



I hereby certify that the foregoing is a true and correct copy of an resolution duly and regularly adopted by the Council of the City of Santa Rosa at a regular meeting thereof held 6/14/2011

SUE STONEMAN, City Clerk
City of Santa Rosa,
Stephanie Williams Dated 6/16/2011
~~City Clerk~~ / Deputy City Clerk

RESOLUTION NO. 27907

RESOLUTION OF THE COUNCIL OF THE CITY OF SANTA ROSA ADOPTING THE 2010 URBAN WATER MANAGEMENT PLAN AND THE 2010 URBAN WATER SHORTAGE CONTINGENCY PLAN

WHEREAS, the State of California Urban Water Management Planning Act (UWMP Act) requires all urban water purveyors serving over 3,000 connections or over 3,000 acre-feet of water annually to prepare an Urban Water Management Plan (Plan) every five years; and

WHEREAS, the City of Santa Rosa is an urban supplier of water to approximately 52,000 connections supplying approximately 20,000 acre-feet of potable water annually and is therefore required to comply with the UWMP Act; and

WHEREAS, the purpose of the UWMP Act is to assure sound planning for and efficient management of water resources in the urban sector; and

WHEREAS, the City's last Plan was adopted in June 2006; and

WHEREAS, in 2009, the UWMP Act was amended by Senate Bill x7-7 the Water Conservation Act (SBx7-7), setting a goal of achieving a 20% reduction in statewide urban per capita water use by the year 2020; and

WHEREAS, SB x7-7 requires each urban water retailer to determine their base gross gallons per capita per day (gpcd), interim 2015 and final 2020 community water use targets, minimum water use reduction requirement, and 2015 and 2020 compliance year gross gpcd and include this information in the 2010 Plan; and

WHEREAS, at its meeting on April 19, 2011, the City Council conducted a public hearing and adopted 127 gpcd as the City's Community Water Use Target for 2020; and

WHEREAS, , the requirements for SBx7-7 and the City's adopted Community Water Use Target are included in the City's 2010 Plan in Section 3; and

WHEREAS, the UWMP Act also requires all urban water purveyors serving over 3,000 connections or over 3,000 acre-feet of water annually to prepare an Urban Water Shortage Contingency Plan (Water Shortage Plan); and

WHEREAS, the City of Santa Rosa has the authority and responsibility to adopt water demand reduction measures within its service area; and

WHEREAS, the City of Santa Rosa adopted its first Water Shortage Plan in 1992 and last adopted an update in June 2006; and

WHEREAS, the Water Shortage Plan is included in the City's 2010 Plan as Appendix G; and

WHEREAS, the City has prepared the City of Santa Rosa 2010 Plan and Water Shortage Plan per the requirements of the UWMP Act; and

WHEREAS, the Water Conservation Subcommittee of the Board of Public Utilities met numerous times from November 2009 through May 2011 to review the data, inputs, and draft sections of the City's 2010 Plan and concurs that the City's 2010 Plan meets the requirements of the UWMP Act and recommends adoption of the 2010 Plan; and

WHEREAS, the Board of Public Utilities, at its meeting on June 2, 2011, reviewed the 2010 Plan and Water Shortage Plan and those changes called out in the Errata/Additional Information Sheet dated May 31, 2011 (Sheet No. 1), and, by resolution, recommended that the Council adopt the City's 2010 Urban Water Management Plan and the 2010 Urban Water Shortage Contingency Plan including the changes in Sheet No.1; and

WHEREAS, in response to public comments received at the Board of Public Utilities meeting on June 2, 2011, the Board asked staff to look at adding certain additional information to the 2010 Plan; and

WHEREAS, staff prepared Additional Information Sheet No. 2 dated June 7, 2011 (Sheet No. 2), which contains additional information.

NOW, THEREFORE, BE IT RESOLVED that the Council of the City of Santa Rosa adopts the City's 2010 Urban Water Management Plan and the 2010 Urban Water Shortage Contingency Plan, including those changes called out in Sheet No. 1 and Sheet No. 2.

IN COUNCIL DULY PASSED this 14th day of June, 2011.

AYES: (7) Mayor Olivares, Vice Mayor Ours, Council Members Bartley, Gorin, Sawyer Vas Dupre, Wysocky

NOES: (0)

ABSENT: (0)

ABSTAIN: (0)

ATTEST: _____
Interim City Clerk

APPROVED: _____
Mayor

APPROVED AS TO FORM:

_____
City Attorney

PROOF OF PUBLICATION

(2015.5 C.C.P.)

STATE OF CALIFORNIA

County of Sonoma

I am a citizen of the United States and a resident of the county aforesaid: I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of the printer of The Press Democrat, a newspaper of general circulation, printed and published DAILY IN THE City of Santa Rosa, County of Sonoma; and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Sonoma, State of California, under the date of November 29, 1951, Case number 34831, that the notice, of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates to wit:

The Press Democrat - Legal Notices
5/29 1x, s6/6 1x - 06/06/2011

I certify (or declare) under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct.

Dated at Santa Rosa, California, on

06/06/2011

SIGNATURE

This space for County Clerk's Filing Stamp

Proof of Publication of

CITY OF SANTA ROSA
NOTICE OF PUBLIC HEARING

ADOPTION OF THE CITY OF SANTA ROSA'S 2010 URBAN WATER MANAGEMENT PLAN AND 2010 URBAN WATER SHORTAGE CONTINGENCY PLAN

Notice is hereby given that a public hearing will be conducted by the City Council on Tuesday June 14, 2011 at or after 5:00 p.m., in the City Council Chamber, City Hall, 100 Santa Rosa Avenue, Santa Rosa. The purpose of the public hearing will be to receive public comment and recommendations prior to the City Council adopting the City of Santa Rosa's 2010 Urban Water Management Plan (UWMP) and 2010 Urban Water Shortage Contingency Plan (Shortage Plan), which is included in the 2010 UWMP as an appendix.

The 2010 UWMP and 2010 Shortage Plan will also be reviewed by the Board of Public Utilities on Thursday, June 2, 2011 at or after 1:30 p.m. in the City Council Chamber, City Hall, 100 Santa Rosa Avenue, Santa Rosa.

Copies of the City of Santa Rosa's 2010 UWMP and 2010 Shortage Plan are available for public inspection at: City Hall, City Manager's Office, 100 Santa Rosa Avenue, Room 10, Santa Rosa and Utilities Department, City of Santa Rosa, 69 Stony Circle, Santa Rosa during regular business hours. The 2010 UWMP and 2010 Shortage Plan are also available for review at the City of Santa Rosa's website: www.srcity.org/2010UWMP.

If you cannot attend, you are encouraged to submit written comments and recommendations prior to the public hearing. Comments and questions may be directed to Jennifer Burke, Senior Water Resources Planner, Utilities Department, City of Santa Rosa, 100 Santa Rosa Avenue, Room 10, Santa Rosa, CA 95404, telephone 707-543-3938.

Sara Anna, Interim City Clerk, City of Santa Rosa

For accessible meeting information please call (707) 543-3016
TDD (707) 543-3031

2536359 - Pub. May 29; Jun. 6, 2011
2ti.

RESOLUTION NO. 1001

RESOLUTION OF THE BOARD OF PUBLIC UTILITIES RECOMMENDING THAT THE CITY COUNCIL ADOPT THE 2010 URBAN WATER MANAGEMENT PLAN AND THE 2010 URBAN WATER SHORTAGE CONTINGENCY PLAN

WHEREAS, the State of California Urban Water Management Planning Act (UWMP Act) requires all urban water purveyors serving over 3,000 connections or over 3,000 acre-feet of water annually to prepare an Urban Water Management Plan (Plan) every five years; and

WHEREAS, the City of Santa Rosa is an urban supplier of water to approximately 52,000 connections supplying approximately 20,000 acre-feet of potable water annually and is therefore required to comply with the UWMP Act; and

WHEREAS, the purpose of the UWMP Act is to assure sound planning for and efficient management of water resources in the urban sector; and

WHEREAS, the City's last Plan was adopted in June 2006; and

WHEREAS, in 2009, the UWMP Act was amended by Senate Bill x7-7 the Water Conservation Act (SBx7-7), setting a goal of achieving a 20% reduction in statewide urban per capita water use by the year 2020; and

WHEREAS, SB x7-7 requires each urban water retailer to determine their base gross gallons per capita per day (gpcd), interim 2015 and final 2020 community water use targets, minimum water use reduction requirement, and 2015 and 2020 compliance year gross gpcd and include this information in the 2010 Plan; and

WHEREAS, at its meeting on April 19, 2011, the City Council conducted a public hearing and adopted 127 gpcd as the City's Community Water Use Target for 2020; and

WHEREAS, the requirements for SBx7-7 and the City's adopted Community Water Use Target are included in the City's 2010 Plan in Section 3; and

WHEREAS, the UWMP Act also requires all urban water purveyors serving over 3,000 connections or over 3,000 acre-feet of water annually to prepare an Urban Water Shortage Contingency Plan (Water Shortage Plan); and

WHEREAS, the City of Santa Rosa has the authority and responsibility to adopt water demand reduction measures within its service area; and

WHEREAS, the City of Santa Rosa adopted its first Water Shortage Plan in 1992 and last adopted an update in June 2006; and

WHEREAS, the Water Shortage Plan is included in the City's 2010 Plan as Appendix G; and

WHEREAS, the City has prepared the City of Santa Rosa 2010 Plan and Water Shortage Plan per the requirements of the UWMP Act; and

WHEREAS, the Water Conservation Subcommittee of the Board of Public Utilities met numerous times from November 2009 through May 2011 to review the data, inputs, and draft sections of the City's 2010 Plan and concurs that the City's 2010 Plan meets the requirements of the UWMP Act and recommends adoption of the 2010 Plan.

NOW, THEREFORE, BE IT RESOLVED that the Board of Public Utilities recommends that the City Council adopt the City's 2010 Urban Water Management Plan and the 2010 Urban Water Shortage Contingency Plan, including those changes called out in the Errata/Additional Information Sheet, dated May 31, 2011, for the Draft 2010 Urban Water Management Plan.

DULY AND REGULARLY ADOPTED by the City of Santa Rosa Board of Public Utilities this 2nd day of June, 2011.

AYES: **(7) DOWD, GALE, CARNEY, GALVIN, LOWRY, MEECHAN, AND SWINTH**

NOES: **(0)**

ABSENT: **(0)**

ABSTAIN: **(0)**

APPROVED: _____
Chairman Richard Dowd

ATTEST: Gina Perez
Gina Perez
Recording Secretary

APPROVED AS TO FORM:

Gina Perez on behalf of Suzanne Rawlings
City Attorney

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Summary of Stakeholder Participation and Outreach for the 2010 Urban Water Management Plan		
Year	**Month**	**Description**
2009	November	Water Conservation Subcommittee meeting of the Board of Public Utilities – update on document development and receive input from Subcommittee and public.
2010	January	Water Conservation Subcommittee meeting of the Board of Public Utilities – update on document development and receive input from Subcommittee and public.
2010	January	Board of Public Utilities meeting – update on document development and receive input from Board and public.
2010	February	Water Conservation Subcommittee meeting of the Board of Public Utilities – update on document development and receive input from Subcommittee and public.
2010	February	Board of Public Utilities meeting – update on document development and receive input from Board and public.
2010	April	Water Conservation Subcommittee meeting of the Board of Public Utilities – update on document development and receive input from Subcommittee and public.
2010	June	Board of Public Utilities meeting – update on document development and receive input from Board and public.
2010	August	Water Conservation Subcommittee meeting of the Board of Public Utilities – update on document development and receive input from Subcommittee and public.
2010	October	Water Conservation Subcommittee meeting of the Board of Public Utilities – update on document development and receive input from Subcommittee and public.
2010	November	Board of Public Utilities meeting – update on document development and receive input from Board and public.
2010	November	City Council meeting – update on document development and receive input from Council and public.
2011	January	Board of Public Utilities meeting – update on document development and receive input from Board and public.
2011	February	60 day notice of Preparation of 2010 Plan sent to County of Sonoma and surrounding water purveyors
2011	March	Launch of dedicated webpage for 2010 Plan development
2011	March	Water Conservation Subcommittee meeting of the Board of Public Utilities – update on document development, recommendation on SBx7-7 Community Water Use Target, and receive input from Subcommittee and public.
2011	March	Board of Public Utilities meeting – update on document development and receive input from Board and public.

Summary of Stakeholder Participation and Outreach for the 2010 Urban Water Management Plan (con't)		
Year	**Month**	**Description**
2011	April	Bill insert sent to all customers informing that the 2010 Plan was being prepared and encouraging public participation
2011	April	Public Notice – Adoption of SBx7-7 Community Water Use Targets
2011	April	Board of Public Utilities meeting – Review and recommendation of adoption of SB x7-7 Community Water Use targets and Regional Alliance formation
2011	April	City Council Public Hearing – Adoption of SBx7-7 Community Water Use Targets and Regional Alliance formation
2011	April	Water Conservation Subcommittee meeting of the Board of Public Utilities – review of draft sections one, two and three of the 2010 Plan and receive input and comments from Subcommittee and public on draft sections.
2011	April	Water Conservation Subcommittee meeting of the Board of Public Utilities – review of draft section six of the 2010 Plan and receive input and comments from Subcommittee and public on draft section.
2011	May	Water Conservation Subcommittee meeting of the Board of Public Utilities – review of draft sections four, five, and seven of the 2010 Plan and the 2010 Water Shortage Plan and receive input and comments from Subcommittee and public on draft sections.
2011	May	Board of Public Utilities meeting – update on document development and receive input from Board and public.
2011	May	Draft 2010 Plan and Draft 2010 Water Shortage Plan available for public review
2011	June	Public Notice – Adoption of 2010 Plan and 2010 Water Shortage Plan
2011	June	Board of Public Utilities meeting – Review and recommendation of adoption of 2010 Plan and 2010 Water Shortage Plan
2011	June	City Council Public Hearing – Adoption of 2010 Plan and 2010 Water Shortage Plan

RESOLUTION NO. 27868

RESOLUTION OF THE COUNCIL OF THE CITY OF SANTA ROSA: (1) ADOPTING 127 GALLONS PER CAPITA PER DAY (GPCD) AS THE CITY'S COMMUNITY WATER USE TARGET FOR 2020; (2) AUTHORIZING PARTICIPATION IN A REGIONAL ALLIANCE FOR COMPLYING WITH THE 2020 WATER USE TARGET; AND (3) AUTHORIZING THE UTILITIES DEPARTMENT DIRECTOR TO SIGN AGREEMENTS REGARDING FORMATION AND PARTICIPATION IN THE REGIONAL ALLIANCE

WHEREAS, the State of California Urban Water Management Planning Act (UWMP Act) requires all urban water purveyors serving over 3,000 connections or over 3,000 acre-feet of water annually to prepare an Urban Water Management Plan every five years; and

WHEREAS, the City of Santa Rosa is an urban supplier of water to approximately 52,000 connections supplying approximately 20,000 acre-feet of potable water annually and is therefore required to comply with the UWMP Act; and

WHEREAS, Senate Bill x7-7 the Water Conservation Act (SB x7-7), was signed into law in 2009 and set a goal of achieving a 20% reduction in statewide urban per capita water use by the year 2020; and

WHEREAS, SB x7-7 requires each urban water retailer to determine their base gross gallons per capita per day (gpcd), interim 2015 and final 2020 community water use targets, minimum water use reduction requirement, and 2015 and 2020 compliance year gross gpcd and include this information in the 2010 UWMP; and

WHEREAS, Utilities Department staff has calculated the base gross gpcd, interim 2015 and final 2020 community water use targets, minimum water use reduction requirement, and 2015 and 2020 compliance year gross gpcd and recommends setting the 2020 community water use target at 127 gpcd, using Method 3 in SB x7-7 and incorporating the minimum community water use reduction requirement; and

WHEREAS, SB x7-7 provides that urban water retailers may plan, comply and report on a regional basis, individual basis or both; and

WHEREAS, the water contractors of the Sonoma County Water Agency, which consist of the cities of Santa Rosa, Rohnert Park, Sonoma, Cotati, Petaluma, the Town of Windsor and North Marin and Valley of the Moon Water Districts (Water Contractors), and the Marin Municipal Water District (MMWD) are eligible to form a Regional Alliance because the Water Contractors and MMWD are recipients of water from a common wholesale water supplier; and

WHEREAS, participating in a Regional Alliance provides the City with another option for complying with SB x7-7 and does not affect the City should the Regional Alliance fail to meet the regional target; and

WHEREAS, the Utilities Department staff has analyzed participating in a Regional Alliance consisting of the Water Contractors and MMWD to comply with SB X7-7 and recommends participating; and

WHEREAS, the Board of Public Utilities, at its meeting on April 7, 2011, reviewed the City's 2020 community water use target and considered participation in the Regional Alliance and recommended that the Council set the City's 2020 community water user target at 127 gpcd, authorized participation in a Regional Alliance for complying with the 2020 water use target, and authorized the Utilities Department Director to sign agreements regarding formation and participation in the Regional Alliance, including requiring the participants in the Regional Alliance to participate in regional water supply planning, requiring all participants to annually report their annual gpcd and their progress in obtaining their 2020 gpcd water use target, and requiring participants to report annually on the programs they are implementing to reach their 2020 gpcd water use targets.

NOW, THEREFORE, BE IT RESOLVED that the Council of the City of Santa Rosa: (1) adopts 127 gallons per capita per day (gpcd) as the City's Community Water Use Target for 2020; (2) authorizes participation in a Regional Alliance for complying with the 2020 Water Use Target; and (3) authorizes the Utilities Department Director to sign agreements regarding formation and participation in the Regional Alliance, including requiring the participants in the Regional Alliance to participate in regional water supply planning, requiring all participants to annually report their annual gpcd and their progress in obtaining their 2020 gpcd water use target, and requiring participants to report annually on the programs they are implementing to reach their 2020 gpcd water use targets.

IN COUNCIL DULY PASSED this 19th day of April, 2011.

AYES: (6) Mayor Olivares, Vice Mayor Ours, Council Members Bartley, Gorin, Vas Dupre, Wysocky

NOES: (0)

ABSENT: (1) Council Member Sawyer

ABSTAIN: (0)

ATTEST: Sara Anna, Interim City Clerk APPROVED: Ernesto Olivares, Mayor

APPROVED AS TO FORM:
Caroline Fowler, City Attorney

PROOF OF PUBLICATION

(2015.5 C.C.P.)

STATE OF CALIFORNIA

County of Sonoma

I am a citizen of the United States and a resident of the county aforesaid: I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of the printer of The Press Democrat, a newspaper of general circulation, printed and published DAILY IN THE City of Santa Rosa, County of Sonoma; and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Sonoma, State of California, under the date of November 29, 1951, Case number 34831, that the notice, of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates to wit:

The Press Democrat - Legal Notices
4/4 1x, s4/14 1x - 04/14/2011

I certify (or declare) under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct.

Dated at Santa Rosa, California, on

04/14/2011

Steve Drocuke

SIGNATURE

This space for County Clerk's Filing Stamp

Proof of Publication of

CITY OF SANTA ROSA
NOTICE OF PUBLIC HEARING

ADOPTION OF THE CITY OF SANTA ROSA'S SB X7-7 COMMUNITY WATER USE TARGET FOR 2020 FOR INCLUSION IN THE CITY OF SANTA ROSA'S 2010 URBAN WATER MANAGEMENT PLAN

Notice is hereby given that a public hearing will be conducted by the City Council on Tuesday April 19, 2011 at or after 5:00 p.m., in the City Council Chamber, City Hall, 100 Santa Rosa Avenue, Santa Rosa. The purpose of the public hearing will be to receive public comment and recommendations prior to the City Council adopting the Community Water Use Target for 2020, as required by Senate Bill x7-7 the Water Conservation Act of 2009, for inclusion in the City of Santa Rosa's 2010 Urban Water Management Plan.

The Community Water Use Target for 2020 will also be reviewed by the Board of Public Utilities on Thursday, April 7, 2011 at or after 1:30 p.m. in the City Council Chamber, City Hall, 100 Santa Rosa Avenue, Santa Rosa.

Copies of the City of Santa Rosa's Community Water Use Target for 2020 and the City of Santa Rosa's Implementation Plan for complying with the Community Water Use Target for 2020 are available for public inspection at: City Hall, City Manager's Office, 100 Santa Rosa Avenue, Room 10, Santa Rosa and Utilities Department, City of Santa Rosa, 69 Stony Circle, Santa Rosa during regular business hours. The Community Water Use Target for 2020 and the Implementation Plan are also available for review at the City of Santa Rosa's website: www.srcity.org/2010UWMP.

If you cannot attend, you are encouraged to submit written comments and recommendations prior to the public hearing. Comments and questions may be directed to Jennifer Burke, Senior Water Resources Planner, Utilities Department, City of Santa Rosa, 100 Santa Rosa Avenue, Room 10, Santa Rosa, CA 95404, telephone 707-543-3938.

Gayle Petersen, Interim City Clerk, City of Santa Rosa
For accessible meeting information please call (707) 543-3016
TDD (707) 543-3031

2527967 - Pub. Apr. 4, 14, 2011 2ti.

City of
Santa Rosa

February 28, 2011

Pete Parkinson
Sonoma County Permit and Resource Management Department
2550 Ventura Avenue
Santa Rosa, CA 95403

RE: Notice of Revision and Review of City of Santa Rosa 2010 Urban Water Management Plan

Each urban water purveyor serving more than 3,000 connections or 3,000 acre-feet annually is required by the State of California Urban Water Management Planning Act to prepare and submit an Urban Water Management Plan (UWMP) every five years. The City of Santa Rosa is currently updating our 2010 UWMP, which is due to the Department of Water Resources by July 1, 2011.

Per Water Code Section 10621(b), the City of Santa Rosa is providing notice that we are currently revising and reviewing our 2010 UWMP. The County is invited to participate and provide input in the development of our 2010 UWMP. The 2010 UWMP will provide an update and analysis regarding the City's projected water demand, water supply, and water supply reliability for the next 25 years, through 2035.

If the County would like to participate or provide input on the preparation of the City's 2010 UWMP, please feel free to contact me at (707) 543-3938 or via email at jburke@srcity.org. In addition, you can find additional information on the development of our 2010 UWMP by visiting our website: www.srcity.org/2010UWMP.

Sincerely,

Jennifer Burke

Jennifer Burke
Senior Water Resources Planner

cc: Sonoma County Water Agency, Attn: Jay Jasperse
City of Cotati, Attn: Damien O'Bid
City of Petaluma, Attn: Pamela Tuft
City of Rohnert Park, Attn: Darrin Jenkins
City of Sonoma, Attn: Milenka Bates
Marin Municipal Water District, Attn: Mike Ban
North Marin Water District, Attn: Chris DeGabriele
Town of Windsor, Attn: Richard Burtt
Valley of the Moon Water District, Attn: Krishna Kumar
City of Sebastopol (Subregional Water Reuse System Partner), Attn: Sue Kelly

69 Stony Circle • Santa Rosa, CA 95401
Phone: (707) 543-4200 • Fax: (707) 543-3936
www.srcity.org/ut

City of Santa Rosa Utilities Department

Connections

Recycled Water Pilot Project Update — Construction Nearly Complete

The first phase of construction on a pilot project that expanded the use of recycled water for irrigation purposes at parks, commercial landscaping, and common area residential landscaping has been completed and the second phase is almost finished. In mid-2009, the City embarked on an expansion of recycled water service to properties with large landscapes along Stony Point Road from approximately W. College Avenue to Occidental Road. Construction along Stony Point Road from approximately W. College Avenue to Glenbrook Drive has been completed.

Construction along Stony Point Road from Glenbrook Drive to Occidental Road and along Occidental Road to Brittain Lane is almost finished, with only final paving and customer connections to be completed once weather conditions allow.

Customers along the first phase are using approximately 30 million gallons per year of recycled water for irrigation purposes. Once completed, customers along the second phase will use an additional approximately 15 million gallons per year for irrigation. By switching the existing customers from potable to recycled water for irrigation purposes, approximately 45 million gallons per year of potable water will be saved and available for other uses, such as human consumption.

Not only is water reuse beneficial because it reduces demand on other water resources, such as groundwater and the Russian River and its tributaries, it also helps reduce the amount of water that the Santa Rosa Subregional Water Reuse System needs to discharge to the Laguna. On average, the Subregional System recycles up to 98 percent of the water it produces. In addition to landscape irrigation, the recycled water is delivered to the Geysers steamfields where it is used to produce clean energy. Surrounding agricultural lands also use recycled water to irrigate crops.

continued on page 4

OUR FUTURE IN EVERY DROP . . .

Water Smart Expo

It's that time of year again!

People enjoyed the activities at the Water Smart Expo public event.

The City of Santa Rosa's Water-Use Efficiency team will be hosting their annual Water Smart Expo, on Wednesday, May 25th, from 5-8:30 PM at the Downtown Market at the intersection of Fourth and D Streets in downtown Santa Rosa.

This is a great way to kick off the 2011 Downtown Market and a grand ending for May, which is Water Awareness Month. The Expo provides an opportunity for you to talk to employees from both City and County agencies, meet with representatives from local business, and enter into a raffle to win great prizes.

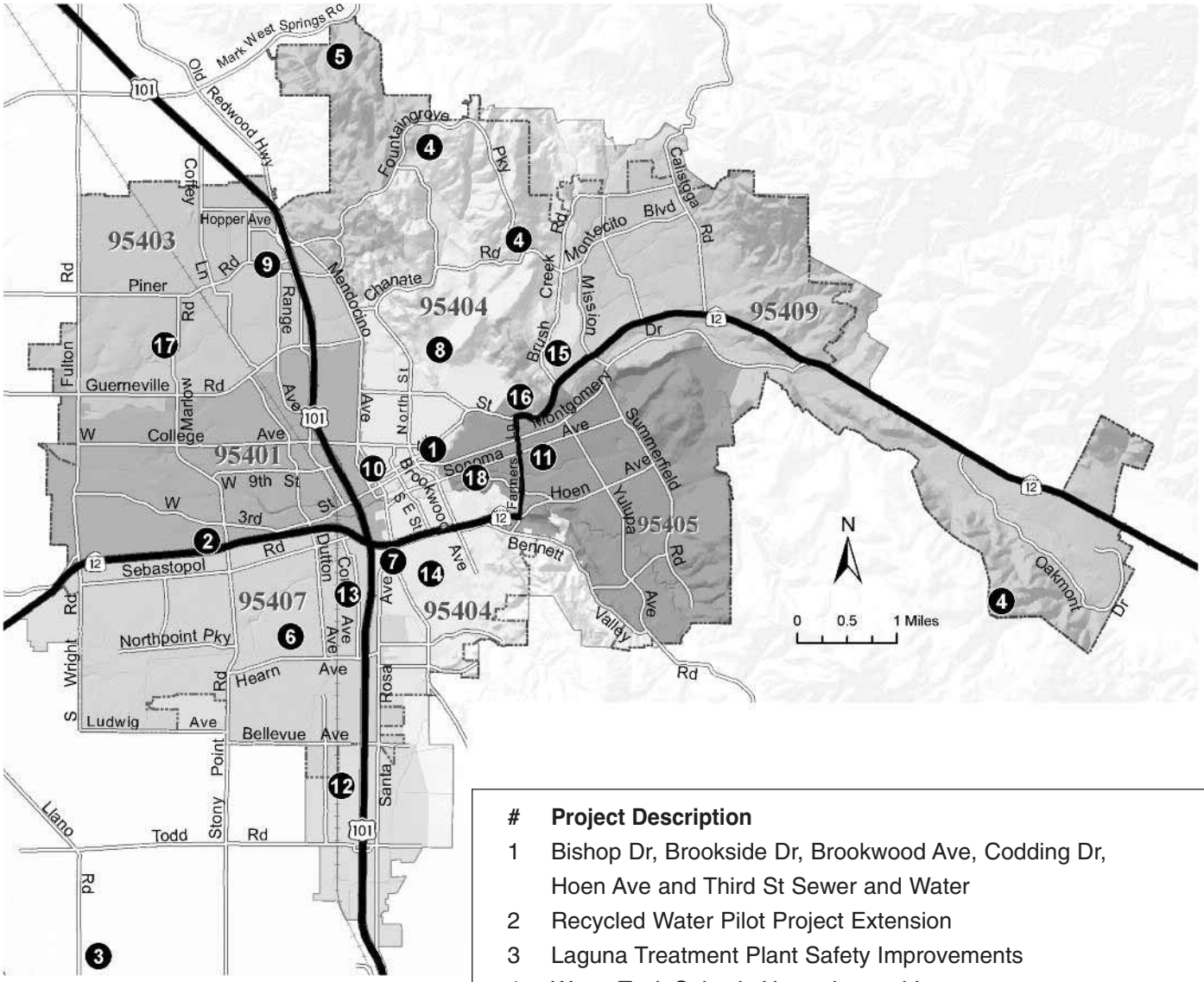
The Water-Use Efficiency team will be available to answer questions and

continued on page 4

In This Issue

- Recycled Water Pilot Project — Construction Nearly Complete
- Water Smart Expo
- Capital Improvement Projects
- Going Green Just Got Easier
- What is an Illegal Connection to a Sewer Lateral?
- The Leak Repair Crew

Water and Sewer Capital Improvement Projects in Construction — April through June 2011



An important goal of your utility department is to be responsible stewards of the environment and the City's infrastructure. The Capital Improvement Program (CIP), funded by the water and sewer rates, ensures our ratepayers will have safe, reliable and efficient water and wastewater services today and in the future.

This map shows capital improvement projects that will be under construction during the second quarter of 2011.

The map reflects projects that are estimated to occur during the period April through June 2011 and, due to varying factors, are subject to change without notice. The data represented has been generated from Utilities Asset Management.

#	Project Description
1	Bishop Dr, Brookside Dr, Brookwood Ave, Codding Dr, Hoen Ave and Third St Sewer and Water
2	Recycled Water Pilot Project Extension
3	Laguna Treatment Plant Safety Improvements
4	Water Tank Seismic Upgrades and Improvements
5	Skyfarm "A" Sewer Lift Station Wet Well Modifications
6	Biwana Sewer Main Replacement - Sonoma County Water Agency
7	Earle St Sewer Replacement - Hwy 101 to Santa Rosa Avenue
8	Parsons Dr Easement Sewer Improvements - Poppy to Terrace
9	Range Avenue Water Main Installation - Russell to Piner
10	3rd St from B St to E Street Sewer and Water
11	Spring Creek Dr Sewer and Water
12	West Robles Sewer Main
13	Olive St Sewer and Water
14	Aston Ave Sewer and Water
15	Sewer Lining Highway 12 - Mission Blvd Easement
16	Proctor Heights Walking Pathway
17	Marlow Siphon Lining
18	Bobelaine Dr and Spring Creek Dr Sewer & Storm Drain

Going Green Just Got Easier

Last year, the City of Santa Rosa Environmental Projects division was awarded a grant from the U.S Department of Energy to fund a new program to spur the installation of solar photovoltaic (PV) projects throughout the county.

The pilot program, called the Clean Energy Advocate (CEA), is an independent and unbiased free service to Sonoma county residents. The program is intended to assist homeowners through the energy and water efficiency, and renewable energy upgrade process. The CEAs will assess the homeowner's current energy usage in order to provide pertinent information about solar and efficiency measures. Ultimately, energy upgrade projects may result in reduced utility bills and a more comfortable and energy-efficient home.

The CEA will also provide property owners with the latest information on financing options, rebates and incentives applicable to their property. "We are a resource to help homeowners make the best energy and budget decisions for their home," says Julie Carlton, CEA with the City of Santa Rosa.

This City program also helps homeowners access local qualified contractors. The CEA offers free informational meetings where homeowners can meet several vendors and discuss their potential solar projects. "By providing a way for contractors and homeowners to meet face-to-face and discuss their potential renewable energy project, we're providing a valuable resource for homeowners who may have questions or are unsure about solar PV in general," says Claire Nordlie also a CEA with the City of Santa Rosa.

Additionally, the CEA program offers an educational resource to homeowners through their Clean Energy Education series — a monthly workshop featuring guest speakers who highlight their experiences with energy efficiency, renewable energy or water efficiency.

The CEA program is aiming to contribute to the installation of solar PV or solar thermal systems on 30 homes by spring of 2012.

If you would like more information about this FREE program, contact the CEA at 707-543-3886, via email at CEA@srcity.org or visit srcity.org/CEA.

Urban Water Management Plan Update

The City of Santa Rosa is preparing an update to our Urban Water Management Plan (UWMP). An UWMP is a long-term planning document that describes the reliability of water sources to meet existing and future water demand over a 20 year planning horizon. The State of California requires every urban water supplier that provides over 3,000 acre-feet of water per year or has more than 3,000 connections to prepare an UWMP every 5 years, typically in years ending in 5 and 0.

Due to recent legislation that required additional analysis, the deadline for the 2010 UWMP was extended to July 1, 2011. The City is currently preparing our 2010 UWMP and the public is encouraged to participate. To learn more about the 2010 UWMP schedule and how to participate, please visit srcity.org/2010UWMP.

What is an Illegal Connection to a Sewer Lateral?

Your sewer lateral, which is the pipeline between your home and the City's sanitary sewer main usually located in the street, drains wastewater from sinks, toilets, showers and tubs and transports it to the City's sanitary sewer system. An illegal connection to a sewer lateral allows stormwater to enter the sanitary sewer system rather than flowing into the storm drain system or soaking into the ground.

Illegal connections include any connection that allows rain water or ground water to enter the sanitary sewer system. Examples of illegal connections include downspouts and outside yard drains connected to the sewer lateral, and broken or faulty sewer laterals. Sump pumps are also prohibited from being connected to the sewer lateral and should ideally be discharged to a landscape area.

Allowing stormwater to flow into the sanitary sewer system from illegal connections can overload the system. Once the system is overloaded, wastewater has nowhere to go and may back up in sewer mains, into sewer laterals and, if severe enough, into local homes and businesses potentially causing property damage. Manholes may also overflow causing untreated wastewater to spill onto surrounding properties, and into creeks and storm drains, potentially contaminating our local creeks and jeopardizing wildlife. Excess flow in the sanitary sewer system from illegal connections not only poses overcapacity issues, it also increases unnecessary costs for transporting and treating wastewater.

If you need assistance determining if you have an illegal connection to your sewer lateral or have any other questions, please contact the Utilities Department at 543-4200.

"Water Smart Expo" continued from page 1...

offer suggestions about:

- How to reduce your water bill
- How to install rainwater harvesting and graywater systems
- How to make your irrigation system more efficient
- What beautiful low-water-use plants will thrive in this climate
- How much water you can save by switching to high-efficiency indoor fixtures
- How much water you can save by using a front-loading washing machine
- What rebates are available

In addition to learning what you can do to become more water efficient, you'll learn about a comprehensive suite of rebate programs to assist you in implementing the changes. For example, the Green Exchange Rebate is a program that pays you to remove your lawn and/or upgrade your irrigation system. There are also rebates available for front-loading washing machines, rainwater harvesting systems, graywater systems and much more.

Staff from the City's Storm Water and Creeks team, Environmental Projects team, and Water Resources team will be available to discuss many of the City's efficiency and environmental programs and how you can participate. You can learn about protecting local creeks, using recycled water, reducing your greenhouse gas emissions, upcoming restoration projects and volunteer events.

The Sonoma County Water Agency (SCWA) will be there to answer questions, as will several local water-related business owners. You'll have access to new technology in appliances, the most efficient irrigation products, water efficient product displays, and qualified professional landscaping and plumbing advice.

There will also be a raffle for City of Santa Rosa Utilities customers with a chance to win great prizes.

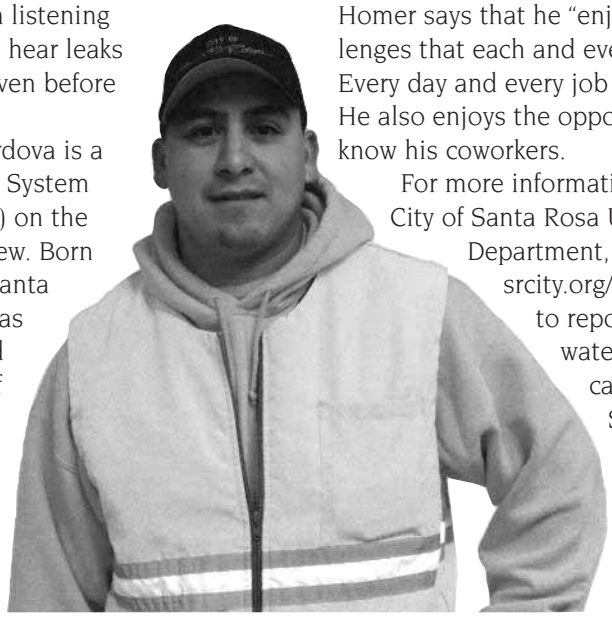
Don't miss this fun and informative event. For more information about the Water Smart Expo, contact Water-Use Efficiency staff at (707) 543-3985 or visit srcity.org/wue.

Your Utilities Department at Work for You

The Leak Repair Crew

Just like a homeowner, the City of Santa Rosa is concerned about water leaks. The Leak Repair Crew is responsible for City-side water service line repairs on more than 600 miles of water mains. They are also responsible for repairing fire hydrants that have been knocked down, usually by traffic accidents.

Visible water leaks are typically reported by our customers. However, the City also has a leak detection program that aggressively searches for leaks throughout the water distribution system. The Leak Repair Crew will walk a street using a listening device that can hear leaks underground even before they surface.



Homer Cordova is a Senior Utilities System Operator (USO) on the Leak Repair Crew. Born and raised in Santa Rosa, Homer has been employed with the City of Santa Rosa for over 13 years. During that time, Homer has worked in different areas of customer service and believes those skills are an important aspect of working on the Leak Repair Crew. Repairing a water service line often means temporarily interrupting a customer's water service. Being able to effectively provide information on the interruption to their water service and respond to a customer's concerns is crucial to the successful completion of a job.

In addition to working on the service line repair itself, Homer's responsibilities as a Senior USO include overseeing and training the other members of the Leak Repair Crew. Homer says that he "enjoys the challenges that each and every day brings. Every day and every job is different." He also enjoys the opportunity to get to know his coworkers.

For more information about the City of Santa Rosa Utilities Department, please visit srcity.org/ut. If you need to report a City-side water leak, please call the City of Santa Rosa Utilities Department at 707-543-4200.

"Recycled Water Pilot Project Update" continued from page 1...

Expanding urban reuse is a high priority for the City because it provides a drought-proof water supply for irrigation and other approved uses while saving potable water for purposes such as drinking and bathing and creating an environmentally-friendly method of disposing recycled water.

If you have questions about recycled water or for more information and updates on the pilot project and other responsible recycled water projects being undertaken by your Utilities Department, visit SRCity.org/RecycledWater or contact the Recycled Water Program at (707) 543-4200.

Web Resources

Visit these websites to learn more about issues mentioned in this Update.

Recycled Water:
SRCity.org/RecycledWater

Water-Use Efficiency:
SRCity.org/wue

Clean Energy Advocate:
SRCity.org/CEA

Urban Water Management Plan:
SRCity.org/2010UWMP

Utilities:
SRCity.org/ut

Twitter:
twitter.com/SantaRosaWater

City of Santa Rosa California

Welcome to Santa Rosa, California

Just 55 miles north of San Francisco, you'll find a vibrant city overflowing with all you love about California. Welcome to Santa Rosa, where everything comes together. Wine country and farm country, redwood forests and rivers, lakes and ocean. And in the center, our charming, thriving downtown, lined with intriguing shops and restaurants that delight casual diners and epicureans alike.

What's Happening in Santa Rosa

2010 Urban Water Management Plan
04/20/2011 — Water Supply Planning - Utilities Department
The City is currently preparing its 2010 Urban Water Management Plan and the public is encouraged to participate.

Earth Day 2011
04/17/2011 — City of Santa Rosa
Come celebrate Earth Day, Saturday, April 16 in Courthouse Square. All are invited downtown to enjoy food, live music, eco-friendly crafts and activities for kids. This is a FREE EVENT.

Shop Santa Rosa
04/12/2011 — Economic Development & Housing
The City is pleased to announce the newly enhanced "Shop Santa Rosa" program that offers Santa Rosa businesses the opportunity to share coupons, news stories, job openings, website links and social media feeds with residents and visitors alike.

Water-Wise Gardening Workshops
04/12/2011 — Water-Use Efficiency Program
A free series of residential gardening workshops

Water Use Efficiency Featured on the Krush Radio
04/01/2011 — Utilities Department
This short interview on the KRUSH's Community Minute Show featured some of the programs the City offers to help residents save money and energy through the efficient use of water.

Looking For Contract Instructors!
03/29/2011 — Rec & Parks
Share your passion and support your community by being a contract instructor! If you connect with people and have a passion, talent or skill that you would like to share, consider being a Community Center or Offsite Contract Instructor!

More of... What's Happening in Santa Rosa

Santa Rosa Resident Services

- Emergency Information
- ADA Information
- Bay Area Traffic - CHP
- Neighborhood Resources
- Take a class or workshop
- Report Crime & Graffiti Online
- Police Beats and Officer Contact Info

Santa Rosa Business Services

- Business Tax Information
- Starting a Business in Santa Rosa
- Open Bids and RFP/RFQs

Give Us Your Best Shot 2010

More Videos...

Search Santa Rosa

General Radiation Information

With the situation in Japan here are some documents that may be of interest:

- NRC Radiation Report
- Radiation Health Advisory
- FAQs About Radiation

I Would Like To...

PLEASE SELECT

Email Alerts

Learn More about Santa Rosa Email Alerts or, use **One-Click to sign-up today!**

Quick Links

- Apply For a Job ONLINE
- Arts and Culture
- City Calendar
- City Council Meetings
- City Facilities and Locations
- City Officials
- CityBus Routes & Schedules
- Contact Information
- Downtown Santa Rosa
- Environmental Stewardship
- Greenhouse Gas Reductions
- Maps and GIS Services
- Mayor's Gang Prevention Task Force
- ONLINE Services
- Public Meetings / Notices
- Volunteer Santa Rosa

Shop Santa Rosa!

Shop Santa Rosa: The City's new online business directory allows residents and visitors to search for businesses by category or name of business, while giving businesses a chance to provide citizens with information about special offers, upcoming events, job opportunities and whatever else they want to share.

City Hours & City Hall Info

CITY OF SANTA ROSA BUSINESS HOURS:
Monday - Thursday: 7:30am - 5:30pm
Friday: 8:00 am - 5:00 pm
Alternate Friday: closed – View schedule

Community Development:
Monday - Thursday: 9:30am - 2:30pm

CITY HALL:
100 Santa Rosa Avenue
Santa Rosa, CA 95404
Tel. (707) 543-3010
Fax (707) 543-3030

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NEWS

4/20/2011 Water Supply Planning - Utilities Department

The City of Santa Rosa is currently preparing an update to our Urban Water Management Plan (UWMP). An UWMP is a long-term planning document that describes the reliability of water sources to meet existing and future water demand over a 20 year planning horizon. The State of California requires every urban water supplier that provides over 3,000 acre-feet of water per year or has more than 3,000 connections to prepare an UWMP every 5 years.

Due to recent legislation that required additional analysis, the deadline for the 2010 UWMP was extended to July 1, 2011. To learn more about the 2010 UWMP schedule and how to participate, please visit our website at **www.srcity.org/2010UWMP**.

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2010 URBAN WATER MANAGEMENT PLAN

Water Conservation Policie

2010 Urban Water Management Plan
Water Shortage Contingency Plan
Water Waste Ordinance
Landscape Standards
Tiered Water Rates
History

2020 Community Water Use Target Public Hearing

In 2009, Senate Bill x7-7, the Water Conservation Act (SB x7-7), was signed into law. SB x7-7 set a goal of achieving a 20% reduction in statewide urban per capita water use by the year 2020 and requires urban water retailers to set an interim 2015 and a final 2020 community urban per capita water use target. SB x7-7 requires urban water suppliers to increase water use efficiency while recognizing and provide credit to those urban water suppliers that have made substantial capital investments in water conservation since the 1990s.

On April 19th, the Santa Rosa City Council will hold a public hearing at or after 5PM in the City Council Chamber, City Hall, 100 Santa Rosa Avenue, Santa Rosa. The purpose of the public hearing will be to receive public comment and recommendations prior to the City Council adopting the Community Water Use Target for 2020, as required by Senate Bill x7-7 the Water Conservation Act of 2009, for inclusion in the City of Santa Rosa's 2010 Urban Water Management Plan.

Copies of the **City of Santa Rosa's Community Water Use Target for 2020** and the **City of Santa Rosa's Implementation Plan** for complying with the Community Water Use Target for 2020 are available for public inspection by clicking on the links above. Copies can also be viewed at: City Hall, City Manager's Office, 100 Santa Rosa Avenue, Room 10, Santa Rosa and Utilities Department, City of Santa Rosa, 69 Stony Circle, Santa Rosa during regular business hours.

Comments and questions may be directed to Jennifer Burke, Senior Water Resources Planner, Utilities Department, City of Santa Rosa, 100 Santa Rosa Avenue, Room 10, Santa Rosa, CA 95404, or by telephone at 707-543-3938.

2010 Urban Water Management Plan

Each urban water purveyor serving more than 3,000 connections or 3,000 acre-feet annually is required by the State of California Urban Water Management Planning Act to prepare and submit an Urban Water Management Plan (Plan) every five years. The City is currently preparing our 2010 Plan according to the requirements of the **Urban Water Management Planning Act**. The 2010 Plan is due to the California Department of Water Resources (DWR) by July 1, 2011.

The 2010 Plan will include information and analysis about Santa Rosa's projected water supply and demand through 2035 during an average water year, a single dry year, and multiple dry years; current and projected recycled water use; water conservation program details; and detailed information about our regional water supply. The 2010 Plan will also include an update to the City's Urban Water Shortage Contingency Plan.

The City will be working with the Water Conservation Subcommittee of the Board of Public Utilities (BPU) to review and provide input on the 2010 Plan. The 2010 Plan will also be reviewed at Public Hearings at the BPU and the City Council. Here is the tentative schedule for review and adoption of the 2010 Plan:

Item	Potential Date
Water Conservation Subcommittee - Section Review	Mar -May
BPU Recommendation - 2020 Water Use Target	April 7th
Council Adoption - 2020 Water Use Target	April 19th
Draft 2010 UWMP Available for Public Input - 15 days	May 1st
BPU Recommendation - 2010 UWMP	May 19th
Council Adoption - 2010 UWMP	June 7th
Submittal of Plan to DWR	June 8th

All dates subject to change – contingent on DWR schedule and Sonoma County Water Agency schedule

For additional information or to participate in the development of the City's 2010 Plan, please contact Jennifer Burke at 707-543-3938 or Teresa Gudino at 707-543-3942 or email: **2010UWMP@srcity.org**.

2005 Urban Water Management Plan

On June 27, 2006, the City Council conducted a public hearing and adopted, by **Resolution No. 26613**, the City of Santa Rosa 2005 Urban Water Management Plan.

On January 12, 2007, the State of California's Department of Water Resources finished their review of the City of Santa Rosa 2005 Urban Water Management Plan and **deemed the Plan complete.**

Copies of the City of Santa Rosa 2005 UWMP can be viewed or downloaded:

- **2005 UWMP - Complete Document** *(File Size 5.5MB)*

Individual sections of the City of Santa Rosa 2005 UWMP can be viewed or downloaded by clicking on

Search Santa Rosa

2010 UWMP Presentations

Mar 2011 Presentation to BPU
Jan 2011 Presentation to BPU
Nov 2010 Presentation to Council
Nov 2010 Presentation to BPU
Jun 2010 Presentation to BPU
Feb 2010 Presentation to BPU
Jan 2010 Presentation to BPU

Useful Links

Department of Water Resources UWMP Website
Urban Water Management Plannning Act
Sonoma County Water Agency 2010 UWMP

any of the links below:

- Cover and Author Information
- Table of Contents
- Section 1 - Introduction
- Section 2 - Description of Existing Water System
- Section 3 - Historical and Projected Water Use
- Section 4 - Water Supply
- Section 5 - Recycled Water
- Section 6 - Water Conservation
- Section 7 - Water Supply Versus Demand Comparison
- Appendix A
- Appendix B
- Appendix C
- Appendix D
- Appendix E
- Appendix F

In addition, printed copies of the City of Santa Rosa 2005 UWMP are available for review at:

- City Hall, City Manager's Office, 100 Santa Rosa Avenue, Santa Rosa
- City of Santa Rosa, Utilities Department, 69 Stony Circle, Santa Rosa
- Santa Rosa Central Library, 211 E Street, Santa Rosa

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CITY OF SANTA ROSA
BOARD OF PUBLIC UTILITIES
WATER CONSERVATION SUBCOMMITTEE

A G E N D A

NOTE: THIS IS A WORKING LUNCH MEETING

November 10, 2009
WATER CONSERVATION MEETING - 12:00 p.m.
Municipal Service Center/South - Room 4
69 Stony Circle
Santa Rosa, CA 95401

DISCUSSION ITEMS:

ITEM NO. 1: PUBLIC COMMENT

ITEM NO. 2: SANTA ROSA RECYCLED WATER PILOT PROJECT
Staff will provide an update on the status of the Recycled Water Pilot Project.

ITEM NO. 3: GRAY WATER REBATE PROGRAM
State and local gray water standards have been updated recently allowing for easier installation of gray water systems. Based on the new standards, public interest and water savings potential, staff has analyzed the effectiveness of using gray water systems in our service area and will present a rebate recommendation for the Committee's review and approval.

ITEM NO. 4: WATER MANAGEMENT REBATE AND CERTIFICATION
Staff will present information on updating our existing Irrigation Efficiency Rebate Program to a Water Management Rebate and Certification Program. The program modification should encourage more customer participation and increase landscape contractor awareness regarding water management. Staff will outline a recommendation for the Committee's review and approval.

ITEM NO. 5: 2010 URBAN WATER MANAGEMENT PLAN
Every urban water purveyor serving more than 3,000 connections or 3,000 acre-feet annually is required by the State of California to prepare an Urban Water Management Plan (UWMP) every five years. Staff will review the requirements of the UWMP and provide an overview of the plan preparation for the Committee's review and input.

ITEM NO. 6: URBAN WATER SHORTAGE CONTINGENCY PLAN

Santa Rosa's Urban Water Shortage Contingency Plan (Shortage Plan) details our response plan to drought and other water shortage conditions. As part of the preparation of the 2010 Urban Water Management Plan, Santa Rosa will need to update our Shortage Plan. Staff will review the current Shortage Plan, provide an overview of other Shortage Plans in the region, and ask for the Committee's input on updating the Shortage Plan and developing an accompanying Demand Offset Policy.

FOR ACCESSIBLE
MEETING INFORMATION
CALL (707) 543-3930

CITY OF SANTA ROSA
BOARD OF PUBLIC UTILITIES
WATER CONSERVATION SUBCOMMITTEE

A G E N D A

NOTE: THIS IS A WORKING LUNCH MEETING

January 12, 2010
WATER CONSERVATION MEETING - 12:00 p.m.
Municipal Service Center/South - Room 4
69 Stony Circle
Santa Rosa, CA 95401

DISCUSSION ITEMS:

ITEM NO. 1: PUBLIC COMMENT

ITEM NO. 2: SANTA ROSA RECYCLED WATER PILOT PROJECT
Staff will provide an update on the status of the Recycled Water Pilot Project.

ITEM NO. 3: 2010 URBAN WATER MANAGEMENT PLAN
Staff will provide an update on the preparation of the City's 2010 Urban Water Management Plan (2010 Plan), including a review of the Urban Water Management Plan requirements, a review of the schedule for development of the City's 2010 Plan, and an overview of how the Water Contractors are planning to work together to develop demand projections and regional information. Staff will ask for the Committee's input and direction on the 2010 Plan.

ITEM NO. 4: URBAN WATER SHORTAGE CONTINGENCY PLAN
At the last Water Conservation Subcommittee meeting, the Committee recommended that the Urban Water Shortage Contingency Plan (Shortage Plan) be updated to include five rationing stages, as well as to update the prohibitions and financial information. Staff will provide an update on the development of the Shortage Plan for the Committee's input and direction.

FOR ACCESSIBLE
MEETING INFORMATION
CALL (707) 543-3930

FOR ACCESSIBLE
MEETING INFORMATION
CALL: (707) 543-4200
ADD: (707) 543-3031

SANTA ROSA BOARD OF PUBLIC UTILITIES
REGULAR MEETING
CITY HALL, 100 SANTA ROSA AVENUE
JANUARY 21, 2010

1:30 P.M. (MAYOR'S CONFERENCE ROOM, ROOM 10)

1. CALL TO ORDER AND ROLL CALL

2. STATEMENTS OF ABSTENTION BY BOARD MEMBERS

3. STUDY SESSION

3.1 UPDATE ON GROUNDWATER RESOURCES

Staff will provide the BPU with an update on the City's groundwater supply including a description of the groundwater basin, an overview of current groundwater use, an update on the USGS Study and a discussion of progress on current and future investigation efforts. The Board may discuss this item and give direction to staff.

3.2 REVIEW OF UTILITIES DEPARTMENT ENFORCEMENT RESPONSE PLAN AND POLICIES

The Enforcement Response Plan (ERP) outlines operational procedures and enforcement mechanisms intended to ensure that all discharges to the sanitary sewer system are in compliance with Santa Rosa City Code Title 15- Sewers and with the United States Environmental Protection Agency (USEPA) Pretreatment Regulations. The ERP was initially written in 1993 to comply with US EPA Pretreatment regulations for Significant Industrial Users (SIUs) and Categorical Users. After revision to Title 15-Sewers in 2008, the next step was to revise and update the Enforcement Response Plan. Two major additions to the Enforcement Response Plan are the inclusion of enforcement provisions for Commercial and Residential Users. The Board may discuss the Plan and policies and give direction to staff.

3.3 ADJOURN STUDY SESSION AND RECONVENE TO OPEN SESSION IN CITY COUNCIL CHAMBER

Any writings or documents provided to a majority of the Board of Public Utilities regarding any item on this agenda will be made available for public inspection in the Utilities Department located at 69 Stony Circle during normal business hours.

PUBLIC COMMENTS ON AGENDA ITEMS: Except for public hearing items, comments from the public will be allowed on all agenda items at the time each item is called. Comments on public hearing items may be made when the hearing is opened.

PUBLIC COMMENTS ON NON-AGENDA ITEMS: Comments from the public on non-agenda items will be heard under Agenda Item 8.

4. APPROVAL OF MINUTES – January 7, 2010

5. STAFF BRIEFINGS - NONE

6. CONSENT ITEMS

6.1 APPROVAL OF UTILITIES DEPARTMENT ENFORCEMENT RESPONSE PLAN AND POLICIES

Utilities Department Staff and the Subregional Technical Advisory Committee recommend that the Board of Public Utilities, by motion, approve the Utilities Department Enforcement Response Plan and Policies.

6.2 CONTRACT AWARD – 2009 UTILITIES PAVEMENT PATCHING

The Public Works Department recommends that the Board, by motion, award a construction contract in the total amount of $395,741.00 to the lowest responsive bidder, Argonaut Constructors of Santa Rosa, CA, for 2009 Utilities Pavement Patching and approve a construction contingency of 15 percent.

6.3 PROPOSED AMENDMENT OF PROFESSIONAL SERVICES AGREEMENT WITH MERRITT SMITH CONSULTING FOR PREPARATION OF A REPORT OF WASTE DISCHARGE AND NPDES PERMIT NEGOTIATION SERVICES

Staff and the BPU's Contract Review Committee recommend that the Board of Public Utilities approve the amendment with Merritt Smith Consulting for preparation of a Report of Waste Discharge and NPDES permit negotiation services.

6.4 REJECTION OF BIDS - BISHOP DRIVE, BROOKSIDE DRIVE, CODDING DRIVE AND HOEN AVENUE SEWER AND WATER REPLACEMENT

The Public Works Department recommends that the Board, by motion, reject all bids for Bishop Drive, Brookside Drive, Codding Drive and Hoen Avenue Sewer and Water Replacement and direct staff to rebid the project.

7. REPORT ITEMS

7.1 REPORT – AUTHORIZATION TO ACQUIRE EASEMENTS FOR THE SANTA ROSA DIFFUSER PROJECT

The Santa Rosa Diffuser Project includes replacing an existing discharge outfall, located 420 linear feet upstream of the confluence with the Laguna de Santa Rosa, with an environmentally less impacting multi-port diffuser. The diffuser will be approximately 37 feet long and extend from the terminus of an existing 48-inch outfall, located in Santa Rosa Creek, and will be positioned slightly to the left of the channel centerline. An array of 24-inch elastomeric duckbill check valves will be oriented at a 45-degree angle to the horizontal to maximize mixing, reduce scour potential on the channel bottom, minimize turbulence at the water surface, and minimize impacts to navigation.

A permanent easement with a temporary construction easement needs to be obtained from the Sonoma County Water Agency to build the coffer dam and the diffuser. The Water Agency Board of Directors is scheduled to consider this item on February 9, 2010. The Agency is asking for compensation of staff time which has been estimated to be less than $10,000. Funding for this project comes from account number 7255.

RECOMMENDATION: It is recommended by the Public Works Department that the Board of Public Utilities, by resolution, authorize the Director of Public Works to execute the easements necessary to construct the Santa Rosa Diffuser Project.

7.2 WATER SUPPLY UPDATE

Staff will update the Board on water supply issues. The Board may discuss this item and give direction to staff.

7.3 2010 URBAN WATER MANAGEMENT PLAN (UWMP) UPDATE

Staff will update the Board on the preparation of the 2010 Urban Water Management Plan. The Board may discuss this item and give direction to staff.

8. PUBLIC COMMENTS ON NON-AGENDA MATTERS

This is the time when any person may address the Board of Public Utilities on matters not listed on this agenda, but which are within the subject matter jurisdiction of the Board. Each speaker is allowed three minutes. To address the Board you are requested to complete the blue Speaker's Card and give it to the Board Secretary.

9. REFERRALS

10. WRITTEN COMMUNICATIONS (AND POSSIBLE BOARD DISCUSSION/ ACTION)

11. SUBCOMMITTEE REPORTS

12. BOARD MEMBER REPORTS

13. DIRECTORS REPORT

14. ANNOUNCEMENT OF CLOSED SESSION ITEM(S) AND ADJOURNMENT TO CLOSED SESSION(S) (MAYOR'S CONFERENCE ROOM – ROOM 10)

    14.1 CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION

    (Subdivision (a) of Government Code Section 54956.9)
    City of Santa Rosa v. Sonoma County Water Agency, et al., Sonoma County Superior Court Case Number SCV – 245844

    14.2 CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION

    Significant exposure to litigation pursuant to subdivision (b) of Government Code Section 54956.9: One potential case

15. RECONVENE TO OPEN SESSION

16. ADJOURNMENT OF MEETING

The Board of Public Utilities encourages public comments regarding the above items. If you are unable to attend this meeting, please feel free to call the Utilities Department at 543-3930 or forward written comments to the City of Santa Rosa, Utilities Department, 69 Stony Circle, Santa Rosa, CA 95401. All comments will be forwarded to the Board at the meeting.

BPU MEETING AND AGENDA INFORMATION ARE AVAILABLE ON A RECORDED INFORMATION LINE BY CALLING 543-3397 OR BY ACCESSING THE CITY OF SANTA ROSA'S INTERNET SITE AT: WWW.SRCITY.ORG

CITY OF SANTA ROSA
BOARD OF PUBLIC UTILITIES
WATER CONSERVATION SUBCOMMITTEE

A G E N D A

NOTE: THIS IS A WORKING LUNCH MEETING

February 9, 2010
WATER CONSERVATION MEETING - 12:00 p.m.
Municipal Service Center/South - Room 4
69 Stony Circle
Santa Rosa, CA 95401

DISCUSSION ITEMS:

ITEM NO. 1: PUBLIC COMMENT

ITEM NO. 2: SANTA ROSA RECYCLED WATER PILOT PROJECT
Staff will provide an update on the status of the Recycled Water Pilot Project.

ITEM NO. 3: 2010 URBAN WATER MANAGEMENT PLAN
Staff will provide an update on the preparation of the City's 2010 Urban Water Management Plan for the Committee's input and direction.

ITEM NO. 4: SB7x7 - WATER USE TARGET
In 2009, the State of California approved Senate Bill 7x7 (SB7x7), which requires the State of California to reduce per capita water use statewide by 20% by the year 2020. The legislation requires each urban water purveyor serving more than 3,000 connections or 3,000 acre-feet annually to adopt a water use target as defined by SB7x7 and to include this water use target in the 2010 Urban Water Management Plan. Staff will provide an overview of the SB7x7 requirements and a review of the methods for determining the water use targets. Staff will outline a recommendation for the City's water use target as defined by SB7x7 and ask for the Committee's input and direction.

ITEM NO. 5: URBAN WATER SHORTAGE CONTINGENCY PLAN
Staff will provide an update on the development of the Urban Water Shortage Contingency Plan for the Committee's input and direction.

Any writings or documents provided to a majority of the Water Conservation Subcommittee regarding any item on this agenda will be made available for public inspection in the City of Santa Rosa Utilities Department located at 69 Stony Circle during normal business hours.

FOR ACCESSIBLE
MEETING INFORMATION
CALL (707) 543-3930

FOR ACCESSIBLE
MEETING INFORMATION
CALL: (707) 543-4200
ADD: (707) 543-3031

SANTA ROSA BOARD OF PUBLIC UTILITIES
REGULAR MEETING
CITY HALL, 100 SANTA ROSA AVENUE
FEBRUARY 18, 2010

1:30 P.M. (MAYOR'S CONFERENCE ROOM)

1. CALL TO ORDER AND ROLL CALL

2. STATEMENTS OF ABSTENTION BY BOARD MEMBERS

3. STUDY SESSION

   3.1 DRY CREEK BY PASS PIPELINE – PRELIMINARY ENGINEERING REPORT UPDATE

   A condition of the Biological Opinion covering the Sonoma County Water Agency's (SCWA) water supply and flood control operations is to prepare a feasibility study on the Dry Creek bypass pipeline. The purpose of this pipeline is to deliver water from Lake Sonoma to the main stem of the Russian River. SCWA has hired HDR Engineering Inc to perform the Dry Creek Bypass Pipeline Feasibility Study. SCWA and HDR will present various pipeline design alternatives and update the BPU on the status of the feasibility Study. The Board may discuss this item and give direction to staff.

   3.2 ADJOURN STUDY SESSION AND RECONVENE TO OPEN SESSION IN CITY COUNCIL CHAMBER

PUBLIC COMMENTS ON AGENDA ITEMS: Except for public hearing items, comments from the public will be allowed on all agenda items at the time each item is called. Comments on public hearing items may be made when the hearing is opened.

PUBLIC COMMENTS ON NON-AGENDA ITEMS: Comments from the public on non-agenda items will be heard under Agenda Item 8.

4. APPROVAL OF MINUTES – January 21, 2010 & February 4, 2010

5. STAFF BRIEFINGS

Any writings or documents provided to a majority of the Board of Public Utilities regarding any item on this agenda will be made available for public inspection in the Utilities Department located at 69 Stony Circle during normal business hours.

This time is reserved for staff to brief the Board on departmental issues of interest. No action will be taken on these matters except to possibly place a particular item on a future agenda for Board consideration.

5.1 OUTREACH PLAN AND BRANDING PLAN

Staff has been developing an Outreach Plan that will include consistent messages about the Utilities Department. The Plan includes the existing outreach being done by the Department as well as new opportunities. The Board may discuss the Plan and give direction to staff.

6. CONSENT ITEMS

6.1 MASTER PROFESSIONAL SERVICES AGREEMENT FOR EMERGENCY GROUNDWATER SUPPLY INVESTIGATION

Staff recommends that the Board of Public Utilities award a Master Professional Services Agreement to AIP Enterprises, Inc., dba ECON for a not to exceed amount of $3,000,000 to provide emergency groundwater supply investigation services in support of the City's Groundwater Program.

6.2 AUTHORIZE SUBMITTAL OF WATER CONSERVATION AWARD APPLICATIONS

It is the recommendation of the Utilities Department staff that the Board of Public Utilities, by resolution, authorize the submittal of award applications for the City of Santa Rosa's water conservation program and authorize the Director of Utilities to sign the applications.

7. REPORT ITEMS

7.1 REPORT – WEST COLLEGE POND #2 DECOMMISSIONING AND GRADING PROJECT – ADOPTION OF MITIGATED NEGATIVE DECLARATION, ADOPT PROJECT AND MITIGATION MONITORING PROGRAM

On November 19, 2009, the Board of Public Utilities held a Study Session to discuss the project. On December 7, the City issued an Initial Study/Proposed Mitigated Negative Declaration for the project and initiated the 30-day public review period. Four comment letters were received in response to the Proposed Mitigated Negative Declaration, and on February 2, 2010, the City issued a final Mitigated Negative Declaration, Response to Comments, and Mitigation Monitoring Program.

RECOMMENDATION: The Utilities Department recommends that the Board of Public Utilities, by resolution, adopt the Mitigated Negative Declaration, adopt the Mitigation and Monitoring program, approve the

project and direct staff to implement the Project.

7.2 REPORT – AUTHORIZATION TO ACQUIRE AN EASEMENT FOR THE SANTA ROSA DIFFUSER PROJECT (CONTINUED FROM JANUARY 7, 2010, JANUARY 21, 2010 AND FEBRUARY 4, 2010 MEETINGS)

The Santa Rosa Diffuser Project includes replacing an existing discharge outfall, located 420 linear feet upstream of the confluence with the Laguna de Santa Rosa, with an environmentally less impacting multi-port diffuser. The diffuser will be approximately 37 feet long and extend from the terminus of an existing 48-inch outfall, located in Santa Rosa Creek, and will be positioned slightly to the left of the channel centerline. An array of 24-inch elastomeric duckbill check valves will be oriented at a 45-degree angle to the horizontal to maximize mixing, reduce scour potential on the channel bottom, minimize turbulence at the water surface, and minimize impacts to navigation.

A permanent easement and revocable license need to be obtained from the Sonoma County Water Agency to build the temporary coffer dam and the diffuser and continue monitoring activities. The Water Agency Board of Directors is scheduled to consider this item on their consent calendar for March 16, 2010. The Directors are scheduled to approve the agreement on their consent calendar for March 23, 2010. The Agency is recommending that the Water Agency Board waive compensation for the Agency staff time that was expended to facilitate the granting of the easement and license. If the Water Agency Board fails to approve the waiver, Agency costs are estimated to be less than $15,000. Funding for this project comes from account number 7255.

RECOMMENDATION: The Public Works Department recommends that the Board of Public Utilities, by resolution, authorize the Director of Public Works to execute the easement agreement necessary to construct the Santa Rosa Diffuser Project.

7.3 WATER SUPPLY UPDATE

Staff will update the Board on water supply issues. The Board may discuss this item and give direction to staff.

7.4 2010 URBAN WATER MANAGEMENT PLAN (UWMP) UPDATE

Staff will update the Board on the preparation of the 2010 Urban Water Management Plan. The Board may discuss this item and give direction to staff.

8. PUBLIC COMMENTS ON NON-AGENDA MATTERS

This is the time when any person may address the Board of Public Utilities on matters

not listed on this agenda, but which are within the subject matter jurisdiction of the Board. Each speaker is allowed three minutes. To address the Board you are requested to complete the blue Speaker's Card and give it to the Board Secretary.

9. REFERRALS

10. WRITTEN COMMUNICATIONS (AND POSSIBLE BOARD DISCUSSION/ ACTION)

11. SUBCOMMITTEE REPORTS

12. BOARD MEMBER REPORTS

13. DIRECTORS REPORT

14. ANNOUNCEMENT OF CLOSED SESSION ITEM(S) AND ADJOURNMENT TO CLOSED SESSION(S) (MAYOR'S CONFERENCE ROOM – ROOM 10)

    14.1 CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION

    Significant exposure to litigation pursuant to subdivision (b) of Government Code Section 54956.9: One potential case

    14.2 CONFERENCE WITH LEGAL COUNSEL--ANTICIPATED LITIGATION Initiation of litigation pursuant to subdivision (c) of Government Code Section 54956.9: One potential case

15. RECONVENE TO OPEN SESSION

16. ADJOURNMENT OF MEETING

The Board of Public Utilities encourages public comments regarding the above items. If you are unable to attend this meeting, please feel free to call the Utilities Department at 543-3930 or forward written comments to the City of Santa Rosa, Utilities Department, 69 Stony Circle, Santa Rosa, CA 95401. All comments will be forwarded to the Board at the meeting.

BPU MEETING AND AGENDA INFORMATION ARE AVAILABLE ON A RECORDED INFORMATION LINE BY CALLING 543-3397 OR BY ACCESSING THE CITY OF SANTA ROSA'S INTERNET SITE AT: WWW.SRCITY.ORG

CITY OF SANTA ROSA
BOARD OF PUBLIC UTILITIES
WATER CONSERVATION SUBCOMMITTEE

A G E N D A

NOTE: THIS IS A WORKING LUNCH MEETING

April 20, 2010
WATER CONSERVATION MEETING - 12:00 p.m.
Municipal Service Center/South - Room 4
69 Stony Circle
Santa Rosa, CA 95401

DISCUSSION ITEMS:

ITEM NO. 1: PUBLIC COMMENT

ITEM NO. 2: 2010 URBAN WATER MANAGEMENT PLAN
Staff will provide an update on the preparation of the City's 2010 Urban Water Management Plan and Urban Water Shortage Contingency Plan.

ITEM NO. 3: DEMAND OFFSET POLICY
At previous subcommittee meetings, staff reviewed options for a demand offset policy for new development as outlined in the Urban Water Shortage Contingency Plan. Staff will provide an update on the development of the policy for the Committee's review and direction.

ITEM NO. 4: WATER CONSERVATION AWARDS
Staff will present recommendations for the 2010 Water Conservation Awards, which will be presented by the Mayor at the first City Council meeting in May, in conjunction with Water Awareness Month.

ITEM NO. 5: 2010 WATER AWARENESS MONTH
Staff will give an update on the activities planned for Water Awareness Month, including the Water Use Home Survey Kit Mailing, the School Poster Contest and the downtown markets.

ITEM NO. 6: HIGH-EFFICIENCY TOILET PROGRAMS
Based on market saturation and budget reductions, the High-Efficiency Toilet rebate and direct install programs are being eliminated. Staff will present information on recent legislation that requires a retrofit program for the Committee's review and direction.

ITEM NO. 7: SANTA ROSA RECYCLED WATER PILOT PROJECT
Staff will provide an update on the status of the Recycled Water Pilot Project.

Any writings or documents provided to a majority of the Water Conservation Subcommittee regarding any item on this agenda will be made available for public inspection in the City of Santa Rosa Utilities Department located at 69 Stony Circle during normal business hours.

FOR ACCESSIBLE
MEETING INFORMATION
CALL (707) 543-3930

SANTA ROSA BOARD OF PUBLIC UTILITIES
REGULAR MEETING
CITY HALL, 100 SANTA ROSA AVENUE
JUNE 3, 2010

1:30 P.M. (CITY COUNCIL CHAMBER)

1. CALL TO ORDER AND ROLL CALL

2. STATEMENTS OF ABSTENTION BY BOARD MEMBERS

3. STUDY SESSION

   3.1 THE SAFE, CLEAN AND RELIABLE DRINKING WATER SUPPLY ACT OF 2010

   Tim Quinn, Executive Director from Association of California Water Associations (ACWA) will explain the recent Delta specific and Statewide legislation related to future California water supply. The Board may discuss this item and give direction to staff.

   3.2 ADJOURN STUDY SESSION AND RECONVENE TO OPEN SESSION IN CITY COUNCIL CHAMBER

PUBLIC COMMENTS ON AGENDA ITEMS: Except for public hearing items, comments from the public will be allowed on all agenda items at the time each item is called. Comments on public hearing items may be made when the hearing is opened.

PUBLIC COMMENTS ON NON-AGENDA ITEMS: Comments from the public on non-agenda items will be heard under Agenda Item 8.

4. APPROVAL OF MINUTES – April 15, 2010, April 20, 2010 & May 6, 2010

5. STAFF BRIEFINGS

This time is reserved for staff to brief the Board on departmental issues of interest. No action will be taken on these matters except to possibly place a particular item on a future agenda for Board consideration.

   5.1 GUIDE TO BEST PRACTICES FOR SUSTAINABILITY

   The City of Santa Rosa's 2035 Draft General Plan reflects a commitment towards community sustainability with a "triple bottom line" of social, economic and environmental goals. In particular, the Utilities Department has taken a leadership role on this front, with a focus on reducing long-term costs to the utility enterprises through increases in energy efficiency,

renewable energy, resource conservation and other strategies. Staff will present the Utilities Department's new "Guide to Best Practices for Sustainability" and outline Department goals, current practices and future actions. The Board may discuss this item and give direction to staff.

6. CONSENT ITEMS - NONE

7. REPORT ITEMS

7.1 REPORT – ADOPTION OF A MITIGATED NEGATIVE DECLARATION AND MITIGATION MONITORING PROGRAM FOR THE SOUTH COUNTY BIOSOLIDS REUSE PROJECT

As the owner and operator of the Subregional Water Reuse Facility, the City currently manages biosolids derived from the wastewater treatment process through land application and composting. The acreage available for land application of biosolids at the three City-owned farms has been reduced by approximately 640 acres due to potential California tiger salamander habitat. The proposed project would off-set the loss of available acreage for land application by establishing agreements at three new sites in southern Sonoma County to provide increased flexibility for agricultural land application of biosolids.

RECOMMENDATION: The Utilities Department recommends that the Board of Public Utilities, by resolution, adopt the Mitigated Negative Declaration for the South County Biosolids Reuse Project; adopt the Mitigation Monitoring Program, approve the Project, direct staff to implement the project, and authorize the Utilities Department Director to execute agreements with landowners and users to implement the project.

7.2 REPORT – APPROVAL OF AGREEMENT WITH STATE COASTAL CONSERVANCY AND THE LAGUNA DE SANTA ROSA FOUNDATION

In 2005 the Board approved leasing a portion of the Stone Farm property to the Laguna de Santa Rosa Foundation. The Foundation anticipated restoration of the existing farmhouse and development of a Laguna Learning Center. The State Coastal Conservancy has agreed to provide funding for the Learning Center.

RECOMMENDATION: The Utilities Department recommends that the Board of Public Utilities, by motion, approve an agreement with the State Coastal Conservancy and the Laguna de Santa Rosa Foundation providing funding for the construction of the Laguna Learning Center.

7.3 REPORT – WATER SUPPLY UPDATE

Staff will update the Board on water supply issues. The Board may discuss this item and give direction to staff.

7.4 REPORT - 2010 URBAN WATER MANAGEMENT PLAN (UWMP) UPDATE

Staff will update the Board on the preparation of the 2010 Urban Water Management Plan. The Board may discuss this item and give direction to staff.

8. PUBLIC COMMENTS ON NON-AGENDA MATTERS

This is the time when any person may address the Board of Public Utilities on matters not listed on this agenda, but which are within the subject matter jurisdiction of the Board. Each speaker is allowed three minutes. To address the Board you are requested to complete the blue Speaker's Card and give it to the Board Secretary.

9. REFERRALS

10. WRITTEN COMMUNICATIONS (AND POSSIBLE BOARD DISCUSSION/ ACTION)

11. SUBCOMMITTEE REPORTS

12. BOARD MEMBER REPORTS

13. DIRECTORS REPORT

14. ADJOURNMENT OF MEETING

The Board of Public Utilities encourages public comments regarding the above items. If you are unable to attend this meeting, please feel free to call the Utilities Department at 543-4200 or forward written comments to the City of Santa Rosa, Utilities Department, 69 Stony Circle, Santa Rosa, CA 95401. All comments will be forwarded to the Board at the meeting.

The City of Santa Rosa does not discriminate on the basis of disability in the admissions or access to, or treatment of or employment in, its programs or activities. Disability-related aids or services, including printed information in alternate formats, to enable persons with disabilities to participate in public meetings and programs are available by contacting the Board Secretary at (707) 543-4202 one week prior to the meeting. Meeting information can also be accessed via the internet at http://srcity.org or on a recorded information line by calling (707) 543-3397. For TDD call (707) 543-3063.

CITY OF SANTA ROSA
BOARD OF PUBLIC UTILITIES
WATER CONSERVATION SUBCOMMITTEE

A G E N D A

NOTE: THIS IS A WORKING LUNCH MEETING

August 10, 2010
WATER CONSERVATION MEETING - 12:00 p.m.
Municipal Service Center/South - Room 4
69 Stony Circle
Santa Rosa, CA 95401

DISCUSSION ITEMS:

ITEM NO. 1: PUBLIC COMMENT

ITEM NO. 2: 2010 STATE BOARD ORDER
Staff will provide an update on how the City is complying with the conservation terms of State Board Order WR 2010-0018-DWR that was issued to the Sonoma County Water Agency in May of this year.

ITEM NO. 3: 2010 URBAN WATER MANAGEMENT PLAN
Staff will provide an update on the preparation of the City's 2010 Urban Water Management Plan, including information on the demand projections and schedule for the Plan development.

ITEM NO. 4: PROGRAM UPDATES
Staff will update the Committee on several program components, including an update on the status of the development of High-Efficiency Fixture requirements and water conservation rebate information.

ITEM NO. 5: SANTA ROSA RECYCLED WATER PILOT PROJECT
Staff will provide an update on the status of the Recycled Water Pilot Project.

Any writings or documents provided to a majority of the Water Conservation Subcommittee regarding any item on this agenda will be made available for public inspection in the City of Santa Rosa Utilities Department located at 69 Stony Circle during normal business hours.

FOR ACCESSIBLE
MEETING INFORMATION
CALL (707) 543-3930

CITY OF SANTA ROSA
BOARD OF PUBLIC UTILITIES
WATER CONSERVATION SUBCOMMITTEE

A G E N D A

NOTE: THIS IS A WORKING LUNCH MEETING

October 12, 2010
WATER CONSERVATION MEETING - 12:00 p.m.
Municipal Service Center/South - Room 4
69 Stony Circle
Santa Rosa, CA 95401

DISCUSSION ITEMS:

ITEM NO. 1: PUBLIC COMMENT

ITEM NO. 2: 2010 URBAN WATER MANAGEMENT PLAN
Staff will provide an update on the preparation of the City's 2010 Urban Water Management Plan, including information on the demand projections and schedule for the Plan development.

ITEM NO. 3: COUNTY MAIN ADULT DETENTION FACILITY
Staff will update the Committee on the progress of this retrofit project and will discuss the estimated water savings and the terms of their rebate.

ITEM NO. 4: PROGRAM UPDATES
Staff will update the Committee on several program components, including an update on the Green Exchange Program and other water conservation programs.

ITEM NO. 5: SANTA ROSA RECYCLED WATER PILOT PROJECT
Staff will provide an update on the status of the Recycled Water Pilot Project.

Any writings or documents provided to a majority of the Water Conservation Subcommittee regarding any item on this agenda will be made available for public inspection in the City of Santa Rosa Utilities Department located at 69 Stony Circle during normal business hours.

FOR ACCESSIBLE
MEETING INFORMATION
CALL (707) 543-3930

SANTA ROSA BOARD OF PUBLIC UTILITIES
REGULAR MEETING
CITY HALL, 100 SANTA ROSA AVENUE
NOVEMBER 4, 2010

1:30 P.M. (MAYOR'S CONFERENCE ROOM – ROOM 10)

1. CALL TO ORDER AND ROLL CALL

2. STATEMENTS OF ABSTENTION BY BOARD MEMBERS

3. STUDY SESSION

3.1 SYSTEMATIC WATER ASSUMPTIONS GUIDELINES

Staff will provide a review of the pros and cons of potential systematic water assumption guidelines. Staff will also provide an overview of the water use assumptions for future budget years, including a review of historical water use data and previous water use assumptions, as well as an overview of Staff's and the Budget Subcommittee's recommendation on water use assumptions for future budget years. The Board may discuss this item and give direction to staff.

3.2 ADJOURN STUDY SESSION AND RECONVENE TO OPEN SESSION IN CITY COUNCIL CHAMBER

PUBLIC COMMENTS ON AGENDA ITEMS: Except for public hearing items, comments from the public will be allowed on all agenda items at the time each item is called. Comments on public hearing items may be made when the hearing is opened.

PUBLIC COMMENTS ON NON-AGENDA ITEMS: Comments from the public on non-agenda items will be heard under Agenda Item 8.

4. APPROVAL OF MINUTES – September 2, 2010

5. STAFF BRIEFINGS

This time is reserved for staff to brief the Board on departmental issues of interest. No action will be taken on these matters except to possibly place a particular item on a future agenda for Board consideration.

5.1 DISCHARGE COMPLIANCE PROJECT UPDATE

Staff will update the Board with a slideshow of the construction of the Diffuser Project, which was recently completed at the outfall of Delta Pond.

Any writings or documents provided to a majority of the Board of Public Utilities regarding any item on this agenda will be made available for public inspection in the Utilities Department located at 69 Stony Circle during normal business hours.

6. CONSENT ITEMS

6.1 AMENDMENTS TO EXISTING MASTER AGREEMENTS FOR PROFESSIONAL SERVICES FOR CAPITAL IMPROVEMENT PROGRAM PROJECTS

The Capital Projects Engineering Division recommends that the Board of Public Utilities amend, by motion, existing Master Professional Services Agreement (MPSAs) to increase the maximum compensation limits with Coastland Civil Engineering ($3,500,000) and Winzler and Kelly ($4,500,000) for Engineering Services for Capital Improvement Program (CIP) projects and extend the term of these MPSAs for an additional five years.

7. REPORT ITEMS

7.1 REPORT – OAKMONT GOLF COURSES IRRIGATION UPDATE

Staff will update the Board on the progress of the negotiations with the Oakmont Golf Association regarding the decommissioning of the Oakmont Treatment Plant and the termination of recycled water delivery to the golf courses. The Board may discuss this item and give direction to staff.

7.2 REPORT – WATER SUPPLY UPDATE

Staff will update the Board on water supply issues. The Board may discuss this item and give direction to staff.

7.3 REPORT - 2010 URBAN WATER MANAGEMENT PLAN UPDATE

Staff will update the Board on the preparation of the 2010 Urban Water Management Plan. The Board may discuss this item and give direction to staff.

8. PUBLIC COMMENTS ON NON-AGENDA MATTERS

This is the time when any person may address the Board of Public Utilities on matters not listed on this agenda, but which are within the subject matter jurisdiction of the Board. Each speaker is allowed three minutes. To address the Board you are requested to complete the blue Speaker's Card and give it to the Board Secretary.

9. REFERRALS

10. WRITTEN COMMUNICATIONS (AND POSSIBLE BOARD DISCUSSION/ ACTION)

11. SUBCOMMITTEE REPORTS

12. BOARD MEMBER REPORTS

13. DIRECTORS REPORT

14. ADJOURNMENT OF MEETING

The Board of Public Utilities encourages public comments regarding the above items. If you are unable to attend this meeting, please feel free to call the Utilities Department at 543-4200 or forward written comments to the City of Santa Rosa, Utilities Department, 69 Stony Circle, Santa Rosa, CA 95401. All comments will be forwarded to the Board at the meeting.

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AGENDAS, PACKETS AND MINUTES

SANTA ROSA CITY COUNCIL AGENDA AND SUMMARY REPORT
REGULAR MEETING
CITY HALL, 100 SANTA ROSA AVENUE
NOVEMBER 9, 2010

2:30 P.M. (MAYOR'S CONFERENCE ROOM, ROOM 10)

1. CALL TO ORDER AND ROLL CALL

2. STUDY SESSION

2.1 2010 URBAN WATER MANAGEMENT PLAN UPDATE

Every urban water purveyor serving more than 3,000 connections or 3,000 acre-feet annually is required by the State of California to prepare an Urban Water Management Plan (UWMP) every five years. Staff will review the requirements of the UWMP and provide an update on the City's 2010 UWMP preparation, including an overview of the UWMP, new UWMP requirements from legislation adopted in 2009, information on the demand projections, and the schedule for the City's 2010 UWMP development. Council may discuss this item and provide direction to staff.

3. ANNOUNCEMENT OF CLOSED SESSION ITEM(S) AND ADJOURNMENT TO CLOSED SESSION(S) IN MAYOR'S CONFERENCE ROOM (ROOM 10, CITY HALL)

PUBLIC COMMENT ON CLOSED SESSION ITEMS

Prior to adjournment into Closed Session, the public may speak up to three minutes on items to be addressed in Closed Session.

3.1 CONFERENCE WITH LABOR NEGOTIATORS

Agency Designated Representatives: Fran Elm, Human Resources Director, Chris Sliz, Employee Relations Manager and Pat Thompson, Interim Assistant City Manager.
Employee Organizations: Santa Rosa Firefighters Association – Local 1401 (representing City Employee Unit 2); Operating Engineers Local 3, Maintenance and Utility System Operators (Employee Units 3 and 16); Santa Rosa City Employees Association (Employee Units 4, 6, 7); Santa Rosa Police Officers Association, (Employee Unit 5); Service Employees International Union Local 1021, (Employee Units 8 and 14); Public Safety Management Association (Employee Unit 9); Santa Rosa City Attorneys' Association (Employee Unit 17), Santa Rosa Management Association (Employee Unit 18).
Unrepresented Executive Management, Middle Management, and Confidential Employees (Employee Units 10, 11 and 12).

3.2 CONFERENCE WITH LEGAL COUNSEL - EXISTING LITIGATION

(Subdivision (a) of Government Code section 54956.9)
Name of case: Country Mobile Home Investments v. City of Santa Rosa, et al., Sonoma County Superior Court Case No. SVC 247980

3.3 CONFERENCE WITH LEGAL COUNSEL - ANTICIPATED LITIGATION

Significant exposure to litigation pursuant to subdivision (b)(1) of Government Code section 54956.9. One potential case.

3.4 ADJOURN CLOSED SESSION(S) AND RECONVENE TO OPEN SESSION IN THE COUNCIL CHAMBER

4:00 P.M. (CITY COUNCIL CHAMBER)

4. ANNOUNCEMENT OF ROLL CALL

5. REPORT, IF ANY, ON STUDY AND CLOSED SESSION(S)

6. PROCLAMATIONS/PRESENTATIONS

6.1 PROCLAMATION – RECOGNIZING LANDPATHS FOR CONTRIBUTIONS TO OUR COMMUNITY

PUBLIC COMMENTS ON AGENDA ITEMS: Except for public hearing items, comments from thepublic will be allowed on all agenda items at the time each item is called. Comments on public hearing items may be made when the hearing is opened.

PUBLIC COMMENTS ON NON-AGENDA ITEMS: Comments from the public on non-agenda items will be heard under Agenda Item 16.

7. STAFF BRIEFINGS -- NONE

This time is reserved for City staff to brief the Council on departmental issues of interest. No action

will be taken on these matters except to possibly place a particular item on a future agenda for Council consideration.

8. APPROVAL OF MINUTES -- NONE

9. STATEMENTS OF ABSTENTION BY COUNCILMEMBERS

10. CONSENT ITEMS

10.1 RESOLUTION -- INSTALLATION OF A SPEED TABLE ON THOMAS LAKE HARRIS DRIVE AT STONEFIELD LANE (NORTH INTERSECTION)

This resolution, recommended by the Public Works Department, authorizes the installation of a speed table on Thomas Lake Harris Drive for the purpose of traffic calming. The cost estimate for a speed table on Thomas Lake Harris Drive is $5,000. Funds are available in Capital Improvement Account P17305. The source of funds is Gas Tax. General Funds will not be used. The resolution also directs the Traffic Engineering Division staff to analyze the effectiveness of the speed table and make adjustments as necessary.

10.2 RESOLUTION -- ELNOKA VILLAGE ENVIRONMENTAL IMPACT REPORT CONTRACT AMENDMENT NO. 2

This resolution, recommended by the Community Development Department, approves Amendment No. 2 to the Agreement for Professional Services with Michael Brandman Associates for preparation of an Environmental Impact Report and Related Services for the Elnoka Village project located at 6160 Sonoma Highway. The contract amendment costs, to be paid for by the project applicant, is $42,000 plus a 15% ($6,375) payable to the City for administrative costs.

10.3 RESOLUTION -- ASSESSMENT LIEN AGAINST THE REAL PROPERTY LOCATED AT 1274 MATANZAS WAY

This resolution, recommended by the Community Development Department, confirms the special assessment lien in the amount of $11,148.73 against the real property located at 1274 Matanzas Way for violations of the City Code that remain uncorrected by the responsible party, Joseph Castro and authorizes recording of a lien and placing the assessment on the property tax roll for collection.

11. REPORT ITEMS

11.1 REPORT -- REQUEST TO APPROVE THE RELEASE OF THE HOUSING ALLOCATION PLAN (HAP) CONTRACT FOR THE WOODBRIDGE SUBDIVISION TO ACCOMMODATE THE SHORT SALE OF CALIFORNIA HOUSING FINANCE AGENCY (CALHFA) FINANCED UNITS

BACKGROUND: The Woodbridge subdivision, located in northwest Santa Rosa, consists of 149 single family homes, twenty-two (22) of which were originally restricted to first-time, low-income homebuyers (80%) of area median income, provided as part of an alternative Housing Allocation Plan (HAP) program approved by Council on June 7, 2005. From the initial approval of the Woodbridge HAP Contract in June 2005 to October 2008, the developer, Rivendale Homes, submitted numerous requests to amend the contract. The First Amendment, and most significant, required subordination of the Woodbridge HAP Contract to California Housing Finance Agency (CalHFA) financing which, following the Housing Authority's recommendation, Council approved in exchange for the creation of a Security Fund with monies deposited by the developer to be utilized by the Housing Authority in the event of a default or foreclosure. To date, three (3) affordable units have been foreclosed upon which has wiped out the Woodbridge HAP Contract, the Resale Agreement, the Deed of Trust securing the Housing Authority's in-kind loan, and exhausted the balance of the Security Fund. Presently, two (2) affordable units at risk of foreclosure are pending short sales, both of which have been approved by CalHFA. In order to accommodate pending and future short sales, the Woodbridge HAP Contract, Resale Agreement, and Promissory Note must be released, requiring consent of the Housing Authority and Council.

RECOMMENDATION: The Department of Economic Development and Housing recommends that the Council, by resolution, approve the release of the Housing Allocation Plan (HAP) Contract for the Woodbridge subdivision to accommodate the short sale of the California Housing Finance Agency (CalHFA) financed units.

5:00 P.M.

11.2 PUBLIC HEARING – MITIGATED NEGATIVE DECLARATION - SANTA ROSA CREEK TRAIL DUTTON AVENUE ACCESS PROJECT – 330 HEWETT STREET

BACKGROUND: The City of Santa Rosa is proposing to construct a 10-foot wide and approximately 200-foot long pedestrian/bicycle path connecting Dutton Avenue to the existing Santa Rosa Creek Trail. An Initial Study was conducted in compliance with the California Environmental Quality Act (CEQA) in March 2010, resulting in a mitigated negative Declaration. A Notice of Mitigated Negative Declaration was posted from July 13, 2010 to August 12, 2010 at the Sonoma County Clerk and the State Clearinghouse.

RECOMMENDATION: It is recommended by the Public Works Department that the Council, by resolution, adopt the Mitigated Negative Declaration and Mitigation Monitoring Plan for the Santa Rosa Creek Trail Dutton Avenue access project located at 330 Hewett Street.

11.3 PUBLIC HEARING – VEHICLES AND TRAFFIC CODE REVISION - COMMERCIAL LOADING ZONE PERMIT AND PERMIT FEE

BACKGROUND: On March 27, 2007, Section 11-20.020 of Title 11, Vehicles and Traffic, was amended by Ordinance 3823 to restrict use of yellow zones to the commercial loading or unloading of freight. For purposes of this section, commercial loading or unloading is allowed

for those deliveries made by commercially registered and licensed vehicles, the United States Postal Service, or vehicles with the business name permanently displayed on the sides of the vehicle, in, at a minimum, two-inch lettering.

The ordinance amendment significantly reduced the abuse of yellow zones by unauthorized users and the associated problems of unavailability of the yellow zones for deliveries and traffic congestion. However, these regulations also had the consequence of limiting access for businesses that use personal vehicles for local pick-up and deliveries.
Downtown merchants and restaurant owners have requested modification of the ordinance to facilitate business access to loading zones in situations where use of a vehicle with commercial license plates or business lettering is not practical. Following discussion with interested business owners, staff is bringing forward a recommendation to amend the City Code to allow the option of a commercial loading zone permit.

RECOMMENDATION: It is recommended by the Department of Economic Development and Housing that the Council (1) introduce the proposed ordinance to amend Section 11-20.020 of the City Code to revise yellow zone restrictions, and (2) adopt, by resolution, a Commercial Loading Zone Permit Pilot Program and permit fee of $100 for calendar year 2011.

****11.4 PUBLIC HEARING -- COUNTRY MOBILE HOME PARK CONVERSION APPEAL - 1180 FULTON ROAD**

BACKGROUND: On August 12, 2010, the Planning Commission voted 6-0-1 to adopt a resolution denying the Country Mobile Home Park Tentative Map, which proposed to convert the existing 178 unit mobile home park from a rental park to a resident ownership park by subdividing the 25.16 acre site into a one lot airspace condominium, which would allow up to 178 airspaces for residential mobile home units on one common parcel. The Planning Commission found that the proposed mobile home park conversion was not a bona fide resident conversion and not in compliance with Government Code Section 66427.5 pertaining to mobile home park conversions, as outlined in Planning Commission Resolution 11550. On August 23, 2010, the applicant filed an appeal of the Planning Commission's denial action.

RECOMMENDATION: It is recommended by the Community Development Department and the Planning Commission that the Council, by resolution, deny the appeal, and deny the proposed Tentative Map based on the proposal's lack of consistency with Government Code Section 66427.5.

12. WRITTEN COMMUNICATIONS (AND POSSIBLE COUNCIL ACTION)

12.1 BOARDS AND COMMISSIONS QUARTERLY ATTENDANCE REPORTS

12.2 LIVABLE PLACES UPDATE - SEPTEMBER 2010

12.3 LOCAL GOVERNMENT COMMISSION REPORTS - SEPTEMBER 2010

13. MAYOR'S/COUNCILMEMBERS' REPORTS

14. CITY MANAGER'S/CITY ATTORNEY'S REPORTS

15. [IF NEEDED] – ANNOUNCEMENT OF ADDITIONAL CLOSED SESSION ITEMS(S), ADJOURNMENT TO CLOSED SESSION(S), RECONVENE TO OPEN SESSION, AND ANNOUNCEMENTS, IF ANY

16. PUBLIC COMMENTS ON NON-AGENDA MATTERS

This is the time when any person may address the Council on matters not listed on this agenda, but which are within the subject matter jurisdiction of the Council. Each speaker is allowed three minutes. To address the Council you are requested to complete the yellow Speaker's Card and give it to the City Clerk.

17. ADJOURNMENT OF MEETING

*Did not appear on the preliminary agenda.
**Quasi-judicial or adjudicative action.

UPCOMING MEETINGS

November 16

Study Session – FY 2011/12 Budget Process and Calendar
Consent – Memorandum of Understanding in Support of the Retrofit Bay Area Program
Report – Adoption of MOUS for the City's Unit 3 – Maintenance and Unit 16 – Utilities Systems Operators Represented by Operating Engineers Local 3
Report – Request to Terminate the Existing Memorandum of Option to Purchase Between the Housing Authority and City of Santa Rosa for 983 Sonoma Avenue (Brookwood Homeless Shelter)
Public Hearing – Draft Density Bonus Ordinance
Public Hearing – Streamside Path Mitigated Negative Declaration

November 23 NO COUNCIL MEETING

November 30

Interviews for Personnel Board
Consent – Parking Fine Increase to Reflect new State Surcharge of $3
Report – Proposed Amendment to Sonoma County Museum Funding Agreement
Report – Highway 101 Bicycle and Pedestrian Overcrossing
Public Hearing – Taxi Cab Regulations

December 7

Council Changeover
Report – Kelly Farm Trail Easement with County Parks
Report – Voter Measure to Extend Urban Growth Boundary

December 14

Consent – Conflict of Interest Code Update
Public Hearing – Humboldt Street Bike Boulevard Mitigated Negative Declaration

December 21 NO COUNCIL MEETING

December 28 NO COUNCIL MEETING

January 4 NO COUNCIL MEETING

January 11

Public Hearing -- Zoning Code Amendments to Implement the Santa Rosa General Plan 2020 Housing Element; file no. ST10-003
Public Hearing – Santa Rosa Avenue Corridor Plan

January 18 NO COUNCIL MEETING

January 25

Public Hearing – TEFRA Multi-Family Housing Revenue Bond Issue for Acacia Lane Senior Apartments
Public Hearing – Fiscal Year 2010/11 Budget Priorities
Public Hearing – Street Furnishings Palette Plan

Pending:

Study Session – Low Impact Development
Report – Campaign Debt Retirement Ordinance
Report – Revenue Measure
Public Hearing – Bicycle and Pedestrian Master Plan

MEETINGS FOR THE WEEK OF NOVEMBER 8, 2010

November 9

Economic Development Subcommittee, 12:00 PM, City Hall, 100 Santa Rosa Avenue, Mayor's Conference Room, Room 10

November 11

Planning Commission, 4:00 PM, City Hall, 100 Santa Rosa Avenue, Council Chamber

The City of Santa Rosa does not discriminate on the basis of disability in the admissions or access to, or treatment of or employment in, its programs or activities. Disability-related aids or services, including printed information in alternate formats, to enable persons with disabilities to participate in public meetings are available by contacting the City Clerk's Office at 543-3016 one week prior to the meeting. TDD 543-3063
Meeting information can also be accessed via the internet at http://srcity.org

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SANTA ROSA BOARD OF PUBLIC UTILITIES
REGULAR MEETING
CITY HALL, 100 SANTA ROSA AVENUE
JANUARY 20, 2011

1:30 P.M. (MAYOR'S CONFERENCE ROOM – ROOM 10)

1. CALL TO ORDER AND ROLL CALL

2. STATEMENTS OF ABSTENTION BY BOARD MEMBERS

3. STUDY SESSION

   3.1 STEERING TEAM RECOMMENDATION FOLLOW UP

   On January 6, 2011, staff presented the proposals developed by the Utilities Department Steering Team that contained cost saving and revenue generating recommendations. Staff will provide follow up information in response to the Board's request. The Board may discuss this item and provide additional direction to staff.

   3.2 ADJOURN AND RECONVENE TO OPEN SESSION IN CITY COUNCIL CHAMBER

   3.3 SONOMA COUNTY WATER AGENCY BUDGET AND 2011/12 RATES

   City staff will review the calculation formula for the wholesale pass through rate which will go into effect in July 2011 for Santa Rosa water customers based on the Sonoma County Water Agency (SCWA) wholesale water rate increase. SCWA staff will review SCWA's 2010 water sales, the preliminary 2011/12 operating expenses and sub-charges and the proposed SCWA wholesale water rate increase for the fiscal year 2011/12.

PUBLIC COMMENTS ON AGENDA ITEMS: Except for public hearing items, comments from the public will be allowed on all agenda items at the time each item is called. Comments on public hearing items may be made when the hearing is opened.

PUBLIC COMMENTS ON NON-AGENDA ITEMS: Comments from the public on non-agenda items will be heard under Agenda Item 8.

4. APPROVAL OF MINUTES – November 18, 2010 and December 2, 2010

5. PRESENTATION – PG & E REBATE

6. CONSENT ITEMS – NONE

Any writings or documents provided to a majority of the Board of Public Utilities regarding any item on this agenda will be made available for public inspection in the Utilities Department located at 69 Stony Circle during normal business hours.

7. REPORT ITEMS

7.1 REPORT – WATER SUPPLY UPDATE

Staff will update the Board on water supply issues. The Board may discuss this item and give direction to staff.

7.2 REPORT – URBAN WATER MANAGEMENT PLAN UPDATE

Staff will update the Board on the preparation of the 2010 Urban Water Management Plan. The Board may discuss this item and give direction to staff.

8. PUBLIC COMMENTS ON NON-AGENDA MATTERS

This is the time when any person may address the Board of Public Utilities on matters not listed on this agenda, but which are within the subject matter jurisdiction of the Board. Each speaker is allowed three minutes. To address the Board you are requested to complete the blue Speaker's Card and give it to the Board Secretary.

9. REFERRALS

10. WRITTEN COMMUNICATIONS (AND POSSIBLE BOARD DISCUSSION/ ACTION)

11. SUBCOMMITTEE REPORTS

12. BOARD MEMBER REPORTS

13. DIRECTORS REPORT

14. ADJOURNMENT OF MEETING

The Board of Public Utilities encourages public comments regarding the above items. If you are unable to attend this meeting, please feel free to call the Utilities Department at 543-4200 or forward written comments to the City of Santa Rosa, Utilities Department, 69 Stony Circle, Santa Rosa, CA 95401. All comments will be forwarded to the Board at the meeting.

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CITY OF SANTA ROSA
BOARD OF PUBLIC UTILITIES
WATER CONSERVATION SUBCOMMITTEE

A G E N D A

March 15, 2011
WATER CONSERVATION MEETING - 2:00 p.m.
Municipal Service Center/South - Room 4
69 Stony Circle
Santa Rosa, CA 95401

DISCUSSION ITEMS:

ITEM NO. 1: PUBLIC COMMENT

ITEM NO. 2: GREEN EXCHANGE REBATE PROGRAM UPDATE

In 2007, the Water Conservation Subcommittee approved the Green Exchange Rebate Program (Program). The Program provides rebates to Santa Rosa water customers for making irrigation efficiency improvements and for removing turf and replacing it with low water use alternatives. Staff will provide an update on the Program and a recommendation on making a change to the Program for the committee's review and approval.

ITEM NO. 3: 2010 URBAN WATER MANAGEMENT PLAN

Staff will provide an update on the preparation of the City's 2010 Urban Water Management Plan (2010 Plan), including a review of the Urban Water Management Plan requirements, a review of the schedule for development of the City's 2010 Plan, and a review of the demand projections.

ITEM NO. 4: SB x7-7 WATER USE TARGET

In 2009, the State of California approved Senate Bill x7-7 (SB x7-7), which requires the State of California to reduce per capita water use statewide by 20% by the year 2020. The legislation requires each urban water purveyor serving more than 3,000 connections or 3,000 acre-feet annually to adopt a water use target as defined by SBx7-7 and to include this water use target in the 2010 Urban Water Management Plan. Staff will provide an overview of the SBx7-7 requirements, an overview of a proposed regional target for complying with SB x7-7, and a review of the recommended water use target for the City. Staff will provide a recommendation for the City's water use target and the regional target for the Committee's review and approval.

ITEM NO. 5: URBAN WATER SHORTAGE CONTINGENCY PLAN

Santa Rosa's Urban Water Shortage Contingency Plan (Shortage Plan) details our response plan to drought and other water shortage conditions. As part of the preparation of the 2010 Urban Water Management Plan, Santa Rosa is required to update our Shortage Plan. Staff will provide an update on the development of the Shortage Plan for the Committee's input and direction.

ITEM NO. 6: SANTA ROSA RECYCLED WATER PILOT PROJECT

Staff will provide an update on the status of the Recycled Water Pilot Project.

Any writings or documents provided to a majority of the Water Conservation Subcommittee regarding any item on this agenda will be made available for public inspection in the City of Santa Rosa Utilities Department located at 69 Stony Circle during normal business hours.

FOR ACCESSIBLE
MEETING INFORMATION
CALL (707) 543-3930

SANTA ROSA BOARD OF PUBLIC UTILITIES
REGULAR MEETING
CITY HALL, 100 SANTA ROSA AVENUE
MARCH 17, 2011

1:30 P.M. (MAYOR'S CONFERENCE ROOM – ROOM 10)

1. CALL TO ORDER AND ROLL CALL

2. STATEMENTS OF ABSTENTION BY BOARD MEMBERS

3. STUDY SESSION

   3.1 NPDES PERMIT RENEWAL AND REPORT OF WASTE DISCHARGE

   The City's current wastewater National Pollutant Discharge Elimination System (NPDES) Permit is due to expire on November 9, 2011. On or before March 20, 2011, the City is required to submit to the North Coast Regional Water Quality Control Board a Report of Waste Discharge as application for issuance of new wastewater discharge requirements. Staff will provide an overview of the process and Report of Waste Discharge. The Board may discuss and give direction on this matter.

   3.2 NUTRIENT OFFSET PROGRAM

   The City's current wastewater NPDES Permit requires zero discharge of certain nutrients or a reduction of nutrients in the Laguna de Santa Rosa watershed as an offset to nutrients discharged. Staff will provide an update on the status of the City's Nutrient Offset Program. The Board may discuss and give direction on this matter.

   3.3 ADJOURN STUDY SESSION AND RECONVENE TO OPEN SESSION IN CITY COUNCIL CHAMBER

PUBLIC COMMENTS ON AGENDA ITEMS: Except for public hearing items, comments from the public will be allowed on all agenda items at the time each item is called. Comments on public hearing items may be made when the hearing is opened.

PUBLIC COMMENTS ON NON-AGENDA ITEMS: Comments from the public on non-agenda items will be heard under Agenda Item 7.

4. APPROVAL OF MINUTES – March 3, 2011

5. CONSENT ITEMS – NONE

6. REPORT ITEMS

Any writings or documents provided to a majority of the Board of Public Utilities regarding any item on this agenda will be made available for public inspection in the Utilities Department located at 69 Stony Circle during normal business hours.

6.1 REPORT – URBAN WATER MANAGEMENT PLAN UPDATE

Staff will update the Board on the preparation of the 2010 Urban Water Management Plan. The Board may discuss this item and give direction to staff.

7. PUBLIC COMMENTS ON NON-AGENDA MATTERS

This is the time when any person may address the Board of Public Utilities on matters not listed on this agenda, but which are within the subject matter jurisdiction of the Board. Each speaker is allowed three minutes. To address the Board you are requested to complete the blue Speaker's Card and give it to the Board Secretary.

8. REFERRALS

9. WRITTEN COMMUNICATIONS (AND POSSIBLE BOARD DISCUSSION/ ACTION)

10. SUBCOMMITTEE REPORTS

11. BOARD MEMBER REPORTS

12. DIRECTORS REPORT

13. ADJOURNMENT OF MEETING

The Board of Public Utilities encourages public comments regarding the above items. If you are unable to attend this meeting, please feel free to call the Utilities Department at 543-4200 or forward written comments to the City of Santa Rosa, Utilities Department, 69 Stony Circle, Santa Rosa, CA 95401. All comments will be forwarded to the Board at the meeting.

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SANTA ROSA BOARD OF PUBLIC UTILITIES
REGULAR MEETING
THIS WILL BE A WORKING LUNCH MEETING
CITY HALL, 100 SANTA ROSA AVENUE
APRIL 7, 2011

PLEASE NOTE THE START TIME OF THIS MEETING IS 12:30 PM

12:30 P.M. (MAYOR'S CONFERENCE ROOM – ROOM 10)

1. CALL TO ORDER AND ROLL CALL

2. STATEMENTS OF ABSTENTION BY BOARD MEMBERS

3. STUDY SESSION

3.1 REVIEW OF UNITED STATES GEOLOGICAL SURVEY GROUNDWATER (USGS) STUDY

Utilities and Sonoma County Water Agency (SCWA) Staff will give a status update on the United States Geological Survey (USGS) Groundwater Study of the Santa Rosa Plain and will provide an overview of the Santa Rosa Plain Groundwater Management Steering Committee process and update the BPU on the Steering Committee's recommendation to the SCWA Board of Directors on April 5, 2011 to proceed with a voluntary groundwater management process in the Santa Rosa Plain Groundwater Basin. The Board may discuss and give direction on this matter.

3.2 REPORT OF INITIAL FINDINGS OF THE 2010 CCTV/SONAR TRUNK SEWER INSPECTION

The Board approved a contract for the inspection of the City's large diameter trunks and all siphons via closed circuit television (CCTV) and sonar. The inspection work has been performed and a presentation of the initial findings is ready for the Board's review. The Board may discuss this matter and give direction to staff.

3.3 2011/12 WATER, LOCAL WASTEWATER AND SUBREGIONAL OPERATION AND MAINTENANCE BUDGET REVIEW AND UTILITIES RESERVE LEVEL REVIEW

Staff will review projected revenues, proposed operations and maintenance budget requests and the resulting impacts on reserve levels with the Board. Staff will discuss the recommendations of the BPU Budget Subcommittee and Director's recommendations. Various impacts and

service reductions resulting from the recommended budgets will be presented. The Board may ask questions and give recommendations to staff.

3.4 WATER, LOCAL WASTEWATER AND SUBREGIONAL CAPITAL IMPROVEMENT PROGRAM REVIEW

Staff will review the proposed Water, Wastewater and Subregional Capital Improvement Program budgets with the Board. Staff will highlight critical and high profile projects, funding levels, established priorities and address recommendations from the BPU Budget Subcommittee. The Board may ask questions and give recommendations to staff.

3.5 ADJOURN STUDY SESSION AND RECONVENE TO OPEN SESSION IN CITY COUNCIL CHAMBER

PUBLIC COMMENTS ON AGENDA ITEMS: Except for public hearing items, comments from the public will be allowed on all agenda items at the time each item is called. Comments on public hearing items may be made when the hearing is opened.

PUBLIC COMMENTS ON NON-AGENDA ITEMS: Comments from the public on non-agenda items will be heard under Agenda Item 9.

4. APPROVAL OF MINUTES – March 17, 2011

5. STAFF BRIEFINGS

This time is reserved for staff to brief the Board on departmental issues of interest. No action will be taken on these matters except to possibly place a particular item on a future agenda for Board consideration.

5.1 UTILITIES PROJECT DEVELOPMENT OVERVIEW AND UPDATE

The Project Development Section will present an overview of the activities and projects in which it has been and is currently engaged. The departmental goals of resource efficiency, greenhouse gas (GHG) reduction and money savings are achieved through a combination of projects, policy development, initiatives, public outreach, clean renewable energy development, grant management and grant development. The Board may discuss these matters and give direction to staff.

6. CONSENT ITEMS

6.1 CONTRACT AWARD – 3RD STREET FROM B STREET TO E STREET SEWER AND WATER IMPROVEMENTS

RECOMMENDATION: The Public Works Department recommends that

the Board, by motion, award a construction contract in the total amount of $2,542,343.25 to the lowest responsive bidder, Argonaut Constructors of Santa Rosa, CA, for 3rd Street from B Street to E Street Sewer and Water Improvements and approve a construction contingency of 15 percent.

6.2 CONTRACT AWARD – OLIVE STREET SEWER & WATER IMPROVEMENTS

RECOMMEDATION: The Public Works Department recommends that the Board, by motion, award a construction contract in the total amount of $549,705.00 to Argonaut Constructors of Santa Rosa, California, for Olive Street Sewer & Water Improvements and approve a construction contingency of 15 percent.

6.3 CONTRACT AWARD - SEISMIC UPGRADES AND IMPROVEMENTS TO TANKS R2-A, R4-B AND R14 - PHASE 3

The Public Works Department recommends that the Board, by motion, award a construction contract in the total amount of $1,990,249.00 to the lowest responsive bidder, Paso Robles Tank, Inc. of Hemet, CA, for Seismic Upgrades and Improvements to tanks R2-A, R4-B and R14 – Phase 3 and approve a construction contingency of 15 percent.

7. REPORT ITEMS

7.1 REPORT – COMMUNITY WATER USE TARGET FOR 2020 AND REGIONAL ALLIANCE PARTICIPATION FOR 2010 URBAN WATER MANAGEMENT PLAN

In 2009, Senate Bill x7-7, the Water Conservation Act (SB x7-7), was signed into law. SB x7-7 set a goal of achieving a 20% reduction in statewide urban per capita water use by the year 2020 and requires urban water retailers to set an interim 2015 and a final 2020 urban per capita water use target. SB x7-7 requires urban water suppliers to increase water use efficiency while recognizing and providing credit to those urban water suppliers that have made substantial capital investments in water conservation since the 1990s.

SB x7-7 applies to those urban water retailers that are subject to the Urban Water Management Planning Act (UWMP Act). The UWMP Act requires every urban water supplier that provides water for municipal purposes to more than 3,000 connections, or supplying more than 3,000 acre-feet (AF) of water annually, to adopt and submit a plan every five years to the California Department of Water Resources (DWR). SB x7-7 extended the deadline for the submittal of the 2010 Urban Water Management Plan (UWMP) from

December 31, 2010 to July 1, 2011 to allow urban water retailers to incorporate the requirements of SB x7-7 into the 2010 UWMP.

RECOMMENDATION: It is the recommendation of the Water Conservation Subcommittee of the Board of Public Utilities and the Utilities Department that the Board of Public Utilities, by resolution, recommend that the City Council: (1)adopt 127 gallons per capita per day (gpcd) as the City's 2020 Water Use Target; (2) authorize participation in a Regional Alliance for complying with the 2020 Water Use Target; (3) and authorize the Utilities Department Director to sign agreements regarding formation and participation in the Regional Alliance.

7.2 FY 2011/12 SUBREGIONAL WATER REUSE SYSTEM OPERATIONS AND CAPITAL BUDGET REVIEW

The Subregional Wastewater Agreement (with the Cities of Cotati, Rohnert Park, Sebastopol and the South Park County Sanitation District) requires that the City annually prepare a Preliminary Operating and Debt Service Budget and Allocation of Costs for the Subregional Wastewater System. The Agreement further requires that the proposed budget and allocation of costs be reviewed by the Subregional Technical Advisory Committee, the Board of Public Utilities and the Council of the City of Santa Rosa.

RECOMMENDATION: It is recommended by Utilities Staff and the Technical Advisory Committee (TAC) that the Board of Public Utilities, by resolution, recommend that the City Council approve the Preliminary Subregional Wastewater Facility Operations Budget and Allocations of Costs for Fiscal Year 2011/12.

8. PUBLIC HEARING – At or after 5:00 pm

8.1 SUBSURFACE HYDROGEOLOGICAL EXPLORATION PROJECT

In order to investigate the usage of local groundwater resources for emergency water supplies, the City is drilling test borings to sample the hydrogeological data at various locations in the City of Santa Rosa. The proposed project contains 3 new test boring sites.

RECOMMENDATION: It is recommended by the Public Works Department, that the Board of Public Utilities, by resolution, adopt the Mitigated Negative Declaration, for the Subsurface Hydrogeological Exploration Project at Delta Pond, Stone Farm and Walker Avenue.

9. PUBLIC COMMENTS ON NON-AGENDA MATTERS

This is the time when any person may address the Board of Public Utilities on matters not listed on this agenda, but which are within the subject matter jurisdiction of the

Board. Each speaker is allowed three minutes. To address the Board you are requested to complete the blue Speaker's Card and give it to the Board Secretary.

10. REFERRALS

11. WRITTEN COMMUNICATIONS (AND POSSIBLE BOARD DISCUSSION/ ACTION)

12. SUBCOMMITTEE REPORTS

13. BOARD MEMBER REPORTS

14. DIRECTORS REPORT

15. ADJOURNMENT OF MEETING

The Board of Public Utilities encourages public comments regarding the above items. If you are unable to attend this meeting, please feel free to call the Utilities Department at 543-4200 or forward written comments to the City of Santa Rosa, Utilities Department, 69 Stony Circle, Santa Rosa, CA 95401. All comments will be forwarded to the Board at the meeting.

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CITY OF SANTA ROSA
BOARD OF PUBLIC UTILITIES
WATER CONSERVATION SUBCOMMITTEE

A G E N D A

PLEASE NOTE THE START TIME OF THIS MEETING IS 11AM

April 18, 2011
WATER CONSERVATION MEETING – 11am
Municipal Service Center/South - Room 4
69 Stony Circle
Santa Rosa, CA 95401

DISCUSSION ITEMS:

ITEM NO. 1: PUBLIC COMMENT

ITEM NO. 2: WATER-USE EFFICIENCY AWARDS
Staff will present recommendations for the 2011 Water-Use Efficiency Awards, which will be presented by the Mayor at the third City Council meeting in May, in conjunction with Water Awareness Month.

ITEM NO. 3: 2011 WATER AWARENESS MONTH
Staff will give an update on the activities planned for Water Awareness Month, including the Water Smart Expo, the School Poster Contest and the downtown markets.

ITEM NO. 4: 2010 URBAN WATER MANAGEMENT PLAN
Staff will provide an update on the preparation of the City's 2010 Urban Water Management Plan (2010 Plan), including a review of the draft of Sections One, Two and Three of the Urban Water Management Plan for the Committee's input and direction.

Any writings or documents provided to a majority of the Water Conservation Subcommittee regarding any item on this agenda will be made available for public inspection in the City of Santa Rosa Utilities Department located at 69 Stony Circle during normal business hours.

FOR ACCESSIBLE
MEETING INFORMATION
CALL (707) 543-3930

AGENDAS, PACKETS AND MINUTES

SANTA ROSA CITY COUNCIL AGENDA AND SUMMARY REPORT
REGULAR MEETING
CITY HALL, 100 SANTA ROSA AVENUE
APRIL 19, 2011

1:30 P.M. (MAYOR'S CONFERENCE ROOM, ROOM 10)

1. CALL TO ORDER AND ROLL CALL

2. INTERVIEWS FOR THE BICYCLE & PEDESTRIAN ADVISORY BOARD, HOUSING AUTHORITY/REDEVELOPMENT AGENCY

- Bicycle & Pedestrian Advisory Board - Two Applicants (1 Position)
- Housing Authority/Redevelopment Agency – One Applicant (1 Position)

3. ANNOUNCEMENT OF CLOSED SESSION ITEM(S) AND ADJOURNMENT TO CLOSED SESSION(S) IN MAYOR'S CONFERENCE ROOM (ROOM 10, CITY HALL)
PUBLIC COMMENT ON CLOSED SESSION ITEMS

Prior to adjournment into Closed Session, the public may speak up to three minutes on items to be addressed in Closed Session.

3.1 CONFERENCE WITH LABOR NEGOTIATORS

Agency Designated Representatives: Fran Elm, Human Resources Director, Chris Sliz, Employee Relations Manager and Jennifer Phillips, Assistant City Manager.
Employee Organizations: Santa Rosa Firefighters Association – Local 1401 (representing City Employee Unit 2); Operating Engineers Local 3, Maintenance and Utility System Operators (Employee Units 3 and 16); Santa Rosa City Employees Association (Employee Units 4, 6, 7); Santa Rosa Police Officers Association, (Employee Unit 5); Service Employees International Union Local 1021, (Employee Units 8 and 14); Public Safety Management Association (Employee Unit 9); Santa Rosa City Attorneys' Association (Employee Unit 17), Santa Rosa Management Association (Employee Unit 18).
Unrepresented Executive Management, Middle Management, and Confidential Employees (Employee Units 10, 11 and 12).

3.2 ADJOURN CLOSED SESSION(S) AND RECONVENE TO OPEN SESSION IN THE COUNCIL CHAMBER

2:30 P.M. (CITY COUNCIL CHAMBER)

4. STUDY SESSION

4.1 REVENUE AND BUDGET PROCESS OVERVIEW, SPRING FINANCIAL UPDATE AND REVIEW OF PROPOSED FY2011/12 BUDGET REDUCTIONS

Finance staff will present an overview of the structure of the City's funds and revenues, and will provide general information on the City's major funds. In addition, staff will update the Council on the status of the General Fund finances by presenting the Spring Financial Update and an update on Measure O funding issues for FY 2011/12. The City Manager will present an overview of the budget process followed by staff's presentation of proposed FY 2011/12 budget reduction options. These options were developed by departments and have been reviewed by department management and the City's Executive Budget Team.

Council may provide direction to staff.

4:00 P.M. (CITY COUNCIL CHAMBER)

5. ANNOUNCEMENT OF ROLL CALL

6. REPORT, IF ANY, ON STUDY AND CLOSED SESSION(S)

7. PROCLAMATIONS/PRESENTATIONS

7.1 PROCLAMATION - VOLUNTEERS IN POLICE SERVICE (VIPS)

7.2 PROCLAMATION - RUSSIAN RIVER-FRIENDLY LANDSCAPING

PUBLIC COMMENTS ON AGENDA ITEMS: Except for public hearing items, comments from the public will be allowed on all agenda items at the time each item is called. Comments on public hearing items may be made when the hearing is opened.

PUBLIC COMMENTS ON NON-AGENDA ITEMS: Comments from the public on non-agenda items will be heard under Agenda Item 15.

8. STAFF BRIEFINGS

This time is reserved for City staff to brief the Council on departmental issues of interest. No action

will be taken on these matters except to possibly place a particular item on a future agenda for Council consideration.

8.1 PHOTOVOLTAIC POWER SYSTEM UPDATE

City Staff has taken a proactive approach working within the City and within various County organizations such as the Sonoma County Fire Prevention Officers and the Redwood Empire Association of Code Officials to address industry concerns about the plan review process and fees for Photovoltaic (PV) system installations. The briefing is intended to provide a history, update and continued focus on City outreach, plan review and fees for the installation of PV systems.

9. APPROVAL OF MINUTES – Special Meeting of the Council on March 3 and 4, 2011 and March 29, 2011, Regular Meeting Minutes

10A. MAYOR'S/COUNCILMEMBERS' REPORTS

1. STATEMENTS OF ABSTENTION BY COUNCILMEMBERS

2. MAYOR /COUNCILMEMBERS' REPORTS

3. REPORTS BY MAYOR/COUNCILMEMBERS REGARDING VARIOUS AGENCY MEETINGS ATTENDED (IF NEEDED)

• Sonoma County Transportation Authority (SCTA)
• Sonoma County Water Agency (SCWA) – Water Advisory Committee
• Solid Waste Advisory Group (SWAG)

• Budget Subcommittee
Council may vote on the Budget Subcommittee recommendation to disband the Budget Subcommittee.

• Appointments to Boards and Commissions
Council may vote to make appointments to the following Boards/Commissions:

- Bicycle & Pedestrian Advisory Board (1 Position)
- Housing & Redevelopment Agency (1 Position)

• Other

10B. CITY MANAGER'S/CITY ATTORNEY'S REPORTS

11. CONSENT ITEMS

11.1 MOTION - CONTRACT AWARD – UTILITY BODY TRUCK AND EQUIPMENT

This motion, recommended by the Finance, Public Works and Utilities Departments, authorizes the Purchasing Agent to issue a purchase order, incorporating the terms of the RFQ and the bid, for two Utility Body Truck and equipment to the lowest responsive and responsible bidder, Altec Industries, Dixon, California, in the total amount of $156,795.60. Funding for this capital purchase is allocated in the Public Works Department Equipment Replacement GL Key 300106, object code 5584.

11.2 MOTION - APPROVAL OF PRELIMINARY 2011/12 SUBREGIONAL WATER REUSE SYSTEM OPERATING AND DEBT SERVICE BUDGET AND ALLOCATION OF COSTS

This motion, recommended by the Subregional Wastewater Technical Advisory Committee and the Board of Public Utilities, approves the Preliminary 2011/12 Subregional Water Reuse System Operating and Debt Service Budget and Allocation of Costs to the Subregional agencies for the purpose of notifying each of the agencies of their cost allocation for the 2011/12 year, approval of Santa Rosa's contribution to be subject to Council approval of the budget during the 2011/12 Council budget review.

11.3 RESOLUTION - APPROPRIATION AND ESTABLISHMENT OF CAPITAL IMPROVEMENT PROGRAM PROJECT KEY 17472 - SANTA ROSA AVE AND SEBASTOPOL AVE TRAFFIC SIGNAL

This resolution, recommended by the Department of Public Works, authorizes the appropriation and establishment of the Capital Improvement Program Project key 17472 – Santa Rosa Avenue and Sebastopol Avenue Traffic Signal in the amount of $330,000, source of funds being from the Redevelopment Agency.

11.4 RESOLUTION - 6TH STREET UNDERCROSSING AT HIGHWAY 101

This resolution, recommended by the Public Works Department, approves a modification to the freeway agreement, authorizes the City Manager to sign the Cooperative Agreement for design oversight for the Highway 101 at 6th Street Undercrossing project, and appropriates $200,000 of State Transportation Improvement Program funding to the 6th Street Undercrossing project.

11.5 RESOLUTION - OFFICE OF JUVENILE JUSTICE AND DELINQUENCY PREVENTION GRANT PROPOSAL

This resolution, recommended by the Department of Recreation, Parks & Community Services, directs staff to submit a proposal for the OJJDP FY 2011 Comprehensive Anti-Gang Strategies and Programs up to $750,000 over a three year term with no matching fund requirement; and upon receipt of the grant, the Council authorizes the Director of Recreation, Parks & Community Services to act as the signing authority for contracts and payments

related to the grant; and authorizes the Chief Financial Officer to create a project account entitled "OJJDP Gang Prevention Grant Program" and to fund the project account by the amount of the grant award.

11.6 ORDINANCE ADOPTION – ORDINANCE OF THE COUNCIL OF THE CITY OF SANTA ROSA REZONING 1755 SEBASTOPOL ROAD AND 1700 HAMPTON WAY TO R-3-18 MULTI-FAMILY RESIDENTIAL

This ordinance, introduced at the April 5, 2011, Regular Meeting, rezones 1755 Sebastopol Road and 1700 Hampton Way to R-3-18 Multi-Family Residential.

12. REPORT ITEMS

12.1 REPORT - 2011-2016 CITY COUNCIL GOALS, GUIDING PRINCIPLES, AND STRATEGIC OBJECTIVES

BACKGROUND: The City Council met for the City Council Strategic Goal Setting Workshop on March 3 and 4, 2011. During the Goals Session, the Council reviewed the existing Council Goals and created a revised set of Council Goals, Guiding Principles, and Strategic Objectives. The new Goals were recommended for a five-year period, which included a plan for quarterly work plan reviews as well as a yearly Council Goal review session.

RECOMMENDATION: It is recommended by the City Manager's Office that the Council, by resolution, accept the list of Council Goals, Guiding Principles, and Strategic Objectives, provide staff direction to develop work plans to implement the Goals, return to a Council meeting in August, 2011 with a final work plan, and provide to Council a first quarter status report in October, 2011.

(THE COUNCIL MAY RECESS DURING THE EVENING FOR 30 MINUTES FOR A DINNER BREAK)

5:00 P.M.

12.2 PUBLIC HEARING – MITIGATED NEGATIVE DECLARATION FOR CREEK STEWARDSHIP VOLUNTEER PROGRAM

BACKGROUND: The existing City of Santa Rosa Creek Stewardship Program provides volunteers the ability to participate in activities such as walks, bike rides, nature interpretation, tree planting, restoration work days, presentations on creek topics, and creek activities for youth programs. The proposed mitigated negative declaration analyzes the potential environmental impacts of expanding this program to use volunteers to aid in creek cleanup, vegetation removal, native plant restoration, erosion control, and minor trail maintenance along 29 specific creeks and waterways within the City of Santa Rosa.

RECOMMENDATION: It is recommended by the Utilities Department that the Council, by resolution, approve the proposed mitigated negative declaration and authorize the Utilities Department to move forward with expanding volunteer activities through the Creek Stewardship Program.

12.3 PUBLIC HEARING - COMMUNITY WATER USE TARGET FOR 2020 AND REGIONAL ALLIANCE PARTICIPATION FOR 2010 URBAN WATER MANAGEMENT PLAN

BACKGROUND: In 2009, Senate Bill x7-7, the Water Conservation Act (SB x7-7), was signed into law. SB x7-7 set a goal of achieving a 20% reduction in statewide urban per capita water use by the year 2020 and requires urban water retailers to set an interim 2015 and a final 2020 community urban per capita water use target. SB x7-7 requires urban water suppliers to increase water use efficiency while recognizing and provide credit to those urban water suppliers that have made substantial capital investments in water conservation since the 1990s.

SB x7-7 applies to those urban water retailers that are subject to the Urban Water Management Planning Act (UWMP Act). The UWMP Act requires every urban water supplier that provides water for municipal purposes to more than 3,000 connections, or supplying more than 3,000 acre-feet (AF) of water annually, to adopt and submit a plan every five years to the California Department of Water Resources (DWR). SB x7-7 extended the deadline for the submittal of the 2010 Urban Water Management Plan (UWMP) from December 31, 2010 to July 1, 2011 to allow urban water retailers to incorporate the requirements of SB x7-7 into the 2010 UWMP.

RECOMMENDATION: It is the recommendation of the Board of Public Utilities and the Utilities Department that the Council, following a public hearing: (1) adopt 127 gallons per capita per day (gpcd) as the City's Community Water Use Target for 2020; (2) authorize participation in a Regional Alliance for complying with the 2020 Water Use Target; and (3) authorize the Utilities Department Director to sign agreements regarding formation and participation in the Regional Alliance, including requiring the participants in the Regional Alliance to participate in regional water supply planning, requiring all participants to annually report their annual gpcd and their progress in obtaining their 2020 gpcd water use target, and requiring participants to report annually on the programs they are implementing to reach their 2020 gpcd water use targets.

13. WRITTEN COMMUNICATIONS (AND POSSIBLE COUNCIL ACTION)

13.1 LETTER IN SUPPORT OF SB 444/AB 579

14. [IF NEEDED] – ANNOUNCEMENT OF ADDITIONAL CLOSED SESSION ITEMS(S), ADJOURNMENT TO CLOSED SESSION(S), RECONVENE TO OPEN SESSION, AND ANNOUNCEMENTS, IF ANY

15. PUBLIC COMMENTS ON NON-AGENDA MATTERS

This is the time when any person may address the Council on matters not listed on this agenda, but which are within the subject matter jurisdiction of the Council. Each speaker is allowed three minutes. To address the Council you are requested to complete the yellow Speaker's Card and give it to the City Clerk.

16. ADJOURNMENT OF MEETING

*Did not appear on the preliminary agenda.
**Quasi-judicial or adjudicative action.

UPCOMING MEETINGS

April 26 NO COUNCIL MEETING

May 3

Study Session – Department Budget Review
Presentation – Sonoma County Senior Olympics
Public Hearing – Annual Action Plan to HUD

May 5 Special Meeting – Department Budget Review

May 10 NO COUNCIL MEETING

May 17

Staff Briefing – Water Use Efficiency and Poster Contest Awards
Report – Prop. 42 Maintenance of Effort Requirement
Report – Benefits for Laid-Off Employees
Public Hearing – 1300 Farmers Lane PCN Appeal

May 24

Staff Briefing – Water-use Efficiency Citizen and Business Awards
Staff Briefing – LAFCO Island Annexation
Report – Review of the Community Involvement Strategy for the North Santa Rosa Station Area Specific Plan
Public Hearing – Taxi Cab Regulations Ordinance

May 31 NO COUNCIL MEETING

June 7

Report – Santa Rosa Tourism Business Improvement Area Annual Report
Public Hearing – Adoption of Urban Water Management Plan

June 14, 15, 16 Public Hearings – Budget Hearings

June 21 NO COUNCIL MEETING

June 28

Pending:

Consent - Highway 101 Bicycle and Pedestrian Bridge Project Initiation Document (PID) Regional Measure 2 Safe Routes to Transit Funding Agreement
Report – Museum on the Square Easement
Report - Fir Ridge: Letter Requesting 10th Amendment to Holding Agreement
Report – Mutual Consent to Parking Charges – Santa Rosa Plaza

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Meeting information can also be accessed via the internet at **http://srcity.org**.

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CITY OF SANTA ROSA
BOARD OF PUBLIC UTILITIES
WATER CONSERVATION SUBCOMMITTEE

A G E N D A

PLEASE NOTE THE START TIME OF THIS MEETING IS 1PM

April 28, 2011
WATER CONSERVATION MEETING – 1pm
Municipal Service Center/South - Room 4
69 Stony Circle
Santa Rosa, CA 95401

DISCUSSION ITEMS:

ITEM NO. 1: PUBLIC COMMENT

ITEM NO. 2: 2010 URBAN WATER MANAGEMENT PLAN
Staff will provide an update on the preparation of the City's 2010 Urban Water Management Plan (2010 Plan), including a review of the draft of Section 6 of the Urban Water Management Plan for the Committee's input and direction.

Any writings or documents provided to a majority of the Water Conservation Subcommittee regarding any item on this agenda will be made available for public inspection in the City of Santa Rosa Utilities Department located at 69 Stony Circle during normal business hours.

FOR ACCESSIBLE
MEETING INFORMATION
CALL (707) 543-3930

CITY OF SANTA ROSA
BOARD OF PUBLIC UTILITIES
WATER CONSERVATION SUBCOMMITTEE

A G E N D A

PLEASE NOTE THE START TIME OF THIS MEETING IS 11AM

May 18, 2011
WATER CONSERVATION MEETING – 11am
Municipal Service Center/South - Room 4
69 Stony Circle
Santa Rosa, CA 95401

DISCUSSION ITEMS:

ITEM NO. 1: PUBLIC COMMENT

ITEM NO. 2: 2010 URBAN WATER MANAGEMENT PLAN
Staff will provide an update on the preparation of the City's 2010 Urban Water Management Plan (2010 Plan), including a review of the draft of Sections 4, 5 and 7 for the Committee's input and direction.

ITEM NO. 3: URBAN WATER SHORTAGE CONTINGENCY PLAN
Staff will provide an update on the preparation of the City's 2010 Urban Water Shortage Contingency Plan, including a review of the draft document, which is part of the 2010 Urban Water Management Plan, for the Committee's input and direction.

Any writings or documents provided to a majority of the Water Conservation Subcommittee regarding any item on this agenda will be made available for public inspection in the City of Santa Rosa Utilities Department located at 69 Stony Circle during normal business hours.

FOR ACCESSIBLE
MEETING INFORMATION
CALL (707) 543-3930

SANTA ROSA BOARD OF PUBLIC UTILITIES
REGULAR MEETING
CITY HALL, 100 SANTA ROSA AVENUE
MAY 19, 2011

1:30 P.M. (CITY COUNCIL CHAMBER)

1. CALL TO ORDER AND ROLL CALL

2. STATEMENTS OF ABSTENTION BY BOARD MEMBERS

3. STUDY SESSION - NONE

PUBLIC COMMENTS ON AGENDA ITEMS: Except for public hearing items, comments from the public will be allowed on all agenda items at the time each item is called. Comments on public hearing items may be made when the hearing is opened.

PUBLIC COMMENTS ON NON-AGENDA ITEMS: Comments from the public on non-agenda items will be heard under Agenda Item 9.

4. APPROVAL OF MINUTES – April 21, 2011

5. STAFF BRIEFINGS - NONE

6. CONSENT ITEMS

6.1 PROPOSED AMENDMENT TO PROFESSIONAL SERVICES AGREEMENT WITH RMC WATER AND ENVIRONMENT TO PROVIDE ENGINEERING AND ENVIRONMENTAL SERVICES FOR THE PREPARATION OF A SALT/NUTRIENT MANAGEMENT PLAN

RECOMMENDATION: Utilities Department staff and the BPU Contract Review Subcommittee recommend that the Board of Public Utilities, by motion, approve an amendment to the Professional Services Agreement with RMC Water and Environment in the amount of $56,015 to provide two additional workshops, support for Proposition 84 grant application processing, preparation of a memorandum summarizing United States Geological Survey's Groundwater Ambient Monitoring and Assessment dataset and its applicability to the project and extend the completion date to May 31, 2012.

6.2 CONTRACT AWARD - LAGUNA TREATMENT PLANT PRIMARY SLUDGE PUMP REPLACEMENT

RECOMMEDATION: Public Works Department staff recommend that the

Board, by motion, award a construction contract in the total amount of $750,993.00 to the lowest responsive bidder, Stiles Construction Company of Windsor, CA, for Laguna Treatment Plant Primary Sludge Pump Replacement and approve a construction contingency of 15 percent.

6.3 BUDGET STRATEGIES: REVENUE SHORTFALL/OVERAGE

RECOMMENDATION: Utilities Department staff and the Board of Public Utilities Budget Subcommittee recommend that the Board of Public Utilities, by resolution, approve the 'Budget Strategies – Revenue Shortfall/Overage' Guidelines and begin implementation of the CIP bid savings provision.

7. REPORT ITEMS

7.1 REPORT – URBAN WATER MANAGEMENT PLAN UPDATE

Staff will update the Board on the preparation of the 2010 Urban Water Management Plan. The Board may discuss this item and give direction to staff.

8. PUBLIC HEARING

The Public Hearings listed below will both be renoticed for a later meeting. However, notice of these items was published in the Press Democrat so anyone appearing in response to the published notice will be heard.

8.1 LAGUNA TREATMENT PLANT SOUTHERN DRIVEWAY WIDENING – ADOPTION OF MITIGATED NEGATIVE DECLARATION AND APPROVAL OF THE PROJECT

The current size of the southern driveway at the Laguna Treatment Plant (LTP) is too small to accommodate the levels of traffic and size of vehicles that access the LTP on a regular and ongoing basis. The Department wishes the widen the driveway to improve vehicular access (Project) however the widening has the potential to impact adjacent wetlands and a Mitigated Negative Declaration was prepared to analyze and mitigate these impacts to a level less than signigficant.

RECOMMENDATION: It is recommended by Utilities Department staff that the Board of Public Utilities, by resolution, adopt the proposed Mitigated Negative Declaration for the Laguna Treatment Plant Driveway Widening and approve the Project.

8.2 REVISED MISCELLANEOUS FIRE PROTECTION LINE FEE

The Utilities Department staff tests fire line protection backflow prevention

devices on an annual basis as required by the California Department of Public Health. Based on staffing reduction in the next fiscal year, the Water Quality Section proposed to transfer the testing responsibility for certain fire line protection backflow devices to the property owner or responsible party. The Utilities Department recently modified the City program so that backflow prevention device testers are authorized operate certain City owned valves. The first valve on a fire line protection system is City owned.

579 of the 1,046 fire line protection devices must remain the Utilities Department's responsibility to test. Accordingly, staff recommends the elimination of the current Monthly Fire Line Protection Fee and the establishment of two monthly Fire Line Protection fees for the specific categories of fire system backflow prevention devices that the City is required to test and devices that private backflow testers will test.

The estimated reduction in fee revenue based on approval of the resolution is $28,020.

RECOMMENDATION: It is the recommendation by the Utilities Deparment that the Board of Public Utilities, by resolution, eliminate the current Fire Line Protection fee and adopt two new fees for Fire Line Protection for different types that reflect the type of backflow prevention devices on fire lines.

9. PUBLIC COMMENTS ON NON-AGENDA MATTERS

This is the time when any person may address the Board of Public Utilities on matters not listed on this agenda, but which are within the subject matter jurisdiction of the Board. Each speaker is allowed three minutes. To address the Board you are requested to complete the blue Speaker's Card and give it to the Board Secretary.

10. REFERRALS

11. WRITTEN COMMUNICATIONS (AND POSSIBLE BOARD DISCUSSION/ ACTION)

12. SUBCOMMITTEE REPORTS

13. BOARD MEMBER REPORTS

14. DIRECTORS REPORT

15. ADJOURNMENT OF MEETING

The Board of Public Utilities encourages public comments regarding the above items. If you are unable to attend this meeting, please feel free to call the Utilities Department at 543-4200 or forward written comments to the City of Santa Rosa, Utilities Department,

69 Stony Circle, Santa Rosa, CA 95401. All comments will be forwarded to the Board at the meeting.

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SANTA ROSA BOARD OF PUBLIC UTILITIES
REGULAR MEETING
CITY HALL, 100 SANTA ROSA AVENUE
JUNE 2, 2011

1:30 P.M. (CITY COUNCIL CHAMBER)

1. CALL TO ORDER AND ROLL CALL

2. STATEMENTS OF ABSTENTION BY BOARD MEMBERS

3. PRESENTATION/PROCLAMATION

PUBLIC COMMENTS ON AGENDA ITEMS: Except for public hearing items, comments from the public will be allowed on all agenda items at the time each item is called. Comments on public hearing items may be made when the hearing is opened.

PUBLIC COMMENTS ON NON-AGENDA ITEMS: Comments from the public on non-agenda items will be heard under Agenda Item 8.

4. APPROVAL OF MINUTES – May 19, 2011

5. STAFF BRIEFINGS

5.1 CITY OF SANTA ROSA PROJECT DEVELOPMENT TEAM RECEIVES TWO NATIONAL ENVIRONMENTAL AWARDS

On April 27, 2011 in Philadelphia Pennsylvania, the U.S. Department of Energy awarded the City of Santa Rosa the “Steel on the Roof” award which reflects the most amount of solar PV arrays of any of the 25 Solar America Cities. The City installed over 40 megawatts of solar energy beating out larger cities like San Jose, San Diego, Denver, Philadelphia, New York City and all others. This is the second year in a row the City has won this award.
On May 13, 2011 in Hollywood, California, Utilities Department staff member Caden Hare won the Jolly Green Giant Civic Leader Award for the City’s Fuel from Aquatic Biomass (FAB) Project. This award also included a $25,000 cash prize to help enhance the project.

6. CONSENT ITEMS

6.1 CONTRACT AWARD – BOBELAINE DRIVE & SPRING CREEK DRIVE SEWER & STORM DRAIN IMPROVEMENTS

RECOMMENDATION: The Public Works Department recommends that

the Board, by motion, award a construction contract in the total amount of $551,993.00 to Argonaut Constructors of Santa Rosa, California, for Bobelaine Drive & Spring Creek Drive Sewer & Storm Drain Improvements and approve a construction contingency of 15%.

6.2 FOURTH AMENDMENT TO THE AGREEMENT FOR DISSOLUTION OF THE SOUTH PARK COUNTY SANITATION DISTRICT AND TRANSFER TO THE CITY OF SANTA ROSA

RECOMMENDATION: The Utilities Department recommends that the Board of Public Utilities, by resolution, recommend that the City Council approve the Fourth Amendment to the Agreement for Dissolution of the South Park County Sanitation District and Transfer to the City of Santa Rosa.

6.3 CONTRACT AWARD - ROOF REPLACEMENT & WALK PADS AT LAGUNA WASTEWATER TREATMENT PLANT

RECOMMENDATION: It is recommended by the Finance and Utilities Departments that the Board, by motion, authorize the award of bid and issuance of a contract for Laguna Wastewater Treatment Plant Annex Building Roof Replacement and to add additional Walk Pads for the Chemical and Filter Building plus a 5% construction contingency to PetersenDean, Santa Rosa, California. Total amount of contract is $122,472 plus a 5% contingency.

6.4 NOMINATION AND AUTHORIZATION FOR THE SENIOR WATER RESOURCES PLANNER TO SERVE AS A MEMBER OF THE ASSOCIATION OF CALIFORNIA WATER AGENCIES (ACWA) REGION 1 BOARD OF DIRECTORS

The Utilities Department recommends that the Board, by resolution, nominate and authorize Jennifer Burke to serve as a member of the Association of California Water Agencies (ACWA) Region 1 Board.

6.5 CONTRACT AWARD - PROCTOR HEIGHTS WALKING PATHWAY

Public Works Department staff recommends that the Board, by motion, award a construction contract in the total amount of $225,457.60 to the lowest responsive bidder, Cats 4 U, Inc. of Healdsburg, CA, for Proctor Heights Walking Pathway and approve a construction contingency of 15 percent.

7. REPORT ITEMS

7.1 REPORT – 2010 URBAN WATER MANAGEMENT PLAN

The Urban Water Mangement Planning Act (UWMP) Act requires every urban water supplier that provides water for municipal purposes to more than 3,000 connections, or supplying more than 3,000 acre-feet per year (AFY) of water, to adopt and submit a plan every five years to the California Department of Water Resources (DWR). In 2009, Senate Bill x7-7, the Water Conservation Act (SB x7-7), was signed into law. SB x7-7 set a goal of achieving a 20% reduction in statewide urban per capita water use by the year 2020 and requires urban water retailers to set an interim 2015 and a final 2020 community urban per capita water use target. SB x7-7 extended the deadline for the submittal of the 2010 Urban Water Management Plan (Plan) from December 31, 2010 to July 1, 2011 to allow urban water retailers to incorporate the requirements of SB x7-7 into the 2010 Plan.

The City's 2010 Plan includes details about Santa Rosa's projected water supply and demand through 2035 during an average water year, a single dry year, and multiple dry years; current and projected recycled water use; water conservation program details; and detailed information about our regional water supply.

The 2010 Plan also includes an update to the City's Urban Water Shortage Contingency Plan (Shortage Plan), which is included in Appendix G of the 2010 Plan. The City's Shortage Plan details how the City and community would react to a reduction in water supply of up to 50%.

The Water Conservation Subcommittee of the Board met numerous times from November 2009 to May 2011 to participate in the development of the 2010 Plan and to review and approve the administrative draft of the 2010 Plan and Shortage Plan. Updates on the development of the 2010 Plan were also provided to the Board of Public Utilities at several meetings between November 2009 and May 2011. The Board will consider the update to both the 2010 Plan and the 2010 Shortage Plan.

RECOMMENDATION: It is the recommendation of the Water Conservation Subcommittee and the Utilities Department staff that the Board of Public Utilities, by resolution, recommend that the City Council adopt the 2010 Urban Water Management Plan and the 2010 Urban Water Shortage Contingency Plan, which is included as Appendix G of the 2010 Urban Water Management Plan.

8. PUBLIC COMMENTS ON NON-AGENDA MATTERS

This is the time when any person may address the Board of Public Utilities on matters not listed on this agenda, but which are within the subject matter jurisdiction of the Board. Each speaker is allowed three minutes. To address the Board you are requested to complete the blue Speaker’s Card and give it to the Board Secretary.

9. REFERRALS

10. WRITTEN COMMUNICATIONS (AND POSSIBLE BOARD DISCUSSION/ ACTION)

    10.1 May 23, 2011 - Memo from Richard A. Moshier, Director of Public Works re: Minor Contract Award – Laguna Treatment Plant Administration Building Roof Upgrade; included in packet

11. SUBCOMMITTEE REPORTS

12. BOARD MEMBER REPORTS

13. DIRECTORS REPORT

14. ADJOURNMENT TO CLOSED SESSION (MAYOR'S CONFERENCE ROOM)

    14.1 CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION Initiation of litigation pursuant to subdivision (c) of Government Code section 54956.9: one potential case

15. ADJOURN TO OPEN SESSION AND ANNOUNCEMENT OF CLOSED SESSION ACTION, IF ANY

16. ADJOURNMENT OF MEETING

The Board of Public Utilities encourages public comments regarding the above items. If you are unable to attend this meeting, please feel free to call the Utilities Department at 543-4200 or forward written comments to the City of Santa Rosa, Utilities Department, 69 Stony Circle, Santa Rosa, CA 95401. All comments will be forwarded to the Board at the meeting.

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AGENDAS, PACKETS AND MINUTES

SANTA ROSA CITY COUNCIL AGENDA AND SUMMARY REPORT
REGULAR MEETING
CITY HALL, 100 SANTA ROSA AVENUE
JUNE 14, 2011
(CONTINUING ON JUNE 15 AND 16, 2011)

4:00 P.M. (CITY COUNCIL CHAMBER)

1. CALL TO ORDER AND ROLL CALL

2. STUDY SESSION -- NONE

3. REPORT, IF ANY, ON STUDY AND CLOSED SESSION(S)

4. PROCLAMATIONS/PRESENTATIONS

4.1 PROCLAMATION - CONGRATULATING TAMAYO FAMILY FOR SMALL BUSINESS AWARD

4.2 PROCLAMATION - SHRINERS HOSPITALS SCREENING CLINIC WEEK

4.3 PROCLAMATION - NATIONAL COMMUNITY ACTION MONTH

PUBLIC COMMENTS ON AGENDA ITEMS: Except for public hearing items, comments from the public will be allowed on all agenda items at the time each item is called. Comments on public hearing items may be made when the hearing is opened.

PUBLIC COMMENTS ON NON-AGENDA ITEMS: Comments from the public on non-agenda items will be heard under Agenda Item 10.

5. STAFF BRIEFINGS -- NONE

This time is reserved for City staff to brief the Council on departmental issues of interest. No action will be taken on these matters except to possibly place a particular item on a future agenda for Council consideration.

6. APPROVAL OF MINUTES – NONE

7A. MAYOR'S/COUNCILMEMBERS' REPORTS

1. STATEMENTS OF ABSTENTION BY COUNCILMEMBERS

2. MAYOR /COUNCILMEMBERS' REPORTS

3. REPORTS BY MAYOR/COUNCILMEMBERS REGARDING VARIOUS AGENCY MEETINGS ATTENDED (IF NEEDED)

- Sonoma County Transportation Authority (SCTA)
- Sonoma County Water Agency (SCWA) – Water Advisory Committee
- Solid Waste Advisory Group (SWAG)
- Other

7B. CITY MANAGER'S/CITY ATTORNEY'S REPORTS

8. CONSENT ITEMS

8.1 MOTION - CONTRACT EXTENSION - SECURITY GUARD SERVICES

This motion, recommended by the Finance Department, awards Amendment No. 8 to Contract 8777 for a one year contract extension for security guard services to First Alarm Security & Patrol, Inc., San Jose, California, with a 4% decrease in contract unit prices, in the amount of $88,182.36. Funding for this contract extension is allocated from fiscal year 2010-11 and will be budgeted in subsequent fiscal year budgets when approved by Council under various operational Key numbers.

8.2 MOTION - CONTRACT AWARD-ANNUAL SLURRY SEAL 2011

This motion, recommended by the Public Works Department, subject to funding of the project in the 2011/12 Capital Improvement Program, awards construction Contract Number C01612, ANNUAL SLURRY SEAL 2011, in the total amount of $366,898.55 to the lowest responsible bidder, California Pavement Maintenance Company of Sacramento, California, effective July 1, 2011, and establishes a total contract amount of $403,588.41 (the original contract amount plus a 10% contingency). Funding for this project will be appropriated to project key 17014

by the 2011/12 Capital Improvement Program. Specifically, the project is to be funded by Gas Tax and Measure M. No City General Fund is to be included in this project.

8.3 RESOLUTION - APPROPRIATIONS LIMIT 2011/12 FISCAL YEAR

This resolution, recommended by the Department of Finance, adopts the Article XIIIB appropriation limit for the City of Santa Rosa at $193,782,000 for the 2011/12 fiscal year. The appropriations limit does not apply to the entire City budget but only to the appropriation of "proceeds of taxes" in the City's "general government" type funds. Fiscal year 2011/12 funds subject to this limit approximate $92 million. It is also recommended that the Council, by the same resolution, approve the use of the inflation and population factors used in the calculation of the limit for the 2011/12 fiscal year.

8.4 RESOLUTION - DEPARTMENT OF HEALTH SERVICES PREPAREDNESS GRANT PROGRAM GOVERNING BODY

This resolution, recommended by the Fire Department, authorizes the City Manager, Fire Chief and Police Chief to execute for and on behalf of the City of Santa Rosa, a public entity established under the laws of the State of California, any actions necessary for the purpose of obtaining Federal financial assistance provided by the Federal Department of Health Services and sub granted through the State of California. Grant applications submittal requiring matching funds will be limited to matching funds available within the approved budget.

9. REPORT ITEMS

9.1 REPORT – AMENDMENT OF REDEVELOPMENT AGENCY FUNDING AGREEMENTS AND BENEFIT FINDINGS

BACKGROUND: This item presents amendments to four existing funding agreements between the City of Santa Rosa and the Redevelopment Agency that would continue certain services and projects within the Gateways and Southwest Redevelopment Project Areas in 2011/2012. These actions serve to document the Fiscal Year 2011/2012 budget approvals and make associated benefit findings in each case as required by California Redevelopment Law.

RECOMMENDATION: It is recommended by the Department of Economic Development and Housing and the Public Works Department that the Council, by resolution, take the following actions subject to Council approval of the Agency's Fiscal Year 2011/12 budget:

Approve (4) amended funding agreements and make certain benefit findings for the Gateways Economic Development Programs and Administration, Gateways Neighborhood Revitalization Program, Southwest Neighborhood Revitalization Program and Southwest Leddy Avenue Sewer/Water Extension Project.

9.2 REPORT - ANNUAL REPORT ON DEVELOPMENT FEES

BACKGROUND: The City of Santa Rosa currently collects the following development fees: Capital Facilities Fee (CFF), Southeast Area Development Impact Fee (SEADIF) and Southwest Area Development Impact Fee (SWADIF). The CFF, SEADIF and SWADIF are based on the adopted policy that new development generates additional residents, traffic and storm run-off which in turn place additional cumulative burdens upon the City's infrastructure, and such development should pay its proportionate share of the cost for new or improved public facilities required to meet such burdens. Staff has analyzed the development fees and found that the purpose of each of the CFF, SEADIF and SWADIF are as originally identified and that the original nexus analysis remains valid, providing a basis for adoption of findings by the City Council.

RECOMMENDATION: It is recommended by the Public Works Department that the City Council, by resolution, adopt findings regarding the use of Southwest Area Development Impact Fees, Southeast Area Development Impact Fees and Capital Facilities Fees consistent with State law.

(THE COUNCIL MAY RECESS DURING THE EVENING FOR 30 MINUTES FOR A DINNER BREAK)

5:00 P.M.

9.3 PUBLIC HEARING - ADOPTION OF THE 2010 URBAN WATER MANAGEMENT PLAN

Staff Report Attachment: Draft 2010 Urban Water Management Plan

BACKGROUND: The Urban Water Management Planning Act (UWMP) Act requires every urban water supplier that provides water for municipal purposes to more than 3,000 connections, or supplying more than 3,000 acre-feet per year (AFY) of water, to adopt and submit a plan every five years to the California Department of Water Resources (DWR). In 2009, Senate Bill x7-7, the Water Conservation Act (SB x7-7), was signed into law. SB x7-7 set a goal of achieving a 20% reduction in statewide urban per capita water use by the year 2020 and requires urban water retailers to set an interim 2015 and a final 2020 community urban per capita water use target. SB x7-7 extended the deadline for the submittal of the 2010 Urban Water Management Plan (Plan) from December 31, 2010 to July 1, 2011 to allow urban water retailers to incorporate the requirements of SB x7-7 into the 2010 Plan.

The City's 2010 Plan includes details about Santa Rosa's projected water supply and demand through 2035 during an average water year, a single dry year, and multiple dry years; current and projected recycled water use; water conservation program details; and detailed information about our regional water supply. The 2010 Plan also includes an update to the City's Urban Water Shortage Contingency Plan (Shortage Plan), which is included in Appendix G of the 2010 Plan. The City's Shortage Plan details how the City and community would react to a reduction in water supply of up to 50%.

The Water Conservation Subcommittee of the Board met numerous times from November

2009 to May 2011 to participate in the development of the 2010 Plan and to review and approve the administrative draft of the 2010 Plan and Shortage Plan. Updates on the development of the 2010 Plan were also provided to the Board of Public Utilities at several meetings between November 2009 and May 2011. The Council will consider the update to both the 2010 Plan and the 2010 Shortage Plan.

RECOMMENDATION: It is the recommendation of the Board of Public Utilities and the Utilities Department that the City Council, by resolution, adopt the 2010 Urban Water Management Plan and the 2010 Urban Water Shortage Contingency Plan, including those changes called out in the Errata/Additional Information Sheet dated May 31, 2011 and Additional Information Sheet No. 2, dated June 7, 2011.

10. PUBLIC COMMENTS ON NON-AGENDA MATTERS

This is the time when any person may address the Council on matters not listed on this agenda, but which are within the subject matter jurisdiction of the Council. Each speaker is allowed three minutes. To address the Council you are requested to complete the yellow Speaker's Card and give it to the City Clerk.

11. CITY COUNCIL BUDGET PUBLIC HEARING (CITY COUNCIL CHAMBER)

11.1 STATEMENTS OF ABSTENTION

City Attorney Fowler will orally enter into the record all projects and budgets from which various Council members shall be abstaining due to project proximity to property owned or income received by the abstaining Council Member.

11.2 CITY MANAGER'S COMMENTS ON CITY'S PROPOSED FY 2011/12 BUDGET

City Manager Kathleen Millison will provide background information on the development of the City of Santa Rosa's proposed FY 2011/12 budget.

11.3 COUNCIL CONSIDERATION OF PROPOSED CITY BUDGET FOR FISCAL YEAR 2011/12 AND ADOPTION OF THE CITY BUDGET FOR THE COMING FISCAL YEAR (DISCUSSION WILL CONTINUE ON JUNE 15, AND JUNE 16 IF NECESSARY)

Draft FY 2011/12 Capital Improvement Program Budget

BACKGROUND: At this public hearing, the City Council will consider the City's proposed fiscal year 2011/12 budget including the proposed fiscal year 2011/12 Operations and Maintenance Budget and proposed fiscal year 2011/12 Five-Year Capital Improvement Program and will receive and consider budget reports for the City's operating departments, agencies and offices, including proposals for new and increased fees. At study sessions on May 3, 2011 and May 5, 2011, staff presented department budgets and included additional department information such as current year accomplishments, initiatives for next year, and department progress toward City Council Goals. At this public hearing, staff will present an overview of the City's proposed FY 2011/12 budget, including individual department budgets, and will review the FY2011/12 budget process.

RECOMMENDATION: It is recommended by the Department of Finance and the City Manager that the Council, by five resolutions, adopt the City's fiscal year 2011/12 budget, including the 2011/12 Operations and Maintenance Budget and 2011/12 Five-Year Capital Improvement Program.

12. WRITTEN COMMUNICATIONS (AND POSSIBLE COUNCIL ACTION)

13. ADJOURN (CONTINUE) REGULAR CITY COUNCIL MEETING TO RECONVENE AT 9:00 A.M. ON WEDNESDAY, JUNE 15, 2011 IN THE COUNCIL CHAMBER

9:00 AM, WEDNESDAY, JUNE 15, 2011, CITY COUNCIL CHAMBER

(NOTE: THE COUNCIL WILL RECESS FOR LUNCH AT AROUND 12:00, NOON, FOR APPROXIMATELY ONE HOUR)

14. ANNOUNCEMENT OF CLOSED SESSION ITEM(S) AND ADJOURNMENT TO CLOSED SESSION(S) IN MAYOR'S CONFERENCE ROOM (ROOM 10, CITY HALL)

PUBLIC COMMENT ON CLOSED SESSION ITEMS
Prior to adjournment into Closed Session, the public may speak up to three minutes on items to be addressed in Closed Session.

14.1 CONFERENCE WITH LABOR NEGOTIATORS

Agency Designated Representatives: Fran Elm, Human Resources Director, Chris Sliz, Employee Relations Manager and Jennifer Phillips, Assistant City Manager.
Employee Organizations: Santa Rosa Firefighters Association – Local 1401 (representing City Employee Unit 2); Operating Engineers Local 3, Maintenance and Utility System Operators (Employee Units 3 and 16); Santa Rosa City Employees Association (Employee Units 4, 6, 7); Santa Rosa Police Officers Association, (Employee Unit 5); Service Employees International Union Local 1021, (Employee Units 8 and 14); Public Safety Management Association (Employee Unit 9); Santa Rosa City Attorneys' Association (Employee Unit 17), Santa Rosa Management Association (Employee Unit 18).
Unrepresented Executive Management, Middle Management, and Confidential Employees (Employee Units 10, 11 and 12).

14.2 CONFERENCE WITH LEGAL COUNSEL - EXISTING LITIGATION
Subdivision (a) of Government Code section 54956.9

Name of Case: Building Industry Association of the Bay Area f/k/a Home Builders Association of Northern California, Inc. v. City of Santa Rosa, et al., Sonoma County Superior Court No.

SCV 244441

14.3 ADJOURN CLOSED SESSION(S) AND RECONVENE TO OPEN SESSION IN THE COUNCIL CHAMBER

14.4 REPORT, IF ANY, ON CLOSED SESSION(S)

15. CALL TO ORDER OF ADJOURNED REGULAR COUNCIL MEETING AND ROLL CALL

15.1 PUBLIC HEARING - FIRE DEPARTMENT PROGRAM FEE ADJUSTMENTS

BACKGROUND: The Fire Department administers several programs including the Annual Fire Permits, Development Permits and the Certified Unified Program Agency (CUPA) Permits. These programs are funded with permit, inspection and other fees established by Council resolution. The Fire Department has studied the current fees and is requesting the adjustment of two permit fees and the addition of four to the fee schedule to continue to recover program costs and effectively administer the programs. The Fire Department recommends that the Council adopt a resolution authorizing the adjustment of two fees and the addition of four permit fees which are attached to the resolution as Exhibit A.

RECOMMENDATION: This resolution, recommended by the Fire Department, authorizes the new and increased fees as set forth in the fee schedule, attached to the resolution as Exhibit A.

15.2 PUBLIC HEARING - BENNETT VALLEY MUNICIPAL GOLF COURSE GREEN FEES

BACKGROUND: This is a proposed restructuring of green fees for the Bennett Valley Municipal Golf Course that will eliminate the higher rates for non-residents and increase the cost of the annual unrestricted pass to take effect on January 1, 2012.

RECOMMENDATION: It is recommended by the Recreation, Parks and Community Services Department that City Council, by resolution, approve the proposed restructured green fees for the Bennett Valley Municipal Golf Course set forth in the Green Fee Schedule attached as Exhibit D to the Resolution, to be effective January 1, 2012.

15.3 REPORT -- MEASURE O IMPLEMENTATION PLAN CHANGE ADJUSTMENTS AND APPROVAL OF BUDGET BELOW BASELINE FUNDING LEVELS

BACKGROUND: On August 3, 2004, the City Council adopted Ordinance 3680 adding Chapter 3-26 to the Santa Rosa City Code, which imposed a special transactions and use tax. The special tax was subsequently approved as Measure O by a 2/3 majority of voters in the November 2004 election. The special tax generates revenues which are required to be split 40% - 40% - 20% and used for Police, Fire, and Gang Prevention and Intervention Programs, respectively.

In accordance with Chapter 3-26, the Council adopted a Transaction and Use Tax Implementation Plan on September 21, 2004 by Resolution No. 26069, which outlines the uses and purposes for which the special tax revenues may be used over time. The Ordinance specifies that the Plan may only be amended by six affirmative votes of the Council.

In addition, City Code Section 3-26.120(G) specifies that General Fund funding for Police Department, Fire Department, and Gang Prevention and Youth Program purposes and uses may not fall below the funding approved the budget for FY 2004/05, as adjusted annually, unless the budgets falling below the Baseline are approved with six affirmative votes of the Council.

The City of Santa Rosa's proposed FY 2011/12 budget is based on the assumption that the Police Department budget will be authorized below baseline.

RECOMMENDATION: It is the recommendation of the Police Department and the Finance Department that the City Council, by resolution, 1) amend the Transaction and Use tax Implementation Plan to delay the purchase of Police vehicles until FY 2012/13; and 2) approve General Fund funding for Police Department purposes and uses at lower levels than those in the approved budget for FY 2004/05, as adjusted annually, pursuant to City Code Section 3-26.120 (G).

15.4 CONTINUED PUBLIC HEARING – COUNCIL CONSIDERATION OF PROPOSED CITY BUDGET FOR FISCAL YEAR 2011-2012 AND ADOPTION OF CITY BUDGET FOR THE COMING FISCAL YEAR

BACKGROUND: At this public hearing, the City Council will consider the City's proposed fiscal year 2011/12 budget including the proposed fiscal year 2011/12 Operations and Maintenance Budget and proposed fiscal year 2011/12 Five-Year Capital Improvement Program and will receive and consider budget reports for the City's operating departments, agencies and offices, including proposals for new and increased fees. At study sessions on May 3, 2011 and May 5, 2011, staff presented department budgets and included additional department information such as current year accomplishments, initiatives for next year, and department progress toward City Council Goals. At this public hearing, staff will present an overview of the City's proposed FY 2011/12 budget, including individual department budgets, and will review the FY2011/12 budget process.

RECOMMENDATION: It is recommended by the Department of Finance and the City Manager that the Council, by five resolutions, adopt the City's fiscal year 2011/12 budget, including the 2011/12 Operations and Maintenance Budget and 2011/12 Five-Year Capital Improvement Program.

16. [IF NEEDED] – ANNOUNCEMENT OF ADDITIONAL CLOSED SESSION ITEM(S), ADJOURNMENT TO CLOSED SESSION(S), RECONVENE TO OPEN SESSION, AND ANNOUNCEMENTS, IF ANY

16.1 ADJOURN (CONTINUE) COUNCIL MEETING TO RECONVENE AT 9:00 A.M. ON THURSDAY, JUNE 16, 2011, IN THE COUNCIL CHAMBER

9:00 AM, THURSDAY, JUNE 16, 2011 CITY COUNCIL CHAMBER

(NOTE: THE COUNCIL WILL RECESS FOR LUNCH AT AROUND 12:00, NOON, FOR APPROXIMATELY ONE HOUR)

17. CALL TO ORDER OF ADJOURNED REGULAR COUNCIL MEETING AND ROLL CALL

18. CONTINUED PUBLIC HEARING - COUNCIL CONSIDERATION OF PROPOSED FY 2011/12 BUDGET AND ADOPTION OF BUDGET FOR COMING FISCAL YEAR.

19. ADJOURNMENT OF MEETING

*Did not appear on the preliminary agenda.
**Quasi-judicial or adjudicative action.

UPCOMING MEETINGS

June 21 NO COUNCIL MEETING

June 28

Study Session – Pension Reform Task Force Report
Report – Museum on the Square Easement, Operating Agreement and Parking Agreement
Report – Community Media Center Agreement Amendment
Public Hearing – Taxi Cab Regulations Ordinance

July 5 NO COUNCIL MEETING

July 12

Study Session – CIP
Public Hearing – Model Code Adoption – Amendments to California Green Building Standards Code

July 19

July 26

PENDING

Report - Highway 101 Bicycle and Pedestrian Bridge
Project Initiation Document (PID) Regional Measure 2
Safe Routes to Transit Funding Agreement
Report – Mutual Consent to Parking Charges – Santa Rosa Plaza

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Meeting information can also be accessed via the internet at **http://srcity.org**.

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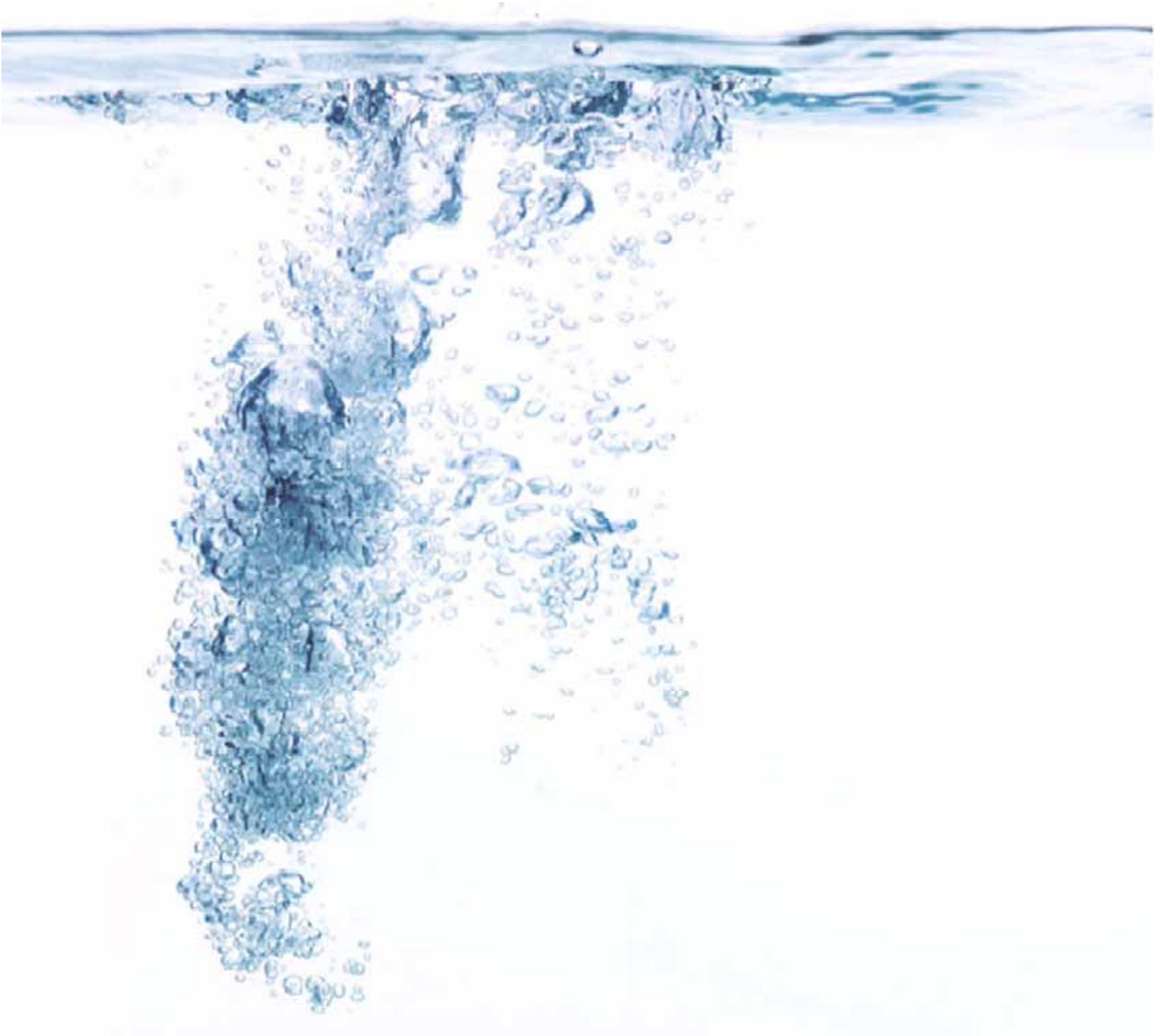
APPENDIX B

Urban Water Management Planning Act



CALIFORNIA WATER CODE DIVISION 6
PART 2.6. URBAN WATER MANAGEMENT PLANNING

All California Codes have been updated to include the 2010 Statutes.

CHAPTER 1.	GENERAL DECLARATION AND POLICY	10610-10610.4
CHAPTER 2.	DEFINITIONS	10611-10617
CHAPTER 3.	URBAN WATER MANAGEMENT PLANS	
Article 1.	General Provisions	10620-10621
Article 2.	Contents of Plans	10630-10634
Article 2.5.	Water Service Reliability	10635
Article 3.	Adoption and Implementation of Plans	10640-10645
CHAPTER 4.	MISCELLANEOUS PROVISIONS	10650-10656

WATER CODE
SECTION 10610-10610.4

10610. This part shall be known and may be cited as the "Urban Water Management Planning Act."

10610.2. (a) The Legislature finds and declares all of the following:

(1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.

(2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.

(3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.

(4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.

(5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.

(6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.

(7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.

(8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.

(9) The quality of source supplies can have a significant impact

on water management strategies and supply reliability.
(b) This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.

10610.4. The Legislature finds and declares that it is the policy of the state as follows:
(a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.
(b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.
(c) Urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies.

WATER CODE
SECTION 10611-10617

10611. Unless the context otherwise requires, the definitions of this chapter govern the construction of this part.

10611.5. "Demand management" means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.

10612. "Customer" means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.

10613. "Efficient use" means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

10614. "Person" means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of such an entity.

10615. "Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities. The components of the plan may vary according to an individual community or area's characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

10616. "Public agency" means any board, commission, county, city

and county, city, regional agency, district, or other public entity.

10616.5. "Recycled water" means the reclamation and reuse of wastewater for beneficial use.

10617. "Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

WATER CODE
SECTION 10620-10621

10620. (a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).

(b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.

(c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.

(d) (1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.

(2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.

(e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.

(f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

10621. (a) Each urban water supplier shall update its plan at least once every five years on or before December 31, in years ending in five and zero.

(b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water

supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

(c) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).

WATER CODE
SECTION 10630-10634

10630. It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied.

10631. A plan shall be adopted in accordance with this chapter that shall do all of the following:

(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:

(1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(c) (1) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

(A) An average water year.

(B) A single dry water year.

(C) Multiple dry water years.

(2) For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.

(d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

(e) (1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:

(A) Single-family residential.

(B) Multifamily.

(C) Commercial.

(D) Industrial.

(E) Institutional and governmental.

(F) Landscape.

(G) Sales to other agencies.

(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

(I) Agricultural.

(2) The water use projections shall be in the same five-year increments described in subdivision (a).

(f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:

(A) Water survey programs for single-family residential and multifamily residential customers.

(B) Residential plumbing retrofit.

(C) System water audits, leak detection, and repair.

(D) Metering with commodity rates for all new connections and retrofit of existing connections.

(E) Large landscape conservation programs and incentives.

(F) High-efficiency washing machine rebate programs.

(G) Public information programs.

(H) School education programs.

(I) Conservation programs for commercial, industrial, and institutional accounts.

(J) Wholesale agency programs.
(K) Conservation pricing.
(L) Water conservation coordinator.
(M) Water waste prohibition.
(N) Residential ultra-low-flush toilet replacement programs.
(2) A schedule of implementation for all water demand management measures proposed or described in the plan.
(3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.
(4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.
(g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:
(1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.
(2) Include a cost-benefit analysis, identifying total benefits and total costs.
(3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.
(4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.
(h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.
(i) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.
(j) For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of subdivisions (f) and (g) by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California,"

dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum.

(k) Urban water suppliers that rely upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c).

10631.1. (a) The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.

(b) It is the intent of the Legislature that the identification of projected water use for single-family and multifamily residential housing for lower income households will assist a supplier in complying with the requirement under Section 65589.7 of the Government Code to grant a priority for the provision of service to housing units affordable to lower income households.

10631.5. (a) (1) Beginning January 1, 2009, the terms of, and eligibility for, a water management grant or loan made to an urban water supplier and awarded or administered by the department, state board, or California Bay-Delta Authority or its successor agency shall be conditioned on the implementation of the water demand management measures described in Section 10631, as determined by the department pursuant to subdivision (b).

(2) For the purposes of this section, water management grants and loans include funding for programs and projects for surface water or groundwater storage, recycling, desalination, water conservation, water supply reliability, and water supply augmentation. This section does not apply to water management projects funded by the federal American Recovery and Reinvestment Act of 2009 (Public Law 111-5).

(3) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if the urban water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the water demand management measures. The supplier may request grant or loan funds to implement the water demand management measures to the extent the request is consistent with the eligibility requirements applicable to the water management funds.

(4) (A) Notwithstanding paragraph (1), the department shall

determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if an urban water supplier submits to the department for approval documentation demonstrating that a water demand management measure is not locally cost effective. If the department determines that the documentation submitted by the urban water supplier fails to demonstrate that a water demand management measure is not locally cost effective, the department shall notify the urban water supplier and the agency administering the grant or loan program within 120 days that the documentation does not satisfy the requirements for an exemption, and include in that notification a detailed statement to support the determination.

(B) For purposes of this paragraph, "not locally cost effective" means that the present value of the local benefits of implementing a water demand management measure is less than the present value of the local costs of implementing that measure.

(b) (1) The department, in consultation with the state board and the California Bay-Delta Authority or its successor agency, and after soliciting public comment regarding eligibility requirements, shall develop eligibility requirements to implement the requirement of paragraph (1) of subdivision (a). In establishing these eligibility requirements, the department shall do both of the following:

(A) Consider the conservation measures described in the Memorandum of Understanding Regarding Urban Water Conservation in California, and alternative conservation approaches that provide equal or greater water savings.

(B) Recognize the different legal, technical, fiscal, and practical roles and responsibilities of wholesale water suppliers and retail water suppliers.

(2) (A) For the purposes of this section, the department shall determine whether an urban water supplier is implementing all of the water demand management measures described in Section 10631 based on either, or a combination, of the following:

(i) Compliance on an individual basis.

(ii) Compliance on a regional basis. Regional compliance shall require participation in a regional conservation program consisting of two or more urban water suppliers that achieves the level of conservation or water efficiency savings equivalent to the amount of conservation or savings achieved if each of the participating urban water suppliers implemented the water demand management measures. The urban water supplier administering the regional program shall provide participating urban water suppliers and the department with data to demonstrate that the regional program is consistent with this clause. The department shall review the data to determine whether the urban water suppliers in the regional program are meeting the eligibility requirements.

(B) The department may require additional information for any determination pursuant to this section.

(3) The department shall not deny eligibility to an urban water supplier in compliance with the requirements of this section that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of

the agencies participating in the project or plan is not implementing all of the water demand management measures described in Section 10631.

(c) In establishing guidelines pursuant to the specific funding authorization for any water management grant or loan program subject to this section, the agency administering the grant or loan program shall include in the guidelines the eligibility requirements developed by the department pursuant to subdivision (b).

(d) Upon receipt of a water management grant or loan application by an agency administering a grant and loan program subject to this section, the agency shall request an eligibility determination from the department with respect to the requirements of this section. The department shall respond to the request within 60 days of the request.

(e) The urban water supplier may submit to the department copies of its annual reports and other relevant documents to assist the department in determining whether the urban water supplier is implementing or scheduling the implementation of water demand management activities. In addition, for urban water suppliers that are signatories to the Memorandum of Understanding Regarding Urban Water Conservation in California and submit biennial reports to the California Urban Water Conservation Council in accordance with the memorandum, the department may use these reports to assist in tracking the implementation of water demand management measures.

(f) This section shall remain in effect only until July 1, 2016, and as of that date is repealed, unless a later enacted statute, that is enacted before July 1, 2016, deletes or extends that date.

10631.7. The department, in consultation with the California Urban Water Conservation Council, shall convene an independent technical panel to provide information and recommendations to the department and the Legislature on new demand management measures, technologies, and approaches. The panel shall consist of no more than seven members, who shall be selected by the department to reflect a balanced representation of experts. The panel shall have at least one, but no more than two, representatives from each of the following: retail water suppliers, environmental organizations, the business community, wholesale water suppliers, and academia. The panel shall be convened by January 1, 2009, and shall report to the Legislature no later than January 1, 2010, and every five years thereafter. The department shall review the panel report and include in the final report to the Legislature the department's recommendations and comments regarding the panel process and the panel's recommendations.

10632. (a) The plan shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier:

(1) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions that are applicable to each stage.

(2) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic

sequence for the agency's water supply.
(3) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.
(4) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.
(5) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.
(6) Penalties or charges for excessive use, where applicable.
(7) An analysis of the impacts of each of the actions and conditions described in paragraphs (1) to (6), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.
(8) A draft water shortage contingency resolution or ordinance.
(9) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.
(b) Commencing with the urban water management plan update due December 31, 2015, for purposes of developing the water shortage contingency analysis pursuant to subdivision (a), the urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:
(a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.
(b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.
(c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.
(d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.
(e) The projected use of recycled water within the supplier's

service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

(f) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.

(g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

10634. The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

WATER CODE SECTION 10635

10635. (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

(b) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

(c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

(d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

WATER CODE
SECTION 10640-10645

10640. Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630).

The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

10641. An urban water supplier required to prepare a plan may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water demand management methods and techniques.

10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan. Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing, the plan shall be adopted as prepared or as modified after the hearing.

10643. An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.

10644. (a) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

(b) The department shall prepare and submit to the Legislature, on or before December 31, in the years ending in six and one, a report summarizing the status of the plans adopted pursuant to this part. The report prepared by the department shall identify the exemplary elements of the individual plans. The department shall provide a copy of the report to each urban water supplier that has submitted its plan to the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans submitted pursuant to this part.

(c) (1) For the purpose of identifying the exemplary elements of the individual plans, the department shall identify in the report those water demand management measures adopted and implemented by specific urban water suppliers, and identified pursuant to Section

10631, that achieve water savings significantly above the levels established by the department to meet the requirements of Section 10631.5.

(2) The department shall distribute to the panel convened pursuant to Section 10631.7 the results achieved by the implementation of those water demand management measures described in paragraph (1).

(3) The department shall make available to the public the standard the department will use to identify exemplary water demand management measures.

10645. Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

WATER CODE
SECTION 10650-10656

10650. Any actions or proceedings to attack, review, set aside, void, or annul the acts or decisions of an urban water supplier on the grounds of noncompliance with this part shall be commenced as follows:

(a) An action or proceeding alleging failure to adopt a plan shall be commenced within 18 months after that adoption is required by this part.

(b) Any action or proceeding alleging that a plan, or action taken pursuant to the plan, does not comply with this part shall be commenced within 90 days after filing of the plan or amendment thereto pursuant to Section 10644 or the taking of that action.

10651. In any action or proceeding to attack, review, set aside, void, or annul a plan, or an action taken pursuant to the plan by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.

10652. The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.

10653. The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the State Water Resources Control Board and the Public Utilities Commission, for the preparation of water management plans or conservation plans; provided, that if the State Water Resources Control Board or the Public Utilities Commission requires additional information concerning water conservation to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan prepared to meet federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.

10654. An urban water supplier may recover in its rates the costs incurred in preparing its plan and implementing the reasonable water conservation measures included in the plan. Any best water management practice that is included in the plan that is identified in the

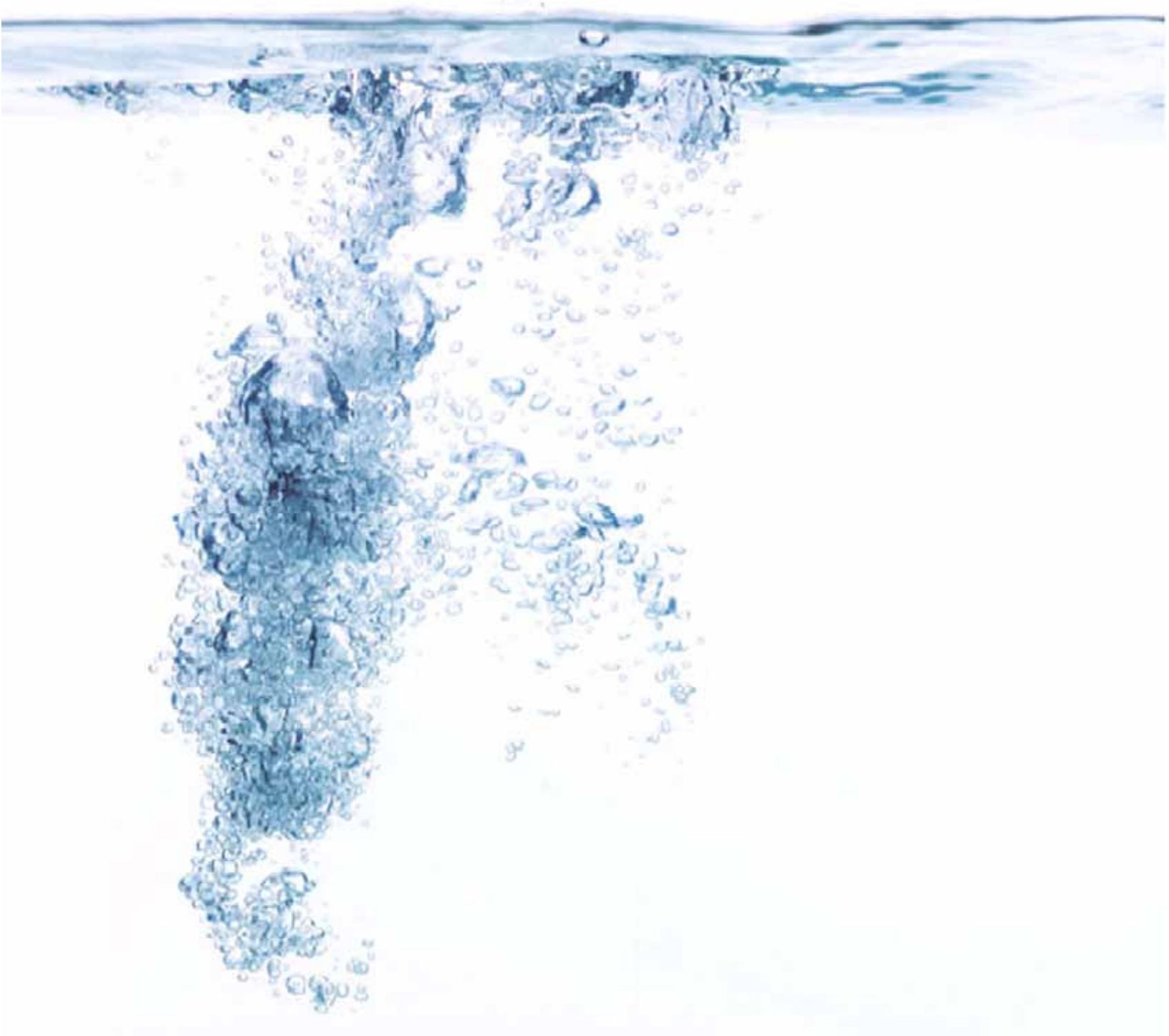
"Memorandum of Understanding Regarding Urban Water Conservation in California" is deemed to be reasonable for the purposes of this section.

10655. If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.

10656. An urban water supplier that does not prepare, adopt, and submit its urban water management plan to the department in accordance with this part, is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) or Division 26 (commencing with Section 79000), or receive drought assistance from the state until the urban water management plan is submitted pursuant to this article.

APPENDIX C

Maddaus Water Management – Final 2010 Urban Water Management Plan Water Demand Analysis and Water Conservation Measure Update – November 12, 2010



City of Santa Rosa

2010 Urban Water Management Plan Water Demand Analysis and Water Conservation Measures Update

November 12, 2010

MADDAUS WATER MANAGEMENT

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1. EXECUTIVE SUMMARY

1.1 Introduction

The 2010 Urban Water Management Plan demand and conservation technical analysis was conducted by Maddaus Water Management (MWM) for the City of Santa Rosa. The purpose of the analysis was to:

1. Calculate a demand forecast for the year 2010 to 2035.
2. Calculate the range of conservation costs and savings for the year 2010 to 2035. This effort included:
    - Incorporate activity from current conservation measures for the year 2005 and 2009 into the DSS model.
    - Evaluate up to three new conservation measures that will reduce future water demand.
    - Estimate the costs and water savings of these measures.
    - Combine the measures into increasingly more aggressive programs and evaluate the costs and water savings of these programs.

1.2 Long-Term Demand and Conservation Program Analysis Results

The project for the Sonoma County Water Agency (SCWA) contractors included two main parts, (1) create a demand and conservation analysis for 2010 to 2035, and (2) evaluate conservation savings potential for the years 2010 to 2035 with a variety of different measures and conservation programs.

The first step in the analysis was to review and analyze historical water use production and billing data. For most contractors, the billing data was provided for the years 2000 to 2009 (a few contractors had data back to 1995 and one contractor has new meters, so data is only available after the year 2006). The data was graphically analyzed and discussed with the individual contractors. The historical water use, along with the selected population and employment projections, were used to create a demand forecast for the year 2010 to 2035.

Once the demands were completed, the conservation measures were analyzed for a total of 31 measures. The conservation analysis included all the measures from the 2005 conservation study that MWM completed for the SCWA contractors, along with up to three new measures for each contractor. The following important assumptions about the conservation measures were included in this analysis:

1. Due to increased regulations and additional research and analysis on conservation measures, conservation measures Tier 2-8 (Reduced Connection Fees), Tier 2-9 (Synthetic Turf Rebate) and Tier 2-11 (Dishwasher Rebate) were removed from all programs at the request of the contractors.
2. No modifications to costs or savings assumptions were made to any of the Tier One and Tier Two Measures. To comply with new regulations and ordinances, minimal changes were made to the New Development measures ND-1 to ND-8.
3. The table of the new measures for each contractor is listed in Section 5.1. An analysis of the new state law SB 407 was included for all contractors.
4. New development ordinances were updated to reflect new local ordinances, the Model Water Efficient Landscape Ordinance, and the Cal Green building code.

Table ES-1, ES-2 and ES-3 and Figure ES-1 show the water demands and conservation savings for the years 2010 to 2035. The Plumbing Code includes the new California State Law requiring High Efficiency Toilets and High Efficiency Urinals by 2014.

Table ES-1
Conservation Measures

City of Santa Rosa Conservation Measures in each Program						
Measure Name	**Program Existing**	**Program Existing & New**	**Program Tier 1**	**Program Tier 1 & Tier 2**	**Program Tier 1 & ND**	**Program Tier 1 & Tier 2 & ND**
CUWCC #1a - Residential Water Surveys - Interior	✓	✓	✓	✓	✓	✓
CUWCC #1b - Residential Water Surveys - Outdoor	✓	✓	✓	✓	✓	✓
CUWCC #2 - Plumbing Retrofit Kits	✓	✓	✓	✓	✓	✓
CUWCC #5a - Large Landscape Water Budgets	✓	✓	✓	✓	✓	✓
CUWCC #5b - Large Landscape Audits	✓	✓	✓	✓	✓	✓
CUWCC #6 - Washer Rebates	✓	✓	✓	✓	✓	✓
CUWCC #7 - Residential Public Education	✓	✓	✓	✓	✓	✓
CUWCC #9 - Commercial Water Audits	✓	✓	✓	✓	✓	✓
Tier 2 - 1 Rain Sensor Retrofit	✓	✓		✓		✓
Tier 2 - 2 Cash for Grass	✓	✓		✓		✓
Tier 2 - 3 Financial Incentives for Being Below Water Budget	✓	✓		✓		✓
Tier 2 - 4 Irrigation Meter Rebates	✓	✓		✓		✓
Tier 2 - 5a Smart Irrigation Controller Rebates - RSF	✓	✓		✓		✓
Tier 2 - 5b Smart Irrigation Controller Rebates - RMF, CII, IRR				✓		✓
Tier 2 - 6 Financial Incentives/Rebates for Irrigation Upgrades	✓	✓		✓		✓
Tier 2 - 7 Hotel Retrofit	*	*		✓		✓
Tier 2 - 10 High Efficiency Toilets	✓	✓		✓		✓
Tier 2 - 12 CII Rebates - Replace Inefficient Water Using Equipment	*	*		✓		✓
Tier 2 - 13 New Commercial Urinals	*	*		✓		✓
Tier 2 - ND1 Rain Sensor Retrofit	✓	✓			✓	✓
Tier 2 - ND2 Smart Irrigation Controller	✓	✓			✓	✓
Tier 2 - ND3 High Efficiency Toilets	✓	✓			✓	✓
Tier 2 - ND4 Dishwasher New Efficient					✓	✓
Tier 2 - ND5 Clothes Washing Machine Requirement					✓	✓
Tier 2 - ND6 Hot Water on Demand					✓	✓
Tier 2 - ND7 High Efficiency Faucets and Showerheads					✓	✓
Tier 2 - ND8 Landscape and Irrigation Requirements	✓	✓			✓	✓
SB 407		✓				
Rainwater Harvesting		✓				
Grey water System Rebate		✓				
*City of Santa Rosa offers these programs but savings are accounted for by other measures.						
Tier 2-7 and Tier 2-12 are accounted for by savings from CUWCC #9.						
Tier 2-13 is a new program and the savings are acounted for by the Cal Green building code starting in 2011.						

NOTE – Due to increased regulations and additional research and analysis, conservation measures Tier 2-8, Tier 2-9 and Tier 2-11 are out of date and were removed from analysis at the request of all the contractors.

Figure ES-1
Long Term Demands with Conservation Programs

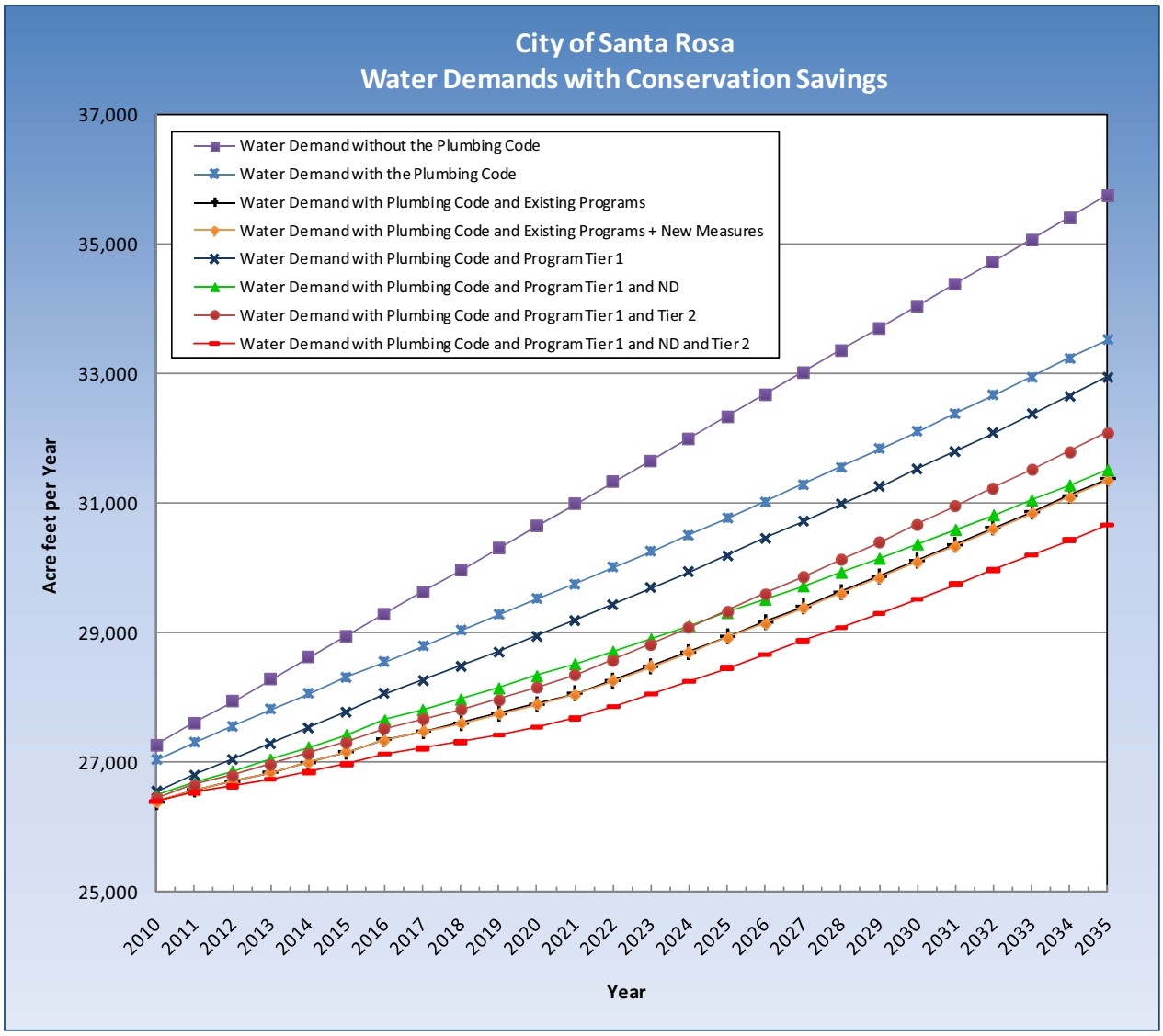


Table ES-2
Water Demand Projections

City of Santa Rosa Water Demand with Conservation Program Savings						
Water Demand with Plumbing Code and Conservation Program Savings (AFY)	**2010**	**2015**	**2020**	**2025**	**2030**	**2035**
Water Demand without the Plumbing Code	27,262	28,947	30,636	32,332	34,032	35,738
Water Demand with the Plumbing Code	27,030	28,303	29,513	30,758	32,100	33,518
Water Demand with Plumbing Code and Existing Programs	26,385	27,155	27,899	28,929	30,110	31,372
Water Demand with Plumbing Code and Existing Programs + New Measures	26,385	27,150	27,888	28,913	30,087	31,349
Water Demand with Plumbing Code and Program Tier 1	26,542	27,770	28,946	30,192	31,522	32,937
Water Demand with Plumbing Code and Program Tier 1 and ND	26,481	27,422	28,327	29,303	30,362	31,506
Water Demand with Plumbing Code and Program Tier 1 and Tier 2	26,446	27,313	28,157	29,336	30,671	32,088
Water Demand with Plumbing Code and Program Tier 1 and ND and Tier 2	26,385	26,966	27,540	28,449	29,514	30,659

Table ES-3
Economic Analysis of Alternative Programs

City of Santa Rosa Comparison of Conservation Program Costs and Savings									
Conservation Program	Water Utility Benefit-Cost Ratio	Community Benefit-Cost Ratio	2035 Water Savings (AFY)	2035 Indoor Water Savings (AFY)	2035 Outdoor Water Savings (AFY)	Total Water Savings as a % of Total Production in 2035*	30 Year Present Value of Water Utility Costs ($1,000)	Total Utility Cost for Five Years 2011-2015 ($1,000)	Utility Cost of Water Saved ($/AF)
Existing Program	2.17	0.46	2,146	331	1815	6.40%	$9,698	$2,978	$225
Existing Program + New Measures	2.13	0.46	2,169	331	1838	6.47%	$9,961	$3,073	$229
Tier One	1.50	0.46	580	269	311	1.73%	$5,634	$882	$352
Tier One + Tier Two	1.57	0.60	1,430	348	1082	4.27%	$10,748	$3,867	$317
Tier One + New Development	2.64	0.90	2,012	854	1157	6.00%	$6,530	$1,202	$183
Tier One + Tier Two + New Development	2.21	0.55	2,859	933	1926	8.53%	$11,644	$4,187	$218

2. INTRODUCTION AND PURPOSE

The purpose of this report is to present an overview of the demand and conservation evaluation process which has been completed for the City of Santa Rosa (City). The goal was to develop forecasts of demand and conservation savings for the 2010 Urban Water Management Plan.

The City of Santa Rosa has a current water conservation program. This report evaluates whether expanding existing efforts is a cost-effective way to meet future water needs.

The conservation measures and programs were analyzed using the Least Cost Planning Water Demand Management Decision Support System (DSS Model). In this report demand management and water conservation are used interchangeably. The evaluation includes measures directed at existing accounts as well as new development measures to make new residential and business customers more water efficient. Six programs were provided to help evaluate the net effect of running multiple measures together over time. Assumptions and results for each of the 31 individual measures and six programs will be described in detail in this report.

2.1 Contents

This report provides a general overview for the methodology, assumptions, and results for the demand forecast and conservation analysis. The following information is included in this report and is discussed in individual sections below:

- Overview of evaluation process
- Baseline water demands with and without the plumbing code
- Comparison of individual conservation measures
- Results of the conservation analysis
- Conclusions
- Appendix A: Assumptions for the Conservation Measures Evaluated

- Appendix B: Water Production and Billing Data Graphs for all Customer Categories

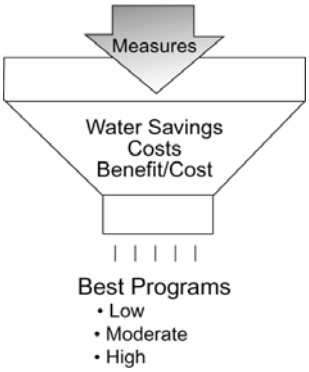
3. OVERVIEW OF EVALUATION PROCESS

Long Term Demand and Conservation Evaluation Process

During the evaluation process, water demand and savings were estimated. Benefits and costs were compared in a formal present value analysis and conclusions were drawn about which measures produce cost-effective water savings. The measure costs were previously developed by MWM and the contractors as part of the 2005 conservation study MWM completed for the SCWA contractors. This process can be thought of as an economic screening process, shown in Figure 1. Packaging the best measures into alternative programs allows City of Santa Rosa to consider what level of conservation implementation is appropriate.

Figure 1

Evaluation Process



Benefit-cost analysis has been used by many water agencies to evaluate and help select a water conservation measure best suited to local conditions. This analysis requires a locale-specific set of data, such as historical water consumption patterns by customer class, population projections, age of housing stock, and prior conservation efforts.

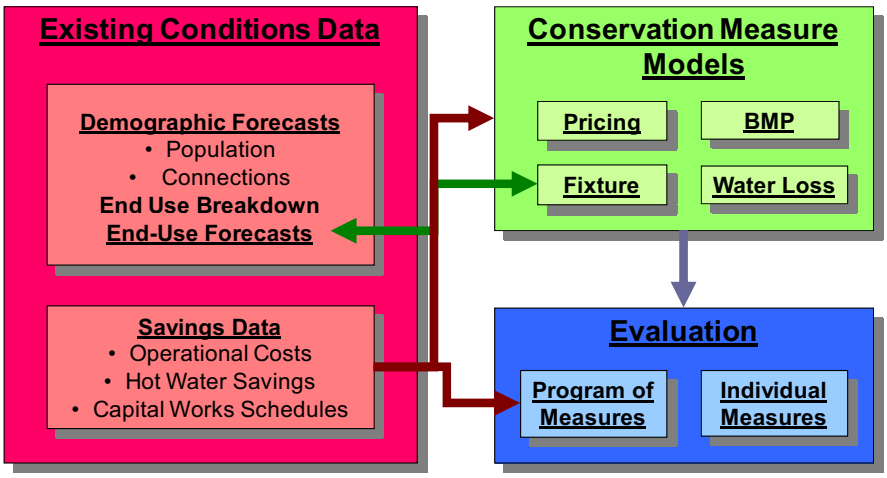
The following ten steps were used to implement the methodology by expanding upon the same DSS Model used to prepare the demand projections.

1. **Generate water use projections with and without the state and national plumbing code**. Projections cover each key customer category and are broken down into indoor and outdoor end uses. Evaluate the impact of the plumbing code changes arising from the 1992 and 2005 Federal Energy Policy Act. The plumbing code also includes fixture changes that will result from the State of California plumbing code which requires only high efficiency toilets and high efficiency urinals be sold in the state after the year 2014.
2. **Evaluate previous conservation measures and up to three new measures** to identify those that are applicable to the service area. Develop appropriate unit water savings and costs for each measure.
3. **Estimate the affected customers (or number of accounts) for each conservation measure** by dividing the measure's projected customers (or accounts) that implement the measure by the total service area customers (accounts). This factor is called the market penetration or installation rate.

4. **Estimate total annual average day water savings.** The water savings are computed by multiplying unit water savings, per measure, by the market saturation or installation rate (i.e. 10% to 90% of accounts), and then multiplying by the number of units in the service area (such as dwelling units) targeted by a particular measure. The indoor and outdoor water savings were also calculated.
5. **Identify benefits to the water agency** including potential reduced water purchases from SCWA, calculated as the wholesale water rate and delivery cost per acre-foot for each contractor with an escalator based on historical water rates and Consumer Price Index (CPI).
6. **Quantify total benefits for each year** in the planning period by multiplying average water savings for each measure by the computed value of the benefits.
7. **Determine initial and annual costs to implement the measures** based upon current conservation program data, local experience, and the costs of goods, services, and labor in the community. This is multiplied by the number of units participating each year and then added to overall administration and promotion costs to arrive at a total measure cost, which may be spread over a number of years. For this project the costs for all measures were used from the 2005 study, except for the three new measures selected by each contractor which had all new parameters developed.
8. **Compare costs of measures** by computing the present value of costs and costs of water saved over the planning period.
9. **Compile six programmatic packages** or programs containing various new and existing measures.
10. **Evaluate the six programs for water savings and cost-effectiveness** and identify the point of diminishing returns from further investments in conservation.

For conservation measure evaluation, the DSS Model performs economic analysis by using net present value and benefit-to-cost ratio as economic indicators. The benefit cost analysis is performed from various perspectives including the utility and community (community perspective equates to the utility plus customer). Figure 2 shows the structure of the model. Results are presented in subsequent sections.

Figure 2
Structure of the DSS Model



4. WATER DEMANDS WITH AND WITHOUT PLUMBING CODE

4.1 Future Population and Employment Projections

Description of Population and Employment Forecasts

There are generally three main sources of population and employment projections used to generate future water demands for the 2010 Urban Water Management Plans.

Available Demographic Projections

- Local General Plan (population and employment) – Typically these plans, depending upon when they were published, have a population and jobs forecast for 2030 and build out.
- Association of Bay Area Governments (ABAG) (population and employment) - ABAG recently published a new projections report in 2009 that includes population and employment estimates for each city in the Bay Area. This report provides estimates for 2000, 2005, 2010, 2015, 2020, 2025, 2030 and 2035. ABAG publishes demand projections every two years. The previous DSS Model projections and ABAG Projections for 2005, 2007, and 2009 were reviewed to determine the most appropriate data set to use in this DSS Model update.
- Water Supply Assessments

At the City of Santa Rosa's request, the population and employment projections were based on the 2035 Santa Rosa General Plan data as shown in Figure 3 and 4 and Table 1 and 2, to be consistent with the City's planning projections. The values shown in the "Selected" column were used to create the demand projections.

Figure 3
Population Projections

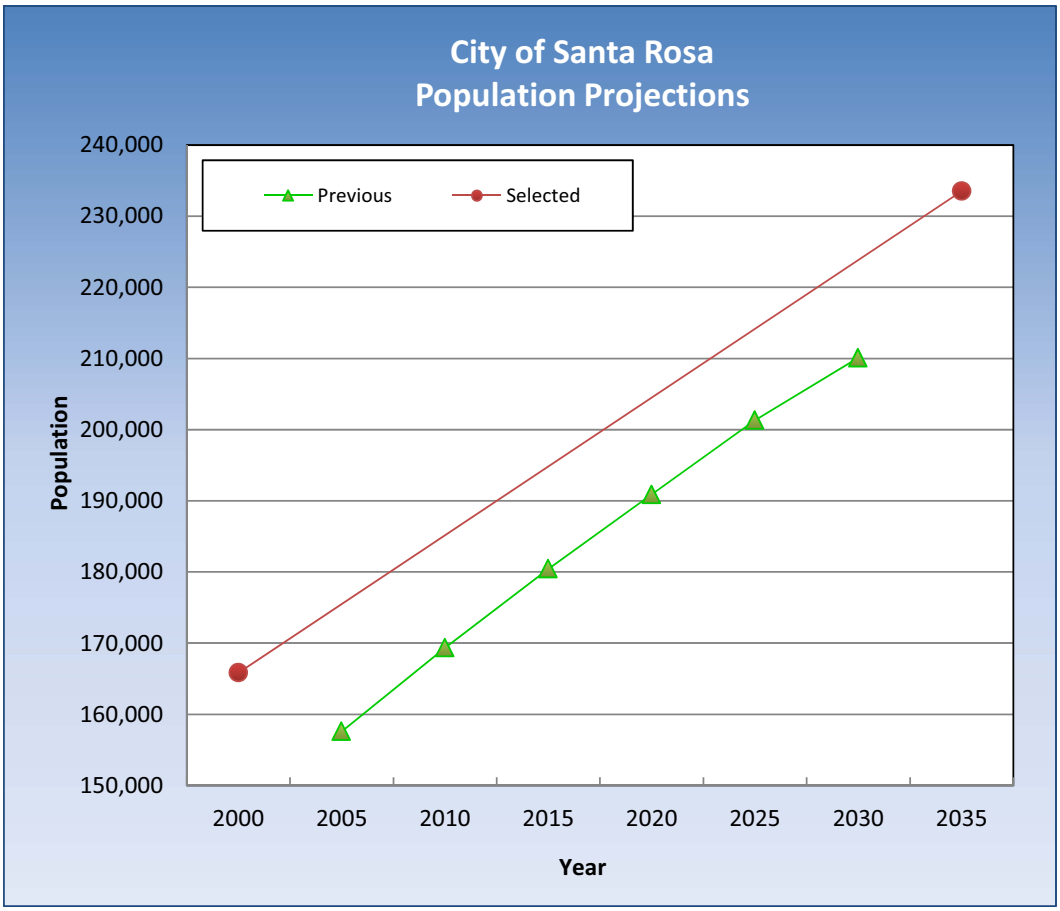


Table 1
Table of Population Projections

City of Santa Rosa Population Projections		
Year	**Previous[1]**	**Selected[2]**
2000		165,850
2005	157,601	
2010	169,346	
2015	180,438	
2020	190,878	
2025	201,318	
2030	210,105	
2035		233,520

Notes:

1) DSS Model data based on the Santa Rosa General Plan

2) Based on the Santa Rosa General Plan 2035 page 4-3 , table 4-2 Urban Growth Boundary

Figure 4
Employment Projections

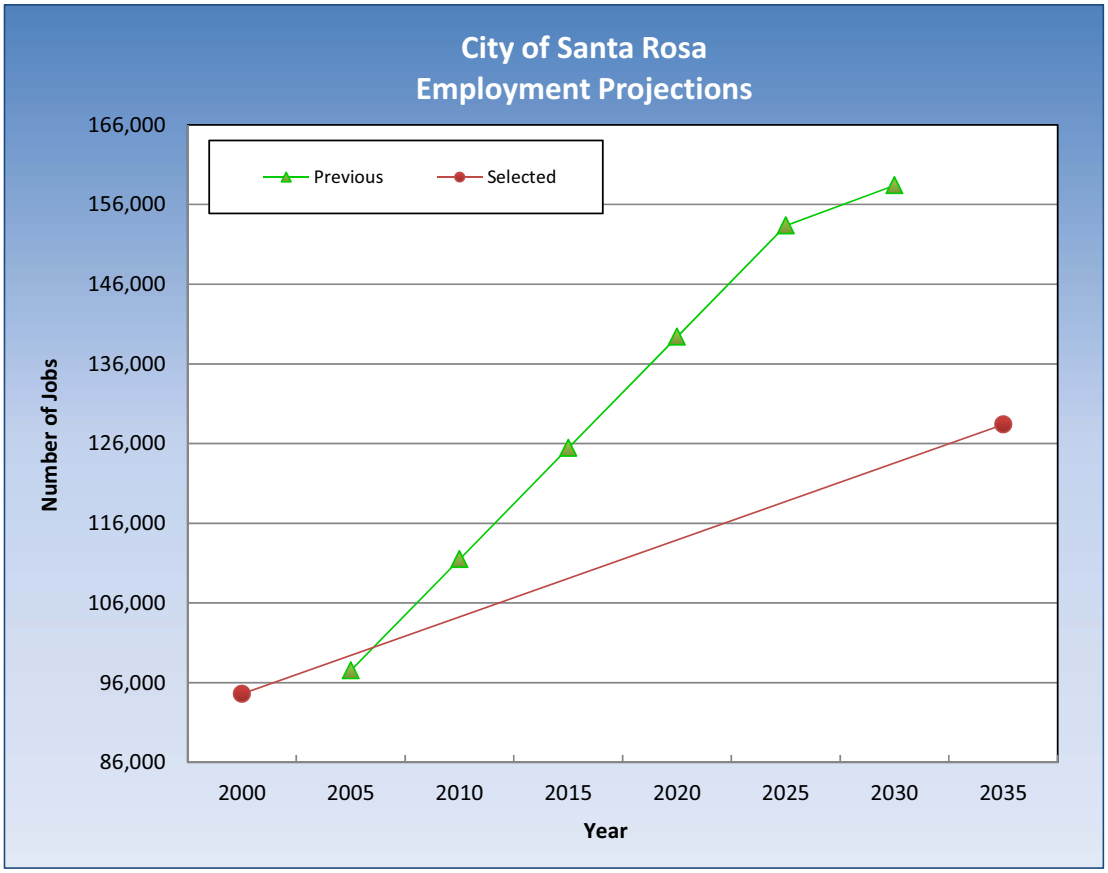


Table 2
Table of Employment Projections

City of Santa Rosa Employment Projections		
Year	Previous[1]	Selected[2,3]
2000		94,600
2005	97,526	
2010	111,484	
2015	125,442	
2020	139,400	
2025	153,358	
2030	158,400	
2035		128,400

Notes:

1) DSS Model data based on the Santa Rosa General Plan

2) Based on the Santa Rosa General Plan 2035 page 4-5, table 4-7

3) From Santa Rosa General Plan 2035 page 4-5, table 4-7 in 2007 employment was 97,980

4.2 Water Use and Demographic Data Inputs to the Model

Description of "Water Use Data Input Sheet"

Figure 5 is a two-page print out of an Excel spreadsheet. The purpose of this "Water Use Data Input Sheet" is to gather and document basic information about the individual service area. The data shown on the "Water Use Data Input Sheet" can be broken into two main categories: (a) current water use data and (b) demographic data. Each area is broken out below and helps to provide some basic definitions and assumptions.

(a) Water Use Data

- *Model Start Year* – This is the starting year for the analysis. For this project, the start year for the model is 2005. The selection of 2005 as a model start year allowed the historical conservation efforts to be included for the past 5 years (2005 to 2009). The DSS Model includes 30 years of data projecting information until the year 2035.
- *Base Year for Future Water Factors* - Based on an analysis of historical water billing data, each contractor selected a year or average of multiple years that is representative of current water use and used as a base year demand factor for developing future water use projections. The year(s) was chosen by the contractors for the following reasons:
    1. The selected years shows less of an effect of the recession. For all contractors the years 2008 and 2009 show a dip in water demand in many areas due to reduction in economic activity.
    2. The years selected had relatively "normal" climate conditions – i.e. not a drought or excessively wet year, so no significant weather adjustments were necessary. For all contractors the years 2008 and 2009 were affected by drought conditions. The water billing or production data was not weather normalized for this analysis.
    3. Many contractors elected to average a few years of data for the analysis. Some contractors selected an individual year as they felt it was representative in terms of weather, vacancy, and customer water use for demand projection purposes.
    4. No additional adjustment factors were added other than the "new single family home category" for three of the contractors (City of Santa Rosa, Valley of the Moon and North Marin Water District). The adjustment was made based on analysis of actual data which showed an increase in water use for homes built since 2000.
- *Average gal/day/acct*- This is the amount of water in gallons that is used per day, per account.
- *Indoor/outdoor water use*- This is the amount of water per account split into the percent that is used indoors and outdoors.
- *Consumption by customer class*- This shows the annual amount of water used for an entire calendar year, broken down by customer class (Single Family, Multi Family, Commercial, Irrigation)
- *Provision for New Single Family Account Use*- For selected agencies, and upon their specific request, a new category was created to model water use of new single family homes. This value is held constant in the baseline projection and not subject to plumbing codes. All new homes include the plumbing code change in the State of California that requires HETs in 2014. The new homes will also be affected by Cal Green building code after July 1, 2011 and required to install efficient fixtures for the toilets, low flow shower heads and faucets. The effects from Cal Green were run as a conservation measure as they were not in effect at the time of this analysis.
- *Unaccounted for water (UFW) also known as Non Revenue Water* – This is the sum of all water input to system that is not billed (metered and unmetered) water consumption, including apparent (metering accuracy) and real losses. The values were calculated by taking the difference

between the amount of water produced and the amount of water that was sold. Data provided by the agency was used, if provided, unless UFW was less than 7 percent, in which case 7 percent was used.

- *Water Produced*– This is the total amount of potable water produced. The water can come from multiple sources including amount purchased from SCWA, purchased from other agencies, local surface water, or obtained from groundwater. This does not include recycled water.
- *Peak day factor* – The ratio of water produced on the maximum day of the year to that produced on the average day.

(b) Demographic Data

- *Census 2000* – The 2000 Census data was used as a general reference when determining population and household sizes for each individual city (and/or unincorporated area) serviced by the water agencies.
- *2005 City of Santa Rosa Service Area Population*- The 2005 total population for the City of Santa Rosa was taken directly from the selected population projection source shown in Table 1.
- *Single and multi family dwelling units*- The 2005 single family dwelling units is equal to the number of single family accounts for 2005. The 2005 multi family dwelling unit estimate was calculated by applying a growth factor to the 2000 data as noted on the water use data sheet in Figure 5.
- *Procedure for service areas not contiguous with city boundaries* – When a service area serves outside a city boundary, estimates were generated either from census tract data when available for the unincorporated areas, Department of Finance data, ABAG Projections, DWR reported data, General Plan or by the local water district if known. If none of the six sources were available, then the modeling team worked with the local water district to make reasonable estimates.
- *Employment data*– The employment figures were obtained from the selected source as discussed earlier in this report.

In summary, the key features of this sheet include the existing 2005 level of water use, 2005 baseline accounts in each customer category, and 2005 baseline forecasts for population and employment.

Effects of Household Size Changes and Housing Vacancy Rates

- The effects of household size changes on future water demand can either increase or decrease future water demands. If household size decreases it takes more housing units to accommodate the existing population. According to the U.S. Census from 2000 to the average of years 2006-2008, City household size decreased slightly from 2.57 to 2.51. This could be because during the housing boom that occurred in this period not all new housing units were occupied. Nevertheless the rate of change is very small and will have a negligible effect on future water demand if the trends continue at the current rate. .
- According to the U.S. Census housing vacancy has increased from 2.8 percent in 2000 to 6.5 percent during the average of years 2006-2008. This could be because during the housing boom that occurred in this period not all new housing units were occupied. Some vacancy is normal and it is not clear what normal vacancy is for the City. As the base water use for the City was a ten year average (1997-2006) the impact is reflected in the base water use used for starting the water demand projection. If indeed 2.8 percent is the normal vacancy then the starting value of water use, even though it is a ten year average, might be low.

Figure 5
Water Use Data Input Sheet

Santa Rosa WD Water Service Area[1]

DSS Input Sheet

September 11, 2010

Base Year Average Use and Indoor Percentages by Billing Category for DSS Model[2]

	Single Family		Multifamily		Commercial		Irrigation	
Year	Average, gpd/a	Indoor	Average, gpd/a	Indoor	Average, gpd/a	Indoor	Average, gpd/a	Indoor
1997-2006	286	61%	1076	92%	1204	79%	1519	0%

Indoor % based on 10 year average of March-Feb Water use

Commercial indoor % same as 2005 report as directly by Jennifer Burke at City of Santa Rosa

Many commercial customers have dedicated irrgation meters

New Single Family	
Average, gpd/a	Indoor
341	43%

19% increase over existing homes as 2004 as directed by Jennifer Burke at the City of Santa Rosa

Note: All categories are monthly data

Data for DSS Model - -Start Year: 2005

Category	Number of Accounts in Start Year[3]	Water Use for Start Year gpd/a[2]	Water Use, MGD	Use Profile Percent	Water Use gcd	Indoor Water Use gcd
Single Family	41,630	285.6	11.889	56.38%	98.6	60.1
Multifamily	3,063	1,075.8	3.295	15.62%	64.8	59.5
Commercial	2,723	1,203.7	3.278	15.54%		
Irrigation	1,729	1,518.5	2.626	12.45%		
New Single Family	1	341	0.000	0.00%	117.6	50.0
Total Billed	49,146	4,424	21.087	100.00%		

Projected UFW for DSS Model[5]	**7.9%**		
Water Produced for use in DSS Model[4]	**22.89**	MGD	Add UFW % to Total Billed Water Use
			Water Produced = Billed /(1- Projected UFW for DSS Model) 22.89
Peaking Factor	2.0	Provided by Agency or Water Master Plan (or NA)	
Peaking Factor for DSS Model=	**2.0**	Provided by Agency	

- Blue cells are entered by modeler

- Yellow cells are input to DSS Model

NOTES

1. - Communities served (includes all or portions of) Santa Rosa and surrounding rural areas

2 - Average gpd/a is based on a 12-month moving average through December 2009. Indoor use is based on average of 2 lowest consecutive months in the base year(s) winter if meters read bimonthly, or single lowest month if meters read monthly.

3 - Number of accounts is from data provided by water agency for this project (see worksheet with account data in this file)

4 - Total water produced is calculated from the total billed water use and the projected UFW

5 - Unaccounted for Water (UFW) is the percent difference between the total water purchased and the total billed water use.

6 - For reference see additional population estimates provided in population and employment estimates corresponding to service area table.

7 - Initial estimate based on census data for renter occupied units. For reference see table below that has 2000 census data for corresponding water service area city or cities.

8 - Group Quarters Population includes Institutionalized and non-Institutionalized and assumes their water use is in the Commercial sector

Definitions / Abbreviations

ABAG	Association of Bay Area Governments	HHS	household size
DOF	Department of Finance	NA	not available
DSS	Decision Support System Model	MF	multi family
du	dwelling unit	MGD	million gallons per day
FY	Fiscal Year	No.	number
gcd	gallons per capita / per day	Pop	population
gpd/a	gallons per day / per account	Res	residential
gpd	gallons per day	SF	single family
		UFW	unaccounted for water

Data Prepared:	June 15, 2010	By: M. Maddaus
Revised:	September 11, 2010	By: C. Matyas

Water Use Data Input Sheet (Page 2)

Santa Rosa WD Water Service Area[1]

Reconcile agency account billing data and census data

Total Dwelling Units in Census 2000 for Santa Rosa

Single family		2000 Units	No. Buildings	Service Area Billing Accounts - Year 2000[3]	Difference between billing and census data	Data Sources / Notes
1-detached		33,454	33,454			
1-attached		5,460	5,460			
Subtotal		38,914	38,914	37,855	-1,059	*When this happens some of the attached units (1,059) classified by City as Multifamily*
Multi family						
2-units		1,448	724			
3-4 units		3,204	915			
5 to 9 units		3,426	489			
10-19 units		2,318	155			
20 or more units		5,328	107			*Meter for assumed 50 units per building*
mobile homes		456	9			*Meter for mobile home parks, assume 50 per park*
Subtotal		16,180	2,399	2,786	386	
	MF Average =	6.7	units/building	5.8	units/account	Typical value of DUs/account
	Total SF + MF units =	55,094				

2000 Group Quarters Data			2000 Census Data		2035 Santa Rosa General Plan	
Institutionalized	1,558	Average household size	2.57		Table 8-1: Schedule of Housing Units Allotments	
Non-Institutionalized	2,248	Average household size of single family units	2.76		*Timeframe*	*Maximum Housing Units Per Year*
Total	3,806	Average household size of multifamily units	2.13		2006-2010	900
		Homeowner vacancy rate (percent)	0.70		2011-2015	850
		Rental vacancy rate (percent)	2.10		2016-2020	800
					2021-2025	800
					2026-2030	750
			Housing unit growth rates found in Chapter 8 page 4		2031-2035	700
			Santa Rosa has adopted a growth management control where they are limiting the growth.			

Population and Household Size in Census 2000 for Santa Rosa

		Santa Rosa Service Area				
		Service Area	**Estimated Population**		**Data Sources / Notes**	
		2000	**2005**		(Santa Rosa General Plan 2035)	
					Estimated growth from 2000 to 2005:	*5.83%*
Total Population from Census data[6] =		147,595	175,517		*Estimated employment growth from 2000 to 2005:*	*5.10%*
Subtract Group Quarters Population =		3,806	4,028		*Water use for the institutionalized population is accounted for in nonresidential billing categories*	
Residential Population =		143,789	171,489		*Employment based on the Santa Rosa General Plan 2035 page 4-5, table 4-7*	
Avg. Residential HHS[7] =		2.61			*Population based on Santa Rosa General Plan 2035 page 2-15, table 2.2*	
MF Pop @ MF HHS[7] =	2.97	48,055	50,856	50,856	29.0%	*Percent of Population that is MF*
SF Pop =		95,734	120,633	120,633	68.7%	*Percent of Population that is SF*
SF HHS[7] =		2.46	2.90	4,028	2.3%	*Percent of Population in Group Quarters*
			Total	175,517	100.0%	*Population used in model*

Estimate Service Area Dwelling Units for 2005		
SF Res	41,630	*Equals No. of Single Family accounts for 2005*
MF Res	17,123	*Equals No. Dwelling Units plus growth in accounts*

4.3 Key Assumptions for the DSS Model

Table 3 shows the key assumptions used in the model. The assumptions having the most dramatic effect on future demands are the natural replacement rate of fixtures, how residential or commercial future use is projected, and finally the percent of estimated water losses.

Table 3
List of Baseline Demand Projection Assumptions for DSS Model

City of Santa Rosa List of Baseline Demand Projection Assumptions for DSS Model	
Parameter	**Model Input Value, Assumptions, and Key References**
Model Start Year	2005
Water Demand Factor Year(s)	Average of Years: 1997-2006
Peak Day Factor	2.00
Unaccounted for Water in the Start Year	7.9%
Population Projection Source	Santa Rosa 2035 General Plan
Employment Projection Source	Santa Rosa 2035 General Plan
Number of Water Accounts for Start Year	49146
Avoided Cost of Water $/AF (includes escalated SCWA cost + $27.7 / AF for pumping cost)	$832.13
Distribution of Water Use Among Categories	Single Family: 56.4%
	Multifamily: 15.6%
	Commercial: 15.5%
	Irrigation: 12.5%
	New Single Family: 0%
Indoor Water Use by Category	Single Family: 61%
	Multifamily: 91.8%
	Commercial: 78.7%
	Irrigation: 0%
	New Single Family: 42.5%
Residential End Uses	AWWARF Report "Residential End Uses of Water" 1999
Non-Residential End Uses, %	AWWARF Report Commercial End Uses of Water" 1999
Efficient Residential Fixture Current Installation Rates	U.S. Census, Housing age by type of dwelling plus natural replacement plus rebate program (if any).
	Reference "High Efficiency Plumbing Fixtures - Toilets and Urinals" Koeller & Company July 23, 2005.
	Reference Consortium for Efficient Energy (www.cee1.org)
Water Savings for Fixtures, gal/capita/day	AWWARF Report "Residential End Uses of Water" 1999, , CUWCC Cost and Savings Study April 28, 2005, Agency supplied data on costs and savings, professional judgement where no published data availble
Non-Residential Fixture Efficiency Current Installation Rates	U.S. Census, assume commercial establishments built at same rate as housing, plus natural replacement
Residential Frequency of Use Data, Toilets, Showers, Washers, Uses/user/day	Falls within ranges in AWWARF Report "Residential End Uses of Water" 1999
Non-Residential Frequency of Use Data, Toilets and Urinals, Uses/user/day	Estimated based using AWWARF Report "Commercial and Institutional End Uses of Water" 1999
Natural Replacement Rate of Fixtures	Residential Toilets 3% (1.28 gpf toilets), 4% (1.6 gpf and higher toilets)
	Commercial Toilets 3% (1.28 gpf toilets), 4% (1.6 gpf and higher toilets)
	Residential Showers 4%
	Residential Clothes washers 6.7%
	A 3% replacement rate corresponds to 33 year life of a new fixture.
	A 6.67% replacement rate corresponds to 15 year washer life based on "Bern Clothes Washer Study, Final Report, Energy Division, Oak Ridge National Laboratory, for U.S. Department of Energy, March 1998, Internet address: www.energystar.gov
Future Residential Water Use	Increases Based on Population Growth
Future Non-Residential Water Use	Increases Based on Employment Growth

4.4 Water Demand Projections With and Without the Plumbing Code

Development of the Water Demand Projections Table and Graph

Water demand projections were developed to the year 2035 using the Demand Side Management Least Cost Planning Decision Support System (DSS) model. This model incorporates information from the:

- "Water Use Data Sheet" and the "Key Assumptions"
- Questions asked of agencies
- Contractorprovided data
- 2000 Census data and 2006-08 American Community Survey 3 year estimates
- Local General Plans
- Association of Bay Area Governments Projections

Water demand projections were input for 30 years using the DSS Model. This model incorporates information from the:

- Contractor selected population and employment forecasts.
- Data provided by City of Santa Rosa staff including estimates for value of water saved, historical water use, past conservation efforts, and water system facilities.

Table 4 shows the projected demands with and without plumbing codes and appliance standards. This page includes both a table and a graph. Each will be described below.

National Plumbing Code

The Federal Energy Policy Act of 1992, as amended in 2005, requires only fixtures meeting the following standards can be installed in new buildings:

- Toilet – 1.6 gal/flush maximum
- Urinals – 1.0 gal/flush maximum
- Showerhead - 2.5 gal/min at 80 psi
- Residential Faucets – 2.2 gal/min at 60 psi
- Public Restroom Faucets - 0.5 gal/min at 60 psi
- Dishwashing pre-rinse spray valves – 1.6 gal/min at 60 psi

Replacement of fixtures in existing buildings is also governed by the Federal Energy Policy Act that requires only devices with the specified level of efficiency (shown above) can be sold today (2010). The net result of the plumbing code is that new buildings will have more efficient fixtures and old inefficient fixtures will slowly be replaced with new more efficient models. The national plumbing code is an important piece of legislation and must be carefully taken into consideration when analyzing the overall water efficiency of a service area.

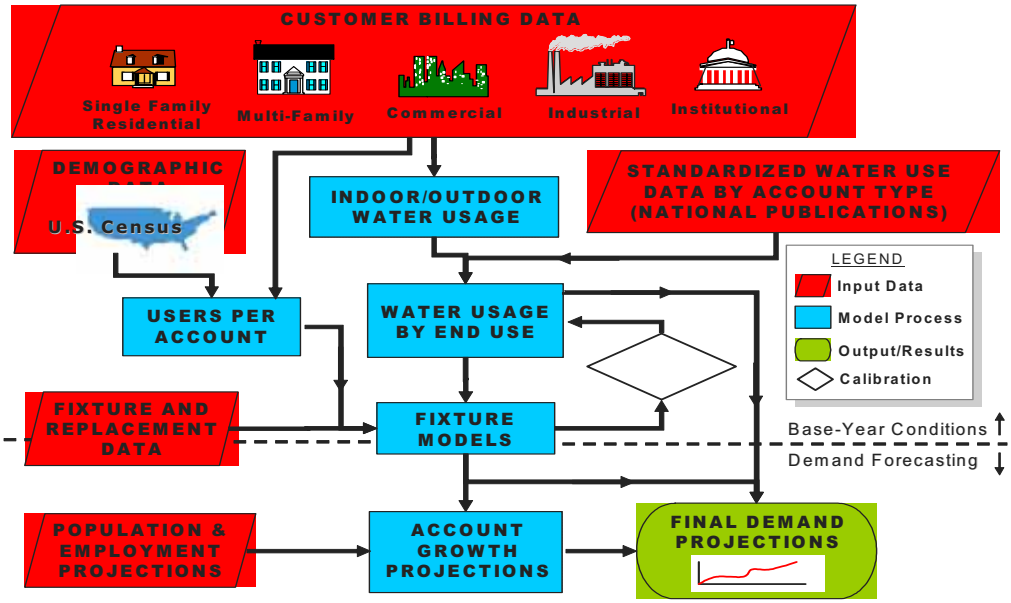
In addition to the plumbing code, the US Department of Energy regulates appliances such as residential clothes washers. Regulations to make these appliances more energy efficient has driven manufacturers to dramatically reduce the amount of water these efficient machines use. Generally horizontal axis washing machines use 30-50 percent less water than conventional models (which are still available). In the analysis for City of Santa Rosa, the DSS Model forecasts a gradual transition to high efficiency clothes washers (using 19 gallons or less) so that by the year 2020 this will be the only type of machines purchased. In addition to the industry becoming more efficient, rebate programs for washers have been

successful in encouraging customers to buy more water efficient models. Given that machines last about 15 years eventually all machines in the City of Santa Rosa area will be of this type.

State Plumbing Code

The Plumbing Code includes the new California State Law requiring High Efficiency Toilets and High Efficiency Urinals be exclusively sold in the state by 2014. Figure 6 below describes conceptually how the above listed items are incorporated into the flow of information in the DSS Model.

Figure 6
DSS Model Overview Used to Make Potable Water Demand Projection
"With the Plumbing Code"



Graph of projected demands (Figure 7)

Figure 7 shows the potable water demand projection at five-year increments. The graph shows projections for demand with and without the plumbing code through 2035.

Table of water demand projections (Table 4)

The table of water demands projections includes:

1. The water demand projections shown in Table 4 are based on the future population and employment projections provided in Table 1 and Table 2.
2. Projections were made *with and without* the plumbing codes.
3. Projections are for potable water only. It does not include recycled water use. Recycled water use and projections are included in a separate Chapter of the UWMP.

Dry Year Demands

The demand projections reflect average weather conditions and **do not** reflect drier and hotter drought conditions. Climate change, which might alter weather patterns, either increased or decreased rainfall, and possibly increased irrigation demand in the spring and fall due to a warmer climate have also not been addressed in this analysis.

Figure 7
Potable Water Use Projections for City of Santa Rosa

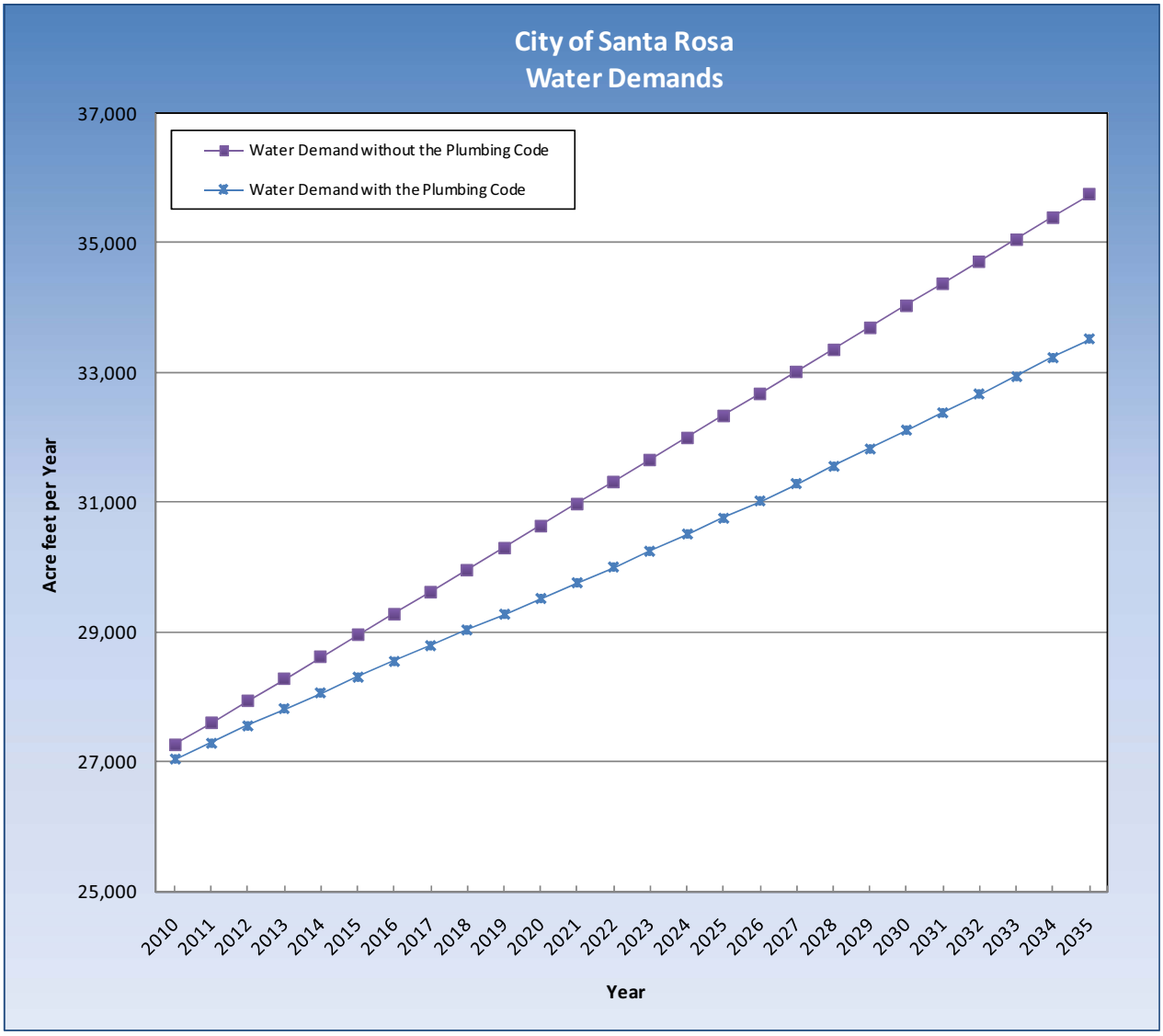


Table 4
Potable Water Use Projections for City of Santa Rosa

City of Santa Rosa Water Demands						
Water Demand (AFY)	**2010**	**2015**	**2020**	**2025**	**2030**	**2035**
Water Demand without the Plumbing Code	27,262	28,947	30,636	32,332	34,032	35,738
Water Demand with the Plumbing Code	27,030	28,303	29,513	30,758	32,100	33,518

*Data is not weather normalized. Total Water use is potable only. Does not include recycled water use. Recycled water use and projection are in a separate section in the UWMP.

4.5 Water Demand Projections – 2005 Urban Water Management Plan (UWMP) Format

The 2010 Urban Water Management Plan Guidance Document from the California Department of Water Resources is not planned to be released until after December 2010. Without the guidance document, the exact formatting of the tables for the 2010 UWMP are not known. Therefore, it was elected to place the demand data into the 2005 UWMP format.

Conversion of the Water Demand Projections Table and Graph to 2005 UWMP Format

The 2005 Urban Water Management Plan Guidance Document from the California Department of Water Resources (Ca DWR) requests that future demand information be in a specific format. Provided below are the five tables relating to future average day demands they requested. The demand projection shown is the "with Plumbing Code" demands and is otherwise the same as Table 4 and Figure 7. The demand projections in the Urban Water Management Plan appeared in the required DWR tables 2, 12, 13, 14, and 15 (2005 Plan requirement table numbers).

Urban Water Management Plan Tables for of 2005 UWMP

Table 5 below provides population projections for City of Santa Rosa service area.

Table 5 (DWR Table 2) Population – Current and Projected

City of Santa Rosa Current and Projected Population	
Year	**Population**
2010	185,184
2015	194,851
2020	204,519
2025	214,186
2030	223,853
2035	233,520

Current, and Future Water Use by Customer Type

The current and projected number of connections and deliveries to the City of Santa Rosa's water distribution system, by sector, are identified below on Table 6.

Table 6 (DWR Table 12) Current and Projected Water Deliveries

City of Santa Rosa Demands and Accounts By Customer Category (Based on Demand with Plumbing Code, excluding UFW)									
Year		**Single Family**	**Multifamily**	**Commercial**	**Irrigation**	**New Single Family**	**Landscape**	**Agriculture**	**Total**
2010	**Number of Accounts**	41,630	3,231	2,842	1,824	2,565	0	0	52,093
	Deliveries AF/Y	13,206	3,835	3,783	3,103	977	0	0	24,904
2015	**# of accounts**	41,630	3,400	2,994	1,919	5,151	0	0	55,094
	Deliveries AF/Y	13,001	3,927	3,923	3,265	1,958	0	0	26,074
2020	**# of accounts**	41,630	3,569	3,147	2,015	7,756	0	0	58,116
	Deliveries AF/Y	12,762	3,995	4,062	3,427	2,944	0	0	27,189
2025	**# of accounts**	41,630	3,737	3,299	2,110	10,382	0	0	61,158
	Deliveries AF/Y	12,540	4,065	4,209	3,589	3,935	0	0	28,337
2030	**# of accounts**	41,630	3,906	3,451	2,205	13,028	0	0	64,221
	Deliveries AF/Y	12,372	4,160	4,362	3,751	4,931	0	0	29,576
2035	**# of accounts**	41,630	4,075	3,604	2,300	15,695	0	0	67,304
	Deliveries AF/Y	12,244	4,273	4,521	3,913	5,932	0	0	30,883

Water Sales to Other Agencies

The City of Santa Rosa does not currently sell water to any other agency. According to City of Santa Rosa, all "outside sales" are local businesses and residents, and not to another agency.

Table 7 (DWR Table 13) Sales to Other Agencies

City of Santa Rosa Sales to Other Agencies	2010	2015	2020	2025	2030	2035
Water Distributed (AFY)	N/A	N/A	N/A	N/A	N/A	N/A

Unaccounted-for Water and Additional Water Use

For this project unaccounted for water is defined to be the difference between water produced and water sold to customers. Unaccounted-for water use normally includes unmetered water use such as for fire protection and training, system and street flushing, sewer cleaning, construction, system leaks, meter inaccuracy, and unauthorized connections. Unaccounted-for water can also result from meter inaccuracies.

Table 8 (DWR Table 14) Additional Water Uses and Losses, AF/yr

City of Santa Rosa Unaccounted for Water	2010	2015	2020	2025	2030	2035
Unaccounted-for system losses (AFY)	2,126	2,229	2,324	2,420	2,525	2,635

Total Water Use

The total current and future water use for the system is shown in the table below.

Table 9 (DWR Table 15) Total Potable Water Use, AF/yr*

City of Santa Rosa Total Demand with Plumbing Code	2010	2015	2020	2025	2030	2035
Total Demand with Plumbing Code and UFW (AFY)	27,030	28,303	29,513	30,758	32,100	33,518

*Total Water use is potable only. Does not include recycled water use. Recycled water use and projection are in another section of the UWMP.

5. COMPARISON OF INDIVIDUAL CONSERVATION MEASURES

5.1 Selecting Conservation Measures to be Evaluated (Conservation Measure Screening)

An important step in updating the water conservation program is the review and screening of new water conservation measures. In 2005, a list of 75 potential conservation measures was developed by Maddaus Water Management from known technology that included devices or programs (e.g., such as a high efficiency toilet) that would save water if installed by a water retailer, contractor, or customer. These measures are considered to be beyond the Tier One measures, which are the same as the 2005 California Urban Water Conservation Council's Best Management Practices. A description of the potential conservation measure was developed that addressed the methods through which the device or program

will be implemented, including the distribution method, or mechanism, that would be used to activate the device or program.

A screening process was undertaken to reduce the number of measures to a more manageable number and to eliminate those measures that are not as well suited to the Marin-Sonoma County area as other potential measures. Each potential measure was screened based on four qualitative criteria (below), scored on a scale of 1 to 5, with 5 being the most acceptable, and 20 being the maximum possible number of points for all criteria. The screening was completed by local conservation professionals, in a one day meeting in July 2005, facilitated by Maddaus Water Management.

Qualitative Criteria

The rating group used the following criteria to evaluate the measures:

- **Technology/Market Maturity** – Refers to whether the technology needed to implement the conservation measure, such as an irrigation control device, is commercially available and supported by the local service industry. A measure was scored low if the technology was not commercially available or high if the technology was widely available in the service area. A device may be screened out if it is not yet commercially available in the region.
- **Service Area Match** – Refers to whether the measure or related technology is appropriate for the area's climate, building stock, or lifestyle. For example, promoting Xeriscape gardens for multi-family or commercial sites may not be appropriate where water use analysis indicates little outdoor irrigation. Thus, a measure scored low in this category if it was not well suited for the area's characteristics and could not save water. A measure scored high in this criterion if it was well suited for the area and could save water.
- **Customer Acceptance/Equity** – Refers to whether retail customers within the wholesale customer service area would be willing to implement and accept the conservation measures. For example, would retail customers attend homeowner irrigation classes and implement lessons learned from these classes? If not, then the water savings associated with this measure would not be achieved and a measure with this characteristic would score low for this criterion. This criterion also refers to retail customer equitability (i.e., one category of retail customers receives benefit while another pays the costs without receiving benefits). Retail customer acceptance may be based on:
    - Convenience
    - Economics
    - Perceived fairness
    - Aesthetics
- **Relative Effectiveness of Measure Available** – Refers to the selection of the most effective measure if alternate conservation measures address the same end use (example – irrigation for single family customers). If the measures are equally effective, the most appropriate was selected (e.g., the measure that was easier or less expensive to implement).

Measures with low scores were eliminated from further consideration, while those with high scores passed into the next evaluation phase (cost-effectiveness analysis using the DSS Model). To reduce the list to a more manageable number, normally a score of 17 or more was necessary to pass. The process reduced the measures to be evaluated further down to 22 new measures in addition to the 10 Tier One measures.

Upon inspection of the overall list of new measures it became apparent that some measures could be combined and others could be separated into two categories as follows:

- Measures that were voluntary and incentive based
- Measures that were regulatory and applied to new development only

This division was used to create two lists of measures that could be evaluated separately. Tier Two targets various types of customers and offers a range of incentives to enhance participation. New Development measures were originally targeted at single family homes (including town homes and condos), as this category represents the largest category of new development with the most water savings potential.

Table 13 presents the measure descriptions that were originally analyzed as part of the 2005 study for "Tier 2" and "New Development" (ND) as well as the new measures that the contractors selected for this analysis. We have not modified the Tier 2 and New Development measure descriptions from their original description other than to add information for Cal Green, SB 407, and the Model Water Efficient Landscape Ordinance. The Tier 1 measures follow the definition of the CUWCC BMPs.

Cal Green (New Development Building Code): MWM added the Cal Green requirements that effect all new development in the State of California after January 1, 2011. MWM modeled water savings from the Cal Green building code by adding Multifamily and Commercial customer categories as appropriate to the following six measures: Tier 2 – 13 (Urinals), ND 1 (Rain Sensors), ND 2 (Smart Controllers), ND 3 (HETs), ND 7 (High Efficiency Faucets and Showerheads) and ND 8 (Landscape Requirements). As this is a new development law and based on discussions with contractors it was assumed actual water savings seen by contractor would begin to occur in the year 2012. The new development ordinances for each contractor are listed in Table 10.

SB 407 (Plumbing Fixture Retrofit on Resale or Remodel): MWM included the new California Law SB 407 to the measure description table and in all of the contractors' models as a new measure. In the model MWM worked carefully such that SB 407 takes into account the overlap with the plumbing code (natural replacement), Cal Green and rebate programs (such as through Tier 2-10 Toilets). SB 407 begins from the year 2017 in residential and 2019 in commercial properties. SB 407 program length continues until all the older high flush toilets have been replaced in each service area.

Tables 11, 12, 13 and 14 summarize the new measures selected for each contractor. Note that measures Tier 2-8, Tier 2-9 and Tier 2-11 were removed from this program at the request of all the contractors on August 2, 2010 for the following reasons:

- Measure Tier 2-8 was removed because new development regulations have changed significantly since this measure was analyzed in 2005 and the regulations require higher efficiency fixtures than this measure.
- Measure Tier 2-9 was removed as rebates for installing synthetic turf are incorporated into Measure Tier 2-2, Cash for Grass.
- Measure Tier 2-11 was removed because this measure is not cost-effective.

The removed measures are included in Table 13 for reference purposes only, but were not included in any of the DSS Model or any of the quantitative water saving calculations.

Table 10
New Development Ordinances

New Development Ordinances								
ND Measure	NMWD	City of Rohnert Park*	City of Cotati	City of Santa Rosa	Town of Windsor	City of Sonoma	Valley of the Moon WD	Draft Cal Green Requirement
Applicability (Customer Classes)	All	Non-SF	SF&MF	All	All	**All**	All	All
ND1-Rain Sensor Retrofit	2005	No	No	2010	2010 (SF>4 lots) & >2,500 sq ft/lot	No	2010, SF>5,000 sq ft	No
ND2-Smart Irrigation Controller	2005	No	2010	2010	2010 (SF>4 lots) & >2,500 sq ft/lot	No	2010, SF>5,000 sq ft	Yes
ND3- High Efficiency Toilets	2005	No	2009	2011	No	No	No	Yes
ND4-Dishwasher New Efficient	2005	No	2009	No	No	No	No	No
ND5-Clothes Washing Machine Requirement	2000	No	2009	No	No	No	No	No
ND6-Hot Water on Demand	No	No	No	No	No	No	No	No
ND7-High Efficiency Faucets and Showerheads	2006	No	2009	2011	No	No	No	Yes
ND8-Landscape and Irrigation Requirements	2004	2010 (State ordinance)	2009	SF since 2007. All other since 1993	2011 for landscapes > 2,500 sq ft (applies to all but SF<5 lots)	2010 (adopted ordinance planned to be adopted September 1, 2010, budgets w/ 60% ET	All except SF<5,000 sq. ft. and turf<600 sq ft	Yes
Urinals	2008	No	No	2011	No	2009	No	Yes
Source	NMWD Reg 15		Use Build it Green Checklist (voluntary)	Adopting Cal Green 2010	Adopting Landscape ordinance June 2010	Use Build it Green Checklist (Mandatory)	County ordinance effective Jan 15, 2010	State Reqmt; May take effect 2012

*ND-3 confirmed to start in 2009 based on July 27, 2010 with City of Cotati at the request of Damien O'Bid

From the City Planner, we found out that typically under the Build it Green Checklist Program they typcially see the following actibity as provided via e-mail on August 2, 2010:

"Specifically, we always see drought tolerant plants, limited areas of turf, and a drip irrigation system as required by the landscaping ordinance. We almost always see low flow fixtures and toilets and insulated hot water pipes."

Table 11
Cal Green Building Code

Cal Green Building Code						
Building Class	Component	Effective Date[i]	Indoor Fixtures Included	Indoor Requirement	Landscaping & Irrigation Requirement	Are the Requirements
Residential	Indoor	1/1/2011	Toilets, Showers, Lavatory & Kitchen Faucets, Urinals	Achieve 20% savings overall below baseline		Yes
	Outdoor	1/1/2011			Provide weather adjusting controllers	Yes
Non Residential	Indoor	1/1/2011	Submeter leased spaces	Only if building >50,000 sq. ft. & if leased space use >100 gpd		Yes
			Toilets, Showers, Lavatory & Kitchen Faucets,	Achieve 20% savings overall below baseline		Yes
	Outdoor	1/1/2011			Provide water budget	> 1,000 sq ft. landscaped area
					Separate meter	As per Local or DWR ordinance
					Prescriptive landscaping requirements	> 1,000 sq ft. landscaped area
					Weather adjusting irrigation controller	Yes

[i] Effective date is 7/1/2011 for toilets

Table 12
Tier One Conservation Measures Evaluated in the DSS Model

Measure Number	Original CA BMP Number	Target Customer Category	Measure	Description
1	1	RSF, RMF	Residential Water Surveys - Indoor	This is the indoor component of indoor and outdoor water surveys for existing single-family and multi family residential customers. Normally those with high water use are targeted and provided customized report to homeowner.
2	1	RSF, RMF	Residential Water Surveys - Outdoor	This is the outdoor component of indoor and outdoor water surveys for existing single-family and multi family residential customers. Normally those with high water use are targeted and provided customized report to homeowner.
3	2	RSF, RMF	Residential Retrofit	Provide owners of pre-1992 homes with retrofit kits that contain easy-to-install low flow showerheads, faucet aerators, and toilet tank retrofit devices, until saturation reaches 75%.
4	5a	IRR	Water Budgets	90% of all irrigators of landscapes with separate irrigation accounts would receive a monthly or bi-monthly irrigation water use budget.
5	5b	IND	Large Landscape Conservation Audits	All public and private irrigators of landscapes larger than one acre would be eligible for free landscape water audits upon request.
6	6	RSF	Clothes Washer Rebate	Homeowners would be eligible to receive a rebate on a new water efficient clothes washer.
7	7	RSF, NRSF	Public Information Program	Public education would be used to raise awareness of other conservation measures available to customers. Programs could include poster contests, speakers to community groups, radio and television time, and printed educational material such as bill inserts, etc.
8	9	COM	Commercial Water Audits	High water use accounts would be offered a free water audit that would evaluate ways for the business to save water and money.
9	14	RSF	Single Family Residential ULF Toilet Rebate	Homeowners would be eligible to receive a rebate to replace an existing high volume toilet with a new water efficient toilet.
10	14	RMF	Multi family Residential ULF Toilet Rebate	Homeowners would be eligible to receive a rebate to replace an existing high volume toilet with a new water efficient toilet.

Notes:

RSF = Residential Single Family RMF = Residential Multi Family NRSF = New Residential Single Family

COM = Business INS = Institutional IND = Industrial

Table 13
Tier Two and New Development Conservation Measures Evaluated in the DSS Model

Measure Number	Name of Measure	Target Customer Category	Description
Tier 2-1	Rain-sensor (shut off device) retrofit on irrigation controllers	Existing Customers SF	Agency pays for the rain sensor, homeowner pays for the optional installation ($35).
Tier 2-2	Cash for Grass (turf removal program)	Existing Customers SF, MF, CII	Provide a rebate for customers who remove irrigated turf grass and replace it with low water using plants. The rebate would require that an appropriate irrigation system be installed for the replacement landscaping. Limited to $500 rebate at $1.00 per square foot.
Tier 2-3	Financial Incentives for Being Below Water Budget	All Dedicated Irrigation Meter customers	For dedicated irrigation customers, link a landscape water budget to a retail water agency's rate schedule so that the dedicated irrigation meter customer pays less when their water use is at or under their water budget.
Tier 2-4	Financial Rebates for Irrigation Meters	Existing CII Customers with mixed water use (indoor and outdoor)	Provide financial incentives/rebates for selected permits and equipment to convert mixed use meters to a separate dedicated irrigation meter. Model implementation program after City of Santa Rosa's Service Split program. Utility will provide a water budget for the new irrigation meter.
Tier 2-5	Smart Irrigation Controller Rebates	Existing Customers SF, MF, CII, IRR	Provide an up to $450 rebate for the purchase of a SMART irrigation controller and associated signal fees (up to $150). Assume one controller for RSF and two for others. Minimum participant requirements: at least 500 sq ft of well maintained turf irrigated with an automatic irrigation control system.
Tier 2-6	Financial Incentives/ Rebates for Irrigation Upgrades	Existing Customers MF, CII, IRR, and SF for some contractors if requested as a new measure	For MF & CII customers with landscape provide rebates for selected types of irrigation equipment upgrade including rain sensors, rain harvesting, and grey water. Each contractor can include any equipment desired and allow the customers to select the items they prefer up to the maximum rebate value per customer. Water savings assumes a mixture of many different irrigation technologies. Model program after water agencies such as EBMUD or Contra Costa Water District or Santa Rosa.
Tier 2-7	Hotel retrofit (w/financial assistance) - CII Existing	Existing Customers: CII	Following a free water audit, offer the hotel a rebate for equipment identified that would save water. Provide a rebate schedule for certain efficient equipment such as air-cooled ice machines, steamers, washers, cooling towers, and spray rinse valves.
Tier 2-8 **MEASURE REMOVED FROM 2010 ANALYSIS**	Offer new accounts reduced connection fees for installing efficient process equipment for selected businesses (restaurants, laundry mat, food/groceries and hospital)	New Customers: CII	Offer reduced water and sewer connection fees to new facilities to install water efficient equipment in new facilities that goes above and beyond the building code requirements. Model program after Santa Rosa's BAT program.

Measure Number	Name of Measure	Target Customer Category	Description
Tier 2-9 **MEASURE REMOVED FROM 2010 ANALYSIS**	Synthetic Turf Rebate	Existing Customers: SF (North Marin only) , IRR	Provide a rebate for replacing existing turf with synthetic turf. Market program to all irrigation customers and single family for North Marin only.
Tier 2-10	High Efficiency Toilet (HET)	Existing Customers: SF & MF	Provide a rebate or voucher for the installation of a high efficiency toilet (HET). HET are defined as any toilet to flush 20% less than an ULFT and include dual flush technology. Rebate amounts would reflect the incremental purchase cost.
Tier 2-11 **MEASURE REMOVED FROM 2010 ANALYSIS**	Dishwasher New Efficient	Existing Customers: SF	Provide a rebate to encourage homeowners to replace old inefficient dishwashers with new efficient dishwashers (meeting certain water efficiency standards, such as gallons/load).
Tier 2-12	CII Rebates - replace inefficient water using equipment	Existing Customers: CII	Provide a rebate for a standard list of water efficient equipment. Included would be x-ray machines, icemakers, air-cooled ice machines, steamers, washers, spray valves, efficient dishwashers, replace once through cooling, add conductivity meters on cooling towers, etc.
Tier 2-13	0.5 gal/flush urinals in new buildings	New Customers: CII	Require that new buildings be fitted with 0.5 gpf or less urinals rather than the current standard of 1.0-gal/flush models.
ND1	Rain-sensor shut off device on irrigation controllers	New Customers: SF, MF and CII depending upon local ordinances and contractor request of new measures	Require-sensor or rain shut off devices with all new automatic irrigation system installations on new homes.
ND2	Smart Irrigation Controller	New Customers: SF, MF and CII depending upon local ordinances and contractor request of new measures	Require developers to provide the latest state of the art SMART irrigation controllers. These SMART controllers have on-site temperature sensors or rely on a signal from a central weather station that modifies irrigation times at least weekly.
ND3	High Efficiency Toilet (HET)	New Customers: SF, MF and CII depending upon local ordinances and contractor request of new measures	Require new single family and multifamily residents to install a high efficiency toilet (HET). HET are defined as any toilet to flush 20% less than an ULFT and include dual flush technology.
ND4	Dishwasher New Efficient	New Customers: SF, MF and CII depending upon local ordinances and contractor request of new measures	Require new single-family residents to install an efficient dishwasher (meeting certain water efficiency standards, such as gallons/load).
ND5	Clothes washing machines requirement for new residential	New Customers: SF, MF and CII depending upon local ordinances and contractor request of new	Building departments would be responsible to ensure that an efficient washer was installed before new home occupancy.

Measure Number	Name of Measure	Target Customer Category	Description
		measures	
ND6	Hot Water on Demand	New Customers: SF, MF and CII depending upon local ordinances and contractor request of new measures	Require developers to equip new homes with a hot water on demand system or tankless hot water heaters, such as those made by Metland Systems and others. These systems use a pump placed under the sink to recycle water sitting in the hot water pipes to the water heater.
ND7	High efficiency faucets and showerheads	New Customers: SF, MF and CII depending upon local ordinances and contractor request of new measures	Require developers to install Lavatory faucets that flow at no more than 1.5 gpm, kitchen faucets at 2.2 gpm, showerheads at 2.0 gpm
ND8	Landscape and irrigation requirements	New Customers: SF, MF and CII depending upon local ordinances and contractor request of new measures	Enforce a regulation that specifies that homes be landscaped according to Xeriscape principals and the Model Water Efficient Landscape Ordinance, with appropriate irrigation systems. (Combines with Smart Controller listed above). Goal is overall 25% reduction in irrigation water use.
New Measure	SB 407	Existing: SF, MF and CII	Measure will start in the year 2017 for SF accounts and 2019 for MF and CII accounts to coincide with the California State Law SB 407. The law includes working with the real estate industry to require a certificate of compliance be submitted to the City stating that, when a property is sold, information on whether or not indoor water fixtures are efficient was disclosed to the buyer.
Potential New Measure Selected by One or More Contractors	Rainwater harvesting	New Customers SF; Existing SF, MF	Provide a rebate ($100 RSF and $200 RMF) to assist a certain percentage of single family homeowners per year with installation of rain barrels or cisterns.
Potential New Measure Selected by One or More Contractors	Grey Water System Rebate	New Customers SF; Existing SF	Provide a rebate (up to $500) to assist a certain percentage of single family homeowners per year to install gray water systems. Parts cost approx $200, installation is approx $400-$500
Potential New Measure Selected by One or More Contractors	Tiered Water Rates	Existing Customers: SF, MF, CII	Change Rate Structure to an inclining block rate and increase prices significantly periodically to maintain savings, such as every ten years.
Potential New Measure Selected by One or More Contractors	Submetering and Consumption Billing of Apartments and Mobile Homes	New Customers: MF	Require installation of submeters on all new MF and mobile home accounts unless the building has a central, circulating hot water system (which precludes a meter on all water going to each unit).

RSF = Residential Single Family RMF = Residential Multi Family NRSF = New Residential Single Family

COM = Business INS = Institutional IND = Industrial

Table 14
New Conservation Measures Evaluated in the DSS Model

New Conservation Measures for Analysis (New for the 2010 analysis)							
Measure	City of Cotati	North Marin Water District	City of Rohnert Park	City of Santa Rosa	City of Sonoma	Valley of the Moon Water District	Town of Windsor
Rainwater Harvesting Rebate				✓			
Grey Water System Rebate				✓		✓	
Tiered Water Rates (Conservation Pricing)	✓				✓		
Submetering and Consumption Billing of Apartments and Mobile Homes - New and Existing			✓				
Add CII to New Develoment Requirements	✓	✓					✓
SB407 - Retrofit of High Efficiency Fixtures	✓	✓	✓	✓	✓	✓	✓
Add SF Residential to Irrigation System Upgrades (T2-6)		✓			✓	✓	✓

5.2 Perspectives on Benefits and Costs

The determination of the economic feasibility of water conservation programs depends on comparing the costs of the programs to the benefits provided. The analysis was performed using the DSS Model. The DSS Model calculates savings at the end-use level; for example, the model determines the amount of water a toilet rebate program saves in daily toilet use for each single family account.

Present value analysis using constant 2010 dollars and a real discount rate of 3% is used to discount costs and benefits to the base year. From this analysis, benefit-cost ratios of each measure are computed. When measures are put together in programs, the model is set up to avoid double counting savings from multiple measures that act on the same end use of water. For example, multiple measures in a program may target toilet replacements. The model includes assumptions to apportion water savings between multiple measures.

Economic analysis can be performed from several different perspectives, based on which party is affected. For planning water conservation programs for utilities, the perspectives most commonly used for benefit-cost analyses include the utility and the community. The “utility” benefit-cost analysis is based on the benefits and costs to the water provider. The “community” benefit-cost analysis includes the utility benefit and costs together with account owner/customer benefits and costs. These include customer energy and other capital or operating cost benefits plus costs of implementing the measure, beyond what the utility pays.

The utility perspective offers two advantages for this analysis. First, it considers only the program costs that will be directly borne by the utility. This enables the utility to fairly compare potential investments for saving and supplying water. Second, because revenue shifts are treated as transfer payments, the analysis is not complicated with uncertainties associated with long-term rate projections and retail rate design assumptions. Because it is the water provider’s role in developing a conservation plan that is paramount in this study, the utility perspective was primarily used to evaluate elements of the plan.

The community perspective is defined to include the utility and the customer costs and benefits. Costs incurred by customers striving to save water while participating in conservation programs are considered, as well as the benefits received in terms of reduced energy bills (from water heating costs) and wastewater savings, among others. Other factors external to the utility, such as environmental effects and climate change, are not included in the benefit-cost analysis. Because these external factors are often difficult to quantify and are not necessarily under the control of the utility, they are therefore frequently excluded from economic analyses, including this one.

5.3 Present Value Parameters

The time value of money is explicitly considered. The value of all future costs and benefits is discounted to 2005 (the model start year) at the real interest rate of 3.0%. The DSS Model calculates this real interest rate, adjusting the current nominal interest rate (assumed to be approximately 6.1%) by the assumed rate of inflation (3.0%). Cash flows discounted in this manner are herein referred to as "Present Value" sums.

5.4 Assumptions about Measure Costs

Costs were determined for each of the measures based on industry knowledge, past experience and data provided by the City of Santa Rosa. Costs may include incentive costs, usually determined on a per-participant basis; fixed costs, such as marketing; variable costs, such as the costs to staff the measures and to obtain and maintain equipment; and a one-time set-up cost. The set-up cost is for measure design by staff or consultants, any required pilot testing, and preparation of materials that will be used in marketing the measure. Measure costs were estimated for 30 years, (each year between 2005 and 2035). Costs were spread over the time period depending on the length of the implementation period for the measure and estimated voluntary customer participation levels.

Lost revenue due to reduced water sales is not included as a cost because the conservation measures evaluated herein generally take effect over a span of time that is sufficient to enable timely rate adjustments, if necessary, to meet fixed cost obligations.

5.5 Assumptions about Measure Savings

Data necessary to forecast water savings of measures include specific data on water use, demographics, market penetration, and unit water savings. Savings normally develop at a measured and predetermined pace, reaching full maturity after full market penetration is achieved. This may occur three to ten years after the start of implementation, depending upon the implementation schedule.

5.6 Assumptions about Avoided Costs

The most expensive source of water for almost all of the contractors, and in some cases the only source of water is the SCWA Russian River Supply. The price of the water to the contractors is set by SCWA every year and varies by contractor location, depending upon which aqueduct they draw from. Since 1990 the annual price of water has increased significantly. The annual rate of increase for 1989/1990 to 2010/11 has varied from 4.5 to 5.1% per year depending upon the aqueduct.
Since 1990 the annual rate of inflation has increased 2.64% per year in the San Francisco Bay Area, as measured by the Consumer Price Index (CPI). Based on this data the price of SCWA water has increased faster than the CPI.

Therefore, in evaluating the benefit-cost ratio of conservation measures and programs it is appropriate to consider the net increase in benefits (i.e., the net increase in the avoided cost of water). Other costs, such as the cost of conservation will increase presumably at the CPI rate. Also the cost of conservation programs will be paid for with inflated dollars.

For this evaluation the avoided costs were escalated from the 2010/11 value to a projected 2025/26 value (15 years). The cost escalated was the 2010/11 current price plus a distribution cost of $27.70 per acre-foot taken from pumping costs documented by North Marin Water District, which was the only contractor that had pumping costs readily available, and used for all contractors.

The net increase and the avoided costs used in this evaluation are listed below:

- Santa Rosa aqueduct contractors - 1.86% per year escalation or $ 832 per acre-foot
- Petaluma aqueduct contractors - 1.81% per year escalation or $ 827 per acre-foot
- Sonoma aqueduct contractors - 2.43% per year escalation or $1,006 per acre-foot
- Windsor was escalated at the Santa Rosa aqueduct rate to $ 991 per acre-foot

This has the effect of raising the benefit-cost ratios in our evaluation by the amount that is roughly the percentage difference in the future vs. the current price of SCWA water. In our opinion this escalation represents a more realistic comparison of benefits and costs of conservation.

5.7 Measure Assumptions including Unit Costs, Water Savings, and Market Penetrations

Appendix A includes assumptions in the DSS Model for each of the following variables for all measures modeled:

- *Targeted Water User Group; End Use* – Water user group (e.g., single-family residential) and end use (e.g., indoor or outdoor water use).
- *Utility Unit Cost (for contractor)* – Cost of rebates, incentives, and contractors hired (by the utility) to implement measures.
- *Retail Customer Unit Cost* – Cost for implementing measures that is paid by retail customers (i.e., the remainder of a measure's cost that is not covered by a utility rebate or incentive).
- *Utility Administration and Marketing Cost* – The cost to the utility administering the measure, including consultant contract administration, marketing, and participant tracking. The mark-up is sufficient (in total) to cover local agency conservation staff time and general expenses and overhead.

The unit costs vary according to the type of account and implementation method being addressed. For example, a measure might cost a different amount for a residential single family account, than a residential multi-family account, and for a rebate versus a direct installation implementation method. Typically water utilities have found that there are increased costs associated with achieving higher market saturation, such as more surveys per year. Appendix A shows the unit costs used in the study. The model calculates the annual costs based on the number of participants each year. The general formulas for calculating annual costs are:

Annual Utility Cost = Annual market saturation x total accounts in category x utility unit cost per account x (1+administration and marketing markup)

Annual Customer Cost = Annual number of participants x retail customer unit cost

Annual Community Cost = Annual utility cost + annual customer cost

5.8 Comparison of Individual Measures

Table 15 presents how much water the measures would save over 30 years, how much they would cost, and what cost of water saved is *if the measures were run on a stand-alone basis (i.e. without interaction or overlap from other measures that might address the same end use(s).* Only the net or highest water savings for overlapping conservation measures was included in each program.

Economic indicators are defined below:

- *Utility costs:* those costs that the utility would spend include measure set-up, annual administration, and payment of rebates or purchase of devices or services as specified in the measure design.
- *Customer costs:* those costs customers would spend to participate in City of Santa Rosa programs and maintaining its effectiveness over the life of the measure.
- *Community costs:* Community costs include utility and customer costs to implement measures.

The column headings in Table 15 are defined as follows:

- *Year 2035 Water Savings (AF/Yr)* = Water savings in 2035 (AF/Yr) where AF/Yr = acre-feet per year.
- *Present Value of Water Utility Costs* = 30 year present value of the time stream of annual costs.
- *Utility Benefit-Cost ratio* = NPV of utility costs/NPV of utility benefits over 30 years.
- *Community Benefit-Cost ratio* = (NPV of Utility Benefits plus NPV of customer energy savings)/NPV of utility plus NPV of customer costs).
- *Utility Cost of Savings per Unit Volume ($/AF, by cost category)* = NPV of Category Costs divided by 30-year volume of water saved.
- *Total Utility Cost for Five Years 2011-2015* = Total cost in dollars to run the program for the years 2011 to 2015 (five years). This is a five year cost often useful for short term financial budgeting purposes.

Table 15
Conservation Measure Cost and Savings

City of Santa Rosa Conservation Measure Cost and Savings						
Measure Name	Year 2035 Water Savings (AFY)	Present Value of Water Utility Costs	Utility Benefit Cost Ratio	Community Benefit Cost Ratio	Utility Cost of Savings per Unit Volume ($/AF)	Total Utility Cost for Five Years 2011-2015
CUWCC #1a - Residential Water Surveys - Interior	54	$1,039,671	0.61	1.29	$808	$312,228
CUWCC #1b - Residential Water Surveys - Outdoor	31	$649,794	0.56	0.42	$882	$195,143
CUWCC #2 - Plumbing Retrofit Kits	31	$58,150	7.83	32.27	$67	$0
CUWCC #5a - Large Landscape Water Budgets	117	$404,956	3.90	3.90	$135	$0
CUWCC #5b - Large Landscape Audits	72	$1,030,238	1.09	0.65	$487	$17,550
CUWCC #6 - Washer Rebates	56	$556,240	2.00	0.65	$276	$0
CUWCC #7 - Residential Public Education	172	$1,509,541	1.61	3.23	$332	$357,385
CUWCC #9 - Commercial Water Audits	50	$385,691	2.05	2.74	$261	$0
Tier 2 - 1 Rain Sensor Retrofit	34	$180,423	2.33	0.97	$214	$62,446
Tier 2 - 2 Cash for Grass	53	$383,325	1.94	1.08	$266	$179,369
Tier 2 - 3 Financial Incentives for Being Below Water Budget	498	$307,365	14.46	0.31	$32	$135,000
Tier 2 - 4 Irrigation Meter Rebates	0	$7,594	0.86	0.48	$600	$5,441
Tier 2 - 5a Smart Irrigation Controller Rebates - RSF	28	$1,080,866	0.27	0.23	$1,736	$608,845
Tier 2 - 5b Smart Irrigation Controller Rebates - RMF, CII, IRR	114	$1,302,765	0.86	0.79	$546	$953,178
Tier 2 - 6 Financial Incentives/Rebates for Irrigation Upgrades	87	$190,610	4.16	2.31	$112	$100,301
Tier 2 - 7 Hotel Retrofit	11	$43,302	2.30	0.88	$200	$24,442
Tier 2 - 10 High Efficiency Toilets	50	$1,462,877	0.52	0.30	$995	$830,573
Tier 2 - 12 CII Rebates - Replace Inefficient Water Using Equipment	13	$120,814	0.93	1.10	$495	$63,550
Tier 2 - 13 New Commercial Urinals	5	$33,838	2.00	0.22	$240	$21,219
Tier 2 - ND1 Rain Sensor Retrofit	238	$128,152	11.10	2.22	$40	$39,963
Tier 2 - ND2 Smart Irrigation Controller	396	$128,152	18.49	0.49	$24	$39,963
Tier 2 - ND3 High Efficiency Toilets	12	$43,809	3.49	0.17	$142	$53,696
Tier 2 - ND4 Dishwasher New Efficient	15	$108,044	0.81	0.23	$543	$35,547
Tier 2 - ND5 Clothes Washing Machine Requirement	229	$108,044	12.13	1.50	$36	$35,547
Tier 2 - ND6 Hot Water on Demand	203	$108,044	10.78	0.61	$41	$35,547
Tier 2 - ND7 High Efficiency Faucets and Showerheads	172	$121,289	8.17	6.23	$54	$39,963
Tier 2 - ND8 Landscape and Irrigation Requirements	294	$150,356	13.46	0.06	$34	$39,963
Tier 2 - SB 407	0	$100	19.27	0.28	$23	$0
Tier 2 - Rainwater Harvesting	2	$47,430	0.28	0.08	$1,573	$17,240
Tier 2 - Grey water System Rebate	24	$215,486	0.72	0.41	$611	$78,249

Note: some measures have a $0 Total Utility Cost from 2011 to 2015. That indicates there are no costs in that particular 5 year period. It does not mean there is no activity before 2011 or after 2011. This column is meant to be helpful for budgeting purposes only.

6. RESULTS OF CONSERVATION PROGRAM EVALUATION

6.1 Selection of Measures for Programs

Table 16 provides a summary of which measures are included in each of the six draft alternative programs. The six packages are designed to illustrate a range of various measure combinations and resulting water savings.

These programs are not intended to be rigid programs but rather to demonstrate the range in savings that could be generated if selected measures were run together. In this step we account for a percent overlap in water savings (and benefits) and estimate combined savings and benefits from programs or packages of measures.

A description of each program evaluated follows. For most contractors Tier Two measures are modeled to commence in 2011. The only reason the measure would not start in 2011 is if an agency had submitted data showing activity in one of the Tier 2 programs from 2005 to 2009. Most agencies have shown significant activity on the Tier One measures since the model start year of 2005.

Program – Existing

Savings for the "Existing Program" include the measures that have been run during the time period of 2005 and 2009 as submitted by each individual contractor. For the City of Santa Rosa, the following measures were included:

Existing Program Conservation Measures:

- CUWCC BMP #1 - Residential Water Surveys - Interior
- CUWCC BMP #1 - Residential Water Surveys - Outdoor
- CUWCC BMP #2 - Plumbing Retrofit Kits
- CUWCC BMP #5a - Large Landscape Water Budgets
- CUWCC BMP #5b - Large Landscape Audits
- CUWCC BMP #6 - Washer Rebates
- CUWCC BMP #7 - Residential Public Education
- CUWCC BMP #9 - Commercial Water Audits
- Tier 2 - 1 Rain Sensor Retrofit
- Tier 2 - 2 Cash for Grass
- Tier 2 -3 Financial Incentives for Being Below Water Budget
- Tier 2 - 4 Financial Rebates for Irrigation Meters
- Tier 2 - 5a Smart Irrigation Controller Rebates - RSF
- Tier 2 - 6 Financial Incentives/Rebates for Irrigation Upgrades
- Tier 2 - 8 Offer new accounts reduced connection fees for installing efficient process equipment for selected businesses
- Tier 2 - 10 High Efficiency Toilet - Program ended June 30, 2010

- Tier 2 - ND1 Rain Sensor Retrofit
- Tier 2 - ND2 Smart Irrigation Controller
- Tier 2 - ND3 High Efficiency Toilets
- Tier 2 - ND8 Landscape and Irrigation Requirements – Per Model Water Efficient Landscape Ordinance set to meet 0.6 ETo

Program – Existing + New Measures

Savings for the "Existing Program + New Measures" include the measures that have been run during the time period of 2005 and 2009 as submitted by each individual contractor in addition to the three new measures evaluated for each contractor. The new measures for each contractor are listed in Table 14.

Program – Tier One Measures

This program was designed to be the future program with full compliance for "Tier One Measures" including all the CUWCC BMPs. Program water savings includes actual achievements for the years 2005 to 2009 and then projected participation rates starting in 2011 in accordance with those specified in the California Urban Water Conservation Council's Memorandum Of Understanding, which may be higher (or lower) than you are currently achieving. If you continue to implement the BMPs as planned, your future demands will be reduced by the amount of savings from Tier One future measures.

Program - Tier One + New Development Measures

Savings for Tier One + New Development Measures were designed to isolate the effects of the New Development measures that would be implemented as well as the completion of Tier One measures. These eight New Development measures target new single family homes, multifamily homes, and commercial development based on the local ordinances or Cal Green as shown in Table 12 and 13.

Program – Tier One + Tier Two Measures

Savings for Tier One + Tier Two Measures includes 13 additional measures beyond the CUWCC BMPs. Tier One Future was designed to be the future program with full compliance for all the CUWCC BMPs. The participation rates starting in 2005 are in accordance with historical conservation efforts for the years 2005 to 2009. Then they proceed with the rate specified in the California Urban Water Conservation Council's Memorandum Of Understanding, which may be higher (or lower) than you are currently achieving. If you continue to implement these measures, your future water demands will be reduced by the amount of conservation savings. Descriptions of the Tier Two measures are in Table 13 and cost and saving assumptions for each individual measure can be found in Attachment A. Note that due to increased regulations and additional research and analysis on conservation measures, measures Tier 2-8, Tier 2-9 and Tier 2-11 were removed from this program at the request of all the contractors on August 2, 2010.

Program: Tier One, Tier Two, New Development

Savings for Tier One, Tier Two, and New Development includes all analyzed conservation measures except for the "new measures" because the new measures are unique to each contractor and did not go through the original measure screening process as the other measures in 2005. Also note that measures that either saved a small amount of water or were not cost-effective (Benefit-Cost ratio less than 1.0 and a high cost of water saved) were included here. Some of the Tier Two measures are small programs in that the target number of accounts is very small. So even though they appear to be relatively expensive from a measure point of view, their impact on the overall program costs and savings is relatively minor. Note that due to increased regulations and additional research and analysis on conservation measures, measures Tier 2-8, Tier 2-9 and Tier 2-11 were removed from this program at the request of all the contractors on August 2, 2010.

Table 16
Conservation Measures Selected for Programs

City of Santa Rosa Conservation Measures in each Program						
Measure Name	**Program Existing**	**Program Existing & New**	**Program Tier 1**	**Program Tier 1 & Tier 2**	**Program Tier 1 & ND**	**Program Tier 1 & Tier 2 & ND**
CUWCC #1a - Residential Water Surveys - Interior	✓	✓	✓	✓	✓	✓
CUWCC #1b - Residential Water Surveys - Outdoor	✓	✓	✓	✓	✓	✓
CUWCC #2 - Plumbing Retrofit Kits	✓	✓	✓	✓	✓	✓
CUWCC #5a - Large Landscape Water Budgets	✓	✓	✓	✓	✓	✓
CUWCC #5b - Large Landscape Audits	✓	✓	✓	✓	✓	✓
CUWCC #6 - Washer Rebates	✓	✓	✓	✓	✓	✓
CUWCC #7 - Residential Public Education	✓	✓	✓	✓	✓	✓
CUWCC #9 - Commercial Water Audits	✓	✓	✓	✓	✓	✓
Tier 2 - 1 Rain Sensor Retrofit	✓	✓		✓		✓
Tier 2 - 2 Cash for Grass	✓	✓		✓		✓
Tier 2 - 3 Financial Incentives for Being Below Water Budget	✓	✓		✓		✓
Tier 2 - 4 Irrigation Meter Rebates	✓	✓		✓		✓
Tier 2 - 5a Smart Irrigation Controller Rebates - RSF	✓	✓		✓		✓
Tier 2 - 5b Smart Irrigation Controller Rebates - RMF, CII, IRR				✓		✓
Tier 2 - 6 Financial Incentives/Rebates for Irrigation Upgrades	✓	✓		✓		✓
Tier 2 - 7 Hotel Retrofit	*	*		✓		✓
Tier 2 - 10 High Efficiency Toilets	✓	✓		✓		✓
Tier 2 - 12 CII Rebates - Replace Inefficient Water Using Equipment	*	*		✓		✓
Tier 2 - 13 New Commercial Urinals	*	*		✓		✓
Tier 2 - ND1 Rain Sensor Retrofit	✓	✓			✓	✓
Tier 2 - ND2 Smart Irrigation Controller	✓	✓			✓	✓
Tier 2 - ND3 High Efficiency Toilets	✓	✓			✓	✓
Tier 2 - ND4 Dishwasher New Efficient					✓	✓
Tier 2 - ND5 Clothes Washing Machine Requirement					✓	✓
Tier 2 - ND6 Hot Water on Demand					✓	✓
Tier 2 - ND7 High Efficiency Faucets and Showerheads					✓	✓
Tier 2 - ND8 Landscape and Irrigation Requirements	✓	✓			✓	✓
SB 407		✓				
Rainwater Harvesting		✓				
Grey water System Rebate		✓				
*City of Santa Rosa offers these programs but savings are accounted for by other measures.						
Tier 2-7 and Tier 2-12 are accounted for by savings from CUWCC #9.						
Tier 2-13 is a new program and the savings are acounted for by the Cal Green building code starting in 2011.						

NOTE – Due to increased regulations and additional research and analysis on conservation measures, Measures Tier 2-8, Tier 2-9 and Tier 2-11 were removed from analysis at the request of all the contractors

6.2 Results of Program Evaluation

Figure 8 shows annual water demand with no conservation, plumbing code only, and the six programs. Table 17 shows the savings in 5 year increments for all six programs. The savings in Table 17 are just from the conservation programs alone and do not include the plumbing code savings. The separate starting points for the demand with and without the plumbing code versus the conservation programs is directly correlated to the fact that the contractors have existing conservation programs active from 2005 and 2009 that are already saving water by the year 2010.

Figure 8
Long Term Demands with Conservation Programs

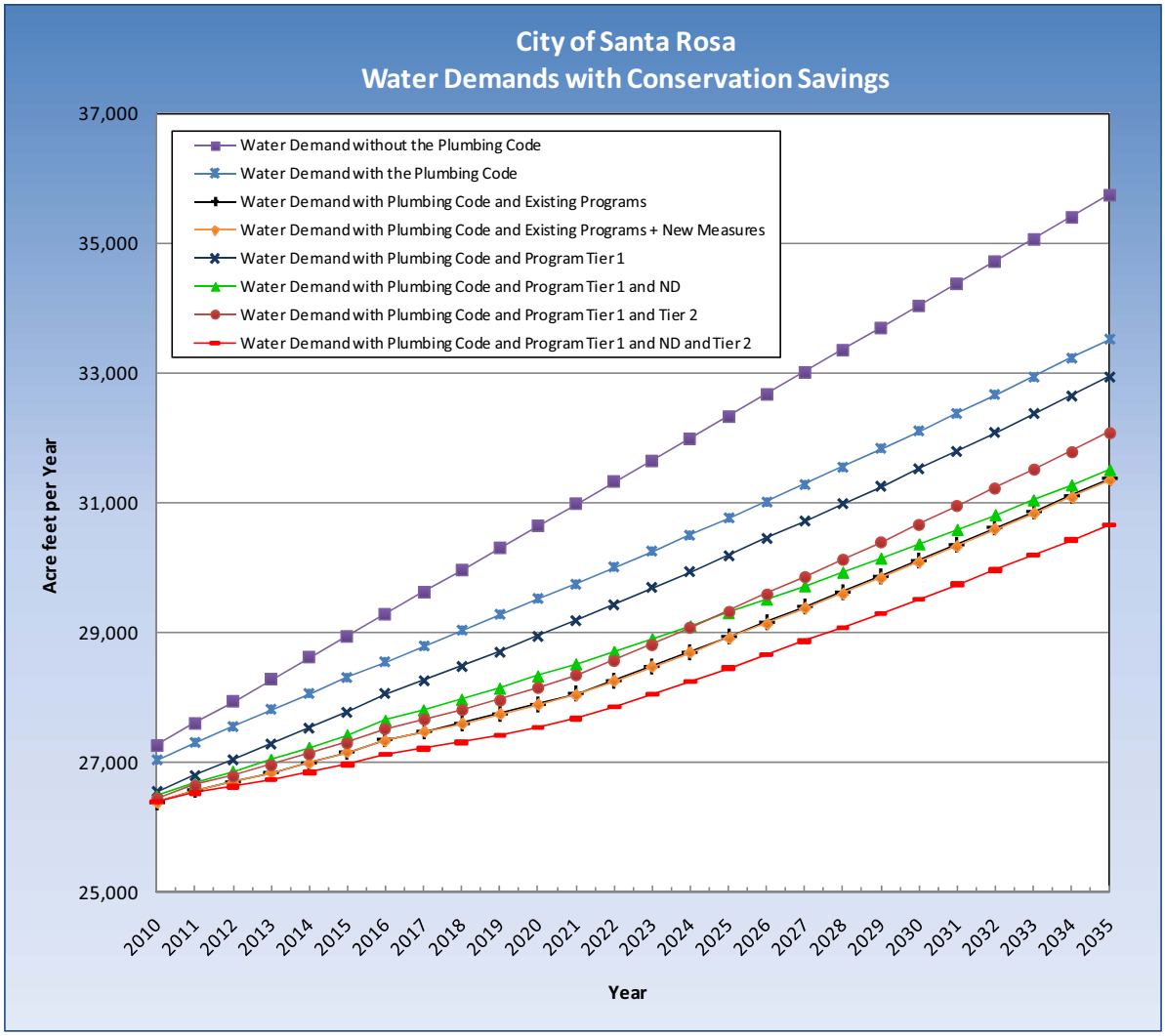


Table 17
Long Term Conservation Program Savings

City of Santa Rosa Water Conservation Savings								
Conservation Savings (AFY)	**2010**	**2015**	**2020**	**2025**	**2030**	**2035**	**Benefit Cost Ratio Utility**	**Benefit Cost Ratio Community**
Existing Programs	645	1,148	1,614	1,828	1,990	2,146	2.2	0.5
Existing Programs + New Measures	645	1,153	1,625	1,845	2,013	2,169	2.1	0.5
Program Tier 1	488	533	567	566	579	580	2.2	0.5
Program Tier 1 and ND	549	881	1,185	1,455	1,738	2,012	2.6	0.6
Program Tier 1 and Tier 2	584	990	1,356	1,422	1,429	1,430	1.6	0.9
Program Tier 1 and ND and Tier 2	645	1,337	1,973	2,309	2,587	2,859	2.2	0.6

Figure 9 shows how marginal returns change as more money is spent to achieve savings. As the figure shows the cost versus saving curve is starting to decline after Program Tier One + New Development. This means that the added cost of going from that Program to Tier One + Tier Two will save less water per unit expenditure. In other words there are diminishing returns when the curve starts to flatten out as

Tier Two measures are added to the program. It is clear that the New Development measures are more cost-effective to the utility than Tier Two measures. It is not to say that the Tier Two measures are a poor investment. The decision on which program is appropriate for each agency is dependent on many factors. Most recently it may be impacted by the goals set forth by SB7x-7 which calls for a reduction in per capita was use by 2020, which is independent of the economic analysis.

Figure 9
Present Value of Utility Costs versus Cumulative Water Saved

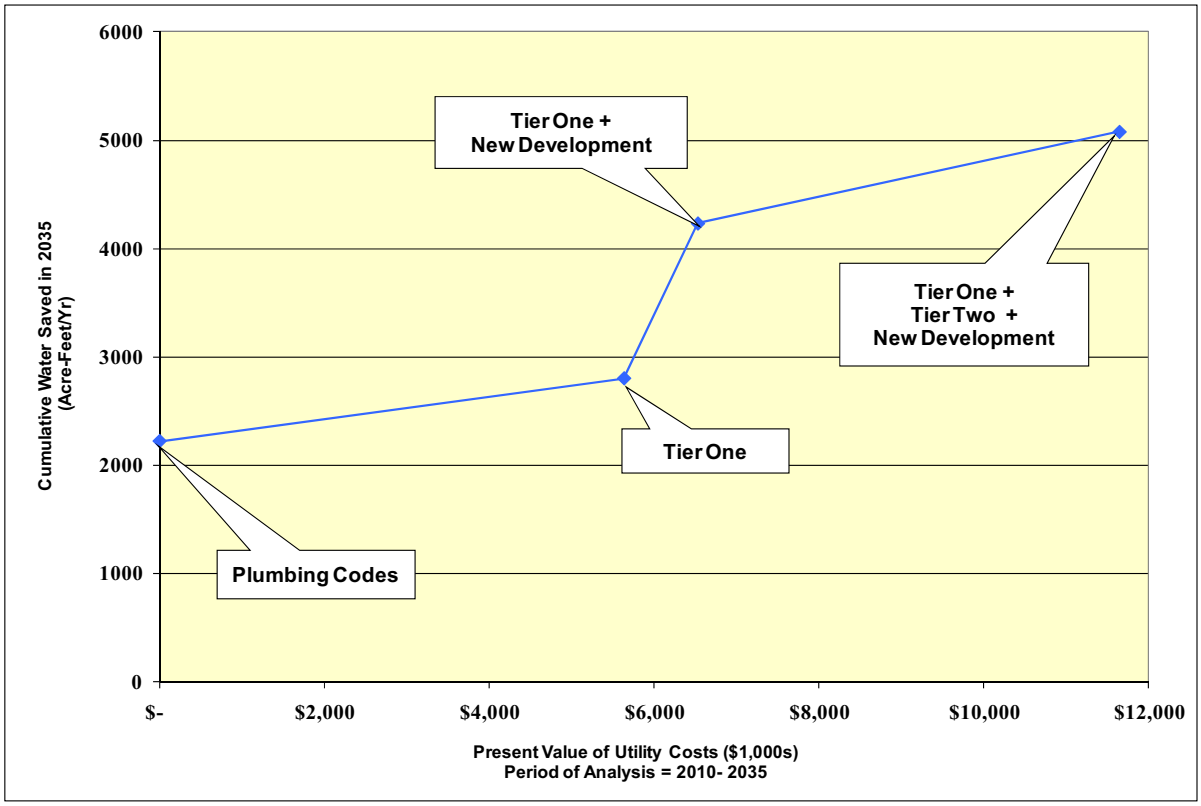


Table 18 presents key evaluation statistics compiled from the DSS Model. Assuming all measures are successfully implemented, projected water savings for 2030 in AF are shown, as are the costs of achieving this reduction. Water savings for programs have been shown for 2035 in Table 18.

The costs are expressed two ways.

1. Total present value over the analysis period,
2. The cost of water saved. Cost of water saved is presented two ways: for the utility and the total community (customer plus utility).

These cost parameters are derived from the annual time stream of utility, customer and community costs.

The water savings are expressed as a percentage of the projected 2035 demand. One column indicates the percentage of the new water demand in 2035 each program could provide. The new water needed by new customers over the full planning period is the difference between 2005 demand and 2035 demand without the plumbing code. The plumbing code is an additional savings that could be added on top of the water savings shown in Table 18. This allows the plumbing code savings percent and water savings in AF/Yr shown in Table 4 and to be additive to the conservation program savings in AF/Yr and percentages shown in Table 18.

Table 18
Comparison of Long-Term Conservation Programs – Utility Costs and Savings

City of Santa Rosa Comparison of Conservation Program Costs and Savings										
Conservation Program	Water Utility Benefit-Cost Ratio	Community Benefit-Cost Ratio	2015 Water Savings (AFY)	2035 Water Savings (AFY)	2035 Indoor Water Savings (AFY)	2035 Outdoor Water Savings (AFY)	Total Water Savings as a % of Total Production in 2035*	30 Year Present Value of Water Utility Costs ($1,000)	Total Utility Cost for Five Years 2011-2015 ($1,000)	Utility Cost of Water Saved ($/AF)
Existing Program	2.17	0.46	1,148	2,146	331	1815	6.4%	$9,698	$2,978	$225
Existing Program + New Measures	2.13	0.46	1,153	2,169	331	1838	6.5%	$9,961	$3,073	$229
Tier One	1.50	0.46	533	580	269	311	1.7%	$5,634	$882	$352
Tier One + Tier Two	1.57	0.60	990	1,430	348	1082	4.3%	$10,748	$3,867	$317
Tier One + New Development	2.64	0.90	881	2,012	854	1157	6.0%	$6,530	$1,202	$183
Tier One + Tier Two + New Development	2.21	0.55	1,337	2,859	933	1926	8.5%	$11,644	$4,187	$218

Notes:

- Present Value is determined using an interest rate of 3%
- Cost of water saved is present value of water utility cost divided by total 30-year water savings.
- * % of water saved refers to the demand without the plumbing code
- Total water savings in 2035 as a percent of production is relative to no plumbing code production
- Conversion 1 MGD is equal to 1120 AF/Yr

7. CONCLUSIONS

7.1 Relative Savings and Cost-Effectiveness of Programs

The City of Santa Rosa service area has a relatively high portion of residential water use and a significant amount of outdoor water use. Consequently, residential conservation programs produce the most savings. City of Santa Rosa's service area is not a heavy manufacturing sector so the conservation potential in the commercial sector is relatively low. Based on the assumed avoided cost of new water, water conservation programs are cost-effective. Overall conclusions are:

- The decrease in demand for the City of Santa Rosa compared to the water demand projections in the 2005 Demand and Water Conservation Measure Analysis completed by MWM was due to the reduction in population and employment projections and change to lower water factors for each customer category used to project the water use for each customer category. The water factors decreased for all contractors compared to the 2005 study.
- Water savings from implementation of the Tier One, Tier Two and New Development conservation programs would reduce water needs in 2035 by about 8.5 percent (2,859 AF/Yr as shown on Table 18) when compared to 2035 water demand without the plumbing code.
- Water savings from implementation of the Tier One conservation programs would reduce water needs in 2035 by about 1.7 percent (580 AF/Yr) as shown on Table 18)) when compared to 2035 water demand without the plumbing code.
- For Future Tier One measures, more than half of the conservation potential in 2035 is in reducing outdoor use; the rest is indoor use reduction potential.
- The average cost of water saved over 30-years is lower than the current price of SCWA water. Thus measures that are cost-effective at today's water rates will be more so if SCWA rates rise in the future.
- Savings contributed by Tier Two measures alone are 850 acre-feet in 2035.
- Savings contributed by the New Development measures alone are 1,431 acre-feet in 2035.
- Benefit-cost ratios of program combinations range from 1.50 to 2.64 so all program combinations are cost-effective from the utility standpoint.
- The average cost of water saved for all of the programs from the utility standpoint (as shown on Table 18) is lower than the forecasted 2025 price of $832 per AF.
- The cost for the new development measures is largely funded by the builders of the new homes, which tends to reduce the overall cost to the utility for all measures.

Appendix A - Assumptions for Water Conservation Measures Evaluated in the DSS Model

	BMP 1a Residential Audits	**BMP 1a Residential Audits**	**BMP 1b Residential Audits**	**BMP 1b Residential Audits**	**BMP 2 Plumbing Retrofits**
Account Category	RSF	RMF	RSF	RMF	RSF / RMF
Affected End Uses	Internal	Internal	External	External	Toilets, Faucets, Showers
Percent Reduction in Water Use	5%	5%	10%	10%	5%/5%/21%
CUWCC MOU Sign-on Year	1998	1998	1998	1998	1998
Evaluation Start Year	2005	2005	2005	2005	2005
Required Interventions Starting in 2005 (Accounts)	0	0	0	0	1468/0
Market Penetration by End Of Program,%	15	15	15	15	75
Measure Life (years)	7	7	7	7	Permanent
Initial Cost	$ -	$ -	$ -	$ -	$ -
Utility Unit Cost, per site one time cost	$40.00	$80.00	$40.00	$50.00	$30.00
Customer Unit Cost to achieve savings	$10.00	$30.00	$5.00	$20.00	$0
Administration Cost, percent of unit cost	25%	25%	25%	25%	10%
Affected Units	dwelling unit	dwelling unit	dwelling unit	dwelling unit	1992 and older dwelling units
Comments	Audits repeated every 7 years to maintain water savings		BMP Complete	BMP Complete	BMP Complete

Notes:

RSF = Residential Single Family
RMF = Residential Multi Family
BUS/COM= Commercial
IND = Industrial
IRR = Dedicated irrigation meters
INS = Institutional/Public, buildings / grounds owned by the Water Utility or City
NRSF = New Single Family Homes
GOV = Government

	BMP 5a Water Budgets	BMP 5b Water Audits	BMP 6 Washer Rebates	BMP 7 Public Education	BMP 9 CII Audits	BMP 14 Toilet Rebates
Account Category	IRR	COM	RSF	RSF/RMF	COM	RSF/RMF
Affected End Uses	Irrigation	Irrigation	Laundry	All	All	Internal
Percent Reduction in Water Use	15%	15%	34%	1%	12%	60%
CUWCC MOU Sign-on Year	1998	1998	1998	1998	1998	1998
Evaluation Start Year	2005	2005	2005	2005	2005	2005
Required Interventions Starting in 2005 (Accounts)	272	0	0	36,700	79	0/0
Market Penetration by End Of Program, %	90	15	4.8	100	10	Matchs resale rate
Measure Life (years)	10	10	Permanent	2	Permanent	Permanent
Initial Cost	$ -	$ -	$ -	$ -	$ -	NA
Utility Unit Cost, per site one time cost	$400.00	$1,500.00	$75.00	$2.50	$4,000.00	$50
Customer Unit Cost to achieve savings	$ -	$1,000.00	$200.00	$ -	$2,000.00	$75
Administration Cost, percent of unit cost	15%	30%	30%	25%	50%	included
Affected Units	Irrigation accounts	large landscape accounts	per dwelling unit	per dwelling unit	CII accounts	per toilet
Comments	Audits and budgets repeated every 10 years to maintain water savings		BMP 6 complete			Complete in 2004

Notes:

RSF = Residential Single Family
RMF = Residential Multi Family
BUS/COM= Commercial
IND = Industrial
IRR = Dedicated irrigation meters
INS = Institutional/Public, buildings / grounds owned by the Water Utility or City
NRSF = New Single Family Homes
GOV = Government

Measure	T2 - 1	T2 - 2	T2 - 3	T2 - 4	T2 - 5a	T2 - 5b	T2 - 6
	Rain-sensor (shut off device) retrofit on irrigation controllers	Cash for Grass (turf removal program)	Financial Incentives for Being Below Water Budget	Financial Rebates for Irrigation Meters	Smart Irrigation Controller Rebates	Smart Irrigation Controller Rebates	Financial Incentives/ Rebates for Irrigation Upgrades
Applicable Customer Classes	SF	Existing Customers SF, MF, CII	IRR	Existing CII Customers with mixed water use (indoor and outdoor)	SF	Existing Customers MF, CII, IRR	Existing Customers MF, CII, IRR
Applicable End Uses	Irrigation	Irrigation	Irrigation	Irrigation	Irrigation	Irrigation	Irrigation
Market Penetration by End Of Program	10%	1%	100%	10%	5%	20%	10%
Water Use Reductions For Targeted End Uses	9%	40%	15%	15%	15%	15%	15%
Program Length, years	5	5	10	5	10	10	15
Measure Life, years	10	permanent	permanent	permanent	21	permanent	permanent
Utility Unit Cost for SFaccounts, $/unit	$ 20.00	$ 500.00	$ 25,000.00	$ -	$ 450.00	$ -	$ -
Utility Unit Cost for MF accounts, $/unit	--	$ 500.00	$ -	$ -	$ -	$ 900.00	$ -
Utility Unit Cost for non-Res accounts, $/unit	--	$ 500.00	$ -	$ 500.00	$ -	$ 900.00	$ 500.00
Customer Unit Cost. $/unit	$ 35.00	$ 500.00	$ 10,000.00	$ 500.00	$ 100.00	$ 100.00	$ 500.00
Annual Utility Admin & Marketing Cost	25%	25%	35%	25%	30%	30%	25%

Notes:

RSF = Residential Single Family
RMF = Residential Multi Family
BUS/COM= Commercial
IND = Industrial
IRR = Dedicated irrigation meters
INS = Institutional/Public, buildings / grounds owned by the Water Utility or City
NRSF = New Single Family Homes
GOV = Government

Measure	T2 - 7	T2 - 10	T2 - 12	T2 - 13
	Hotel retrofit (w/financial assistance) - CII Existing	High Efficiency Toilet (HET)	CII Rebates - replace inefficient water using equipment	0.5 gal/flush urinals in new buildings
Applicable Customer Classes	Existing Customers: CII	SF, MF	CII	COM New
Applicable End Uses	Indoor uses	Toilet end use	Process end use	COM Urinal
Market Penetration by End Of Program	20%	20%	10%	100%
Water Use Reductions For Targeted End Uses	20%	45 to 55%	10%	65 to 75%
Program Length, years	15	10	15	30
Measure Life, years	permanent	permanent	permanent	permanent
Utility Unit Cost for SFaccounts, $/unit	$ -	$ 150.00		$ 50.00
Utility Unit Cost for MF accounts, $/unit	$ -	$ 150.00		
Utility Unit Cost for non-Res accounts, $/unit	$ 100.00		$ 500.00	
Customer Unit Cost. $/unit	$ 200.00	$ 150.00	$ 1,000.00	$ 500.00
Annual Utility Admin & Marketing Cost	25%	35%	30%	25%

Notes:

RSF = Residential Single Family
RMF = Residential Multi Family
BUS/COM= Commercial
IND = Industrial
IRR = Dedicated irrigation meters
INS = Institutional/Public, buildings / grounds owned by the Water Utility or City
NRSF = New Single Family Homes
GOV = Government

Measure	ND 1	ND 2	ND 3	ND 4	ND 5	ND 6	ND 7	ND 8
	Rain-sensor shut off device on irrigation controllers	Smart Irrigation Controller	High Efficiency Toilet (HET)	Dishwasher New Efficient	Clothes washing machines requirement for new residential	Hot Water on Demand	High efficiency faucets and showerheads	Landscape and irrigation requirements
Applicable Customer Classes	Varies	Varies	Varies	Varies	Varies	Varies	Varies	Varies
Applicable End Uses	Irrigation	Irrigation	Toilet end use	Diswasher end use	Clothes Washer end use	Faucet and shower end use	Faucet and shower end use	Irrigation
Market Penetration by End Of Program	100%	100%	100%	100%	100%	100%	100%	100%
Water Use Reductions For Targeted End Uses	9%	15%	50 to 55%	34%	50%	14.2 gpd per house	15%	10%
Program Length, years	30	30	30	30	30	30	30	30
Measure Life, years	permanent	permanent	permanent	permanent	permanent	permanent	permanent	permanent
Utility Unit Cost for SFaccounts, $/unit	$ 12.50	$ 12.50	$ 12.50	$ 12.50	$ 12.50	$ 12.50	$ 12.50	$ 12.50
Utility Unit Cost for MF accounts, $/unit	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Utility Unit Cost for non-Res accounts, $/unit	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Customer Unit Cost. $/unit	$ 55.00	$ 500.00	$ 300.00	$ 400.00	$ 500.00	$ 700.00	$ 50.00	$ 3,000.00
Annual Utility Admin & Marketing Cost	10%	10%	10%	10%	10%	10%	10%	10%

Notes:

RSF = Residential Single Family
RMF = Residential Multi Family
BUS/COM= Commercial
IND = Industrial
IRR = Dedicated irrigation meters
INS = Institutional/Public, buildings / grounds owned by the Water Utility or City
NRSF = New Single Family Homes
GOV = Government
*Customer class varies depending upon local ordinances, Cal Green and contractor request of new measure or planned ordinances

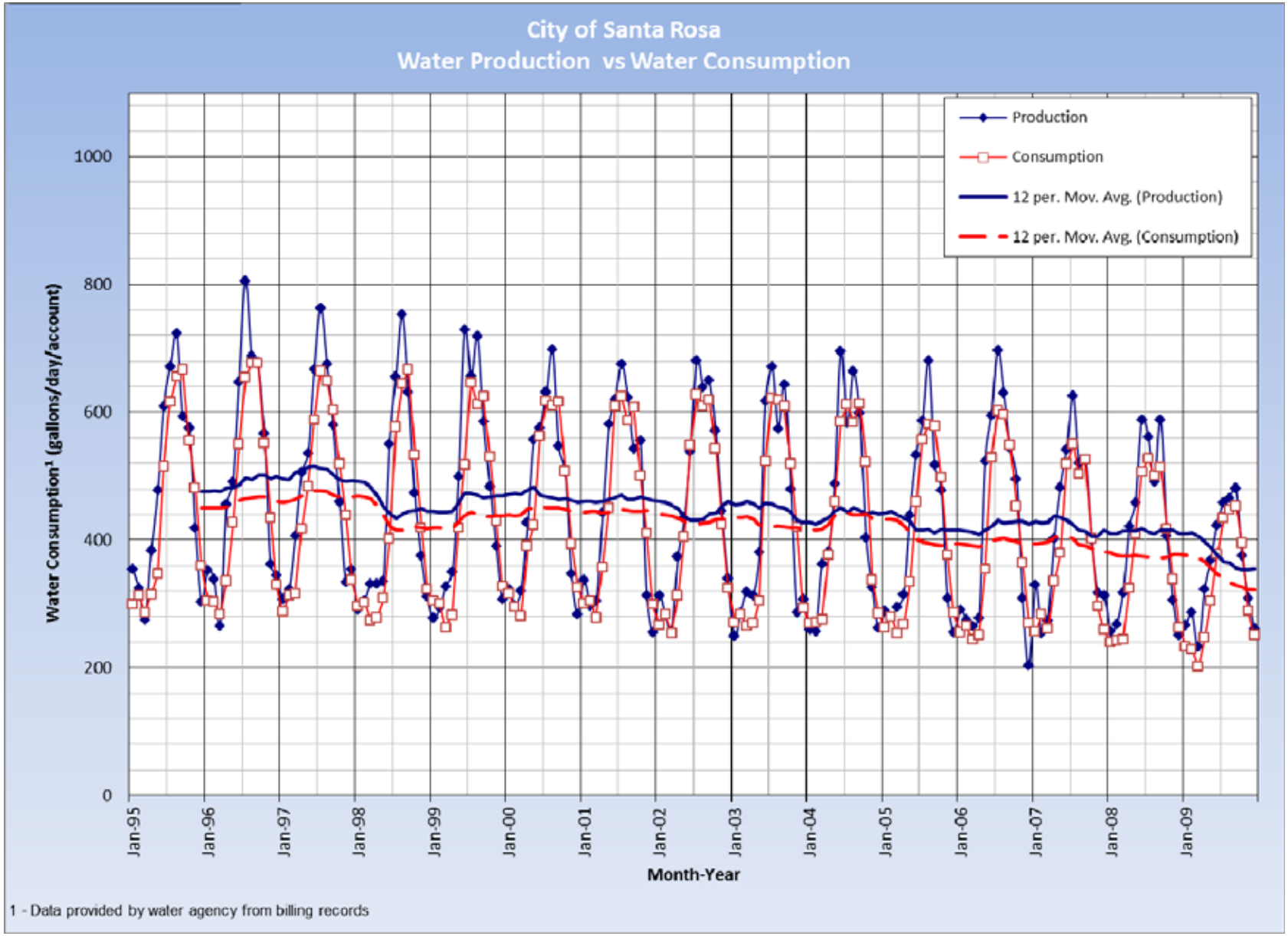
Measure	Fixture Replacement SB 407	Cisterns/Rain Catchments	Gray water Retrofit SF
Account Category	Pre-1994 Existing Accounts	SF, MF	SF
Affected End Uses	Toilet, urinal, shower, lavatory faucet	Irrigation	Irrigation
Market Penetration by End Of Program, %	4% SF, 2% MF and CII	5%	5%
Annual Market Penetration Rate, %	1% 2017-2020 SF, 1% 2019-2020 MF,1% CII 2019-2020	0.5%	0.25%
Percent Reduction in Water Use	Varies	0.0%	40%
Measure Start Year	2014	2011	2011
Measure End Year	2020	2030	2030
Program Length	7	19	19
Measure Life (years)	Permanent	Permanent	Permanent
Utility unit Cost SF, $	$ 25	$ 100	$ 500
Utility unit Cost MF, $	$ 25	$ 200	$ -
Utility Unit Cost CII, $	$ 25	$ -	$ -
Customer unit Cost SF, $	Varies	$ 500	$ 500
Customer unit Cost MF, $	Varies	$ 750	$ -
Customer Unit Cost CII, $	Varies	$ -	$ -
Administration Cost, percent of unit cost, %	25%	25%	30%
Affected Units	Dwelling unit or CII account	Accounts	Accounts
Comments	Measure will start in the year 2017 (SF) and 2019 (CII) to coincide with the California State Law SB 407. Work with the real estate industry to require a certificate of compliance be submitted to the City/Town that the property and efficient fixtures where either already there or were installed at the time of sale, before close of escrow. Consider allowing this certification to be made as a part of the conventional private building inspection report process.	Provide a rebate ($100) to assist a certain percentage of single family homeowners per year with installation of rain barrels or cisterns.	Provide a rebate (up to $500) to assist a certain percentage of single family homeowners per year to install gray water systems. Parts cost approx $200, installation is approx $400-$500

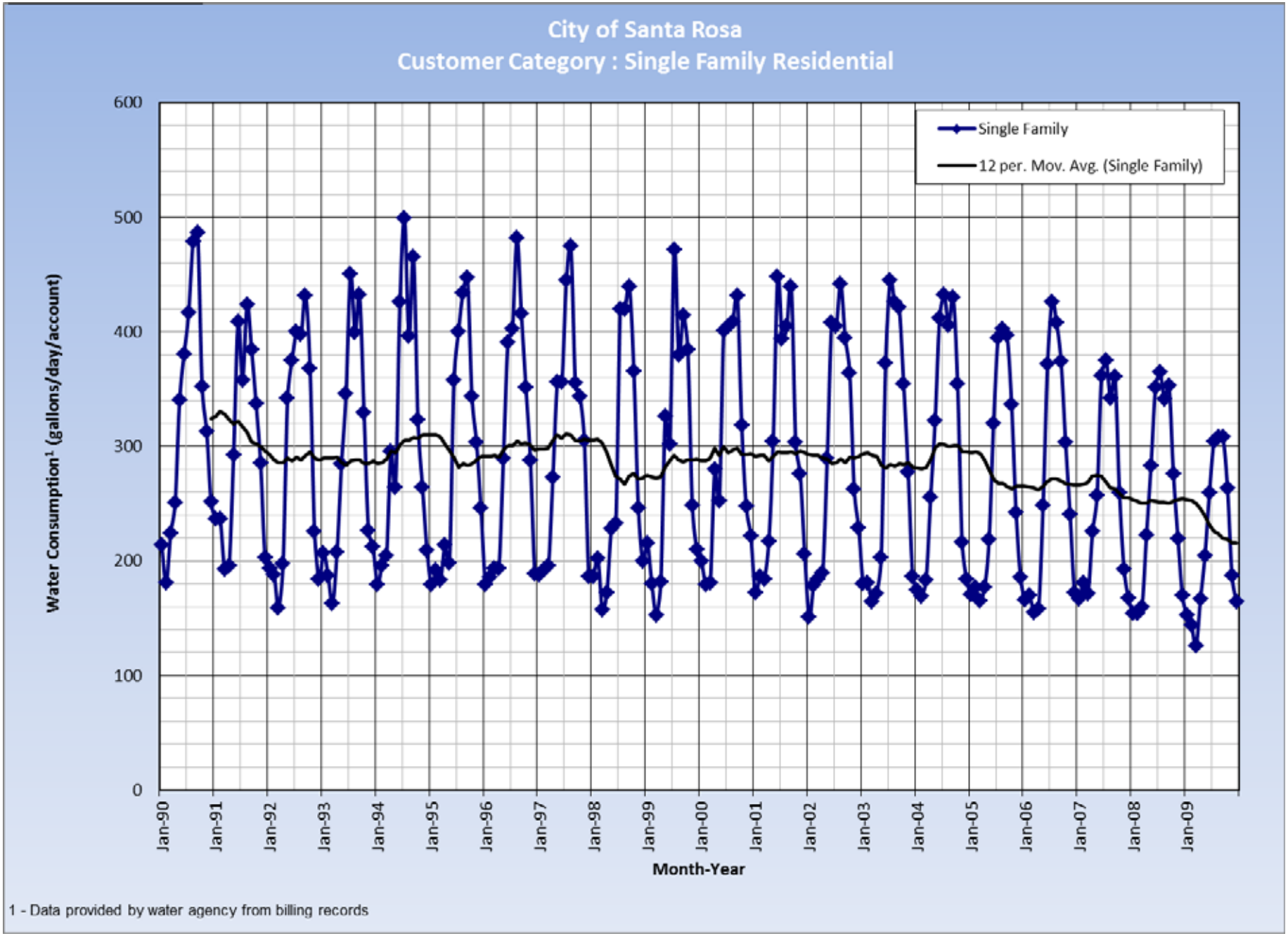
Notes:

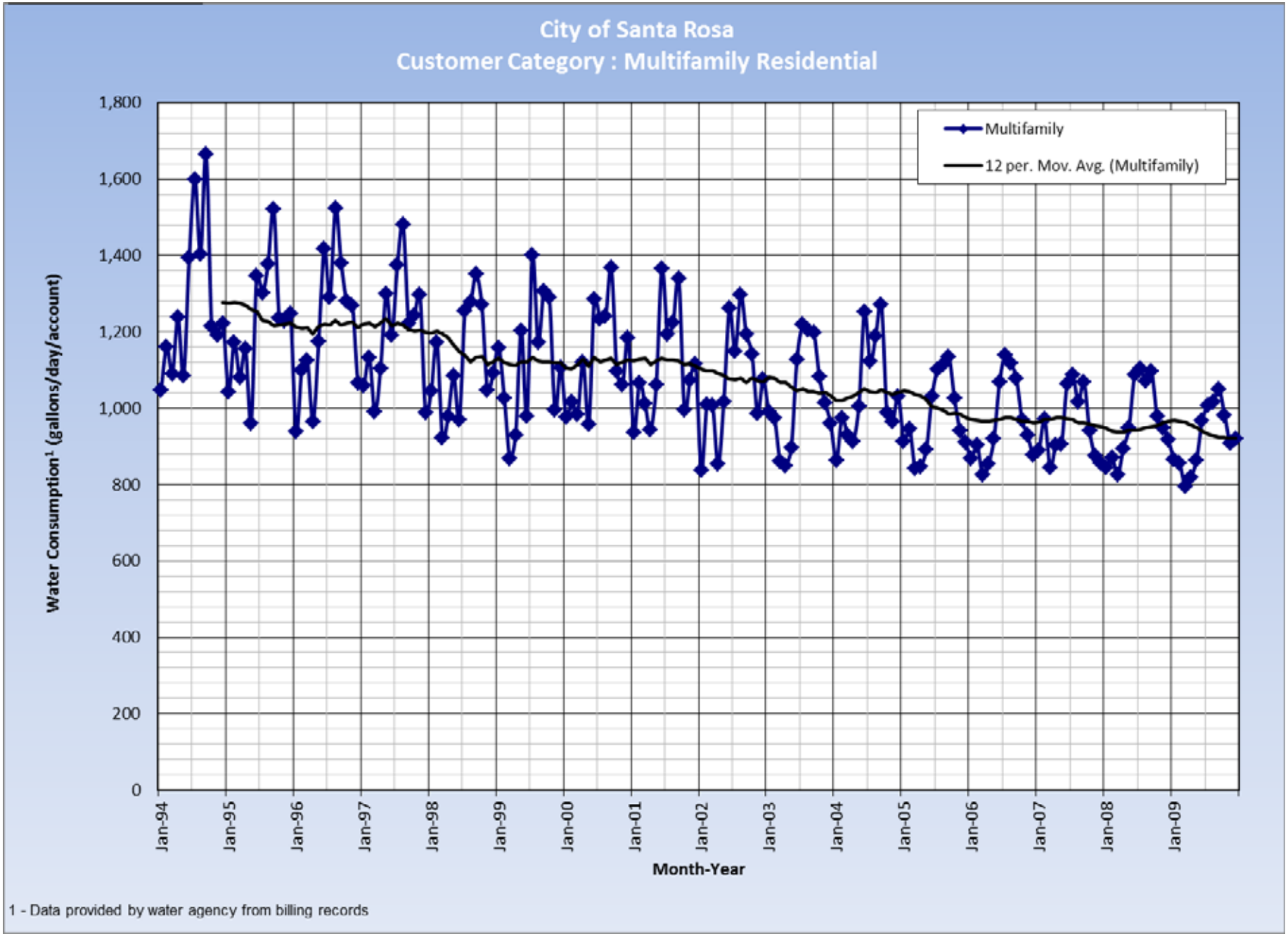
RMF = Residential Multi Family

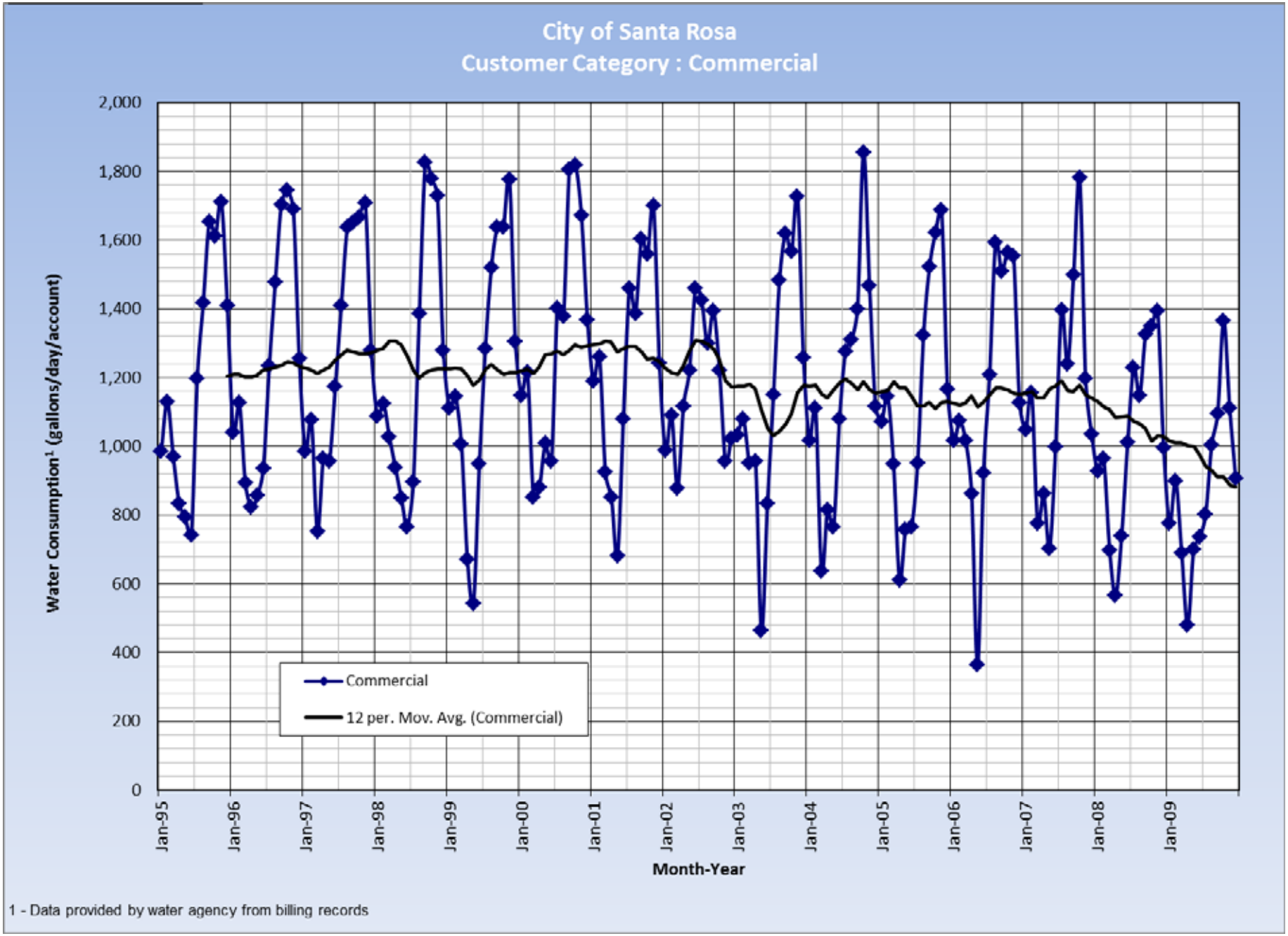
CII = Commercial, Industrial and Institutional

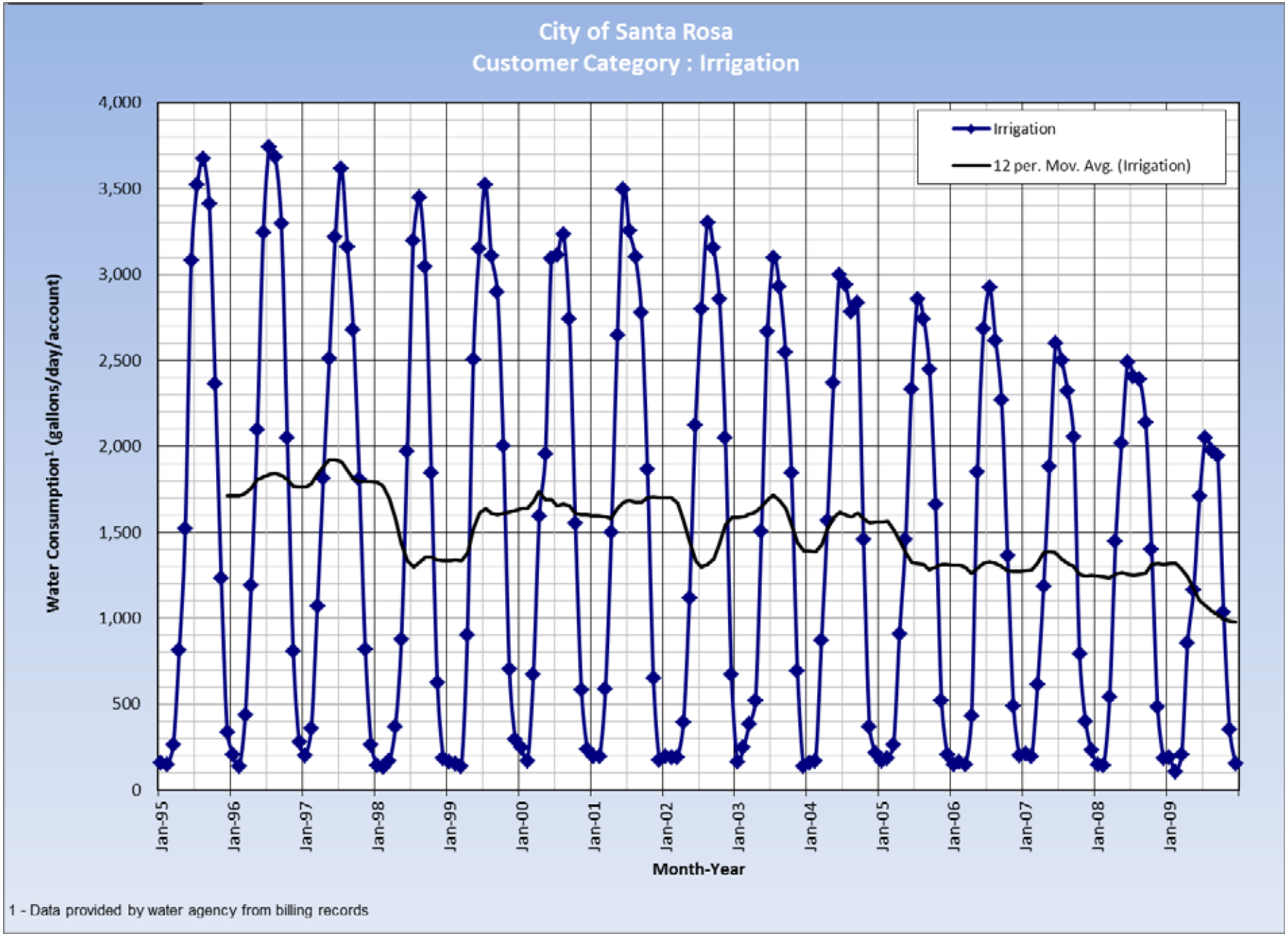
Appendix B - Water Use Data Graphs for Production and Customer Categories




City of Santa Rosa
Customer Category : Single Family Residential
Single Family
12 per. Mov. Avg. (Single Family)
Water Consumption[1] (gallons/day/account)
600
500
400
300
200
100
0
Jan-90
Jan-91
Jan-92
Jan-93
Jan-94
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Month-Year
1 - Data provided by water agency from billing records

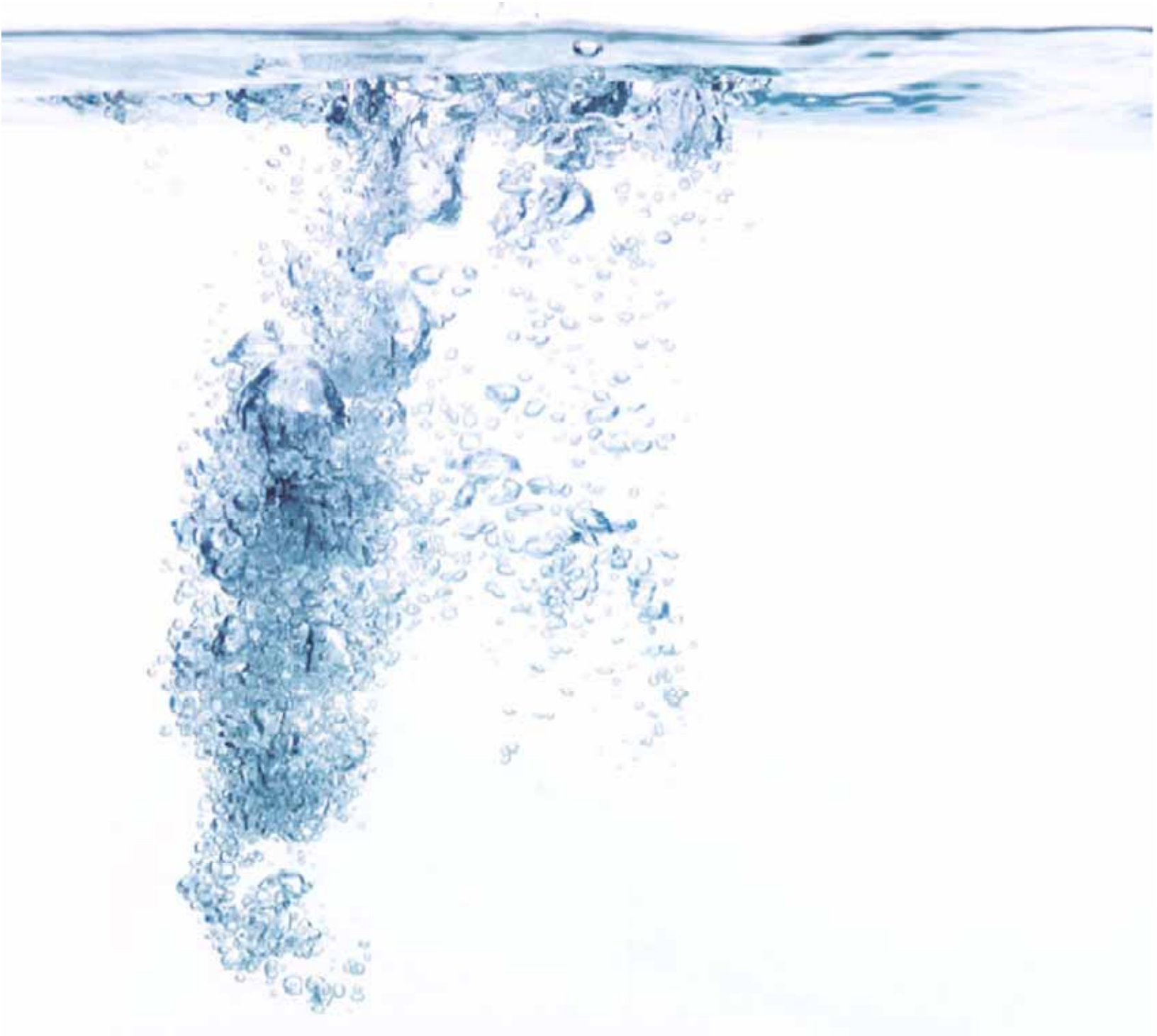

City of Santa Rosa
Customer Category : Multifamily Residential
Multifamily
12 per. Mov. Avg. (Multifamily)
Water Consumption[1] (gallons/day/account)
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
Jan-94
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Month-Year
1 - Data provided by water agency from billing records


City of Santa Rosa
Customer Category : Commercial
Water Consumption[1] (gallons/day/account)
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Month-Year
Commercial
12 per. Mov. Avg. (Commercial)
1 - Data provided by water agency from billing records


City of Santa Rosa
Customer Category : Irrigation
Irrigation
12 per. Mov. Avg. (Irrigation)
Water Consumption[1] (gallons/day/account)
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Month-Year
1 - Data provided by water agency from billing records

APPENDIX D

West Yost Associates Technical Memorandum – Compliance with the Water Conservation Act of 2009 (Senate Bill x7-7) – March 2011



WEST YOST ASSOCIATES

TECHNICAL MEMORANDUM

DATE: March 23, 2011 Project No.: 405-02-09-27

TO: Jennifer Burke, City of Santa Rosa

FROM: Gerry Nakano, R.C.E. #29524
Elizabeth Drayer, R.C.E. #46872

SUBJECT: Compliance with the Water Conservation Act of 2009 (Senate Bill x7-7)

BACKGROUND

In November 2009, Senate Bill x7-7 (SBx7-7), The Water Conservation Act of 2009, was signed into law by Governor Arnold Schwarzenegger as part of a comprehensive water legislation package. The Water Conservation Act addresses both urban and agricultural water conservation. The legislation sets a goal of achieving a 20 percent statewide reduction in urban per capita water use by the year 2020 (*i.e.*, "20 by 2020"), and directs urban retail water suppliers to establish an "interim" per capita water use target to be met by 2015 and a "final" per capita water use target to be met by 2020.

The legislation also extended the deadline for the submittal of 2010 Urban Water Management Plans (UWMPs) by urban retail water suppliers from December 31, 2010 to July 1, 2011 to allow for additional time to comply with the SBx7-7 requirements and to incorporate reporting requirements into the 2010 UWMPs. Similar legislation (SB 1478 passed on September 24, 2010) was also passed to extend the 2010 UWMP submittal deadline for urban wholesale water suppliers to permit coordination between urban wholesale water suppliers and urban retail water suppliers.

The Water Conservation Act of 2009 was incorporated into Division 6 of the California Water Code, commencing with Section 10608 of Part 2.55. The methodologies, water use targets, and reporting required by the Water Conservation Act of 2009 apply to urban retail water suppliers that "*directly provide potable municipal water to more than 3,000 end users or that supply more than 3,000 acre-feet of potable water annually at retail for municipal purposes.*"

The City of Santa Rosa (City) currently serves approximately 52,000 connections (as of January 2011) and produced approximately 19,400 acre-feet of potable water in 2010. Therefore, the City is required to comply with the requirements of SBx7-7.

INTRODUCTION

This memorandum presents the City of Santa Rosa's (City's) proposed compliance with SBx7-7. This memorandum includes the following information:

- Assumptions for gross water use and service area population
- Calculation of base daily per capita water use
- Calculation of interim and final targets using the four target methods established by SBx7-7 and DWR
- Recommended interim and final per capita water use targets for the City
- Regional targets
- Allowable adjustments to compliance daily per capita water use
- Provisions for future revision of base daily per capita water use and/or target method used
- Public hearing requirements
- Reporting requirements in the City's 2010 UWMP and subsequent UWMPs
- Consequences of non-compliance with SBx7-7
- References

Calculations of Base Daily Per Capita Water Use, and Interim and Final Per Capita Water Use Targets have been made based on the requirements specified in the SBx7-7 legislation and the California Department of Water Resources (DWR) "Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use" dated October 1, 2010 (referred to as the "DWR Methodologies" in this memorandum).

GROSS WATER USE

Gross water use is the annual water supplied to the distribution system adjusted for recycled, wholesale, and agricultural deliveries and is defined in the Water Code as follows:

> *10608.12 (g) "Gross water use" means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:*
>
> *(1) Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier.*
>
> *(2) The net volume of water that the urban retail water supplier places into long-term storage.*
>
> *(3) The volume of water the urban retail water supplier conveys for use by another urban water supplier.*
>
> *(4) The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24.*

The City's gross water use is based on the quantity of water purchased by the City from the Sonoma County Water Agency (SCWA) and groundwater pumped by the City from its municipal production wells for municipal use. DWR Methodology 1 (Gross Water Use) suggests that water volumes should be adjusted for meter errors and that gross water use calculations should be adjusted for changes in distribution system storage, indirect recycled water use and process water use. However, the City's gross water use has not been adjusted for meter errors as the City's meters are considered to be appropriately calibrated and any meter errors are considered to be negligible. The City has also not adjusted its gross water use for changes in distribution system storage as the volumes of water stored in the City's water storage reservoirs and tanks, although they vary from hour to hour based on diurnal demand patterns, are kept at consistent levels throughout the year. Also, no deductions have been taken for indirect recycled water use, water delivered for agricultural use or process water use as these deductions do not apply to the City. The City's gross water use, presented in the format recommended by the DWR Methodologies, is presented in Table 1.

Table 1. Urban Retail Water Supplier Gross Water Use Calculation
(DWR Methodologies Table 1)

Utility Name: City of Santa Rosa
12-month period: 1-Jan to 31-Dec
Volume Units: MG

Item	Calculation	Year 1 1995	Year 2 1996	Year 3 1997	Year 4 1998	Year 5 1999	Year 6 2000	Year 7 2001	Year 8 2002	Year 9 2003	Year 10 2004	2005	2006	2007	2008	2009	2010
1	Volume from Own Sources (raw data)	-	-	-	-	-	-	-	-	-	-	-	-	271	489	440	292
	Meter error adjustment (+/-)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Subtotal: Corrected Volume from Own Sources	-	-	-	-	-	-	-	-	-	-	-	-	271	489	440	292
2	Volume from Imported Sources (raw data)	7,141	7,609	7,621	7,032	7,558	7,596	7,817	7,269	7,494	7,818	7,461	7,756	7,397	7,137	6,157	6,033
	Meter error adjustment (+/-)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Subtotal: Corrected Volume from Imported Sources	7,141	7,609	7,621	7,032	7,558	7,596	7,817	7,269	7,494	7,818	7,461	7,756	7,397	7,137	6,157	6,033
3	**Total Volume Into Distribution System = Item 1 + Item 2**	**7,141**	**7,609**	**7,621**	**7,032**	**7,558**	**7,596**	**7,817**	**7,269**	**7,494**	**7,818**	**7,461**	**7,756**	**7,668**	**7,626**	**6,597**	**6,325**
4	Volume Exported to Other Utiltities (raw data)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Meter error adjustment (+/-)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Subtotal: Corrected Volume Exported to Other Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Change in Distribution System Storage (+/-)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	**Gross Water Use Before Indirect Recycled Water Use Deductions = Item 3 - Item 4 - Item 5**	**7,141**	**7,609**	**7,621**	**7,032**	**7,558**	**7,596**	**7,817**	**7,269**	**7,494**	**7,818**	**7,461**	**7,756**	**7,668**	**7,626**	**6,597**	**6,325**
7	Indirect Recycled Water Use Deduction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	**Gross Water Use After Indirect Recycled Water Use Deductions = Item 6 - Item 7**	**7,141**	**7,609**	**7,621**	**7,032**	**7,558**	**7,596**	**7,817**	**7,269**	**7,494**	**7,818**	**7,461**	**7,756**	**7,668**	**7,626**	**6,597**	**6,325**
9	*Water Delivered for Agricultural Use (optional deduction)*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	*Process Water Use (optional deduction)*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	**Gross Water Use After Optional Deductions = Item 8 - Item 9 - Item 10**	**7,141**	**7,609**	**7,621**	**7,032**	**7,558**	**7,596**	**7,817**	**7,269**	**7,494**	**7,818**	**7,461**	**7,756**	**7,668**	**7,626**	**6,597**	**6,325**

Indicates the 10-year period used to calculate the 10-year base daily per capita water use (1995-2004)

The City's historical gross water use from 1995 to 2010 in acre-feet per year (af/yr) is summarized in Table 2.

Table 2. City of Santa Rosa Historical Gross Water Use

Year	Gross Water Use (includes water purchased from SCWA and groundwater)[a], af/yr
1995	21,916
1996	23,353
1997	23,389
1998	21,580
1999	23,196
2000	23,314
2001	23,990
2002	22,310
2003	23,001
2004	23,995
2005	22,897
2006	23,804
2007	23,533
2008	23,406
2009[b]	20,247
2010[b]	19,413

[a] Does not include recycled water use.
[b] Gross water use in the City in 2009 and 2010 dropped significantly due to a number of factors (*e.g.*, drought conditions, economic downturn, and limited supplies from SCWA)

SERVICE AREA POPULATION

Service area population is used to determine per capita water use and is defined in the Water Code as follows:

> *(1) 10608.20 (f) When calculating per capita values for the purpose of this chapter, an urban retail water supplier shall determine population using federal, state, and local population reports and projections.*

Consistent with DWR Methodology 2 (Service Area Population), the City's service area population is based on population data obtained from the California Department of Finance (DOF). The City's historical service area population from 1995 to 2010 is summarized in Table 3.

Table 3. City of Santa Rosa Historical Service Area Population

Year	Service Area Population[(a)]
1995	126,495
1996	129,028
1997	131,848
1998	139,862
1999	143,009
2000	146,871
2001	149,648
2002	152,053
2003	154,027
2004	154,944
2005	155,589
2006	156,431
2007	157,126
2008	159,469
2009	161,716
2010	163,436

[(a)] Population Sources:

1995-2000: California Department of Finance, E-4 Historical Population Estimates for City, County and the State, 1991-2000, with 1990 and 2000 Census Counts, Sacramento, CA, August 2007 (downloaded March 2011).

2001-2010: California Department of Finance, E-4 Population Estimates for City, County and the State, 2001-2010, with 2000 Benchmark, Sacramento, CA, May 2010 (downloaded March 2011).

BASE DAILY PER CAPITA WATER USE

The Base Daily Per Capita Water Use is the historical gross water use divided by the service area population and is defined in the Water Code as follows:

> *10608.12 (b) "Base daily per capita water use" means any of the following:*
>
> *(1) The urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.*
>
> *(2) For an urban retail water supplier that meets at least 10 percent of its 2008 measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the calculation described in paragraph (1) up to an additional five years to a maximum of a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.*
>
> *(3) For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.*

Unless the urban retail water supplier's 5-year Base Daily Per Capita Water Use per Water Code Section 10608.12(b)(3) is 100 gallons per capita per day (gpcd) or less, Base Daily Per Capita Water Use must be calculated for both baseline periods. Calculation methods are described in DWR Methodology 3 (Base Daily Per Capita Water Use).

5-Year Base Daily Per Capita Water Use Per Water Code Section 10608.22

For purposes of Water Code Section 10608.22, the Base Daily Per Capita Water Use must be calculated using a continuous 5-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.

Table 4 shows the calculation of the City's Base Daily Per Capita Water Use for the 5-year period ending December 31, 2007. As shown, the City's 5-Year Base Daily Per Capita Water Use is 134 gpcd.

10- or 15-Year Base Daily Per Capita Water Use Per Water Code Section 10608.20

Per Water Code Section 10608.20, the City's Base Daily Per Capita Water Use is calculated using one of the following base periods:

- If recycled water made up less than 10 percent of 2008 retail water delivery, use a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.
- If recycled water made up 10 percent or more of 2008 retail water delivery, use a continuous 10- to 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.

Table 4. Base Daily Per Capita Water Use Calculation for Section 10608.22
(DWR Methodologies Table 3)

Utility Name: City of Santa Rosa
12-month Period: January 1 to December 31

(1)	(2)	(3)	(4)	(5)
Base Years	Service Area Population	Gross Water Use, gpd	Daily Per Capita Water Use (3) ÷ (2), gpcd	5-year Running Average Daily Per Capita Water Use Ending Between 2007 and 2010, gpcd
2003	154,027	20,532,483	133	
2004	154,944	21,419,832	138	
2005	155,589	20,440,066	131	
2006	156,431	21,249,766	136	
2007	157,126	21,007,600	134	134
2008	159,469	20,893,843	131	134
2009	161,716	18,073,973	112	129
2010	163,436	17,328,576	106	124
			5-Year Base Daily Per Capita Water Use Ending in 2007, gpcd	134

Indicates the 5-year period used to calculate the 5-year base daily per capita water use (2003-2007)

The City's recycled water delivery in 2008 was 189 acre-feet, which was about 1 percent of the City's total retail water delivery in 2008 (23,595 acre-feet). As such, the City must use a continuous 10-year period to determine their Base Daily Per Capita Water Use. Table 5 shows the calculation of the City's Base Daily Per Capita Water Use for the 10-year period ending December 31, 2004. As shown, the City's 10-Year Base Daily Per Capita Water Use is 144 gpcd.

DETERMINATION OF INTERIM (2015) AND FINAL (2020) TARGETS

Overview of DWR Methods

The City must set an interim (2015) water use target and a final (2020) water use target using one of four methods defined by SBx7-7 and DWR. Three of these methods are defined in Water Code Section 10608.20(a)(1), with the fourth to be developed by DWR by the end of 2010. The 2020 water use target will be calculated using one of the following four methods:

- Method 1: 80 percent of the City's base daily per capita water use
- Method 2: Per capita daily water use estimated using the sum of performance standards applied to indoor residential use; landscaped area water use; and commercial, industrial, and institutional uses
- Method 3: 95 percent of the applicable State hydrologic region target as stated in the State's April 30, 2009, draft 20x2020 Water Conservation Plan
- Provisional Method 4: A provisional approach that considers the water conservation potential from (1) indoor residential savings, (2) metering savings, (3) commercial, industrial and institutional savings, and (4) landscape and water loss savings

Interim (2015) targets for each of the target methods are calculated based on the midpoint of the City's 10-year Base Daily Per Capita Water Use and the 2020 targets calculated for each of the respective target methods.

As described below, the target may need to be adjusted further to achieve a minimum reduction in water use regardless of the target method.

Target Method 1

SBx7-7 legislation, section 10608.20 (b) (1) defines Method 1 as:

> *Eighty percent of the urban retail water supplier's baseline per capita daily water use.*

Urban water use targets calculated using Method 1 rely on the historical gross water use and service area population to determine a base daily per capita water use. The definitions and methodologies used for Method 1, as defined in the legislation and in the DWR Methodologies, are detailed below.

Target Method 1 is based on a 20 percent reduction from the City's 10-year Base Daily Per Capita Water Use. The Interim (2015) target is based on 90 percent of the Base Daily Per Capita Water Use (equal to the midpoint between the 10-year Base Daily Per Capita Water Use and the

Table 5. Base Daily Per Capita Water Use Calculation for Section 10608.20
(DWR Methodologies Table 4)

Utility Name: City of Santa Rosa
12-month Period: January 1 to December 31

(1)	(2)	(3)	(4)	(5)
Base Years	Service Area Population	Gross Water Use, gpd	Daily Per Capita Water Use (3) ÷ (2), gpcd	10-year Running Average Daily Per Capita Water Use Ending Between 2004 and 2010, gpcd
1995	126,495	19,563,827	155	
1996	129,028	20,846,477	162	
1997	131,848	20,878,518	158	
1998	139,862	19,264,433	138	
1999	143,009	20,706,650	145	
2000	146,871	20,811,698	142	
2001	149,648	21,415,342	143	
2002	152,053	19,915,728	131	
2003	154,027	20,532,483	133	
2004	154,944	21,419,832	138	144
2005	155,589	20,440,066	131	142
2006	156,431	21,249,766	136	140
2007	157,126	21,007,600	134	137
2008	159,469	20,893,843	131	136
2009	161,716	18,073,973	112	133
2010	163,436	17,328,576	106	130
			10-Year Base Daily Per Capita Water Use Ending in 2004, gpcd	144

Indicates the 10-year period used to calculate the 10-year base daily per capita water use (1995-2004)

Final 2020 target) and the Final (2020) target is based on 80 percent of the Base Daily Per Capita Water Use.

As calculated above, the City's Base Daily Per Capita Water Use for the 10-year period ending December 31, 2004 is 144 gpcd (see Table 5). Therefore, the City's interim (2015) target per Target Method 1 is 130 gpcd (90 percent of 144 gpcd), and the City's final (2020) target per Target Method 1 is 115 gpcd (80 percent of 144 gpcd).

The City's targets using Target Method 1 are summarized as follows:

- Interim (2015) Target = 130 gpcd
- Final (2020) Target = 115 gpcd

Target Method 2

SBx7-7 legislation, section 10608.20 (b) (2) defines Method 2 as:

> *The per capita daily water use that is estimated using the sum of the following performance standards:*
>
> *(A) For indoor residential water use, 55 gallons per capita daily water use as a provisional standard. Upon completion of the department's 2016 report to the Legislature pursuant to Section 10608.42, this standard may be adjusted by the Legislature by statute.*
>
> *(B) For landscape irrigated through dedicated or residential meters or connections, water efficiency equivalent to the standards of the Model Water Efficient Landscape Ordinance set forth in Chapter 2.7 (commencing with Section 490) of Division 2 of Title 23 of the California Code of Regulations, as in effect the later of the year of the landscape's installation or 1992. An urban retail water supplier using the approach specified in this subparagraph shall use satellite imagery, site visits, or other best available technology to develop an accurate estimate of landscaped areas.*
>
> *(C) For commercial, industrial, and institutional uses, a 10-percent reduction in water use from the baseline commercial, industrial, institutional water use by 2020.*

Residential Indoor Water Use

Per DWR Methodology 5 (Indoor Residential Use), the residential indoor urban water use target is set at 55 gpcd. The legislation requires that DWR assess whether this is a reasonable assumption in a report due in 2016. Depending on the findings, the residential indoor urban water use target may be adjusted after 2016.

Landscape Irrigation Water Use

The landscaped area urban water use target relies on the state-adopted Model Water Efficient Landscape Ordinance for definitions and calculations. The projected 2020 landscaped area for the service area must be computed and then the Maximum Applied Water Allowance (MAWA) calculated from the Model Water Efficient Landscape Ordinance. Two different MAWA equations are specified in the DWR Methodologies. For landscapes installed prior to January 1, 2010, the MAWA equation as defined in the 1992 version of the Model Water Efficient Landscape Ordinance is to be used. For landscapes installed after January 1, 2010, the MAWA equation as defined in the 2009 version of the Model Water Efficient Landscape Ordinance is to be used.

Per the DWR Methodology 6 (Landscaped Area Water Use), a rigorous application of this method requires a data-intensive analysis using GIS, coupled with site visits, to estimate the 2020 landscaped areas. Such an analysis has not been performed for this evaluation. Instead, rough estimates of landscaped areas have been used to determine if the Method 2 targets are comparable to targets obtained using alternative methods.

The equation used to calculate the MAWA on landscaped areas constructed prior to January 1, 2010 is as follows:

Maximum Applied Water Allowance (MAWA) = (ETo) (0.62)(0.8 x LA)

Where,

MAWA is in gallons per year

ETo = 42.0 inches/year for the City of Santa Rosa. Reference evapotranspiration (inches per year), which is "a standard measurement of environmental parameters which affect the water use of plants" (reference: Appendix A of the Model Water Efficient Landscape Ordinance)

0.62 = Conversion Factor (from inches/year to gallons/sf/year)

0.8 = ET Adjustment Factor (ETAF). When applied to reference evapotranspiration, the ETAF "adjusts for plant factors and irrigation efficiency, two major influences upon the amount of water that needs to be applied to the landscape

LA = Landscaped Area (sf), which includes "all the planting areas, turf areas, and water features in a landscape design plan subject to the MAWA calculation" (for SBx7-7 compliance, only irrigated landscape area should be included)

The City has estimated the Landscaped Area (LA) installed prior to January 1, 2010 based on the following assumptions:

- Residential landscaped areas have been estimated to be 2,150 square feet per connection based on an estimated outdoor water use of 31 gpcd (actual landscaped areas have not been measured)
- "Dedicated meter" landscaped areas have been estimated based on actual irrigation water use and assuming a unit water use factor of 3.5 af/ac/yr to back-calculate the landscaped area (actual landscaped areas have not been measured)
- "Recycled water" landscaped areas have been estimated based on actual irrigation water use and assuming a unit water use factor of 3.5 af/ac/yr to back-calculate the landscaped area (actual landscaped areas have not been measured)

Based on these assumptions, the pre-2010 Landscaped Area is approximately 111 million square feet (about 2,600 acres), and the calculated MAWA is 2.3 billion gallons per year. Based on the City's projected 2020 service area population, the MAWA for the pre-2010 landscaped area equates to 31 gpcd.

A second equation is used to determine the MAWA on landscaped areas constructed after January 1, 2010. It is as follows:

Maximum Applied Water Allowance (MAWA) = (ETo) (0.62) [(0.7 x LA) + (0.3 x SLA)]

Where definitions for factors not provided above are,

0.7 = ET Adjustment Factor (ETAF). When applied to reference evapotranspiration, the ETAF "adjusts for plant factors and irrigation efficiency, two major influences upon the amount of water that needs to be applied to the landscape

0.3 = Additional Water Allowance for Special Landscape Area (SLA), resulting in an effective ETAF for SLA of 1.0

SLA = Special Landscaped Area (sf), which is defined as "an area of the landscape dedicated solely to edible plants, areas irrigated with recycled water, water features using recycled water and areas dedicated to active play such as parks, sports fields, golf courses, and where turf provides a playing surface"

The City has estimated the Landscaped Area (LA) and Special Landscaped Area (SLA) to be constructed after January 1, 2010 based on the following assumptions:

- Residential landscaped areas in 2020 have been estimated to be 2,150 square feet per connection based on a current estimated outdoor water use of 31 gpcd (projected landscaped areas have not been measured) times the number of new single-family connections projected between 2010 and 2020
- "Dedicated meter" landscaped areas in 2020 have been estimated based on projected incremental irrigation water use in 2020 and assuming a unit water use factor of 3.5 af/ac/yr to back-calculate the incremental landscaped area (projected landscaped areas have not been measured)
- "Recycled water" landscaped areas in 2020 have been estimated based on projected incremental irrigation water use and assuming a unit water use factor of 3.5 af/ac/yr to back-calculate the landscaped area (projected landscaped areas have not been measured)

Based on these assumptions, the post-2010 Landscaped Area (LA) is 21 million square feet and the post-2010 Special Landscaped Area (SLA) is 7 million square feet, and the calculated MAWA is 445 million gallons per year. Based on the City's projected 2020 service area population, the MAWA for the post-2010 landscaped area equates to 6 gpcd.

The total MAWA for the pre-2010 and post-2010 landscapes therefore equates to 37 gpcd (31 gpcd + 6 gpcd).

Commercial, Industrial and Institutional Water Use

Per DWR Methodology 7 (Baseline Commercial, Industrial and Institutional Water Use), the commercial, industrial and institutional (CII) urban water use target is based on a 10 percent reduction in water use from the baseline CII water use by 2020. The calculation of the baseline CII water use is performed in the same way that the 10-year Base Daily Per Capita Water Use is calculated and is shown on Table 6. As shown, the baseline CII water use for the 10-year period ending in 2004 is 23 gpcd. The CII water use target is then a 10 percent reduction from this baseline water use and equals 21 gpcd.

Table 6. Baseline Commercial, Industrial and Institutional (CII) Water Use

Utility Name: City of Santa Rosa
12-month Period: January 1 to December 31

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Base Years	Service Area Population	Commercial Water Use, MG	Industrial Water Use, MG	Institutional Water Use, MG	Total CII Water Use, MG (3) + (4) + (5)	CII Daily Per Capita Water Use (6) ÷ (2), gpcd	10-year Running Average Daily Per Capita Water Use Ending Between 2004 and 2010, gpcd
1995	126,495	1,149	0	0	1,149	25	
1996	129,028	1,190	0	0	1,190	25	
1997	131,848	1,243	0	0	1,243	26	
1998	139,862	1,206	0	0	1,206	24	
1999	143,009	1,206	0	0	1,206	23	
2000	146,871	1,285	0	0	1,285	24	
2001	149,648	1,246	0	0	1,246	23	
2002	152,053	1,172	0	0	1,172	21	
2003	154,027	1,167	0	0	1,167	21	
2004	154,944	1,163	0	0	1,163	21	23
2005	155,589	1,126	0	0	1,126	20	23
2006	156,431	1,156	0	0	1,156	20	22
2007	157,126	715	88	311	1,114	19	22
2008	159,469	685	86	297	1,068	18	21
2009	161,716	565	78	278	921	16	20
2010	163,436	697	84	105	886	15	19
						Baseline CII Per Capita Water Use Ending in 2004, gpcd	23

Indicates the 10-year period used to calculate the 10-year baseline CII water use (1995-2004)

The resulting final (2020) target for Method 2 is then the sum of the residential indoor water use target (55 gpcd), the landscaped area urban water use target for 2020 landscaped areas (31 gpcd + 6 gpcd = 37 gpcd) and the CII urban water use target (21 gpcd), or 113 gpcd. The interim (2015) target is the midpoint between the City's 10-Year Base Daily Per Capita Water Use (144 gpcd) and the final (2020) target as calculated by Method 2 (113 gpcd), or 129 gpcd.

The City's targets using Target Method 2 are summarized as follows:

- Interim (2015) Target = 129 gpcd
- Final (2020) Target = 113 gpcd

Target Method 3

SBx7-7 legislation, section 10608.20 (b) (3) defines Method 3 as:

> *Ninety-five percent of the applicable state hydrologic region target, as set forth in the state's draft 20x2020 Water Conservation Plan (dated April 30, 2009). If the service area of an urban water supplier includes more than one hydrologic region, the supplier shall apportion its service area to each region based on population or area.*

Method 3 is based on the hydrologic region targets that have been established in the draft 20x2020 Water Conservation Plan dated April 30, 2009[1].

DWR has defined ten hydrologic regions for water resources planning purposes (see Figure 1). The City of Santa Rosa is located in North Coast Hydrologic Region (Region No. 1).

The baseline, interim and final targets established in the 20x2020 Water Conservation Plan for each hydrologic region are summarized in Table 7.

Table 7 also shows 95 percent of the final (2020) hydrologic region targets, which are the required 2020 targets for SBx7-7 Method 3. For the City, the 2020 target is 130 gpcd (95 percent of the Region No. 1 targets).

Figure 1. California DWR Hydrologic Regions

The Method 3 interim target is calculated based on the midpoint between the City's 10-year Base Daily Per Capita Water Use (144 gpcd) and the Method 3 2020 Target (130 gpcd) and equals 137 gpcd.

[1] A final version of the 20x2020 Water Conservation Plan was published in February 2010.

Table 7. California Hydrologic Region Per Capita Water Use Targets

DWR Hydrologic Region Number and Name, gpcd	Region									
	1	2	3	4	5	6	7	8	9	10
	North Coast	SF Bay	Central Coast	South Coast	Sacto River	San Joaquin	Tulare Lake	North Lahontan	South Lahontan	Colorado River
20x2020 Water Conservation Plan Targets										
Baseline (1995-2005)	165	157	154	180	253	248	285	243	237	346
Interim (2015) Targets	151	144	139	165	215	211	237	208	204	278
Final (2020) Targets	137	131	123	149	176	174	188	173	170	211
SBx7-7 Targets										
95% of Final (2020) Targets	130	124	117	142	167	165	179	164	162	200

Note: The City of Santa Rosa is located in Region 1 (North Coast).

Interim (2015) SBx7-7 Targets are to be determined based on the midpoint of the agency's 10-year base daily per capita water use and the Final (2020) SBx7-7 target as shown above.

The City's targets using Target Method 3 are summarized as follows:

- Interim (2015) Target = 137 gpcd
- Final (2020) Target = 130 gpcd

Provisional Target Method 4

On February 16, 2011, DWR released the Provisional Method 4. It should be noted that Method 4 is "provisional", and it is expected that DWR will continue to make improvements to the method, prior to finalizing the methodology before the end of 2014 as stated in Water Code Section 10608.20 (d):

> *The department shall update the method described in paragraph (4) of subdivision (b) and report to the Legislature by December 31, 2014. An urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may adopt a new urban daily per capita water use target pursuant to this updated method.*

Possible improvements to Method 4 may include changes to the landscape and water loss savings calculations and adjustments to baselines based on data provided in 2010 UWMPs.

Method 4 develops water use targets which consider the water conservation potential from the following four sources:

1. Indoor Residential Savings
2. Metering Savings
3. CII Savings
4. Landscape and Water Loss Savings

The sum of the calculated water use savings from the four sources listed above will be subtracted from the 10-year Base Daily Per Capita Water Use to determine the Method 4 final (2020) water use target. The Method 4 interim target is calculated based on the midpoint between the 10-year Base Daily Per Capita Water Use and the Method 4 2020 Target. A summary of the water savings assumptions and calculations for each of these four sources is provided below.

Indoor Residential Savings

Indoor residential water use is assumed to be 70 gpcd for all water suppliers. The indoor residential savings can be calculated in two ways, either by using a default savings of 15 gpcd, or by using the Best Management Practice (BMP) Calculator. The BMP Calculator sums the potential savings from the following four elements:

- Single-family housing toilets,
- Multi-family housing toilets,
- Residential washers, and
- Showerheads.

Based on the four categories of fixtures listed above, the BMP Calculator estimates how much indoor residential water use would be saved if the saturation for efficient fixtures was increased to reach saturation goals for 2020. Saturation goals for each of the elements listed above are defined as:

- Single-family housing toilets = 85 percent 1.28 gallons per flush toilets
- Multi-family housing toilets = 85 percent 1.28 gallons per flush toilets
- Residential washers = 85 percent Water Factor of 6 (Water Factor = gallons of water per cubic foot of laundry), 15 percent average 2000 Water Factor
- Showerheads = 95 percent low flow showerheads

Existing saturation estimates are based on the midpoint year of the supplier's baseline, which for the City would be 2000. Therefore, water suppliers with existing high percentages of efficient fixtures will have to install fewer efficient fixtures in the future, and subsequently, will have a smaller calculated indoor residential savings requirement (*i.e.*, higher Method 4 per capita water use target).

Metering Savings

The metering savings calculation assumes (per BMP 1.3 of the California Urban Water Conservation Council Memorandum of Understanding) that water deliveries to unmetered accounts can be lowered by 20 percent once meters are installed. All of the City's water connections are metered; therefore, there would be no additional savings for the City under this savings category.

CII Savings

The CII savings are equal to 10 percent of the baseline CII water use, which is identical to the calculation of the CII water use target in Target Method 2 as discussed previously.

Landscape and Water Loss Savings

Estimated landscape water use and water loss is equal to the 10-year Base Daily Per Capita Water Use minus the following per capita water uses: residential indoor, unmetered, and CII. Landscape and water loss savings are defined to be 21.6 percent of the calculated estimated landscape water use and water loss. DWR calculated the value of 21.6 percent based on the percent reduction required for a random sample of 52 California water suppliers to reduce their collective total per capita water demand by 20 percent. DWR anticipates adjusting the required percent reduction in landscape and water loss savings to be included in the 2015 UWMP.

Target Method 4 Calculation

West Yost has calculated the City's targets using Method 4 based on the default savings for the indoor residential savings as follows:

Calculation for Estimated Landscape Water Use and Water Loss:								
10-Year Baseline, gpcd	Minus	Standard Indoor Residential, gpcd	Minus	10-Year Baseline CII, gpcd	Equals	Estimated Landscape Water Use and Water Loss, gpcd		
144	-	70	-	23 (based on 2005 CII water use)	=	51		
Calculation of Total Savings:								
Indoor Residential Savings (Default), gpcd	Plus	Metered Savings BMP 1.3, gpcd	Plus	CII Savings BMP 4 (10% of CII Baseline), gpcd	Plus	Landscape plus Water Loss Savings (21.6% of Estimated Landscape Water Use and Water Loss), gpcd	Equals	Total Savings, gpcd
-15	+	0	+	-2	+	-11	=	-28
Calculation of Provisional Method 4 2020 Urban Water Use Target:								
10-Year Baseline, gpcd	Plus	Total Savings, gpcd	Equals	2020 Urban Water Use Target, gpcd				
144	+	-28	=	116				

The Method 4 interim target is calculated based on the midpoint between the City's 10-year Base Daily Per Capita Water Use (144 gpcd) and the Method 4 2020 Target (116 gpcd) and equals 130 gpcd.

The City's targets using Target Method 4 are summarized as follows:

- Interim (2015) Target = 130 gpcd
- Final (2020) Target = 116 gpcd

Minimum Water Use Reduction Requirement

Water Code Section 10608.22 specifies the minimum water use reduction requirement as follows:

> *Notwithstanding the method adopted by an urban retail water supplier pursuant to Section 10608.20, an urban retail water supplier's per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use as defined in paragraph (3) of subdivision (b) of Section 10608.12. This section does not apply to an urban retail water supplier with a base daily per capita water use at or below 100 gallons per capita per day.*

The calculation of the minimum water use reduction requirement includes the following three steps:

1. Calculate Base Daily Per Capita Water Use using a continuous five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.
2. Multiply the result from Step 1 by 0.95. The 2020 per capita water use target cannot exceed this value (unless the water supplier's five year baseline per capita water use is 100 gpcd or less). If the 2020 target is greater than this value, reduce the target to this value.
3. Set the 2015 target to the mid-point between the 10- or 15-year baseline per capita water use and the 2020 target determined in Step 2.

As described above, the City's Base Daily Per Capita Water Use for the five-year period ending December 31, 2007 was 134 gpcd (see Table 4). Therefore, per Water Code Section 10608.22, the 2020 per capita water use target cannot exceed 95 percent of 134 gpcd, or 127 gpcd. The Interim (2015) target is then set at the midpoint between the City's 10-year Base Daily Per Capita Water Use (144 gpcd) (see Table 5) and 127 gpcd, which equals 136 gpcd.

The City's targets using the required minimum reduction are summarized as follows:

- Interim (2015) Target = 136 gpcd
- Final (2020) Target = 127 gpcd

Recommended Target Method and Resulting Targets for the City of Santa Rosa

Table 8 summarizes the methods for calculating base daily water use and the interim and final target daily water use in gpcd.

Table 8. Summary of SBx7-7 Methodologies for Determining Urban Water Use Targets

Target Method Number	Target Method Description	Base Daily Per Capita Water Use	Interim (2015) Target	Final (2020) Target
1	Uses historical gross water use and service area population to determine a base daily per capita water use. The Urban Water Use Target is 80 percent of this value. Based on 10-year running average per capita water use ending between 2004 and 2010. Gross water use is that total water supplied to the system less recycled, wholesale or agricultural deliveries	144 gpcd	130 gpcd	115 gpcd
2	Uses performance standards for indoor water use, landscape irrigation use and commercial, institutional and industrial (CII) uses. Residential water use = 55 gpcd Uses Model Water Efficient Landscape Ordinance for definitions and calculations. Uses estimated landscaped area and applies a Maximum Applied Water Allowance, calculated from the ordinance[(a)]. CII use based on historical CII per capita use less 10 percent	144 gpcd[(b)]	129 gpcd	113 gpcd
3	Uses 95 percent of the applicable state hydrologic region target as defined in the state's draft 20x2020 Water Conservation Plan issued by DWR in April 2009 City of Santa Rosa is located in state hydrologic region number 1 (North Coast Region)	144 gpcd[(b)]	137 gpcd	130 gpcd
4	Results shown based on Provisional Method 4 released by DWR in February 2011 Provisional Method 4 is subject to change	144 gpcd[(b)]	130 gpcd	116 gpcd
Minimum Required	Based on 95 percent of the 5-year running average per capita water use ending between 2007 and 2010.	134 gpcd	136 gpcd	127 gpcd

(a) Rigorous application of this method requires a data-intensive analysis using GIS, coupled with site visits to estimate appropriate irrigation areas. For preliminary screening purposes to evaluate use of the method, landscaped areas were estimated by West Yost based on historical irrigation water use and average water use factors (see additional discussion under Target Method 2).
(b) The baseline for this method is the same as Method 1 and is used to establish the interim target.

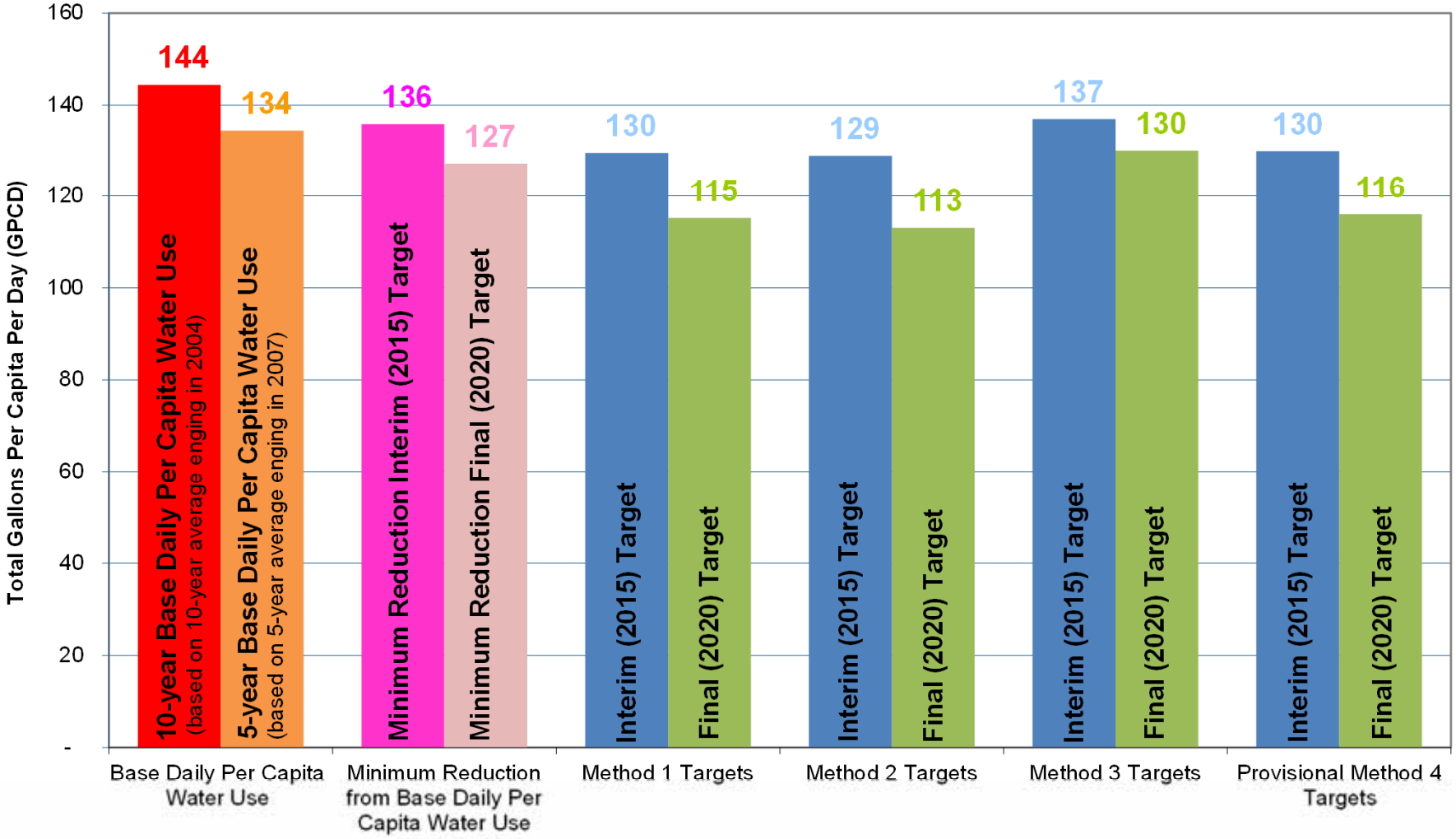
Based on the results for the four target methods, Target Method 3 results in the highest allowable SBx7-7 gpcd, and therefore is the most favorable for the City. However, as shown, the minimum water use reduction requirement is lower than the Method 3 target and therefore applies. These targets are graphically shown on Figure 2.

Therefore, the City should adopt the following SBx7-7 per capita water use targets based on the minimum water use reduction requirement:

- Interim (2015) Target = 136 gpcd
- Final (2020) Target = 127 gpcd

The City's compliance with these targets in 2015 and 2020 shall be determined in accordance with DWR Methodology 4 (Compliance Daily Per Capita Water Use) based on gross water use and service area population in the compliance years (2015 and 2020).

Figure 2. Summary of City of Santa Rosa Urban Water Use Targets



REGIONAL TARGETS

Per the DWR Methodologies, the Water Contractors of the Sonoma County Water Agency are eligible to form a regional alliance because the Water Contractors (including the City) are recipients of water from a common wholesale water supplier. The members of this regional alliance may plan, comply and report on SBx7-7 compliance on a regional basis, an individual basis, or both.

Per the DWR Methodologies (DWR Methodology 9), there are three options for calculating a regional alliance target. The first option is for each member of the regional alliance to calculate their individual target and then weight the individual targets by each member's population. The weighted targets are then averaged to determine the regional alliance target. Current population data can be used for generating the regional target.

The second option is to sum up each member's gross water use and service area populations to develop a regional gross water use and population. A base daily per capita water use would be calculated and a target would be calculated using one of the following four methods:

1. 80 percent of the regional alliance's baseline per capita daily water use;
2. Performance standards of 55 gallons per capita per day for indoor water use, water efficiency equivalent to the Model Water Efficient Landscape Ordinance for landscapes irrigated through dedicated or residential meters, and a 10 percent reduction in Commercial, Industrial, Institutional water use;
3. 95 percent of the applicable state hydrologic region target as set forth in the State's 20x2020 Water Conservation Plan. If the area includes more than one hydrologic region, the area should be apportioned to each region based on population or area; or
4. Provisional Target Method 4 developed by DWR.

Alliances must have all of their members use the same baseline period.

The third option is to calculate regional gross water use or population directly for the entire regional alliance area. A base daily per capita water use would be calculated and a target would be calculated using one of the four methods listed above. As with the second option, alliances must have all of their members use the same baseline period. The regional target may not exceed 95 percent of the region's 5-year Base Daily Per Capita Water Use.

The City is exploring the option of joining the regional alliance and adopting the regional targets in addition to its individual targets.

ADJUSTMENTS TO COMPLIANCE DAILY PER CAPITA WATER USE

Water Code Section 10608.24(d) provides for adjustments when determining the compliance daily per capita water use. It states that an urban retail water supplier may consider the following factors:

- Differences in evapotranspiration and rainfall in the baseline period compared to the compliance reporting period.
- Substantial changes to commercial or industrial water use resulting from increased business output and economic development that have occurred during the reporting period.
- Substantial changes to institutional water use resulting from fire suppression services or other extraordinary events, or from new or expanded operations, that have occurred during the reporting period.

As described in DWR Methodology 8 (Criteria for Adjustments to Compliance Daily Per Capita Water Use), if the urban retail water supplier elects to adjust its estimate of compliance daily per capita water use due to one or more of the factors described above, it shall provide the basis for, and data supporting, the adjustment.

FUTURE REVISION OF METHODS AND/OR TARGETS

The City may revise its calculated Base Daily Per Capita Water Use after submitting its 2010 UWMP if better information becomes available. The revisions may be included in the City's 2015 and subsequent plans or may be submitted in an amended 2010 UWMP, provided it follows the process required for amendments to UMWPs. It should be noted that if the revisions to the Base Daily Per Capita Water Use change the water use target, the water use target must be revised as well.

In addition, the City may change the method it uses to set its water use target, and report the method change and target revision in an amended 2010 UWMP or in its 2015 UWMP. Target method changes are not permitted in the 2020 UWMP or amended 2015 UWMPs.

PUBLIC HEARING REQUIREMENTS

To comply with Water Code Section 10608.26, the City shall conduct at least one public hearing to discuss and adopt the water use target method and resulting water use targets for 2015 and 2020. The following issues must be addressed during the public hearing:

- Allow community input regarding the urban retail water supplier's implementation plan for complying with SBx7-7;
- Consider the economic impacts of the urban retail water supplier's implementation plan for complying with SBx7-7; and
- Adopt a method, pursuant to subdivision (b) of Section 10608.20, for determining its urban water use target.

The Water Code has no other specific requirements for this public hearing. The City may choose to hold a specific public hearing for this purpose only, or may choose to combine this public hearing with the public hearing required for the preparation of the City's 2010 UWMP (per Water Code Section 10642).

REPORTING REQUIREMENTS

The City must report on their SBx7-7 compliance in their upcoming UWMPs. Table 9 provides an outline of the specific reporting requirements for the City's 2010, 2015, and 2020 UWMPs.

The City will incorporate these reporting requirements into their 2010, 2015 and 2020 UWMPs.

Table 9. SBx7-7 Reporting Requirements

Reporting Element	2010 UWMP	2015 UWMP	2020 UWMP
Baseline Gross Water Use and Service Area Population	✓	✓	✓
2020 Urban Water Use Target	✓	✓	✓
Interim 2015 Urban Water Use Target	✓	✓	
Compliance Year Gross Water Use		✓	✓
Service Area Population	✓	✓	✓
Adjustments to Gross Water Use in the Compliance Year		✓	✓
Water Suppliers who choose Target Method 2 must provide Landscaped Area Water Use and Baseline CII Water Use data	✓	✓	✓
Water suppliers who choose Target Method 4 must provide the components of calculation as required by Target Method 4	✓	✓	✓

CONSEQUENCES OF NON-COMPLIANCE WITH SBX7-7

The City must comply with the SBx7-7 requirements by establishing 2015 interim and 2020 final water use targets, demonstrating that its water use is in compliance with its targets, and reporting water use baselines, targets, compliance year water use, and supporting data in its 2010, 2015 and 2020 UWMPs.

Water Code Section 10608.56(a) states that a water supplier not in compliance will not be eligible for water grants or loans that may be administered by DWR or other state agencies:

> *On and after July 1, 2016, an urban retail water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.*

Two exceptions to this are allowed.

- Water Code Section 10608.56 (c) states that a water supplier shall be eligible for a water loan or grant if it "has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for achieving the per capita reductions."
- Water Code Section 10608.56 (e) states that a water supplier can also be eligible for a water loan or grant if it "has submitted to the department for approval documentation demonstrating that its entire service area qualifies as a disadvantaged community."

REFERENCES

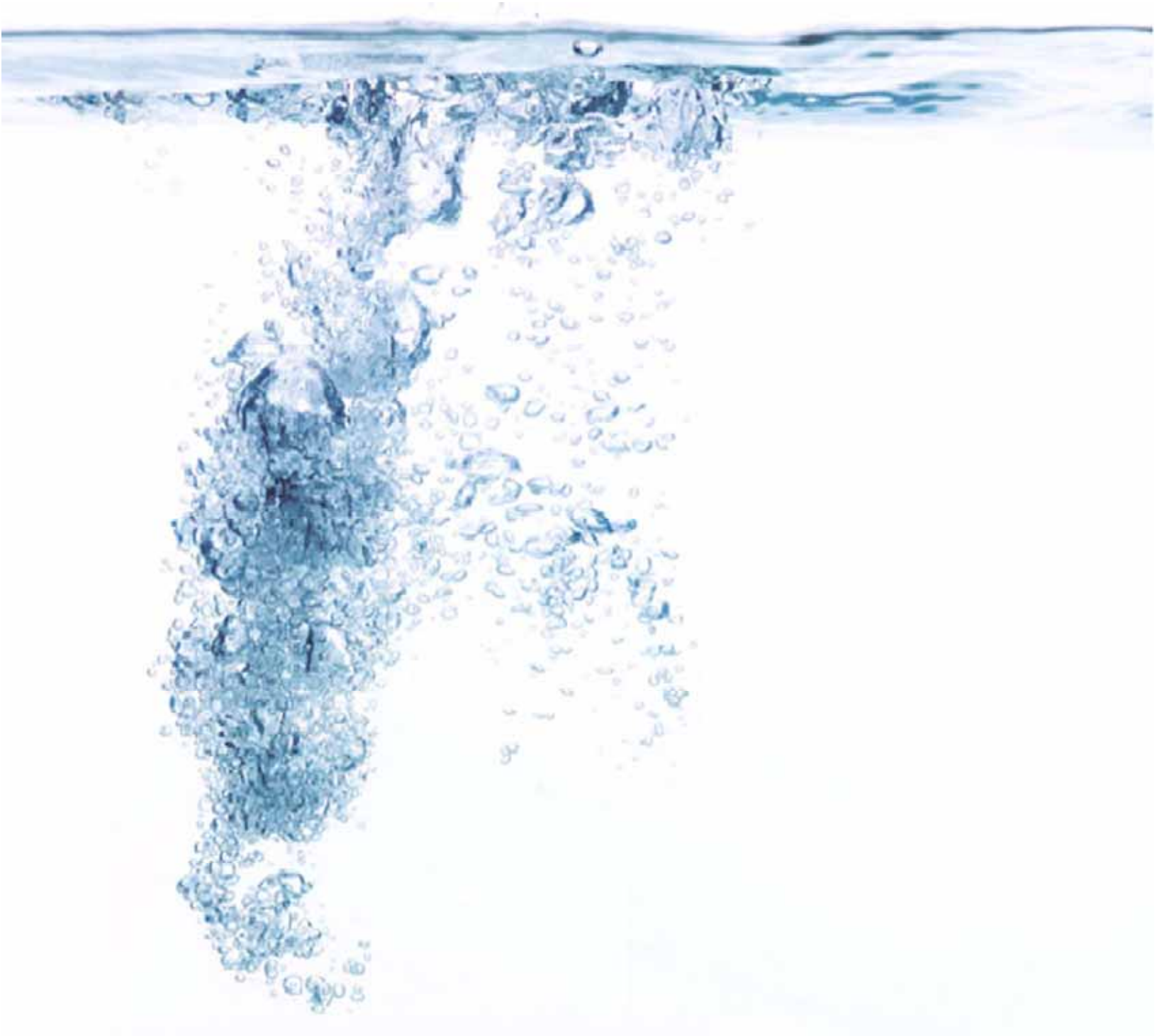
Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use, prepared by California Department of Water Resources, October 1, 2010.

Senate Bill 1478, approved by Governor Arnold Schwarzenegger on September 24, 2010.

Water Conservation Act of 2009 (Senate Bill x7-7), approved by Governor Arnold Schwarzenegger on November 10, 2009.

APPENDIX E

Regional Alliance Letter to Department of Water Resources and Regional Alliance Letter Agreement



NORTH MARIN
WATER DISTRICT

999 Rush Creek Place
P.O. Box 146
Novato, CA 94948

PHONE
415.897.4133

FAX
415.892.8043

EMAIL
info@nmwd.com

WEB
www.nmwd.com

May 18, 2011

California Department of Water Resources
Division of Statewide Integrated Water Management
Water Use and Efficiency Branch
Attn: Manucher Alemi Chief
PO Box 942836
Sacramento, CA 94236

Dear Mr. Alemi

A regional alliance has been formed between and among the cities of Santa Rosa, Rohnert Park, Sonoma, Cotati, Petaluma, Town of Windsor and North Marin, Marin Municipal and Valley of the Moon Water Districts to comply with SBx7-7, the Water Conservation Act of 2009. The regional alliance has been formed pursuant to the Department of Water Resources Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use because the parties receive water from a common water wholesale supplier, the Sonoma County Water Agency. Data pertaining to the regional alliance can be collected through the individual cities and water districts urban water management plans to be submitted by July 1, 2011.

Should you have any questions regards the regional alliance, please contact me.

Sincerely,

Chris DeGabriele
General Manager
North Marin Water District

Chair, Technical Advisory Committee
to the Water Contractors receiving
wholesale supply from SCWA

cc: Miles Ferris, City of Santa Rosa
Darrin Jenkins, City of Rohnert Park
Milenka Bates, City of Sonoma
Damien O'Bid, City of Cotati
Pamela Tuft, City of Petaluma
Richard Burtt, Town of Windsor
Krishna Kumar, Valley of the Moon Water District
Paul Helliker, Marin Municipal Water District

CD/rr

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DIRECTORS: JACK BAKER • RICK FRAITES • STEPHEN PETTERLE • DENNIS RODONI • JOHN C. SCHOONOVER
OFFICERS: CHRIS DEGABRIELE, General Manager • RENEE ROBERTS, Secretary • DAVID L. BENTLEY, Auditor-Controller • DREW MCINTYRE, Chief Engineer

Letter Agreement

Between and Among

Cities of Santa Rosa, Rohnert Park, Sonoma, Cotati, Petaluma, Town of Windsor

And

North Marin Water District, Marin Municipal Water District

and Valley of the Moon Water District

For

Establishing a Regional Alliance to Comply with

SB x7-7 the Water Conservation Act of 2009

Recitals

A. The Water Conservation Act of 2009 (SB x7-7) set a goal of achieving a 20% reduction in statewide urban per capita water use by the year 2020 and requires urban water retailers to set a 2020 urban per capita water use target. SB x7-7 provides that urban water retailers may plan, comply and report on a regional basis, individual basis or both.

B. The Parties to this Letter Agreement (Cities of Santa Rosa, Rohnert Park, Sonoma, Cotati, Petaluma, Town of Windsor and North Marin, Marin Municipal and Valley of the Moon Water Districts) are eligible to form a "Regional Alliance" pursuant to the *Department of Water Resources Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use* (DWR Methodologies) because the Parties receive water from a common water wholesale water supplier, the Sonoma County Water Agency (Agency). The Parties desire to establish a Regional Alliance for purposes of complying with SB x7-7.

C. The Parties and the Agency are signatories to the Sonoma-Marin Saving Water Partnership Memorandum of Understanding (S-MSWP MOU) that provides for the identification and implementation of regional water conservation programs and tasks as directed by the Water Advisory Committee (WAC). The S-MSWP MOU requires financial and reporting commitments for implementation of water conservation programs.

Agreement for Regional Alliance Target Setting and Reporting

1. Regional Alliance Formation and Target Setting

Pursuant to the DWR Methodologies, the Parties hereby form a Regional Alliance and agree to send a letter to the Department of Water Resources (DWR) prior to July 1, 2011 informing DWR that a Regional Alliance has been formed. The Parties agree that the Regional Alliance Target will be established using Option 1 (as Option 1 is described in the DWR Methodologies) and that each Party will include the Regional Alliance Target in its individual 2010 Urban Water Management Plan.

2. Regional Alliance Review

No later than December 31, 2015, the Parties agree to review and re-analyze the Regional Alliance and Regional Alliance Target as part of the preparation of the 2015 Urban Water Management Plan.

3. Regional Alliance Reporting

The Parties agree to prepare Regional Alliance Reports pursuant to the DWR Methodologies including but not limited to the following information: baseline gross water use and service area population, individual 2015 and 2020 water use targets for each Party and for the Regional Alliance, compliance year gross water use and service area population, and adjustments to gross water use in compliance year. The information will be provided by each Party and reported in the annual S-MSWP report in addition to the information required in the annual report, as outlined in the S-MSWP MOU.

4. Regional Water Supply Planning

The Parties agree to participate in discussions regarding regional water supply planning.

5. Regional Alliance Dissolution

The Parties agree that each Party can withdraw from the Regional Alliance at any time without penalty by giving written notice to all other Parties. If a Party withdraws from the Regional Alliance, the Parties agree that the Regional Target will be recalculated among remaining participating Parties as set forth in the DWR Methodologies and in Section 2 above.

6. Miscellaneous

This Letter Agreement shall be between and among those Parties that have executed this Letter Agreement by May 1, 2011. If all Parties have not executed this Letter Agreement by said date, the Parties who have executed this Letter Agreement by May 1, 2011, agree that the Regional Target will be recalculated among participating Parties as set forth in the DWR Methodologies and in Section 2 above.

7. Letter Agreement Authorization

This Letter Agreement may be signed in counterparts. By signing below, each signatory states that he or she is authorized to sign this Letter Agreement on behalf of the Party for which he or she is signing.

Miles Ferris — 4/20/11

Name: Miles Ferris — Date

City of Santa Rosa

_____ — _____

Name: _____ — Date

City of Rohnert Park

_____ — _____

Name: _____ — Date

City of Sonoma

_____ — _____

Name: _____ — Date

City of Cotati

6. Miscellaneous

This Letter Agreement shall be between and among those Parties that have executed this Letter Agreement by May 1, 2011. If all Parties have not executed this Letter Agreement by said date, the Parties who have executed this Letter Agreement by May 1, 2011, agree that the Regional Target will be recalculated among participating Parties as set forth in the DWR Methodologies and in Section 2 above.

7. Letter Agreement Authorization

This Letter Agreement may be signed in counterparts. By signing below, each signatory states that he or she is authorized to sign this Letter Agreement on behalf of the Party for which he or she is signing.

Name: _____ City of Santa Rosa	Date
Name: Gabriel A. Gonzalez City of Rohnert Park	4/13/11 Date Per Rohnert Park City Council Resolution No. 2011-30 adopted on April 12, 2011
Name: _____ City of Sonoma	Date
Name: _____ City of Cotati	Date

6. Miscellaneous

This Letter Agreement shall be between and among those Parties that have executed this Letter Agreement by May 1, 2011. If all Parties have not executed this Letter Agreement by said date, the Parties who have executed this Letter Agreement by May 1, 2011, agree that the Regional Target will be recalculated among participating Parties as set forth in the DWR Methodologies and in Section 2 above.

7. Letter Agreement Authorization

This Letter Agreement may be signed in counterparts. By signing below, each signatory states that he or she is authorized to sign this Letter Agreement on behalf of the Party for which he or she is signing.

_____ _____
Date

Name: _____
City of Santa Rosa

_____ _____
Date

Name: _____
City of Rohnert Park

_____ 4/19/2011
Date

Name: Milenka Bates
City of Sonoma

_____ _____
Date

Name: _____
City of Cotati

6. Miscellaneous

This Letter Agreement shall be between and among those Parties that have executed this Letter Agreement by May 1, 2011. If all Parties have not executed this Letter Agreement by said date, the Parties who have executed this Letter Agreement by May 1, 2011, agree that the Regional Target will be recalculated among participating Parties as set forth in the DWR Methodologies and in Section 2 above.

7. Letter Agreement Authorization

This Letter Agreement may be signed in counterparts. By signing below, each signatory states that he or she is authorized to sign this Letter Agreement on behalf of the Party for which he or she is signing.

_____ _____
Date

Name: _____
City of Santa Rosa

_____ _____
Date

Name: _____
City of Rohnert Park

_____ _____
Date

Name: _____
City of Sonoma

Dianne Thompson 5-17-11
Date

Name: Dianne Thompson
City of Cotati

Name: PAMELA TUFT

City of Petaluma

4-11-11
Date

Name: _____

Town of Windsor

Date

Name: _____

North Marin Water District

Date

Name: _____

Marin Municipal Water District

Date

Name: _____

Valley of the Moon Water District

Date

_____ _____

Name: _____ Date

City of Petaluma

J Matthew Mullan 4-12-11

Name: J. Matthew Mullan Date

Town of Windsor

_____ _____

Name: _____ Date

North Marin Water District

_____ _____

Name: _____ Date

Marin Municipal Water District

_____ _____

Name: _____ Date

Valley of the Moon Water District

Name: _____ Date

City of Petaluma

Name: _____ Date

Town of Windsor

Chris DeGabriele 4/26/2011

Name: Chris DeGabriele Date

North Marin Water District

Name: _____ Date

Marin Municipal Water District

Name: _____ Date

Valley of the Moon Water District

_____ _____

Name: _____ Date

City of Petaluma

_____ _____

Name: _____ Date

Town of Windsor

_____ _____

Name: _____ Date

North Marin Water District

Paul Helliker 5/13/11

Name: Paul Helliker Date

Marin Municipal Water District

_____ _____

Name: _____ Date

Valley of the Moon Water District

_____ _____

Name: _____ Date

City of Petaluma

_____ _____

Name: _____ Date

Town of Windsor

_____ _____

Name: _____ Date

North Marin Water District

_____ _____

Name: _____ Date

Marin Municipal Water District

_____ April 11, 2011

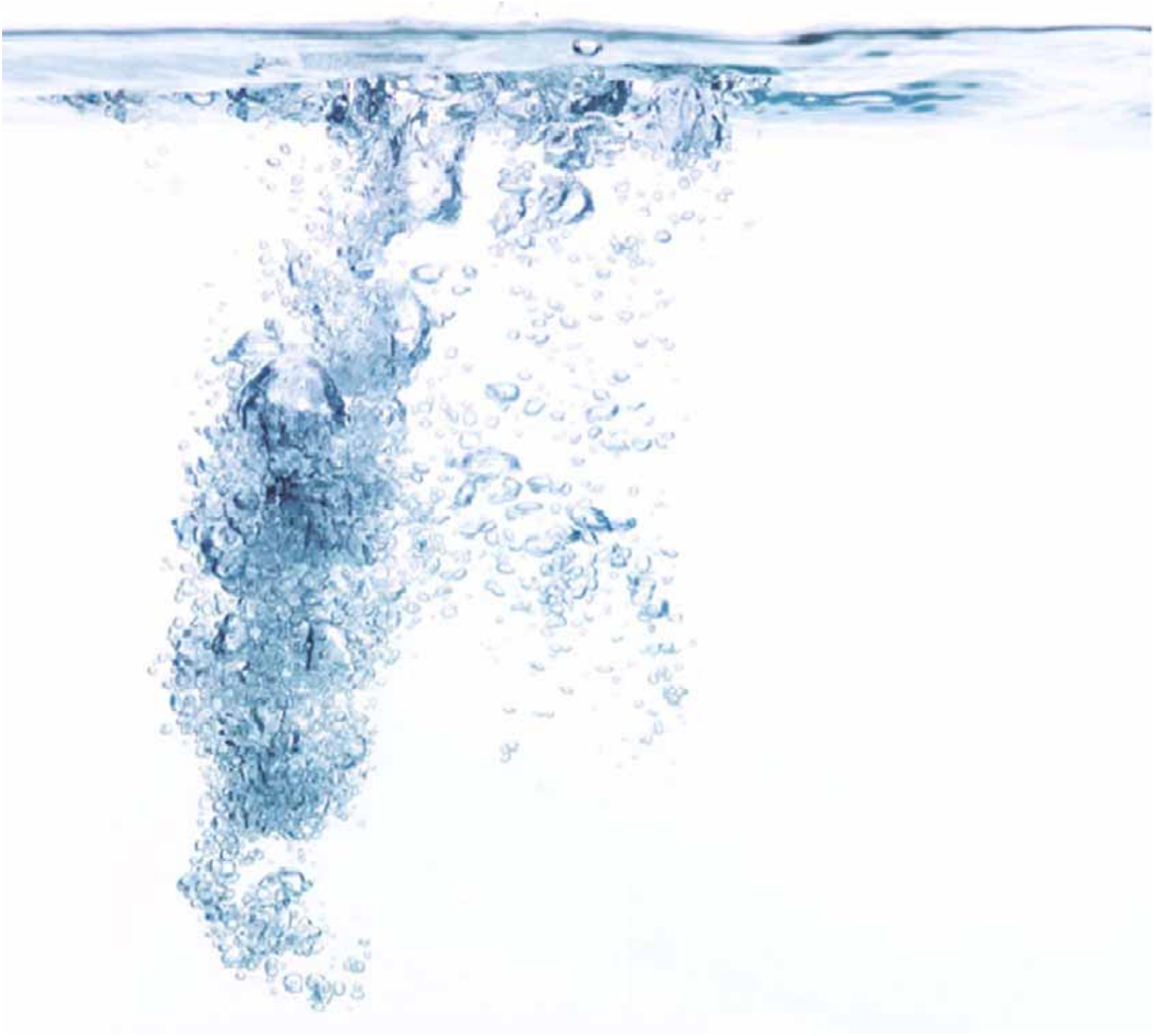
Name: KRISHNA KUMAR Date

Valley of the Moon Water District

RECEIVED

APPENDIX F

City of Santa Rosa Water Efficient Landscape Ordinance and Water Waste Ordinance



ORDINANCE NO. 3925

ORDINANCE OF THE COUNCIL OF THE CITY OF SANTA ROSA WATER EFFICIENT LANDSCAPE ORDINANCE

THE PEOPLE OF THE CITY OF SANTA ROSA DO ENACT AS FOLLOWS:

Section 1. Chapter 14-30 – Water Efficient Landscape - is added to the Santa Rosa City Code to read as follows:

"**14-30.010 Purpose.**

(A) Article X, Section 2 of the California Constitution specifies that the right to use water is limited to the amount reasonably required for the beneficial use to be served and the right does not and shall not extend to waste or unreasonable method of use. This policy protects local water supplies through the implementation of a whole systems approach to design, construction, installation and maintenance of the landscape resulting in water conserving climate-appropriate landscapes, improved water quality and the minimization of natural resource inputs.

14-30.020 Applicability.

(A) After January 1, 2010, this ordinance shall apply to all of the following new and rehabilitated landscape projects that require a Building or Grading Permit, Plan Check, Design Review or Utilities Certificate:

(1) Commercial, industrial and institutional landscaping, park and greenbelt landscaping, multiple-family residential and single-family residential landscaping.

(B) This ordinance does not apply to:

(1) Projects that have a completed application for a Building or Grading Permit, Plan Check, Design Review or Utilities Certificate on file prior to January 1, 2010 will be governed either by the City of Santa Rosa Water Efficient Landscape Policy as adopted by City Council Resolution No. 21142 and as amended by City Council Resolution No. 26846 or the City of Santa Rosa Single Family Landscape Policy as adopted by City Council Resolution No. 26690;

(2) Registered local, state or federal historical landscape area;

(3) Ecological restoration or mined-land reclamation projects that do not require a permanent irrigation system.

14-30.030 Definitions.

(A) The following definitions apply to this Chapter:

(1) Backflow Prevention Device: means an approved device installed to City standards which will prevent backflow or back-siphonage into the City potable water system.

(2) Booster Pumps: used where the normal water system pressure is low and needs to be increased.

(3) Check Valve: a valve located under a sprinkler head or other location in the irrigation system, to hold water in the system to prevent drainage from sprinkler heads when the sprinkler is off.

(4) Common Interest Development: community apartment projects, condominium projects, planned developments, and stock cooperatives per Civil Code Section 1351.
(5) Compost: the decayed remains of organic matter that has rotted into a natural fertilizer.
(6) Ecological Restoration Project: a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.
(7) Effective Precipitation: the portion of total precipitation which becomes available for plant growth and that is used by the plants.
(8) Emitter: a drip irrigation fittings emission device that delivers water slowly from the system to the soil.
(9) ET Adjustment Factor: a factor of 0.6, that, when applied to reference evapotranspiration, adjusts for plant factors and irrigation efficiency, two major influences upon the amount of water that needs to be applied to the landscape.
(10) Evapotranspiration rate: the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specific specified time.
(11) Flow Rate: the rate at which water flows through pipes, and valves and emission devices, measured in (gallons per minute, gallons per hour, or cubic feet per second).
(12) Hardscapes: any durable material (pervious and non-pervious).
(13) Head to Head Coverage: full coverage from one sprinkler head to the next.
(14) High-Flow Sensor: a device for sensing the rate of fluid flow.
(15) High-Water-Use Plants: turf, annuals, container plantings, and other plants recognized as high-water-use by the Water Use Classification of Landscape Species document (http://www.owue.water.ca.gov/docs/wucols00.pdf), as it currently exists or maybe amended in the future.
(16) Hydrozone: a portion of the landscaped area having plants with similar water needs that are served by a valve or set of valves with the same schedule.
(17) Infiltration Rate: the rate of water entry into the soil expressed as a depth of water per unit of time (e.g., inches per hour).
(18) Invasive Plant Species: species of plants not historically found in California and/or that spread outside cultivated areas and can damage environmental or economic resources as determined by the California Invasive Plant Council (www.cal-ipc.org).
(19) Irrigation Efficiency (IE): the measurement of the amount of water beneficially used divided by the amount of water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices. The minimum average irrigation efficiency for purposes of this ordinance is 0.71.
(20) Irrigation Meter: a separate meter that measures the amount of water used for items such as lawns, washing exterior surfaces, washing vehicles, filling pools, etc.
(21) Isolation Valves: used to isolate a portion of the piping system.

(22) Landscaped Area: the entire parcel less the building footprint, driveways, and non-irrigated portions of parking lots, hardscapes-such as decks and patios, and other non-porous areas. Water features are included in the calculation of the landscaped area. Areas dedicated to edible plants, such as orchards or vegetable gardens are not included. The landscape area does not include footprints of buildings or structures, sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, other pervious or non-pervious hardscapes, and other nonirrigated areas designated for non-development (e.g., open spaces and existing native vegetation).

(23) Lateral Line: Non-pressurized pipe that is located downstream of an irrigation valve (Class 200 or equivalent is not acceptable).

(24) Low-Water-Use Plants : "Mediterranean Region" and native trees, shrubs and groundcovers (such as rosemary), juniper, most native oaks, and other plants recognized as low-water-use by the Water Use Classification of Landscape Species document (http://www.owue.water.ca.gov/docs/wucols00.pdf), as it currently exists or maybe amended in the future.

(25) Main Line: the pressurized pipeline that delivers water from the water source to the valve or outlet (Class 200 or equivalent is not acceptable).

(26) Maximum Applied Water Allowance (MAWA): for design purposes, the upper limit of annual applied water for the established landscaped.

(27) Microclimate: the climate of a small, specific area that may contrast with the climate of the overall landscape area due to factors such as wind, sun exposure, plant density or proximity to reflective surfaces.

(28) Mined-Land Reclamation Projects: any surface mining operation with a reclamation plan approved in accordance with the Surface Mining and Reclamation Act of 1975.

(29) Moderate Water Use Plants: ornamental trees, shrubs ground covers, and perennials and other plants recognized as moderate-water-use by the Water Use Classification of Landscape Species document (http://www.owue.water.ca.gov/docs/wucols00.pdf), as it currently exists or maybe amended in the future.

(30) Mulch: any organic material such as leaves, bark, straw, compost or other inorganic mineral materials such as rocks, gravel, and decomposed granite left loose and applied to the soil surface for the beneficial purposes of reducing evaporation, suppressing weeds, moderating soil temperature and preventing soil erosion.

(31) Low-Head Drainage: water that flows out of the system after the valve turns off due to elevation changes within the system.

(32) Operating Pressure: the pressure when water is flowing through the irrigation system.

(33) Overhead Irrigation: those systems that deliver water through the air (e.g., pop-ups, impulse sprinklers, spray heads, rotors, micro-sprays, etc).

(34) Overspray: the irrigation water which is delivered beyond the landscaped target area; wetting pavements, walks structures, or other non-landscaped areas.

(35) Pervious: any surface or material that allows the passage of water through the material and into the underlying soil.
(36) Plant Factor: a factor that, when multiplied by reference evapotranspiration ETo, estimates the amount of water used by needed plants. Plant factors cited in this ordinance are derived from the Department of Water Resources 2000 publication "Water Use Classification of Landscape Species."
(37) Precipitation Rate: the rate of application of water measured in inches per hour.
(38) Point of Connection: the point at which an irrigation system taps into the main water supply line.
(39) Point Source Irrigation: any non-spray low volume irrigation system utilizing emission devices with a flow rate measured in gallons per hour. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.
(40) Pressure Regulation: a valve that automatically reduces the pressure in a pipe.
(41) Project Applicant: the individual or entity submitting a Landscape Documentation Package, to request a permit, plan check or design review from the local agency. A project applicant may be the property owner or his or her designee.
(42) Rain Sensor: a system component which automatically shuts off and suspends the irrigation system when it rains.
(43) Recreational Area: areas dedicated to active play or recreation such as sports fields, school yards, picnic grounds, or other areas with intense foot traffic parks, sports fields and golf courses where turf provides a playing surface.
(44) Recycled Water: means tertiary treated water which results from the treatment of wastewater, is suitable for direct beneficial use, and conforms to the definition of disinfected tertiary recycled water in accordance with state law.
(45) Reference Evapotranspiration or ETo: a standard measurement of environmental parameters which affect the water use of plants and is an estimate of the evapotranspiration of a large field of four to seven-inch tall, cool-season grass that is well watered.
(46) Rehabilitated Landscape: any re-landscaping project that requires a building or grading permit, plan check or design review.
(47) Runoff: water which is not absorbed by the soil or landscape to which it is applied and flows from the landscape area.
(48) Soils Laboratory Report: the analysis of a soil sample to determine nutrient content, composition and other characteristics, including contaminants.
(49) Special Landscape Area (SLA): an area of the landscape dedicated solely to edible plants, areas irrigated with recycled water, water features using recycled water and areas dedicated to active play such as parks, sports fields, golf courses, and where turf provides a playing surface.
(50) Sprinkler Head: a device that delivers to the landscape water through a spray nozzle.

(51) Static Water Pressure: the pipeline or municipal water supply pressure when water is not flowing.
(52) Station: an area served by one valve or by a set of valves that operate simultaneously.
(53) Submeter: a separate meter that is located on the private side of the water system and is plumbed to measure all water that flows only through the irrigation system. This meter is to be use by the owner to monitor irrigation water use and will not be read by the City.
(54) Swing Joint: an irrigation component that provides a flexible, leak-free connection between the emission device and lateral pipeline to allow movement in any direction and to prevent equipment damage.
(55) Valve: a device used to control the flow of water in the irrigation system.
(56) Valve Manifold: a one-piece manifold for use in a sprinkler valve assembly that includes an intake pipe having a water inlet and a plurality of ports adapted for fluid connection to inlets.
(57) Water Feature: a design element where open water performs an aesthetic or recreational function. Water features include ponds, lakes, waterfalls, fountains, artificial streams, spas and swimming pools (where water is artificially supplied). The surface area of water features is included in the high water use hydrozone of the landscape area.
(58) Weather Based or Sensor Based Irrigation Control Technology: uses local weather and landscape conditions to tailor irrigation schedules to actual conditions on the site or historical weather data.
(59) WUCOLS: the Water Use Classification of Landscape Species published by the University of California Cooperative Extension, the Department of Water Resources and the Bureau of Reclamation, 2000.

14-30.040 Landscape Design Plan.

(A) For each landscape project subject to this chapter applicants shall submit a landscape design plan in accordance with the following:

(1) Amendments, Mulching and Soil Conditioning
  (a) A minimum of 8” of non-mechanically compacted soil shall be available for water absorption and root growth in planted areas.
  (b) Incorporate compost or natural fertilizer into the soil to a minimum depth of 8" at a minimum rate of 6 cubic yards per 1000 square feet or per specific amendment recommendations from a soils laboratory report.
  (c) A minimum 3” layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting groundcovers or direct seeding applications.

(2) Plants
  (a) Selected plants shall not cause the Estimate Water Use to exceed the Maximum Applied Water Allowance (see calculation in Appendix A)
  (b) Plants with similar water use needs shall be grouped together in distinct hydrozones and where irrigation is required the distinct hydrozones shall be irrigated with separate valves.

(c) Low and moderate water use plants can be mixed, but the entire hydrozone will be classified as moderate water use for MAWA calculations.

(d) High water use plants shall not be mixed with low or moderate water use plants.

(e) All non-turf plants shall be selected, spaced and planted appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the project site.

(f) Turf shall not be planted in the following conditions:

(i) Slopes exceeding 10%

(ii) Planting areas 8 feet wide or less

(iii) Street medians, traffic islands, planter strips or bulbouts of any size

(g) Invasive plants as listed by the California Invasive Plant Council are prohibited.

(3) Water Features

(a) Recirculating water systems shall be used for water features.

(b) Recycled water shall be used when available onsite.

14-30.050 Irrigation Design Plan.

(A) For each landscape project subject to this chapter applicants shall submit an irrigation design plan that is designed and installed to meet irrigation efficiency criteria as described in Appendix A (MAWA) and in accordance with the following:

(1) Dedicated irrigation meter or submeter must be specified

(2) Irrigation systems with meters 1 ½" or greater require a high-flow sensor that can detect high flow conditions and have the capabilities to shut off the system.

(3) Isolation valves shall be installed at the point of connection and before each valve or valve manifold

(4) Weather-based or other sensor based self-adjusting irrigation controllers shall be required

(5) Rain sensors shall be installed for each irrigation controller

(6) Pressure regulation and/or booster pumps shall be installed so that all components of the irrigation system operate at the manufacturer's recommended optimal pressure

(7) Irrigation system shall be designed to prevent runoff or overspray onto non-targeted areas

(8) Point source irrigation is required where plant height at maturity will affect the uniformity of an overhead system

(9) Minimum 24" setback of overhead irrigation is required where turf is directly adjacent to a continuous hardscape that flows into the curb and gutter

(10) Slopes greater than 15% shall be irrigated with point source or other low-volume irrigation technology

(11) A single valve shall not irrigate hydrozones that mix high water use plants with moderate or low water use plants

(12) Trees shall be placed on separate valves except when planted in turf areas
(13) Sprinkler heads, rotors and other emission devices on a valve shall have matched precipitation rates
(14) Head to head coverage is required unless otherwise directed by the manufacturer's specifications
(15) Swing joints or other riser protection components are required on all risers
(16) Check valves shall be installed to prevent low-head drainage

14-30.060 Documentation for Compliance.

(A) The following documentation is to be presented to the City at each of the three steps of review defined below. This documentation is required for compliance with this policy.

(1) STEP 1: FINAL DESIGN REVIEW

(a) For those landscape projects that require Design Review or a Utilities Certificate applicants shall submit the following documentation to the City:

(i) Completed Appendix A, Maximum Applied Water Allowance

(ii) The landscape planting design plan that accurately and clearly identifies and depicts:

a. new and existing trees, shrubs, groundcovers, turf, and any other planting areas;
b. plants by botanical name and common name;
c. plant sizes and quantities;
d. property lines, new and existing building footprints, streets, driveways, sidewalks and other hardscape features;
e. pools, fountains, water features,

(iii) A conceptual irrigation design plan or statement which describes irrigation methods and design actions that will be employed to meet the irrigation specifications of this chapter.

(2) STEP 2: BUILDING PERMIT/PLAN CHECK

(a) The following shall be reviewed and approved prior to a building permit being issued:

(i) Appendix A and the planting design as submitted at step 1 in connection with the Design Review or Utilities Certificate application.

(ii) The irrigation plan drawn at the same scale as the planting plan that:

a. Accurately and clearly identifies and depicts irrigation system point of connection;
b. Accurately and clearly identifies and depicts irrigation system components, e.g. controller, pipe, remote-control valves, sprinklers and other application devices, rain shut-off device, check valves, pressure regulating devices, backflow prevention devices.
c. Includes the Hydrozone Table (See Appendix B)

(iii) Where slopes exceed 10%, a grading plan drawn at the same scale as the planting plan that accurately and clearly identifies

finished grades, drainage patterns, pad elevations, spot elevations and storm water retention improvements. The grading design plan shall contain the following statement: "I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the grading design plan" and shall bear the signature of a licensed professional as authorized by law.

(3) STEP 3: COMPLETION OF INSTALLATION

(a) Upon installation and completion of the landscape, applicant shall submit Appendix C, the Certificate of Completion.

(i) The certificate must be accompanied by an irrigation audit that contains the following:

a. Operating pressure of the irrigation system
b. Distribution uniformity of overhead irrigation
c. Precipitation rate of overhead irrigation
d. Report of any overspray or broken irrigation equipment
e. Irrigation schedule including:
   i. Plant establishment irrigation schedule
   ii. Regular irrigation schedule by month including: plant type, root depth, soil type, slope factor, shade factor, irrigation interval (days per week), irrigation runtimes, number of start times per irrigation day, gallons per minute for each valve, precipitation rate, distribution uniformity and monthly estimated water use calculations.

(ii) An irrigation maintenance schedule timeline must be attached to the certificate of completion that includes:

a. Routine inspections, adjustment and repairs to the irrigation system, aerating and dethatching turf areas, replenishing mulch, fertilizing, pruning and weeding.

(iii) A final inspection shall be performed by City staff to verify policy compliance. Advanced notice is required for all inspections. Inspections can be requested for either morning or afternoon during regular business hours. Specific times of the day cannot be scheduled. Building permit final approval shall not be completed until the landscape inspection is approved. An extension of the building permit to complete landscape and irrigation installation shall be requested and must be approved by the Chief Building Official prior to occupancy.

14-30.070 Other Provisions.

(A) The Director of Utilities will consider and may allow the substitution of design alternatives and innovation which may equally reduce water consumption for any of these requirements.

(B) The Director of Utilities will accept documentation methods, water allowance determination, and landscape and irrigation design requirements of the State of California Model Water Efficient Landscape Ordinance instead of Chapters

14-30.040 and 14-30.050 of these requirements where it can be demonstrated that the State procedure will more effectively address the design requirements of the project.

14-30.080 Provisions For Appeal.

(A) The applicant or any affected person may appeal the final decision of staff regarding plan check or final inspection to the Director of Utilities, or a final decision of the Director of Utilities to the Board of Public Utilities by filing a written notice of appeal with the Director of Utilities within ten City working days of the date of the decision. The decision of the Board of Public Utilities shall be final and may not be appealed to the City Council. An appeal regarding plan check must be submitted prior to the installation of the landscape or it will be deemed to have been waived.

14-30.090 Forms.

(A) The following forms shall be submitted as outlined in Section 6 of this chapter.

Appendix A

Maximum Applied Water Allowance

The following calculations will help you determine your site specific water budget and establish a planting mix that will allow you to meet your water budget. Your Estimated Total Water Use must be less than your Maximum Applied Water Allowance.

1.) Maximum Applied Water Allowance (MAWA)

MAWA = (ETo) (0.62)[(0.6x LA) + (0.4 x SLA)]

Where:
ETo = Annual Net Reference Evapotranspiration (inches)
0.6 = ET Adjustment Factor
LA = Landscaped Area (square feet)
0.62 = Conversion factor (to gallons per square foot)
SLA = Portion of the landscape area identified as Special Landscape Area (square feet)
0.4 = the additional ET adjustment factor for Special Landscape Area (1.0 - 0.6 = 0.4)

A.) Net Evapotranspiration Calculation

(Annual ETo)

(Annual Rainfall) x .25 = *(Effective Rainfall)*

Net Evapotranspiration Calculation = Annual ETo - Effective Rainfall =

B.) Adjusted Landscape Area Calculation

(Landscaped Area) x 0.6 *Adjustment Factor* =

(Special Landscaped Area) x 0.4 *Adjustment Factor* =

Sum of Adjusted Landscape Area =

MAWA = x 0.62 x =

2.) Estimated Total Water Use (ETWU)

A.) Net Evapotranspiration Calculation

Net Evapotranspiration Calculation = Annual ETo - Effective Rainfall =

B.) Adjusted Landscape Area Calculation

(Low water use plant sqft) x 0.3 =

(Moderate water use plant sqft) x 0.6 =

(High water use plant sqft) x 1.0 =

Sum of Adjusted Landscape Area =

ETWU = x 0.62 x =

Irrigation Efficiency Factor		
Percent of total landscape Irrigated with Drip		
0-25%		0.71
26-50%		0.75
51-75%		0.80
76-100%		0.85

Appendix B
Hydrozone Table

This worksheet is filled out by the project applicant and it is a required element of the Landscape Documentation Package. Please complete the hydrozone table(s) for each hydrozone. Use as many tables as necessary to provide the square footage of landscape area per hydrozone.

Hydrozone*	Zone or Valve	Irrigation Method**	Area (Sq. Ft.)	% of Landscape Area
	Total			**100%**

Summary Hydrozone Table		
Hydrozone*	**Area (Sq. Ft.)**	**% of Landscape Area**
High Water Use		
Moderate Water Use		
Low Water Use		
	Total =	100%

***Hydrozone**
HW= High Water Use Plants
MW=Moderate Water Use Plants
LW=Low Water Use Plants

****Irrigation Method**
MS=Micro-spray
S=Spray
R=Rotor
B=Bubbler
D=Drip
O=Other

Appendix C
Certificate of Completion

This certificate is filled out by the project applicant, landscape architect and landscape contractor upon completion of the landscape project.

Part 1. Project Information Sheet

Date		
Project Name	Project Address	
Name of Project Applicant	Telephone No.	
	Fax No.	
Title	Email Address	
Company	Street Address	
City	State	Zip Code

Property Owner or his/her designee:

Name	Telephone No.	
	Fax No.	
Title	Email Address	
Company	Street Address	
City	State	Zip Code

"I/we certify that I/we have received copies of all the documents within the Landscape Documentation Package and that it is our responsibility to see that the project is maintained in accordance with the Landscape and Irrigation Maintenance Schedule."

Property Owner Signature Date

Part 2. Landscape Architect and Landscape Contractor/Installer

Landscape Architect Name	Telephone No.	
	Fax No.	
Title	Email Address	
License No. or Certification No.	Telephone No.	
Company	Street Address	
City	State	Zip Code

Landscape Contractor/Installer Name	Telephone No.	
	Fax No.	
Title	Email Address	
License No. or Certification No.	Telephone No.	
Company	Street Address	
City	State	Zip Code

"I/we certify that the work has been completed in accordance with the ordinance and that the landscape planting and irrigation installation conform with the criteria and specifications of the approved Landscape Documentation Package. Additionally, per section VI of this ordinance, a landscape audit and irrigation maintenance schedule have been completed and are attached to this certificate showing that the system meets the efficiency requirements used in the Maximum Applied Water Allowance calculation"

Landscape Architect Signature Date

Landscape Contractor Signature Date

Section 2. Environmental Determination. The Council has considered this proposed ordinance and finds that the adoption and implementation of this ordinance will not have a significant impact on the environment.

Section 3. Severability. If any section, subsection, sentence, clause, phrase or word of this ordinance is for any reason held to be invalid and/or unconstitutional by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this ordinance.

Section 4. Effective Date. This ordinance shall take effect on January 1, 2010.

IN COUNCIL DULY PASSED AND ADOPTED this 17th day of November, 2009.

AYES: (7) Mayor Gorin, Vice Mayor Vas Dupre, Councilmembers Bender, Sawyer, Jacobi, Olivares and Wysocky

NOES: (0)

ABSENT: (0)

ABSTAIN: (0)

ATTEST: Susan Stoneman, City Clerk APPROVED: Susan Gorin,Mayor

APPROVED AS TO FORM:

Caroline Fowler, City Attorney

WATER WASTE ORDINANCE

The City of Santa Rosa adopted this ordinance in 1999 to prohibit water waste due to unattended open hoses, broken irrigation heads or lines, plumbing leaks, and excessive irrigation running off property or spraying on sidewalks or gutters.

ORDINANCE NO. 3426

ORDINANCE OF THE COUNCIL OF THE CITY OF SANTA ROSA AMENDING SECTION 14-04.210 OF THE SANTA ROSA CITY CODE BY ADDING SUBSECTION (E) TO PROVIDE FOR DISCONNECTION OF SERVICE FOR WATER WASTE AND ADDING CHAPTER 14-21 ENTITLED "WATER WASTE REGULATIONS"

THE PEOPLE OF THE CITY OF SANTA ROSA DO ENACT AS FOLLOWS:

Section 1. Section 14-04.210 of the Santa Rosa City Code is amended by adding subsection (E) to read as follows:

"(E) If the utility customer who has received notice of violation of the water waste provisions of Chapter 14-21 fails to correct the conditions which caused the violation within fifteen days, or other reasonable time as determined by the Director of Utilities."

Section 2. Chapter 14-21 is added to the Santa Rosa City Code to read as follows:

"Chapter 14-21

WATER WASTE REGULATIONS

Sections:
14-21.010 Purpose.
14-21.020 Water waste B Definition.
14-21.030 Prohibition of water waste.
14-21.040 Requirements for certain recirculating systems in new water services.
14-21.050 Notice and disconnection.
14-21.010 Purpose.

The purpose of this chapter is to promote the efficient use of water by prohibiting water uses which constitute water waste. The sections of this chapter encourage reasonable use of the water supply by eliminating all intentional or unintentional water waste when a reasonable solution is available and discouraging use of equipment which is wasteful.

14-21.020 Water waste - definition.
Water waste means:
(A) Water use in outdoor areas resulting in runoff; or

(B) Breaks or leaks in the water delivery system.

14-21.030 Prohibition of water waste.
A customer shall not allow water waste.

14-21.040 Requirements for certain recirculating systems in new water services.
New water services shall be equipped with recycling or reuse systems for the following water service receiving equipment: evaporative cooling systems, decorative water fountains, conveyer car washes and industrial clothes washers.

14-21.050 Notice and disconnection.
The Director of Utilities may issue a written warning to anyone who violates the provisions of this chapter. If a customer does not correct the violation within fifteen days of notification, or such other time as specified by the Director, the City may disconnect water service."

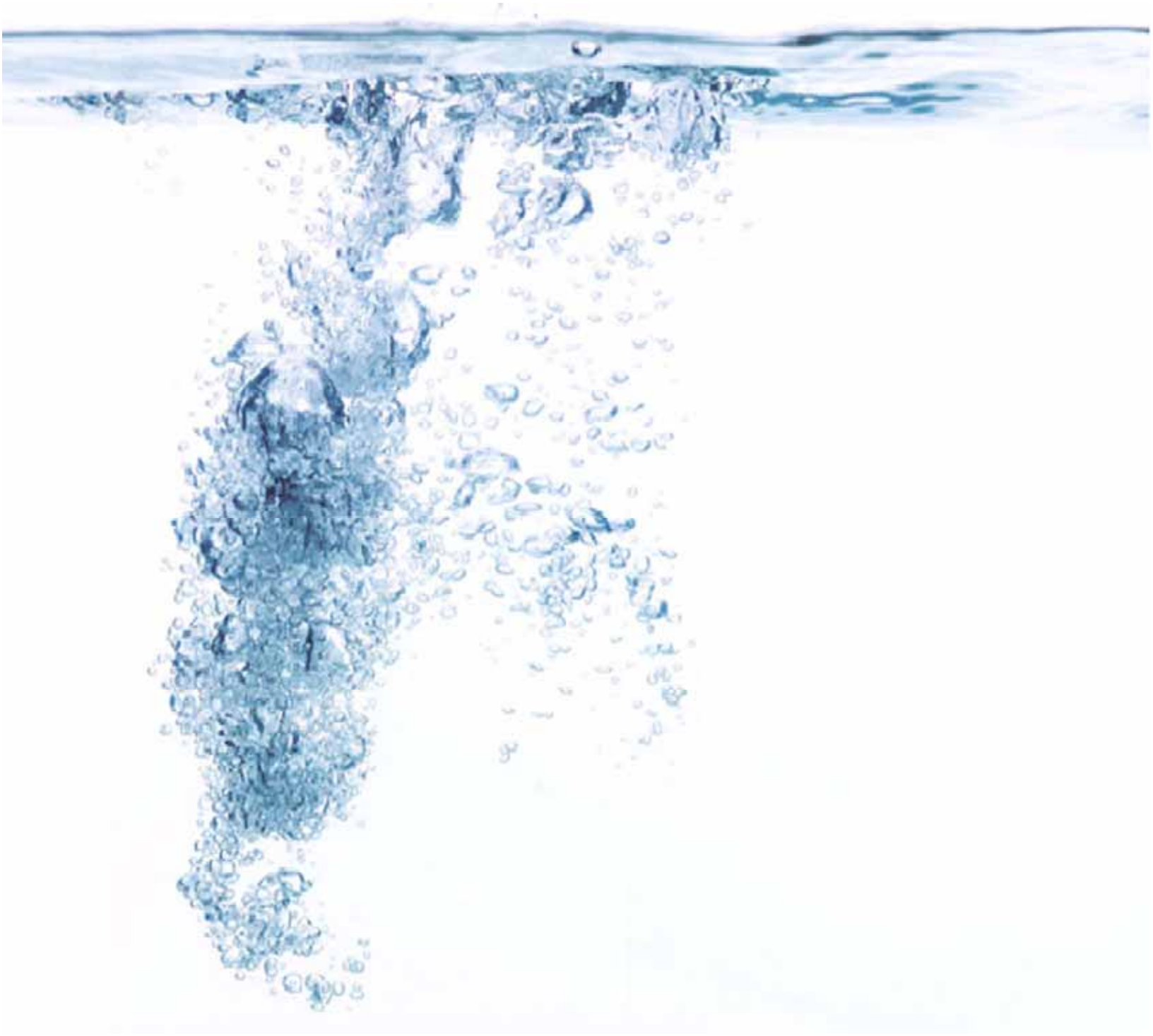
Section 3. Severability. If any section, subsection, sentence, clause phrase, or word of this ordinance is for any reason held to be invalid, the validity of the remaining portions of this ordinance shall not be affected.

Section 4. Environmental Determination. The Council determines that this ordinance is a Class 7 categorical exemption under section 15307 of the California Environmental Quality Act, which exempts actions by regulatory agencies for protection of natural resources.

Section 5. This ordinance shall take effect on the 31st day following its adoption.

APPENDIX G

Urban Water Shortage Contingency Plan



Urban Water Shortage Contingency Plan 2010

City of
Santa Rosa
Utilities Department

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Section 1: Introduction

The City of Santa Rosa Urban Water Shortage Contingency Plan (Shortage Plan) was first adopted on February 11, 1992 and is updated periodically, at a minimum every five years. The Shortage Plan is a component of the City's Urban Water Management Plan, which is updated every five years. The Shortage Plan was first adopted in response to emergency legislation, California Assembly Bill 11X. Legislation has changed the requirements of water shortage contingency planning several times since the initial bill was passed. Current requirements are in Section 10632 of the California Water Code, the Urban Water Management Planning Act, which is provided as Appendix 3 to this document.

The City's 1992 Shortage Plan was first revised in 1996 with updated demand and financial data. In 2002, a more comprehensive revision was completed, which included updated demand projections, financial analysis, and rate structure design for each rationing stage; a change in the per capita allocations in Stages 2 through 4; and a change in the methodology for determining landscape allocations in Stages 2 through 4. In 2005, the revision updated the demand and financial data. In 2006, the revision added two sections to the document addressing minimum water supply and drought/emergency planning actions. This 2010 revision updates the demand projections and financial analysis; adds a new rationing stage and changes the per capita allocations in the Stages.

The City's Shortage Plan provides guidance on demand reduction strategies for the Santa Rosa system. Trigger points on the Russian River system, which in turn trigger the City's program, are determined by the Sonoma County Water Agency (Agency) and water shortage provisions for the Agency system are governed by the Restructured Agreement for Water Supply dated June 2006 (Restructured Agreement).

Section 2: City of Santa Rosa Water Supply

The City currently has three sources of existing water supply: 29,100 acre-feet per year (AFY) entitlement from the Agency; 2,300 AFY of groundwater from the City's wells; and approximately 410 AFY of recycled water from the City's Subregional System. In addition, the City has an aggressive water conservation program which reduces current demands and assures that future demands are efficient.

The City currently receives the majority of its potable water supply from the Agency under the provisions of the Restructured Agreement, which was executed in June 2006; approximately 95% of water delivered by the Agency is from surface water sources, with the remainder from groundwater. Santa Rosa holds an entitlement to 56.6 million gallons per day, peak month average with an annual volume limit of 29,100 AFY.

In addition to Agency supply, in July 2005, the City received permission from the California Department of Public Health (DPH) to use two of its groundwater wells, formerly permitted as standby emergency wells, for supply; this supply source is now

permitted for regular production and can provide up to 2,300 AFY to the City under normal conditions and approximately 1,550 AFY during dry year conditions.

Section 3: Previous Water Shortage Conditions

The contractual provisions of the Restructured Agreement dictate how water supply reductions will be administered by the Agency in the event of a water shortage. For the City and the other parties to the Restructured Agreement, the shortage provisions are defined in Section 3.5 of that agreement, and further defined in the Water Shortage Allocation Methodology (Shortage Methodology), which was adopted by the Agency Board in April 2006. The Restructured Agreement Section 3.5 provisions, and the Shortage Methodology, are designed to take the demand hardening associated with water conservation into account. The City implemented an aggressive water conservation program over the past 17 years and has one of the lowest per capita water uses among all the Agency water contractors.

Recent drought conditions in 2007 and 2008 have led to short-term water supply shortages, resulting in the Agency requesting a voluntary 15% reduction in water use during these dry conditions. In 2009, short-term water supply shortages resulted in the Agency implementing the Shortage Methodology and providing water allocations to its customers, including the City. In response to the Agency's implementation of the Shortage Methodology, the City implemented Stage 1 of the Shortage Plan and was able to successfully reduce water use to remain within the monthly water allocation provided by the Agency.

Section 4: Past, Current and Projected Demand

Santa Rosa is a community of over 163,000 people. Of the approximately 52,000 water connections, 91% service residential demand while the remaining 9% service commercial demand. Utility customers are segregated into the following large customer classes: single-family residential, multi-family residential, commercial and irrigation. The multi-family residential class can be further divided by the number of living units. In the commercial customer class, all utility customers have been classified according to the Standard Industrial Classification (SIC) system, which allows the commercial category to be sorted into sub-categories including: industrial, governmental institution, health care facility, and public safety.

Analysis of historic dry year conditions in the Sonoma County Water Agency 2010 Urban Water Management Plan indicates a reduction of up to 30% of Agency supply in a single dry year and no supply curtailment in a multiple dry year. Because allocation among the Agency's customers is determined by the Shortage Methodology of Section 3.5 of the Restructured Agreement, no water supply deficiency is expected for the City due to dry year conditions in either analysis.

Table 1 presents actual water deliveries for the City in 2010; however it should be cautioned that the 2010 water use is not representative of normal water use

characteristics for the City. From 2007 to 2010, the City's water use was significantly affected by a number of factors described below:

- Drought conditions – In 2007 and 2008, dry year conditions caused the Agency to request voluntary 15% reductions in water use from all of the Agency's water contractors. The Agency implemented significant public education and outreach campaigns asking all customers to reduce their water use. In response, the City requested customers to voluntarily reduce their water use, implemented additional public outreach, implemented a water watch patrol, provided new "water on request" cards to restaurants and "towel and linen" cards to hotels and motels, and developed a water wise kit which was provided to all single-family residential and dedicated irrigation customers. Water use was reduced by approximately 15%.
- Water Shortage Conditions – In 2009, drought conditions caused the Agency to implement their Shortage Methodology and provide monthly allocations to each of its water contractors, including the City. The Agency implemented even greater public education and outreach campaigns asking all customers to reduce their water use. In response, the City adopted Stage 1 of the City's Shortage Plan, requesting customers to reduce their water use by 15%, prohibiting washing hard surfaces, requiring hose-end shut off nozzles on all garden hoses, and requiring restaurants to only serve water on request. The City implemented a significant public outreach and education program, increased the water watch patrol, and sent numerous customized letters to every customer informing them of the Stage 1 water requirements and providing information on ways to reduce their water use. Water use was reduced by approximately 25%.
- Economic Conditions – From 2007 to 2010, economic recession and high amounts of vacancy in existing residential and commercial customer accounts had a significant effect on water usage.

Lasting effects of the drought, water shortage and economic recession, as well as a cool summer, significantly affected the City's 2010 water use and therefore, the City's 2010 water use is not representative of normal water use characteristics for the City.

Table 1
2010 Water Use by Customer Class

Customer Class	Water Demand (Acre-feet)[2]	Number of Connections
Single-family	9,860	43,494
Multi-family	3,204	3,129
Commercial[1]	2,713	2,887
Landscape	1,608	1,695
Total	17,385	51,205

[1] Includes Commercial, Industrial, Institutional, Health Care and Public Safety
[2] Demand totals do not include unaccounted for water loss, which is approximately 8%.

Because 2010 is not representative of normal water use characteristics, average

historical water use based on a 10-year average was used to determine the normal water use characteristics for purposes of the Shortage Plan analysis. The average water demand is representative of normal water use and is used throughout the Shortage Plan for determining demand reduction goals, consumption limits by customer class, as well as for conducting the revenue and expenditure impacts analysis. Table 2 summarizes the 10-year average historical water demand by customer class. Actual purchase and production of water would be approximately 8% higher than demand due to normal unaccounted for water losses.

Table 2
Average Historical Water Use by Customer Class

Customer Class	Average Water Demand 1997 - 2006 (Acre-Feet)[2]	Average Number of Connections 1997 – 2006
Single-Family Residential	12,526	39,530
Multi-Family Residential	3,457	2,905
Commercial[1]	3,674	2,729
Irrigation	2,608	1,554
Total	**22,265**	**48,718**

[1] Includes Commercial, Industrial, Institutional, Health Care and Public Safety.

[2] Demand totals do not include unaccounted for water loss, which is approximately8%.

4.1 – ESTIMATED MINIMUM WATER SUPPLY FOR NEXT THREE YEARS

The estimated minimum water supply for the next three years assumes a multiple dry year condition based on the driest four-year historic sequence (1990 to 1993). As indicated in the Agency's 2010 Urban Water Management Plan, no supply curtailment would result to the City from the Agency if the hydrologic conditions of the driest four-year historic sequence occurred today. Table 3 presents the estimated minimum water supply for the next three years, as well as the projected demands under normal conditions for the next three years. As shown, the estimated minimum water supply is sufficient to meet the projected water demands under normal conditions and no supply shortfall is projected.

Table 3 Estimated Minimum Water Supply for the Next Three Years			
Supply Source	**Projected Minimum Water Supply, Acre-Feet**		
	2011	**2012**	**2013**
Sonoma County Water Agency[1]	29,100	29,100	29,100
City Groundwater	1,550	1,550	1,550
Recycled Water	410	410	410
Total Supply	31,060	31,060	31,060
Projected Water Demand[2]	**26,585[2]**	**26,737[2]**	**26,887[2]**
Projected Supply Shortfall	**No Shortfall Projected**		

[1] Assumes no supply curtailment based on information provided in the Agency's 2005 UWMP.
[2] Demand totals are based on normal year conditions and do not include unaccounted for water loss, which is approximately 8%.

The methodology used for the demand projections for the next three years is based on normal water use characteristics and does not incorporate the effects of the conditions described in Section 4 above. Because of this methodology, the projections for the next three years included in Table 3 may be slightly higher than what may likely occur and represents the maximum demand the City anticipates will occur based on a strong economic recovery in the next three years.

Section 5: Emergency Planning Actions

In addition to responding to drought conditions, the City's Shortage Plan can be used to respond to emergency conditions that interrupt water supplies to the City. Water supplies may be interrupted in the future due to water supply contamination, major transmission pipeline break, regional power outage, or a natural disaster such as an earthquake. In the event of an emergency, the Utilities Department would respond as outlined in the City's current City of Santa Rosa Utilities Department Water System Emergency Response Plan. Actions that the City would take if these emergencies occurred today are outlined below.

5.1 NO WATER AVAILABLE FROM THE AGENCY

In the event that the Agency's Russian River supply becomes contaminated (i.e. due to a chemical spill or other environmental incident), it may be possible that no water would be available from the Agency for a period of time. In such a case, the City would need to rely on water from its distribution system storage facilities, Farmers Lane wells, and/or emergency wells.

If such an event were to occur, the City would need to implement one or more stages of the Shortage Plan to notify customers of the need to reduce water use until the Agency water supply could be restored.

5.2 AREA-WIDE ELECTRICAL POWER FAILURE

If an area-wide electrical power failure were to occur within the City's water service area, many of the City's pumping facilities could potentially be impacted. The City has stationary standby generators at 16 of its 20 booster pump stations. The other 4 booster pump stations either have receptacles for use with a portable generator or have outlets for bypass pumping with portable water pumpers. In addition, the City has numerous pumper connectors and pressure regulating valves throughout the water system to move water from different pressure zones during an emergency.

The Agency's facilities may also be vulnerable to power outages; however, most of the Agency facilities which serve the City have backup power provisions.

5.3 EARTHQUAKE

Water system infrastructure, including pump stations, storage tanks, and pipelines, can be damaged during a strong earthquake. The City's facilities have been constructed in accordance with the applicable building codes to minimize potential damage during an earthquake. However, it is expected that some facilities may be damaged as the result of a strong earthquake. The City has planned for this potential outage scenario by constructing system redundancy into its water system. The City has multiple storage facilities and looped distribution pipelines, to allow potentially damaged portions of the City's system to be quickly isolated and repaired.

Section 6: Stages of Action for Demand Reduction up to 50%

Demand reduction strategies will be employed at all stages of a water shortage emergency. This Section includes details of *Rationing Stages, Demand Reduction Goals, Consumption Limits, Prohibitions on Water Use,* and *Water Shortage Rate Structure.* The entire strategy for demand reduction is summarized in Appendix 1, the City's Water Shortage Action Plan.

6.1 RATIONING STAGES

The City has determined the rationing stages for response to reduced supply in a water shortage emergency. Table 4 details these rationing stages.

Table 4 (DWR Table 35) Water shortage contingency — rationing stages to address water supply shortages			
Stage No.	**Water Supply Conditions**	**% Supply Shortage**	**Overall Demand Reduction Goal**
Stage 1 - Voluntary	Up to 10% Reduction in Agency Water Supply	Up to 10%	10%
Stage 1 – Mandatory	11 – 20% Reduction in Agency Water Supply	11 - 20%	20%
Stage 2 – Moderate	21 – 30% Reduction in Agency Water Supply	21 - 30%	30%
Stage 3 – Severe	31 – 40% Reduction in Agency Water Supply	31 - 40%	40%
Stage 4 – Critical	41 – 50%+ Reduction in Agency Water Supply	41 - 50%+	50%+

6.2 DEMAND REDUCTION GOALS

Overall demand reduction will be achieved with different reduction goals in each user class. The following priorities have been established for use in developing demand reduction programs and allocations during a water shortage emergency. Priorities for use of available water, from highest to lowest priority, are:

- Health and Safety
- Commercial, Industrial and Governmental
- Existing Landscaping - especially trees and shrubs
- New Demand - projects without permits when shortage is declared

With these guidelines in mind, Table 5 details overall reduction goals by customer class for Stages 2 through 4 of the water shortage emergency. Reduction goals are based on a 10-year average water use, representing normal water demand. Reduction goals for single-family customers are based on per capita water allocation, plus an irrigation allocation (as further described below). For multi-family customers, reduction goals are based on per capita water allocation. For the commercial/industrial/government and Health Care Facilities/Public Safety customers, prior year demand is the basis for calculating demand reduction. For irrigation services, the allocation is based on plant type and evapotranspiration data.

Table 5 Average Demand and Reduction Goals by Customer Class				
Customer Class	**Average Water Use 1997 - 2006 (AF)**	**Stage 2**	**Stage 3**	**Stage 4**
		% Reduction	% Reduction	% Reduction
	Annual Demand	Annual Allocation	Annual Allocation	Annual Allocation
		31%	38%	56%
Single Family	12,526	8,643	7,766	5,511
		5%	14%	23%
Multiple Family	3,457	3,284	2,973	2,662
		15%	20%	30%
Commercial/ Industrial/ Government	3,266	2,776	2,613	2,286
		39%	68%	90%
Irrigation	2,608	1,591	835	261
		5%	10%	15%
Health Care Facilities/ Public Safety	408	388	367	347
		25%	35%	50%
Total (AF)	**22,265**	**16,699**	**14,472**	**11,133**

6.3 CONSUMPTION LIMITS

To achieve the overall reduction goals, a community-wide goal is assigned in Stage 1 – Voluntary and Stage 1 – Mandatory and allocations are determined for each customer within a customer class for Stages 2 through 4. Details of reduction strategies for each customer class at each reduction stage are as follows:

Stage 1 - Voluntary is a voluntary program with 10% overall reduction:

- Community-wide reduction is the goal; elimination of all waste; minimization of non-essential use; "water-on-request" restaurant program

Stage 1 - Mandatory is a mandatory program with 20% overall reduction:

- Community-wide reduction is the goal; all Stage 1-Voluntary requirements as well as a limitation on hours of irrigation for all customers

Stage 2 is a mandatory program with 30% overall reduction. Allocations are developed for each water service as follows:

- Single-family customers receive 58 gallons per capita day (gpcd) plus a moderate landscape allotment of 2,300 gallons per month from May through October
- Multi-family customers receive 58 gpcd plus a moderate landscape allotment if irrigation usage is not on a separate dedicated service
- Commercial/Industrial/Governmental receives 85% of previous 12 months' usage or of the most recent 12-month period with no water shortage restrictions in place
- Irrigation receives a water budget based on 61% of historical net evapotranspiration-based demand for the square footage of the irrigated area
- Health care and public safety receives 95% of previous 12 months' usage or of the most recent 12-month period with no water shortage restrictions in place

Stage 3 is a mandatory program with 40% overall reduction. Allocations are developed for each water service:

- Single-family customers receive 52 gpcd plus a minimal landscape allotment of 2,000 gallons per month from May through October
- Multi-family customers receive 52 gpcd plus a minimal landscape allotment if irrigation usage is not on a separate dedicated service
- Commercial/Industrial/Governmental receives 80% of previous 12 months' usage or of the most recent 12-month period with no water shortage restrictions in place
- Irrigation receives a water budget based on 32% of historical net evapotranspiration-based demand for the square footage of the irrigated area
- Health care and public safety receives 90% of previous 12 months' usage or of the most recent 12-month period with no water shortage restrictions in place

Stage 4 is a mandatory program with 50% overall reduction. Allocations are developed for each water service:

- Single and multi-family customers receive 47 gpcd with no landscape allotment
- Commercial/Industrial/Governmental receives 70% of previous 12 months' usage or of the most recent 12-month period with no water shortage restrictions in place
- Irrigation receives allotment only for mature trees and shrubs
- Health care and public safety receives 85% of previous 12 months' usage or of the most recent 12-month period with no water shortage restrictions in place

A summary of the consumption reduction methods are included in Table 6.

Table 6 (DWR Table 37) Water shortage contingency — consumption reduction methods		
Consumption Reduction Methods	**Stage When Method Takes Effect**	**Projected Reduction (%)**
Community wide reduction target established, minimization of non-essential uses and water on request program for restaurants	1 – Voluntary	10%
Limitation on irrigation hours	1 – Mandatory	20%
Allocations are given to each customer class	2	30 – 50%
New construction must offset new demand	2	30 – 50%

6.4 PROHIBITIONS ON WATER USE

Santa Rosa adopted a Water Waste Ordinance in 1999 which prohibits the following:

- Irrigation in such a manner that it runs off or over-sprays the irrigated area
- Leaks that are detected yet un-repaired

The Water Waste Ordinance states that water service will be discontinued for continued violation once notification has been made.

In addition to the prohibitions outlined in the Water Waste Ordinance, the following program of prohibited use is established for the Water Shortage Emergency condition:

Stage 1 Voluntary

- Hose-end shut-off nozzles are required on all garden and utility hoses
- Water served in restaurants on request only
- Washing sidewalks, patios, and other hard surfaces is prohibited unless required for public health and safety needs
- Using potable water for street washing is prohibited

Stage 1 Mandatory – All prohibitions established in previous stage plus:

- Irrigation limited to the hours of 8:00 pm to 6:00 am

Stage 2 - All prohibitions established in previous stage plus:

- Operating ornamental fountains is prohibited
- Filling new swimming pools is prohibited
- New construction must offset new demand by conserving the equivalent of the new demand within the community
- Recycled water must be used for construction dust control if recycled water is available and project is within a 1 mile radius of recycled water filling station

Stage 3 - All prohibitions established in previous stage plus:

- No water using landscape installation in new construction
- New construction must offset new demand by conserving two times the new demand within the community
- Filling or topping-off of existing swimming pools is prohibited

Stage 4 - All prohibitions established in previous stage plus:

- No water using landscape installation
- New construction must offset new demand by conserving three times the new demand within the community

A summary of the mandatory prohibitions is included in Table 7.

Table 7 (DWR Table 36)
Water shortage contingency — mandatory prohibitions

Examples of Prohibitions	Stage When Prohibition Becomes Mandatory
Water Waste Ordinance Prohibitions	During all water conditions
Using potable water for street washing	Stage 1 Voluntary
Hose end shut-off nozzles required	Stage 1 Voluntary
Water served in restaurants on request only	Stage 1 Voluntary
Washing sidewalks, patios and other hard surfaces prohibited except for health and safety reasons and certain construction purposes	Stage 1 Voluntary
Irrigation limited to hours of 8PM to 6AM	Stage 1 Mandatory
Prohibition on operating ornamental fountains	Stage 2
Prohibition on filling new swimming pools	Stage 2
New construction must offset water demand	Stage 2
Prohibition on installing water using landscape in new construction	Stage 3
New construction must offset water demand two to one	Stage 3
Prohibition on filling existing swimming pools	Stage 3
Prohibition on installing water using landscapes	Stage 4
New construction must offset water demand three to one	Stage 4

A customer will be found in violation of a prohibited use if the use continues after two official City written notifications. Remedies for violation of these prohibited actions are included in Section 6.6.

6.5 WATER SHORTAGE RATE STRUCTURE

The City's water rate structure consists of a four-tiered water rate structure for Single-

Family Residential customers, a commodity rate structure for Multi-Family Residential and Commercial, Industrial and Institutional customers, and a water-budget based tiered water rate structure for Dedicated Irrigation customers. As of January 15, 2011, the water rate per 1,000 gallons is listed in Table 8. The water rate structure also includes monthly fixed service charges, which vary with the size of the water meter.

Table 8
Water Rates Effective 2011

	Water Usage Charge (per 1,000 gallons)
Single Family Residential Tiered Rate	
Tier 1 (up to the sewer cap)	$4.41
Tier 2 (above sewer cap to 8,000 gal.)	$5.08
Tier 3 (8,001 to 30,000 gal. above sewer cap)	$6.34
Tier 4 (over 30,000 gal. above sewer cap)	$9.51
Multi-family Residential	$4.86
Commercial & Industrial	$4.86
Dedicated Irrigation Water-Budget Based Tiered Rate	
Tier 1 (up to 125% of water budget)	$4.65
Tier 2 (126 to 200% of water budget)	$6.34
Tier 3 (201% and over water budget)	$9.51

Water rates during a shortage condition as defined in the following sections will be based on modifications to the current rate structure in place at the time of the declared emergency.

The City's water rate structure is designed to encourage efficient water use, even during normal water supply conditions. This is achieved through a low fixed service charge and a relatively high usage charge applicable to each unit of water use. This conservation-oriented rate structure introduces some financial risk in that a significant portion of fixed costs is recovered through the usage charge, based on total water usage. A reduction in water usage can result in revenues not covering all fixed costs.

Changes to the water rate structure during each stage of rationing are designed to encourage customers to reduce water use commensurate with water allocations and reduction goals. In addition, the rate structure changes are also necessary to help protect the financial stability of the water system as water demands are reduced.

Three lines of defense are incorporated into the City's water shortage financial strategy and rate structure:

1. The catastrophic reserve will be drawn down to absorb part of the financial deficit caused by a reduction in water rate revenues (due to lower water sales) that exceeds the reduction in operating costs.

2. All customers will be subject to an increased usage charge (Water Shortage Charge) in Stages 2 through 4 to encourage water conservation by all customers and help protect the financial condition of the water utility. The Water Shortage Charge (described below) is designed such that customers meeting reduction goals will have lower water bills than they do with normal usage.
3. Water service customers that exceed water allocations and do not meet reduction goals will be subject to additional Excess Use Charges during severe (Stage 3) and critical (Stage 4) periods. Revenues from Excess Use Charges will be used only for specified purposes.

Table 9 summarizes the charges and the Stage that they are applied.

Table 9 (DWR Table 38)
Water shortage contingency — penalties and charges

Penalties or Charges	Stage When Penalty Takes Effect
Water Shortage Charge - Increased usage charge to encourage water conservation	2
Excess Use Charge – Penalty for excess use above allocation	3

In Stage 1, there are no changes to the water rate structure. To compensate for loss of revenue from reduced water sales and increased staffing for the water shortage response effort, the Catastrophic Reserve may be employed in Stage 1. In the event of a water shortage, adoption of the Water Shortage Resolution (See Section 8: Implementation of the Shortage Plan) by the Santa Rosa City Council will allow the appropriation of funds from the Catastrophic Reserve.

In Stages 2 through 4, reduction in net revenue brought on by reduced water sales and increased costs for the water shortage response effort will be mitigated by both the Catastrophic Reserve and the introduction of a Water Shortage Charge (WSC) on each unit of water sold. A 10% WSC will be added to the current user charge on every unit of water sold (per 1,000 gallons) for all customer accounts beginning in Stage 2. The WSC will increase by 10% for each additional stage, resulting in a 20% WSC in Stage 3 and a 30% WSC in Stage 4. Beginning in Stage 3 and continuing in Stage 4, the tiered water user charges for Single-Family Residential and Dedicated Irrigation accounts are eliminated and the user charge for Multi-Family Residential and Commercial and Industrial accounts (the “uniform commodity rate”) is imposed on all customer accounts.

The WSC is designed to recover a portion of the cost of the revenue from the shortfall from the entire community, and is designed such that a typical customer’s bill will not change significantly even though the rate has increased (this assumes the typical customer will reduce use at least at the level of the WSC.) The WSC will increase with each stage according to Table 10.

Table 10
Water Shortage Charge (WSC) for All Water Sold – Stages 2 through 4

WATER SHORTAGE CHARGE - STAGE 2 MODERATE		
Account Type	**Water Shortage Charge Stage 2 - Moderate ($ Per Thousand Gallons)**	**Example with 2011 water rate ($ Per Thousand Gallons)**
Single Family Residential	Tier 1 Rate Plus 10% Tier 2 Rate Plus 10% Tier 3 Rate Plus 10% Tier 4 Rate Plus 10%	Tier 1 $4.85 Tier 2 $5.59 Tier 3 $6.97 Tier 4 $10.46
Dedicated Irrigation Accounts	Tier 1 Rate Plus 10% Tier 2 Rate Plus 10% Tier 3 Rate Plus 10%	Tier 1 $5.12 Tier 2 $6.97 Tier 3 $10.46
Multi-Family Residential (2 units or more)	Commodity Rate Plus 10%	$5.35
Commercial, Industrial, Government, Health Care, Safety	Commodity Rate Plus 10%	$5.35
WATER SHORTAGE CHARGE - STAGE 3 SEVERE		
Account Type	**Water Shortage Charge Stage 3 - Severe ($ Per Thousand Gallons)**	**Example with 2011 water rate ($ Per Thousand Gallons)**
Single Family Residential	Commodity Rate Plus 20%	$5.83
Dedicated Irrigation Accounts	Commodity Rate Plus 20%	$5.83
Multi-Family Residential (2 units or more)	Commodity Rate Plus 20%	$5.83
Commercial, Industrial, Government, Health Care, Safety	Commodity Rate Plus 20%	$5.83
WATER SHORTAGE CHARGE - STAGE 4 CRITICAL		
Account Type	**Water Shortage Charge Stage 4 - Critical ($ Per Thousand Gallons)**	**Example with 2011 rate ($ Per Thousand Gallons)**
Single Family Residential	Commodity Rate Plus 30%	$6.32
Dedicated Irrigation Accounts	Commodity Rate Plus 30%	$6.32
Multi-Family Residential (2 units or more)	Commodity Rate Plus 30%	$6.32
Commercial, Industrial, Government, Health Care, Safety	Commodity Rate Plus 30%	$6.32

In addition to the WSC, an inclining rate designed to reward customers for staying within their allotment and to assess Excess Use Charges (EUC) for water use over the allotment will be adopted at Stages 3 and 4. In Stage 3, the EUC consists of a 50% surcharge for use 101 – 150% above consumption limits and a 100% surcharge for use over 150% of consumption limits for all customer accounts. In Stage 4, the EUC

consists of a 100% surcharge for use 101 – 150% above consumption limits and a 200% surcharge for use over 150% of consumption limits for all customer accounts. The EUC will be designed to reflect the structure illustrated in Table 11.

Table 11
Excess Use Charge (EUC) for Water Used in Excess of Allotment – Stages 3 and 4

Water Use Compared to Allotment	Excess Use Charge
Water use up to 100% of allotment	Commodity rate with WSC per Table 9
Water use 101% to 150% of allotment	Stage 3 – Commodity rate with WSC plus 50% EUC Stage 4 - Commodity rate with WSC plus 100% EUC
Water use over 150% of allotment	Stage 3 – Commodity rate with WSC plus 100% EUC Stage 4 - Commodity rate with WSC plus 200% EUC

EUC revenues are not intended to be used as general operating revenues during the emergency, but may be used to: (1) offset the extraordinary costs of the water shortage emergency such as additional conservation support; (2) rebuild the Catastrophic Reserve; and/or (3) establish a rate stabilization fund for the post-emergency recovery.

Table 12 summarizes the water shortage rate structure for each stage of rationing based on the current (2011) water rates.

Table 12
Water Shortage Rate Structure (2011)

		Normal Supply	Stage 1: Voluntary (10% Shortage)	Stage 1: Mandatory (20% Shortage)	Stage 2: Moderate (30% Shortage)	Stage 3: Severe (40% Shortage)	Stage 4: Critical (50% Shortage)
Monthly Service Charge ($/month)[1]							
5/8" meter		$ 8.35	$ 8.35	$ 8.35	$ 8.35	$ 8.35	$ 8.35
1" meter		$ 15.21	$ 15.21	$ 15.21	$ 15.21	$ 15.21	$ 15.21
1 1/2" meter		$ 29.07	$ 29.07	$ 29.07	$ 29.07	$ 29.07	$ 29.07
2" meter		$ 48.86	$ 48.86	$ 48.86	$ 48.86	$ 48.86	$ 48.86
3" meter		$ 114.27	$ 114.27	$ 114.27	$ 114.27	$ 114.27	$ 114.27
4" meter		$ 194.40	$ 194.40	$ 194.40	$ 194.40	$ 194.40	$ 194.40
6" meter		$ 425.58	$ 425.58	$ 425.58	$ 425.58	$ 425.58	$ 425.58
Water Usage Rates ($/1,000 gal.)[2]							
Single Family Residential	Tier 1	$ 4.41	$ 4.41	$ 4.41	$ 4.85		
	Tier 2	$ 5.08	$ 5.08	$ 5.08	$ 5.59		
	Tier 3	$ 6.34	$ 6.34	$ 6.34	$ 6.97		
	Tier 4	$ 9.51	$ 9.51	$ 9.51	$ 10.46		
Dedicated Irrigation	Tier 1	$ 4.65	$ 4.65	$ 4.65	$ 5.12		
	Tier 2	$ 6.34	$ 6.34	$ 6.34	$ 6.97		
	Tier 3	$ 9.51	$ 9.51	$ 9.51	$ 10.46		
Multi-Family Residential		$ 4.86	$ 4.86	$ 4.86	$ 5.35		
Non-Residential		$ 4.86	$ 4.86	$ 4.86	$ 5.35		
All Water Customers[3]		Tier 1 - Up to 100% of water allotment				$ 5.83	$ 6.32
		Tier 2 - From 100% to 150% of water allotment				$ 8.75	$ 11.66
		Tier 3 - Over 150% of water allotment				$ 17.50	$ 26.24
Water Shortage Rate Surcharges[3]							
Water Shortage Charge					10%	20%	30%
Tier 2 Excess Use Charge						50%	100%
Tier 3 Excess Use Charge						100%	200%

[1] *Monthly water service charges are unaffected by water shortage rate changes.*

[2] *No changes to water usage rates occur during Stage 1 - Voluntary and Stage 1 - Mandatory conditions. During Stage 2 - Moderate conditions the water usage rates are increased by the amount of the water shortage surcharge. The basis water usage structure for each customer class is unchanged through Stage 2 - Moderate conditions.*

[3] *During Stage 3 - Severe and Stage 4 - Critical conditions the water usage rate structure changes to an allotment for each customer (as described) .Water shortage charges apply in these stages, and excess use charges apply to usage above the allotment, as specified*

6.6 VIOLATIONS OF WATER USE RESTRICTIONS AND REPEATED EXCESS USE

Any customer who exceeds the established allotment for three consecutive months, or

exceeds the established allotment for six months within a twelve month period, or violates one or more prohibited uses, may, at the discretion of the Director of Utilities, be subject to any of the following actions:

- At the customer's expense, undergo a complete site water audit and install certain water efficient fixtures
- Installation of a flow reducing device at the water meter
- Disconnection of water service and payment of a designated fee for reconnection of the water service

6.7 VARIANCE PROCEDURES

This Shortage Plan is designed to place the responsibility for managing our water resource during a water shortage emergency on the entire community. Care has been taken in the design of the Shortage Plan not to penalize any customer who has undertaken conservation measures in the past for having saved water on an ongoing basis. Furthermore, any customer meeting water use reduction goals by limiting water use to defined allocations will be able to avoid paying Excess Use Charges.

Any customer who feels their established allotment is unfair may apply to the City for a reassessment. Variances will be granted, on a case-by-case basis, at the discretion of the Director of Utilities. The following conditions are among those that may be given consideration in the variance process:

- Water uses that support public health and safety
- Non-residential water customers (whose allotment is based on previous consumption) who can demonstrate that water efficient hardware and conservation practices were in place prior to the water shortage emergency
- Water used for mature trees for which an inadequate allocation has been made

Section 7: Analysis of Revenue and Expenditure Impacts

Table 13 details the City Water Utility's projected annual revenue and expenditure status (based on a normalized budget and water supply/demand condition for FY 11-12) in non-shortage conditions and at each stage in the water shortage program.

Table 13
Impact of Water Shortage on Revenues and Expenditures (FY11-12)

	Normal Supply[1]	Stage 1: Voluntary (10% Shortage)	Stage 1: Mandatory (20% Shortage)	Stage 2: Moderate (30% Shortage)	Stage 3: Severe (40% Shortage)	Stage 4: Critical (50% Shortage)
Water Sales (AF) -->	22,265	20,039	17,812	15,586	13,359	11,133
Sources of Funds						
Service Charge Revenues	6,400,000	6,400,000	6,400,000	6,400,000	6,400,000	6,400,000
Usage Charge Revenues[2]	35,200,000	31,700,000	28,200,000	24,600,000	21,100,000	17,600,000
Water Shortage Revenues[3]				2,460,000	4,220,000	5,280,000
Other Operating Revenues	1,900,000	1,900,000	1,900,000	1,900,000	1,900,000	1,900,000
Total Sources of Funds	43,500,000	40,000,000	36,500,000	35,360,000	33,620,000	31,180,000
(% or normal)		92%	84%	81%	77%	72%
Uses of Funds						
Purchase of Water	15,300,000	13,770,000	12,240,000	10,710,000	9,180,000	7,650,000
Water Administration	5,800,000	5,800,000	5,800,000	5,800,000	5,800,000	5,800,000
Water Maintenance	3,200,000	3,200,000	3,200,000	3,200,000	3,200,000	3,200,000
Water Operations	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Electricity for Pumping[4]	900,000	810,000	720,000	630,000	540,000	450,000
Water Quality	600,000	600,000	600,000	600,000	600,000	600,000
Water Conserv.& Demand Mgmt.[5]	500,000	600,000	700,000	800,000	900,000	1,000,000
Debt Service	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
O&M Projects	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Transfers for Capital Projects[6]	13,000,000	12,000,000	11,000,000	10,000,000	9,000,000	8,000,000
Total Uses of Funds	43,500,000	40,980,000	38,460,000	35,940,000	33,420,000	30,900,000
(% or normal)		94%	88%	83%	77%	71%
Surplus/(Deficit) in Operations		(980,000)	(1,960,000)	(580,000)	200,000	280,000
Catastrophic Reserve						
Available Balance[7]	4,400,000	4,400,000	4,400,000	4,400,000	4,400,000	4,400,000
Excess Use Charge Revenues[8]						
Used to Cover Oper. Deficit[9]	-	(980,000)	(1,960,000)	(580,000)	-	-
Ending Balance	4,400,000	3,420,000	2,440,000	3,820,000	4,400,000	4,400,000

(1) Reflects estimated FY 11-12 revenues and expenses under normal budgetary, water supply, and economic conditions, as a basis for water shortage financial analysis.

(2) Water usage charge revenue would decline in proportion to reduced water usage.

(3) Water shortage charge would be imposed in Stages 2, 3, and 4 to limit the operating deficit.

(4) Water purchase costs and pumping energy costs would decline in proportion to reduced water usage.

(5) Water conservation and demand management costs would increase with each stage of shortage.

(6) Funding for the capital program would be restricted beginning with Stage 1 - Mandatory and escalate through higher stages.

(7) Assumes Catastrophic Reserve would be fully funded at outset of water shortage.

(8) Excess Use Charges would be imposed in Stages 3 and 4, but are assumed to generate no revenue for financial analysis purposes. Any Excess Use Charge Revenue received would be used to replenish the Catastrophic Reserve and fund conservation activities.

(9) Catastrophic Reserve would be used to offset any operational deficit.

Customers who reduce their water use per the consumption limits should expect to see a decrease in the water portion of their monthly utility bill. Table 14 summarizes a sample water bill (not including wastewater fees) for an average Single Family Residential account that uses water per the consumption limits compared to a sample bill for an average Single Family Residential account that does not reduce their water use per the consumption limits.

Table 14
Sample Single Family Residential Charges

Shortage Stage	Single Family Reduction Goal	Monthly Water Use (1,000 gal.)	Monthly Service Charge	Water Usage Charge	Water Shortage Charge	Excess Use Charge	Total Water Bill (Wastewater Fees Not Included)
Average Single Family Customer Meeting Reduction Goals[1]							
Normal	0%	12	$ 8.35	$ 58.28	$ -	$ -	$ 66.63
Stage 1 - Voluntary	10%	11	$ 8.35	$ 53.20	$ -	$ -	$ 61.55
Stage 1 - Mandatory	20%	10	$ 8.35	$ 48.12	$ -	$ -	$ 56.47
Stage 2 - Moderate	29%	9	$ 8.35	$ 43.04	$ 4.30	$ -	$ 55.69
Stage 3 - Severe	40%	3.5	$ 8.35	$ 20.41	$ 4.08	$ -	$ 32.84
Stage 4 - Critical	57%	1.4	$ 8.35	$ 8.85	$ 2.65	$ -	$ 19.85
Average Single Family Customer With No Water Use Reduction1							
Normal	0%	12	$ 8.35	$ 58.28	$ -	$ -	$ 66.63
Stage 1 - Voluntary	10%	12	$ 8.35	$ 58.28	$ -	$ -	$ 66.63
Stage 1 - Mandatory	20%	12	$ 8.35	$ 58.28	$ -	$ -	$ 66.63
Stage 2 - Moderate	29%	12	$ 8.35	$ 58.28	$ 5.83	$ -	$ 72.46
Stage 3 - Severe	40%	12	$ 8.35	$ 69.98	$ 14.00	$ 58.26	$ 150.59
Stage 4 - Critical	57%	12	$ 8.35	$ 75.82	$ 22.74	$ 187.36	$ 294.27

[1] *Assumes sewer cap of 4,000 gallons , and three-person household with summertime irrigation.*

Section 8: Implementation of the Shortage Plan

At the time of a water shortage emergency, the Santa Rosa City Council will adopt a Water Shortage Resolution. A draft Water Shortage Emergency Resolution is found in Appendix 2. With Stages 2 through 4, a Water Shortage Emergency Ordinance will also be adopted.

In the event that a Water Shortage Emergency occurs and the City Council cannot assemble to adopt the Water Shortage Emergency Resolution, the Director of Utilities is

authorized to implement the appropriate stage, based on the reduction in water supply, of the Shortage Plan. The Director of Utilities' determination to implement the Shortage Plan shall remain effective until the City Council meeting immediately following such determination, at which time the Santa Rosa City Council will adopt the Water Shortage Resolution.

Section 9: Monitoring Procedures

Stage 1 – Voluntary and Stage 1 – Mandatory – Monthly delivery records from the Agency meters and from local groundwater sources, if in use, will be reported to the Director of Utilities or the Director's designee. If overall reduction goals are not met, the Director may notify the Board of Public Utilities and more aggressive measures can be implemented.

Stages 2 through 4 - Weekly delivery figures from the Agency meters and local groundwater sources, if in use, and monthly consumption data from the City's Utility Billing Division will be reported to the Director of Utilities or the Director's designee. If reduction goals are not met, the Director will notify the Board of Public Utilities and more aggressive action will be taken.

Section 10: Public Noticing and Adoption

The City prepared the first Shortage Plan during December 1991 and January 1992. The Board of Public Utilities adopted the Shortage Plan on February 6, 1992. The Santa Rosa City Council adopted the Shortage Plan on February 11, 1992. The Shortage Plan was updated in data areas only in 1996 and reviewed by the Board of Public Utilities Water Conservation Subcommittee. The 2002 revision was reviewed in a public hearing before the Santa Rosa Board of Public Utilities. The City Council adopted the Shortage Plan on May 21, 2002.

The 2005 revision was updated in data areas only and reviewed in a public hearing before the Santa Rosa Board of Public Utilities on May 19, 2005, and was recommended for adoption by the Santa Rosa City Council on that date. The City Council adopted the Shortage Plan on June 7, 2005.

The 2006 revision was updated as part of the adoption of the City's 2005 Urban Water Management Plan. The revision was updated by adding Section 4 to the document and was reviewed by the Board of Public Utilities Water Conservation Subcommittee in May 2006. The 2006 Shortage Plan was reviewed in a public hearing before the Santa Rosa Board of Public Utilities on June 15, 2006, and was recommended for adoption by the Santa Rosa City Council on that date. The City Council adopted the Shortage Plan on June 27, 2006 as part of the adoption of the City's 2005 Urban Water Management Plan.

In 2009, the Santa Rosa City Council enacted Stage 1 of the Shortage Plan on February 24, 2009 via Resolution No. 27308. Santa Rosa's customers were successful in the implementation of Stage 1, achieving savings above and beyond the 15%

reduction requested. The Santa Rosa City Council rescinded Stage 1 of the Shortage Plan on October 3, 2009 via Resolution No. 27492.

This 2010 revision was updated as part of the update of the City's 2010 Urban Water Management Plan. This revision was updated by adding a new rationing stage and updating the demand projections, per capita allocations, and financial analysis. The 2010 Shortage Plan was reviewed by the Board of Public Utilities Water Conservation Subcommittee in numerous meetings in 2010 and 2011. The 2010 Shortage Plan was reviewed in a public hearing before the Santa Rosa Board of Public Utilities on June 2, 2011, and was recommended for adoption by the Santa Rosa City Council on that date. The City Council adopted the Shortage Plan on June 14, 2011 as part of the adoption of the City's 2010 Urban Water Management Plan.

Appendices

City of Santa Rosa - Water Shortage Action Plan 2010

Stage	Utility Department Actions	Customer Actions	Comments
Stage 1 - Voluntary: 10 percent overall reduction.	1. Adopt resolution: • Requesting voluntary water conservation with non-allotment based cut-back goals for all user classes. • Prohibiting water waste and reducing all non-essential uses. 2. Initiate public information campaign: • Prepare and disseminate educational brochures, bill inserts, etc. • Disseminate technical information to specific customer types. • Set up public information booths urging water conservation and showing ways the public can save water. • Coordinate media outreach program; issue news releases to the media. • Explain other stages and forecast future actions. 3. Increase City support: • Add temporary position to staff phone lines. • Initiate patrol for water waste violations. 4. Prepare for future stages: • Prepare for initiation of rationing stages. • Update people per household information for residential sector for per capita allotments.	1. Implement voluntary water use reductions. 2. Adhere to water shortage resolution. 3. Become aware of possible further restriction.	Voluntary program with community-wide reduction goals. Strong public information campaign. Emphasis on elimination of waste and increased awareness. Hose-end shut-off nozzles required on all garden and utility hoses. Hosing off hard surfaces prohibited unless required for public health and safety. Using potable water for street washing prohibited. A “Water-on-request” restaurant program.

Stage	Utility Department Actions	Customer Actions	Comments
Stage 1 - Mandatory: 20 percent overall reduction.	1. Adopt resolution: • Requesting voluntary water conservation with non-allotment based cut-back goals for all user classes. • Limiting hours of irrigation for all customers and reducing all non-essential uses. 2. Initiate public information campaign: • Prepare and disseminate educational brochures, bill inserts, etc. • Send out information on irrigation hour limitation. • Disseminate technical information to specific customer types. • Set up public information booths urging water conservation and showing ways the public can save water. • Coordinate media outreach program; issue news releases to the media. • Explain other stages and forecast future actions. 3. Increase City support: • Add temporary position to staff phone lines. • Initiate patrol for water waste violations. 4. Prepare for future stages: • Prepare for initiation of rationing stages. • Update people per household information for residential sector for per capita allotments	1. Implement voluntary water use reductions. 2. Adhere to water shortage resolution. 3. Become aware of possible further restriction.	Voluntary program, community-wide reduction goals. Strong public information campaign. Emphasis on elimination of waste and increased awareness. Irrigation limited to hours of 8 PM to 6 AM. Hose-end shut-off nozzles required on all garden and utility hoses. Hosing off hard surfaces prohibited unless required for public health and safety. Using potable water for street washing prohibited. "Water-on-request" restaurant program.

Stage	Utility Department Actions	Customer Actions	Comments
Stage 2 - Moderate: 30 percent overall reduction.	In addition to Stage 1- Voluntary and Stage 1- Mandatory: 1. Adopt rationing ordinance: • Assigning allotment to each water service: residential based on per capita allotment plus landscape; irrigation only based on ETo water budget; non-residential based on reduction from previous consumption. • Implementing Water Shortage Charge (WSC). • Expanding prohibited uses and developing penalty structure for waste violations. • Defining criteria and administrative procedures for variances. 2. Intensify public info campaign: • Notify each service of allotment goals. • Make site surveys available to all customers. 3. Increase City support: • Establish Shortage Response Center. • Appoint variance officer and administer variance program for all user classes. • Increase water waste patrol and audit support.	1. Adhere to allotment for 30 percent overall reduction: • Single Family - 58 gpcd, plus landscape allotment of 2,300 gallons per month May-Oct. • Multiple Family - 58 gpcd, plus moderate landscape allotment. • Commercial/Industrial/ Governmental - 85 % of previous 12 months' usage (15% reduction). • Irrigation - 61% of ET based water budget. • Health Care Facilities/ Public Safety - 95% of previous 12 months' usage (5% reduction). 2. Request variance where required. 3. Eliminate all prohibited uses.	Mandatory program with allotments for each service. Close tracking and feedback to community. Restricted uses include: • operation of ornamental fountains prohibited. • filling new swimming pools prohibited. New development must offset water demand. Recycled water must be used for construction dust control if available and project is within a 1-mile radius of a recycled water filling station.

Stage	Utility Department Actions	Customer Actions	Comments
Stage 3 - Severe: 40 percent overall reduction.	In addition to Stage 2: 1. Intensify ordinance requirements: • Prohibit installation of landscapes in new construction. • Require new construction to offset two times the new demand through upgrades to existing homes and businesses (toilet replacements, etc.). • Implement Excess Use Charge (EUC) in addition to WSC. 2. Intensify public information campaign: • Promote participation in new construction offset program. 3. Staffing: • Expand Shortage Response Center, water waste patrol and audit effort.	In addition to Stage 2: 1. Adhere to allotment for 40 percent overall reduction: • Single Family - 52 gpcd, plus landscape allotment of 2,000 gallons per month May-Oct. • Multiple Family - 52 gpcd, plus minimal landscape allotment. • Commercial/Industrial/ Governmental - 80% of previous 12 months' usage (20% reduction). • Irrigation - 32% of ET based budget. • Health Care Facilities/ Public Safety - 90% of previous 12 months' usage (10% reduction). 2. Request variance when required. 3. Eliminate all prohibited uses.	Mandatory program with minimal landscape allotments. Penalties for excess usage. Prohibit uses from Stage 2 plus: • New construction program - offset twice the new demand. • No water using landscape installation in new construction. • Filling or topping off of existing swimming pool is prohibited.

Stage	Utility Department Actions	Customer Actions	Comments
Stage 4 - Critical: 50 percent overall reduction.	In addition to Stage 3: 1. Intensify ordinance requirements: • Prohibit installation or replanting of any landscaping. • Requiring new construction to offset three times the new demand through upgrades to existing homes and businesses; toilet replacement, etc. • Continue WSC and EUC. 2. Intensify public information campaign. 3. Expand Drought Response Center, water waste patrol and audit effort.	1. Adhere to allotment for 50 percent overall reduction: • Single Family - 47 gpcd, no landscape allotment. • Multiple Family - 47 gpcd, no landscape allotment. • Commercial/Industrial/ Governmental - 70% of previous 12 months' usage (30% reduction). • Irrigation - minimal allotment – for mature trees and shrubs only. • Health Care Facilities/ Public Safety - 85% of previous 12 months' usage (15% reduction). 2. Request variance where required. 3. Eliminate all prohibited uses.	Mandatory program with no landscape allotments. Severe penalties for excess usage. Prohibited uses from Stage 3 plus: • New construction offset program – offset three times new demand. • No water using landscape installation in new construction.

DRAFT WATER SHORTAGE EMERGENCY RESOLUTION

RESOLUTION OF THE COUNCIL OF THE CITY OF SANTA ROSA DECLARING A WATER SHORTAGE EMERGENCY, IMPLEMENTING STAGE __ OF THE CITY'S URBAN WATER SHORTAGE CONTINGENCY PLAN REQUESTING CUSTOMERS TO _____ REDUCE WATER USE BY ____%, AND AUTHORIZING UTILIZATION OF THE UTILITY'S CATASTROPHIC RESERVE.

WHEREAS, the City of Santa Rosa is a City empowered to provide water service within certain boundaries; and

WHEREAS the Sonoma County Water Agency (Agency) is the wholesaler of water to the City of Santa Rosa; and

WHEREAS, due to (current condition – drought, contamination, etc.), water supply conditions indicate that a ____% reduction in demand is required to ensure adequate supply in 20__; and

WHEREAS, the Sonoma County Water Agency has reduced delivery to the City and all prime contractors by ____%; and

WHEREAS, the City of Santa Rosa has the authority and responsibility to adopt water demand reduction measures within its area of service; and

WHEREAS, the City of Santa Rosa has the authority to employee the Catastrophic Reserve during a Water Shortage Emergency; and

WHEREAS, the Utilities Department staff is recommending implementation of Stage __ of the City's Urban Water Shortage Contingency Plan; and

WHEREAS, on _____ the Board of Public Utilities recommended that the Council of the City of Santa Rosa adopt a resolution declaring a water shortage emergency, directing staff to implement a program of demand management as defined by Stage ___ of the City's Urban Water Shortage Contingency Plan to realize community-wide water reduction of ___% and directing staff to utilize the Catastrophic Reserve to compensate for loss of revenue due to reduced water sales.

NOW, THEREFORE, BE IT RESOLVED that the Council of the City of Santa Rosa declares a water shortage emergency and directs staff to implement a program of demand management as defined by Stage __ of the City's Urban Water Shortage Contingency Plan to realize community-wide water reduction of ____%.

BE IT FURTHER RESOLVED, that the City Council directs staff to utilize the Catastrophic Reserve to compensate for loss of revenue due to reduced water sales.

IN COUNCIL DULY PASSED this _____ day of _____, 20___

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:_____ APPROVED:_____

City Clerk Mayor

APPROVED AS TO FORM:

_____

City Attorney

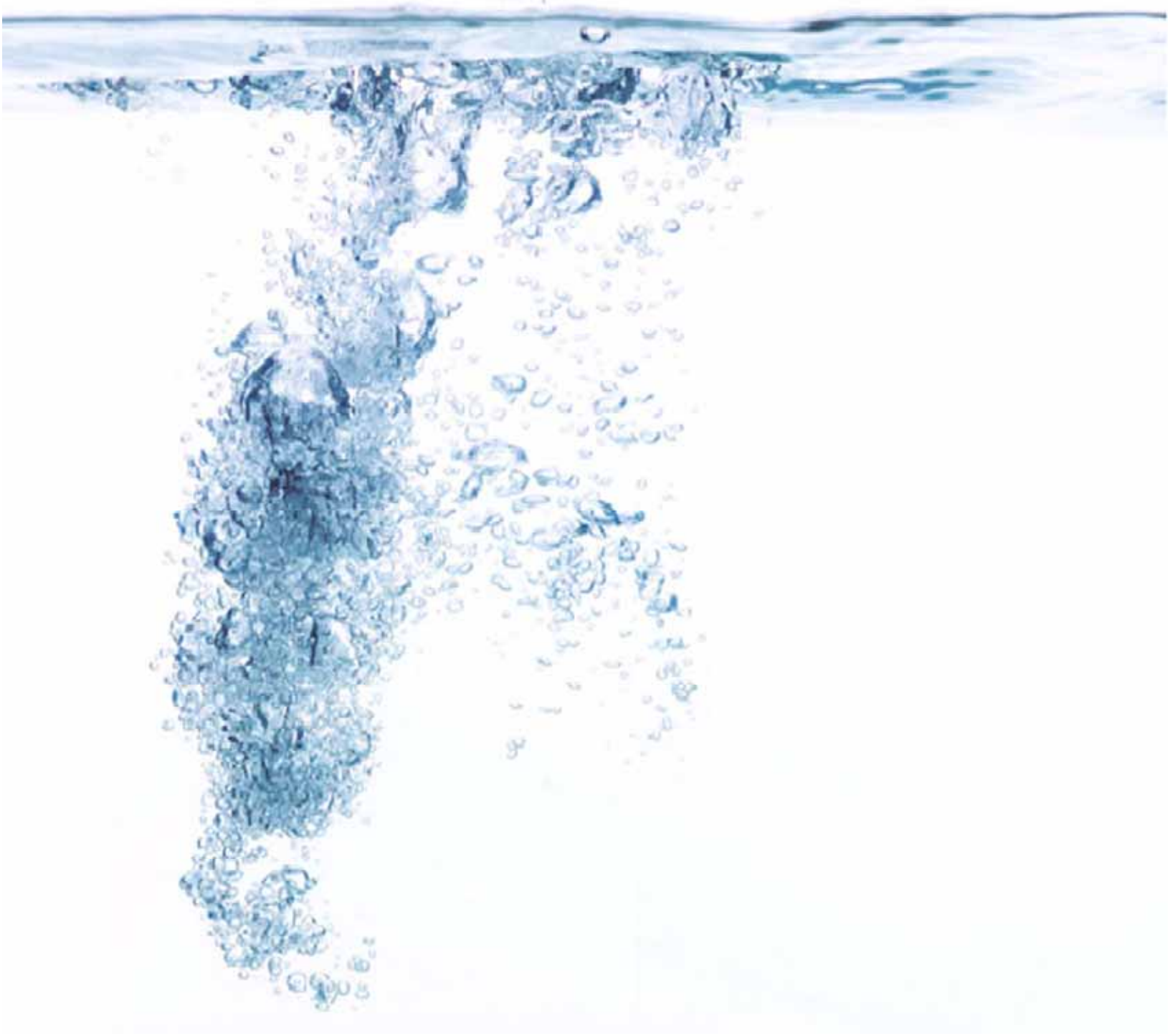
California Water Code Section 10632
Urban Water Management Planning

Water Shortage Contingency Analysis

10632. The plan shall provide an urban water shortage contingency analysis, which includes each of the following elements, which are within the authority of the urban water supplier:
(a) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage.
(b) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.
(c) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.
(d) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.
(e) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.
(f) Penalties or charges for excessive use, where applicable.
(g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.
(h) A draft water shortage contingency resolution or ordinance.
(i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

APPENDIX H

California Urban Water Conservation Council (CUWCC)
Best Management Practices (BMP) Reporting Forms



CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Agency: City of Santa Rosa **District Name:** City of Santa Rosa **CUWCC Unit #:** 90
Retail

Primary Contact Daniel Muelrath **Telephone** 707-543-3988 **Email:** dmuelrath@srcity.org

Compliance Option Chosen By Reporting Agency:
(Traditional, Flex Track or GPCD)
GPCD if used:

GPCD in 2010	**106**
GPCD Target for 2018	114

Year	Report	Target		Highest Acceptable Bound	
		% Base	GPCD	% Base	GPCD
2010	1	96.4%	135	100%	140
2012	2	92.8%	129	96%	135
2014	3	89.2%	124	93%	129
2016	4	85.6%	119	89%	124
2018	5	82.0%	114	82%	114

Not on Track if 2010 GPCD is > than target

GPCD in 2010	106
Highest Acceptable GPCD for 2010	140

On Track

Reporting Period: Fiscal

Agency: City of Santa Rosa **District Name:** City of Santa Rosa **CUWCC Unit #:** 90
Retail

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

BMP 1.1 Operational Practices

		2009	2010
1.Conservation Coordinator	Name	Daniel Muelrath	Daniel Muelrath
	Title	Water Conservation Program Coordinator	Water Conservation Program Coordinator
	Email		dmuelrath@srcity.c
		On Track	**On Track**
2. Water waste prevention documentation			
	Descriptive File	http://ci.santa-rosa.ca.us/doclib/Documents/waterwasteordinance.pdf	http://ci.santa-rosa.ca.us/doclib/Documents/waterwasteordinance.pdf
	URL	The file address is a link to our policy. I also included a link to the public interface and how they report water waste to the City in addition to phone calls.	http://ci.santa-rosa.ca.us/departments/utilities/conserve/Pages/WaterWasteReportForm.aspx
	Description	The file address is a link to our policy. I also included a link to the public interface and how they report water waste to the City in addition to phone calls.	The file address is a link to our policy. I also included a link to the public interface and how they report water waste to the City in addition to phone calls.
		On Track	**On Track**

Agency: City of Santa Rosa **District Name:** City of Santa Rosa **CUWCC Unit #:** 90
Retail

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

BMP 1.2 Water Loss Control

	2009		
Complete a prescreening Audit	yes	On Track	On Track if Yes
Metered Sales	19,807		
Verifiable Other Uses	97		
Total Supply	21,995		
(Metered Sales + System uses)/ Total Supply >0.89	0.90	On Track	On Track if =>.89, Not on Track if No
If ratio is less than 0.9, complete a full scale Audit in 2009?	Yes	On Track	On Track if Yes
Verify Data with Records on File?	Yes	On Track	On Track if Yes
Operate a system Leak Detection Program?	Yes	On Track	On Track if Yes

	2010		
Compile Standard Water Audit using AWWA Software?	Yes	On Track	On Track if Yes, Not on Track if No
AWWA file provided to CUWCC?	santa rosa m36 091	On Track	On Track if Yes, Not on Track if No
AWWA Water Audit Validity Score?	97		Info only until 2012
Completed Training in AWWA Audit Method?	yes		Info only until 2012
Completed Training in Component Analysis Process?	Yes		
Complete Component Analysis?	Yes		Info only until 2012
Repaired all leaks and breaks to the extent cost effective?	Yes	On Track	On Track if Yes, Not on Track if No
Locate and repair unreported leaks to the extent cost effective.	Yes	On Track	On Track if Yes, Not on Track if No
Maintain a record-keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair.			Info only until 2012

Provided 7 types of Water Loss Control Info

Info only until 2012

Leaks Repaired	Value Real Losses	Value Apparent Losses	Miles Surveyed	Press Reduction	Cost of Interventions	Water Saved
473	$ 24,966	$ 554,696	50	Yes	$ 30,000	27.7

Agency: City of Santa Rosa **District Name:** City of Santa Rosa **CUWCC Unit #:** 90
Retail

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

1.3 METERING WITH COMMODITY RATES FOR ALL NEW CONNECTIONS AND RETROFIT OF EXISTING CONNECTIONS

If signed MOU prior to 31 Dec 1997, On Track if all connections metered; If signed after 31 Dec 1997, complete meter installations by 1 July 2012 or within 6 yrs of signing and 20% biannual reduction of unmetered connections.

	2009		2010		
Exemption or 'At least as Effective As' accepted by CUWCC					
Numbered Unmetered Accounts 2008	0	On Track	0	On Track	On Track if no unmetered accounts
Metered Accounts billed by volume of use	Yes	On Track	Yes	On Track	Volumetric billing required for all connections on same schedule as metering
Number of CII accounts with Mixed Use meters	428		428		Info only
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	Yes	On Track	Yes	On Track	On Track if Yes, Not on Track if No
Feasibility Study provided to CUWCC?	Yes	On Track	Yes	On Track	On Track if Yes, Not on Track if No
Completed a written plan, policy or program to test, repair and replace meters	Yes	On Track	Yes	On Track	On Track if Yes, Not on Track if No

California Urban Water Conservation Council

TARGETS / COMPLIANCE
(CUWCC MOU)

Baseline / Initial GPCD
(Use option buttons to select)

GPCD in 2006 ○	135.8
Baseline GPCD (1997 to 2006) ◉	139.5
GPCD in 2010	106.0
GPCD Target for 2018	114.4

Potable Water GPCD for each Year in the Baseline Period

Year	GPCD
2006	135.8
2005	131.4
2004	138.2
2003	133.3
2002	131.0
2001	143.1
2000	141.7
1999	144.8
1998	137.7
1997	158.4

Biennial GPCD Compliance Table

Year	Report	Target		Highest Acceptable Bound	
		% Base	GPCD	% Base	GPCD
2010	1	96.4%	134.5	100%	139.5
2012	2	92.8%	129.5	96.4%	134.5
2014	3	89.2%	124.5	92.8%	129.5
2016	4	85.6%	119.4	89.2%	124.5
2018	5	82.0%	114.4	82.0%	114.4

Monthly GPCD Data for Weather Normalization

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2010	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0
Baseline avg*	139.5	139.5	139.5	139.5	139.5	139.5	139.5	139.5	139.5	139.5	139.5	139.5

* The average for each month is based on the baseline period 1997 to 2006

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Agency: City of Santa Rosa **District Name:** City of Santa Rosa **CUWCC Unit #:** 90
Retail

Primary Contact Daniel Muelrath **Email:** dmuelrath@srcity.org

1.4 Retail Conservation Pricing

Metered Water Rate Structure

On Track if: Increasing Block, Uniform, Allocation, Standby Service; Not on Track if otherwise

Customer Class	2009 Rate Type	Conserving Rate?	Customer Class	2010 Rate Type	Conserving Rate?
Other	Increasing Block	Yes	Other	Increasing Block	Yes
	On Track			On Track	

Year Volumetric Rates began for Agencies with some Unmetered Accounts

Info only

Agencies with Partially Metered Service Areas: If signed MOU prior to 31 Dec. 1997, implementation starts no later than 1July 2010. If signed MOU after 31 Dec. 1997, implementation starts no later than 1July 2013, or within seven years of signing the MOU,

Agency: City of Santa Rosa **District Name:** City of Santa Rosa **CUWCC Unit #:** 90
Retail

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Adequacy of Volumetric Rates) for Agencies with No Unmetered Accounts

Customer Class	2009 Rate Type	2009 Volumetric Revenues $1000s	2010 Rate Type	2010 Volumetric Revenues $1000s
Other	Increasing Block	$ 24,435	Other	$ 24,299
Total Revenue Commodity Charges (V):		$ 24,435		$ 24,299
Total Revenue Fixed Charges (M):		$ 5,316		$ 5,763
Calculate: V / (V + M):		82%		81%
		On Track		On Track
Canadian Water & Wastewater Rate Design Model Used and Provided to CUWCC		No		No
If Canadian Model is used, was 1 year or 3 year period applied?				

Agency Choices for rates:

A) Agencies signing MOU prior to 13 June2007, implementation starts 1 July2007: On Track if (V / (V + M) ≥ 70% x .8 = **56% for 2009** and 70%x0.90 = **63% for 2010**; Not on track if (V / (V + M)) < 70%;

B) Use Canadian model.

Agencies signing MOU after 13June2007, implementation starts July 1 of year following signing.

Agency: City of Santa Rosa
Retail

District Name: City of Santa Rosa

CUWCC Unit #: 90

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Wastewater Rates

	2009		2010
Does Agency Provide Sewer Service?	yes	If 'No', then wastewater rate info not required.	Yes

Customer Class	2009 Rate Type	Conserving Rate?	Customer Class	2010 Rate Type	Conserving Rate?
Other	Uniform	Yes	Other	Uniform	Yes
Other	Select a Rate Structure				
Other	Select a Rate Structure	Yes			
Other	Select a Rate Structure	Yes			
Other	Select a Rate Structure	yes			
		On Track			On Track

On Track if: 'Increasing Block', 'Uniform', 'based on long term marginal cost' or 'next unit of capacity'

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Agency: City of Santa Rosa **District Name:** City of Santa Rosa **CUWCC Unit #:** 90

Coverage Report Date: May 19, 2011

Primary Contact Daniel Muelrath **Telephone** #N/A **Email:** dmuelrath@srcity.org

BMP 2. EDUCATION PROGRAMS

BMP 2.1 Public Outreach Actions Implemented and Reported to CUWCC

	2009	2010
1) Contacts with the public (minimum = 4 times per year)	640,000	640,000
2) Water supplier contacts with media (minimum = 4 times per year, i.e., at least quarterly).	4	4
3) An actively maintained website that is updated regularly (minimum = 4 times per year, i.e., at least quarterly).	Yes	yes
4) Description of materials used to meet minimum requirement.	Newsletter articles on conservation Website Newsletter articles on conservation General water conservation information Newspaper contacts Radio contacts News releases Select a type of media contact	Newsletter articles on conservation Website Newsletter articles on conservation General water conservation information Newspaper contacts Radio contacts News releases Select a type of media contact
5) Annual budget for public outreach program.	$ 150,000	$ 150,000
6) Description of all other outreach programs	Public Events, Workshops Brand: Water: our future in every drop Website, Facebook, Twitter and Website Partnering with other Utilities: PG&E, Clean Anergy Advocates, Sonoma County Water Agency, Local Retail Water Agencies Conservation Gardens: We have a few City Landscape contests: School poster contest. Citizen and Business awards for low water	Public Events, Workshops Brand: Water: our future in every drop Website, Facebook, Twitter and Website Partnering with other Utilities: PG&E, Clean Anergy Advocates, Sonoma County Water Agency, Local Retail Water Agencies Conservation Gardens: We have a few City Landscape contests: School poster contest. Citizen and Business awards for low water use
	On Track for 6 Actions	**On Track for 6 Actions**

All 6 action types implemented and reported to CUWCC to be 'On Track')

Agency: City of Santa Rosa **District Name:** City of Santa Rosa **CUWCC Unit #:** 90

Coverage Report Date: May 19, 2011

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

2.2 School Education Programs Implemented and Reported to CUWCC

	2009	2010	
Does a wholesale agency implement School Education Programs for this unility's benefit?	Yes	Yes	
Name of Wholesale Supplier?	Sonoma County Water Agency	Sonoma County Water Agency	
1) Curriculum materials developed and/or provided by agency	0	Project WET	Yes/ No
2) Materials meet state education framework requirements and are grade-level appropriate?	Yes	Yes	All 5 actions types implemented and reported to CUWCC to be 'On Track'
3) Materials Distributed to K-6?	yes	Yes	
Describe K-6 Materials	0	0	Describe materials to meet minimum requirements
Materials distributed to 7-12 students?	No	No	Info Only
4) Annual budget for school education program.	$ 4,300	$ -	
5) Description of all other water supplier education programs			
	See Wholesale Report 0 On Track	See Wholesale Report 1 On Track	

California Urban Water Conservation Council

TARGETS / COMPLIANCE
(CUWCC MOU)

Baseline / Initial GPCD
(Use option buttons to select)

GPCD in 2006 ○	135.8
Baseline GPCD (1997 to 2006) ◉	139.5
GPCD in 2010	106.0
GPCD Target for 2018	114.4

Potable Water GPCD for each Year in the Baseline Period

Year	GPCD
2006	135.8
2005	131.4
2004	138.2
2003	133.3
2002	131.0
2001	143.1
2000	141.7
1999	144.8
1998	137.7
1997	158.4

Biennial GPCD Compliance Table

Year	Report	Target		Highest Acceptable Bound	
		% Base	GPCD	% Base	GPCD
2010	1	96.4%	134.5	100%	139.5
2012	2	92.8%	129.5	96.4%	134.5
2014	3	89.2%	124.5	92.8%	129.5
2016	4	85.6%	119.4	89.2%	124.5
2018	5	82.0%	114.4	82.0%	114.4

Monthly GPCD Data for Weather Normalization

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2010	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0
Baseline avg*	139.5	139.5	139.5	139.5	139.5	139.5	139.5	139.5	139.5	139.5	139.5	139.5

* The average for each month is based on the baseline period 1997 to 2006

The fields in red are required.

Agency name: City of Santa Rosa

Reporting unit name (District name): City of Santa Rosa

Reporting unit number: 90

Primary contact:

First name: Daniel

Last name: Muelrath

Email: dmuelrath@srcity.org

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

Base Year Data

Link to FAQs

Reporting Unit Base Year

What is your reporting period? Fiscal

Base Year 2008

BMP 1.3 Metering

Number of unmetered accounts in Base Year 0

BMP 3.1 & BMP 3.2 & BMP 3.3 Residential Programs

Number of Single Family Customers in Base Year 43,318

Number of Multi Family Units in Base Year 18,142

BMP 3.4 WaterSense Specification (WSS) Toilets

Number of Single Family Housing Units constructed prior to 1992 33295

Number of Multi Family Units prior to 1992 15834

Average number of toilets per single family household 1.9

Average number of toilets per multi family household 1.3

Five year average resale rate of single family households 7%

Five-year average resale rate of multi family households 7%

Average number of persons per single family household 2.76

Average number of persons per multi family household 2.13

BMP 4.0 & BMP 5.0 CII & Landscape

Total water use (in Acre Feet) by CII accounts 1067

Number of accounts with dedicated irrigation meters 1,728

Number of CII accounts without meters or with Mixed Use Meters 428

Number of CII accounts 2,753

Comments:

428 is mixed use meters

The fields in red are required.

Agency name: City of Santa Rosa

Division name (Reporting unit): City of Santa Rosa

Reporting unit number: 90

Primary contact:

First name: Daniel

Last name: Muelrath

Email: dmuelrath@srcity.org

WATER SOURCES

2009

Service Area Population: 159981

Potable Water

Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
Wells	1,476.10	Groundwater	Santa Rosa production wells
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	

Imported Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
Sonoma County Water Agency	20,518.60	Groundwater	Wholesaler
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	

Exported Water Name	AF/YEAR	Where Exported?

The fields in red are required.

Agency name: City of Santa Rosa

Division name (Reporting unit): City of Santa Rosa

Reporting unit number: 90

Primary contact:

First name: Daniel

Last name: Muelrath

Email: dmuelrath@srcity.org

Water Uses

2009

Potable Water Billed

Make sure to enter numbers in AF/Year.

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
Single-Family	43,318.00	11,247.50	0.00	0.00	
Multi-Family	3,128.00	3,299.10	0.00	0.00	
Commercial	2,273.00	2,019.30	0.00	0.00	
Institutional	480.00	847.00	0.00	0.00	
Industrial	95.00	251.60	0.00	0.00	
Dedicated Irrigation	1,728.00	2,142.10	0.00	0.00	
Other					
Other					
Other					
Other					
Other					
Other					
Other					

Potable Water Un-Billed

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
Other	0.00	97.00	0.00	0.00	System Flushing, Street Sweep Trucks
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					

The fields in red are required.

Agency name: City of Santa Rosa

Division name (Reporting unit): City of Santa Rosa

Reporting unit number: 90

Primary contact:

First name: Daniel

Last name: Muelrath

Email: dmuelrath@srcity.org

2009

Service Area Population: 159981

Non- Potable Water

If you select Other for type, enter

Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
Recycled	173.40	Recycled Non Potable	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	

Imported Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	

Exported Water Name	AF/YEAR	Where Exported? such as groundwater recharge, retail,

The fields in red are required.

Agency name: City of Santa Rosa

Division name (Reporting unit): City of Santa Rosa

Reporting unit number: 90

Primary contact:

First name: Daniel

Last name: Muelrath

Email: dmuelrath@srcity.org

Water Uses

2009

Non-Potable Billed

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
Dedicated Irrigation	12.00	173.40	0.00	0.00	Recycled Water
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					

Non-Potable Un-Billed

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					

The fields in red are required.

Agency name: City of Santa Rosa

Reporting unit name (District name): City of Santa Rosa

Reporting unit number: 90

Primary contact:

First name: Daniel

Last name: Muelrath

Email: dmuelrath@srcity.org

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

Link to FAQs

2009

BMP 1.1 Operations Practices

Comments:

See the complete MOU: View MOU

See the coverage requirements for this BMP:

Conservation Coordinator

Conservation Coordinator (•) Yes ( ) No

Contact Information

First Name	Daniel
Last Name	Muelrath
Title	Water Conservation Program Coordi
Phone	707-543-3988
Email	dmuelrath@srcity.org

Note that the contact information may be the same as the primary contact information at the top of the page. If this is your case, excuse the inconvenience but please enter the information again.

Water Waste Prevention

Water Agency shall do one or more of the following:

a. Enact and enforce an ordinance or establish terms of service that prohibit water waste
b. Enact and enforce an ordinance or establish terms of service for water efficient design in new development
c. Support legislation or regulations that prohibit water waste
d. Enact an ordinance or establish terms of service to facilitate implementation of water shortage response measures
e. Support local ordinances that prohibit water waste
f. Support local ordinances that establish permits requirements for water efficient design in new

To document this BMP, provide the following:

a. A description of, or electronic link to, any ordinances or terms of service
b. A description of, or electronic link to, any ordinances or requirements adopted by local jurisdictions or regulatory agencies with the water agency's service area.
c. A description of any water agency efforts to cooperate with other entities in the adoption or enforcement of local requirement
d. description of agency support positions with respect to adoption of legislation or regulations

You can show your documentation by providing files, links (web addresses), and/or entering a description.

File name(s): Email files to natalie@cuwcc.org

Web address(s) URL: comma-separated list

http://ci.santa-rosa.ca.us/doclib/Documents/waterwasteordinance.pdf

http://ci.santa-rosa.ca.us/departments/utilities/conserve/Pages/WaterWasteReportForm.aspx

Enter a description:

The file address is a link to our policy. I also included a link to the public interface and how they report water waste to the City in addition to phone calls.

The fields in red are required.

Agency name: City of Santa Rosa

Reporting unit name (District name): City of Santa Rosa

Reporting unit number: 90

Primary contact:

First name: Daniel

Last name: Muelrath

Email: dmuelrath@srcity.org

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

Link to FAQs

View MOU

2009 BMP 1.2 Water Loss Control

Did your agency complete a pre-screening system audit in 2009? Yes ◉ No ○

If yes, answer the following:

Determine metered sales in AF: 19,806.60

Definition: other accountable uses not included in metered sales, such as unbilled water use, fire suppression, etc.

Determine system verifiable uses AF: 97.00

Determine total supply into the system in AF: 21,994.70

Does your agency keep necessary data on file to verify the answers above? Yes ◉ No ○

Did your agency complete a full-scale system water audit during 2009? Yes ○ No ◉

Does your agency maintain in-house records of audit results or the completed AWWA worksheet for the completed audit which could be forwarded to CUWCC? Yes ◉ No ○

Did your agency operate a system leak detection program? Yes ◉ No ○

Comments:

We use the AWWA M36 Model to determine water loss. Additionally the City has a full time leak detection/repair crew that uses visual and audio devices to locate leaks.

AWWA WLCC Free Water Audit Software: Reporting Worksheet

Copyright © 2010, American Water Works Association. All Rights Reserved.

WAS v4.1

Back to Instructions

? Click to access definition

Water Audit Report for: City of Santa Rosa Utilities Department

Reporting Year: 7/2008 - 6/2009

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: ACRE-FEET PER YEAR

WATER SUPPLIED

<< Enter grading in column 'E'

Volume from own sources:	?	10	1,476.100	acre-ft/yr
Master meter error adjustment (enter positive value):	?	10	0.000	acre-ft/yr
Water imported:	?	10	20,518.600	acre-ft/yr
Water exported:	?	10	0.000	acre-ft/yr
WATER SUPPLIED:			21,994.700	acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

					Pcnt:	Value:
Billed metered:	?	10	19,806.600	acre-ft/yr		
Billed unmetered:	?	10	0.000	acre-ft/yr		
Unbilled metered:	?	10	97.000	acre-ft/yr		
Unbilled unmetered:	?	10	97.000	acre-ft/yr		97.000
AUTHORIZED CONSUMPTION:	?		20,000.600	acre-ft/yr		

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption)

1,994.100 acre-ft/yr

Apparent Losses

					Pcnt:	Value:
Unauthorized consumption:	?		54.987	acre-ft/yr	0.25%	
Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed						
Customer metering inaccuracies:	?	10	303.101	acre-ft/yr	1.50%	
Systematic data handling errors:	?	10	109.974	acre-ft/yr		
Apparent Losses:	?		468.061			

Choose this option to enter a percentage of billed metered consumption. This is NOT a default value

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses:	?		1,526.039	acre-ft/yr
WATER LOSSES:			1,994.100	acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER:	?		2,188.100	acre-ft/yr

= Total Water Loss + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	?	10	616.0	miles
Number of active AND inactive service connections:	?	10	52,046	
Connection density:			84	conn./mile main
Average length of customer service line:	?	10	15.0	ft (pipe length between curbstop and customer meter or property boundary)
Average operating pressure:	?	10	55.0	psi

COST DATA

Total annual cost of operating water system:	?	10	$45,178,096	$/Year
Customer retail unit cost (applied to Apparent Losses):	?	10	$3.74	$/1000 gallons (US)
Variable production cost (applied to Real Losses):	?	10	$434.02	$/acre-ft/yr

PERFORMANCE INDICATORS

Financial Indicators

Non-revenue water as percent by volume of Water Supplied:	9.9%
Non-revenue water as percent by cost of operating system:	2.9%
Annual cost of Apparent Losses:	$570,418
Annual cost of Real Losses:	$662,332

Operational Efficiency Indicators

Apparent Losses per service connection per day:	8.03	gallons/connection/day
Real Losses per service connection per day*:	26.18	gallons/connection/day
Real Losses per length of main per day*:	N/A	
Real Losses per service connection per day per psi pressure:	0.48	gallons/connection/day/psi
? Unavoidable Annual Real Losses (UARL):	245.89	million gallons/year
From Above, Real Losses = Current Annual Real Losses (CARL):	1,526.04	million gallons/year
? Infrastructure Leakage Index (ILI) [CARL/UARL]:	2.02	

* only the most applicable of these two indicators will be calculated

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 97 out of 100 *****

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Unauthorized consumption

2: Volume from own sources

3: Master meter error adjustment

For more information, click here to see the Grading Matrix worksheet

AWWA WLCC Free Water Audit Software: Water Balance

Copyright © 2010, American Water Works Association. All Rights Reserved. WAS v4.1

Water Audit Report For:	Report Yr:
Department	

Own Sources (Adjusted for known errors) 1,476.100	Water Exported 0.000	Billed Water Exported			
	Water Supplied 21,994.700	Authorized Consumption 20,000.600	Billed Authorized Consumption 19,806.600	Billed Metered Consumption (inc. water exported) 19,806.600	Revenue Water 19,806.600
				Billed Unmetered Consumption 0.000	
			Unbilled Authorized Consumption 194.000	Unbilled Metered Consumption 97.000	Non-Revenue Water (NRW) 2,188.100
				Unbilled Unmetered Consumption 97.000	
		Water Losses 1,994.100	Apparent Losses 468.061	Unauthorized Consumption 54.987	
				Customer Metering Inaccuracies 303.101	
				Systematic Data Handling Errors 109.974	
Water Imported 20,518.600			Real Losses 1,526.039	Leakage on Transmission and/or Distribution Mains Not broken down	
				Leakage and Overflows at Utility's Storage Tanks Not broken down	
				Leakage on Service Connections Not broken down	

The fields in red are required.

Agency name: City of Santa Rosa

Reporting unit name (District name): City of Santa Rosa

Reporting unit number: 90

Primary contact:

First name: Daniel

Last name: Muelrath

Email: dmuelrath@srcity.org

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

BMP 1.3 Metering with Commodity

Link to FAQs

See the complete MOU: View MOU

See the coverage requirements for this BMP:

Implementation

Does your agency have any unmetered service connections? ○ Yes ◉ No

If YES, has your agency completed a meter retrofit plan? ○ Yes ○ No

Enter the number of previously unmetered accounts fitted with meters during reporting year:

Are all new service connections being metered? ◉ Yes ○ No

Are all new service connections being billed volumetrically? ◉ Yes ○ No

Has your agency completed and submitted electronically to the Council a written plan, policy or program to test, repair and replace meters? ◉ Yes ○ No

Please Fill Out The Following Matrix

Account Type	# Metered Accounts	# Metered Accounts Read	# Metered Accounts Billed by Volume	Billing Frequency Per Year	# of estimated bills/yr
Single-Family	43,318	43,318	43,318	Monthly	0
Multi-Family	3,128	3,128	3,128	Monthly	0
Commericial	2,273	2,273	2,273	Monthly	0
Industrial	95	95	95	Monthly	0
Institutional	480	480	480	Monthly	0
Dedicated Irrigatic	1,728	1,728	1,728	Monthly	0
Fire Lines	1,024	1,024	1,024	Monthly	0
Other				Other	
Other				Other	
Other				Other	

Number of CII Accounts with Mixed-use Meters: 428

Number of CII Accounts with Mixed-use Meters Retrofitted with Dedicated Irrigation Meters during Reporting Period: 0

Feasibility Study

Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters? ◉ Yes ○ No

If YES, please fill in the following information:

A. When was the Feasiblity Study conducted: 01/01/2000

B. Email or provide a link to the feasibility study (or description of):

File name(s): Email files to natalie@cuwcc.org: http://ci.santa-rosa.ca.us/doclib/Documents/servicesplit.pdf

Web address(s) URL: comma-separated list: http://ci.santa-rosa.ca.us/doclib/Documents/servicesplit.pdf

General Comments about BMP 1.3:

We offer the service split incentive to commercial customers. The brochure link that i

The fields in red are required.

Agency name: City of Santa Rosa

Reporting unit name (District name): City of Santa Rosa

Reporting unit number: 90

Primary contact:

First name: Daniel

Last name: Muelrath

Email: dmuelrath@srcity.org

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

CUWCC

2009

Link to FAQs

View MOU

BMP 1.4 Retail Conservation Pricing

If you are reporting more rate structures than this form allows, add the structures to a spreadsheet and send the file to natalie@cuwcc.org.

Implementation (Water Rate Structure)

Enter the Water Rate Structures that are assigned to the majority of your customers, by customer class

Rate Structure	Customer Class	Total Revenue Commodity Charges	Total Revenue Customer Meter/Service (Fixed Charges)
Increasing Block	Other	24,435,196.00	5,316,064.00
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		

Implementation Option (Conservation Pricing Option)

- (•) Use Annual Revenue As Reported
- ( ) Use Canadian Water & Wastewater Association Rate Design Model

If CWWA is select, enter the file name and email the spreadsheet to natalie@cuwcc.org

Retail Waste Water (Sewer) Rate Structure by Customer Class

Agency Provide Sewer Service (•) Yes ( ) No

Select the Retail Waste Water(Sewer) Rate Structure assigned to the majority of your customers within a specific customer class.

Rate Structure	Customer Class	Total Revenue Commodity Charges	Total Revenue Customer Meter/Service (Fixed Charges)
Uniform	Other	37,369,447.00	11,607,208.00
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		

Comments:

New billing system cannot break out by customer class so all information provided is

The fields in red are required.

Agency name: City of Santa Rosa

Reporting unit name (District name): City of Santa Rosa

Reporting unit number: 90

Primary contact:

First name: Daniel

Last name: Muelrath

Email: dmuelrath@srcity.org

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

Link to FAQs

2009

BMP 2.1 Public Outreach - Retail Reporting

View MOU

Is a Wholesale Agency Performing Public Outreach?

Are there one or more wholesale agencies performing public outreach which can be counted to help your agency comply with the BMP? (•) Yes ( ) No

Enter the name(s) of the wholesale agency (comma delimited): Sonoma County Water Agency

Is your agency performing public outreach?

Report a minimum of 4 water conservation related contacts your agency had with the public during the year.

Public Information Programs List

Did at least one contact take place during each quarter of the reporting year? ✓

Number of Public Contacts	Public Information Programs
640,000	Newsletter articles on conservation
1,280,000	Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets
2,500	Website
500	Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets
180	General water conservation information

Contact with the Media

Are there one or more wholesale agencies performing media outreach which can be counted to help your agency comply with the BMP? (•) Yes ( ) No

Enter the name(s) of the wholesale agency (comma delimited): Sonoma County Water Agency

OR Retail Agency (Contacts with the Media)

Media Contacts List

Did at least one contact take place during each quarter of the reporting year? ✓

Number of Media Contacts	Did at least one contact take place during each quarter of the reporting year?	Media Contact Types
160,000		Newspaper contacts
160,000		Radio contacts
160,000		News releases
		Select a type of media contact
		Select a type of media contact
		Select a type of media contact

Is a Wholesale Agency Performing Website Updates?

Did one or more CUWCC wholesale agencies agree to assume your agency's responsibility for meeting the requirements of and for CUWCC reporting of this BMP? ○ Yes ◉ No

Enter the name(s) of the wholesale agency (comma delimited)

Is Your Agency Performing Website Updates?

Enter your agency's URL (website address): www.srcity.org/wue

Describe a minimum of four water conservation related updates to your agency's website that took place during the year:

Annoucement for workshops, updated water savings numbers, water shortage information, turf-time water information updated weekly.

Did at least one Website Update take place during each quarter of the reporting year? ◉ Yes ○ No

Public Outreach Annual Budget

Enter budget for public outreach programs. You may enter total budget in a single line or brake the budget into discrete categories by entering many rows. Please indicate if personnel costs are included in the entry.

Category	Amount		Personnel Costs Included? If yes, check the box.	Comments	
Public Outreach	$150,000			Bill inserts, leak detection kits, newsletters, b	

Comments:

Sonoma County Water Agency does some public outreach that overlaps in our service area, but we also meet this BMP through our own efforts too.

The fields in red are required.

Agency name: City of Santa Rosa

Reporting unit name (District name): City of Santa Rosa

Reporting unit number: 90

Primary contact:

First name: Daniel

Last name: Muelrath

Email: dmuelrath@srcity.org

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Link to FAQs

2009

BMP 2.1 Public Outreach Cont'd

View MOU

Public Outreach Expenses

Enter expenses for public outreach programs. Please include the same kind of expenses you included in the question related to your budget (Section 2.1.7, above). For example, if you included personnel costs in the budget entered above, be sure to include them here as well.

Expense Category	Expense Amount	Personnel Costs Included?	
Public Outreach	$150,000	☐	If yes, check the check box.
		☐	
		☐	
		☐	

Additional Public Information Program

Please report additional public information contacts. List these additional contacts in order of how your agency views their importance / effectiveness with respect to conserving water, with the most important/ effective listed first (where 1 = most important).

Were there additional Public Outreach efforts? ◉ Yes ○ No

Public Outreach Additional Information

Public Information Programs	Importance
Public Events	$1
Workshops	$1

Social Marketing Programs

Branding

Does your agency have a water conservation "brand," "theme" or mascot? ○ Yes ◉ No

Describe the brand, theme or mascot. Water: our future in every drop

Market Research

Have you sponsored or participated in market research to refine your message? ○ Yes ◉ No

Market Research Topic

Brand Message

Brand Mission Statement

Community Committees

Do you have a community conservation committee? ○ Yes ◉ No

Enter the names of the community committees:

Training

Training Type	# of Trainings	# of Attendees	Description of Other
Workshops	$10	$300	

Social Marketing Expenditures

Public Outreach Social Marketing Expenses

Expense Category	Expense Amount	Description
Website	0	Facebook, Twitter and Website

Partnering Programs - Partners

Name	Type of Program
☐ CLCA?	
☐ Green Building Programs?	
☐ Master Gardeners?	
☐ Cooperative Extension?	
☐ Local Colleges?	
☐ Other	

☑ Retail and wholesale outlet; name(s) and type(s) of programs:

Saving Water Partnership

Partnering Programs - Newsletters

Number of newsletters per year: 4

Number of customers per year	160000

Partnering with Other Utilities

Describe other utilities your agency partners with, including electrical utilities	PG&E, Clean Energy Advocates, Sonoma County Water Agency, Local Retail Water Agencies.

Conservation Gardens

Describe water conservation gardens at your agency or other high traffic areas or new	We have a few City sponsored low water use sites in Santa Rosa. Additionally, we provide a map of businesses that have installed low water use gardens in Santa Rosa.

Landscape contests or awards

Describe water wise landscape contest or awards program conducted by your agency	School poster contest for 3rd & 4th grade students. Citizen and Business awards for low water use or innovative reductions in water use.

Comments:

The fields in red are required.

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Reporting unit number: 90

Primary contact:

First name: Daniel

Last name: Muelrath

Email: dmuelrath@srcity.org

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

Link to FAQs

2009

BMP 2.2 School Education Programs, Retail Agencies

View MOU

School Programs

Is a wholesale agency implementing school programs which can be counted to help your agency comply with this BMP? ⦿ Yes ○ No

Enter Wholesaler Names, separated by commas: Sonoma County Water Agency

☐ Materials meet state education framework requirements?

Description of Materials

☐ Materials distributed to K-6 Students?

Description of materials distributed to K-6 Students

Number of students reached

☐ Materials distributed to 7-12 Students?

Description of materials distributed to 7-12 Students

Number of Distribution

Annual budget for school education program

Description of all other water supplier education programs

School Program Activities

Classroom presentations:

Number of presentations

Number of attendees

Large group assemblies:

Number of presentations

Number of attendees

Children's water festivals or other events:

Number of presentations

Number of attendees

Cooperative efforts with existing science/water education programs (various workshops, science fair awards or judging) and follow-up:

Number of presentations

Number of attendees

Other methods of disseminating information (i.e. themed age-appropriate classroom loaner kits):

Description

Number distributed

Staffing children's booths at events & festivals:

Number of booths | Number of attendees

Water conservation contests such as poster and photo:

Description

Number distributed

Offer monetary awards/funding or scholarships to students:

Number Offered | Total Funding

Teacher training workshops:

Number of presentations | Number of attendees

Fund and/or staff student field trips to treatment facilities, recycling facilities, water conservation gardens, etc.:

Number of tours or field trips | Number of participants

College internships in water conservation offered:

Number of internships | Total funding

Career fairs/workshops:

Number of presentations | Number of attendees

Additional program(s) supported by agency but not mentioned above:

Description

Number of events (if applicable) | Number of participants

Total reporting period budget expenditures for school education programs (include all agency costs):

Comments

We also implement a school poster contest too, but are fully compliant through the Sonoma County Water Agency (wholesale

The fields in red are required.

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First name: Daniel

Last name: Muelrath

Email: dmuelrath@srcity.org

WATER SOURCES

2010

Service Area Population: 161496

Potable Water

Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
Wells	1,282.80	Groundwater	Santa Rosa production wells
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	

Imported Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
Sonoma County Water Agency	17,529.50	Groundwater	Wholesaler
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	

Exported Water Name	AF/YEAR	Where Exported?

The fields in red are required.

Agency name: City of Santa Rosa

Division name (Reporting unit): City of Santa Rosa

Reporting unit number: 90

Primary contact:

First name: Daniel

Last name: Muelrath

Email: dmuelrath@srcity.org

Water Uses 2010

Potable Water Billed

Make sure to enter numbers in AF/Year.

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
Single-Family	43,438.00	10,194.80	0.00	0.00	
Multi-Family	3,120.00	3,253.00	0.00	0.00	
Commercial	2,252.00	2,108.30	0.00	0.00	
Institutional	278.00	613.80	0.00	0.00	
Industrial	101.00	227.10	0.00	0.00	
Dedicated Irrigation	1,715.00	1,522.20	0.00	0.00	
Other					
Other					
Other					
Other					
Other					
Other					
Other					

Potable Water Un-Billed

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
Other	0.00	213.85	0.00	0.00	System Flushing, Street Sweep Trucks
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					

The fields in red are required.

Agency name: City of Santa Rosa

Division name (Reporting unit): City of Santa Rosa

Reporting unit number: 90

Primary contact:

First name: Daniel

Last name: Muelrath

Email: dmuelrath@srcity.org

2010

Service Area Population: 161496

Non- Potable Water

If you select Other for type, enter

Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
Recycled	202.20	Recycled Non Potable	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	

Imported Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	

Exported Water Name	AF/YEAR	Where Exported? such as groundwater recharge, retail,

The fields in red are required.

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Last name: Muelrath

Email: dmuelrath@srcity.org

Water Uses

2010

Non-Potable Billed

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
Dedicated Irrigation	12.00	202.20	0.00	0.00	Recycled Water
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					

Non-Potable Un-Billed

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					
Other					

The fields in red are required.

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Link to FAQs

2010

BMP 1.1 Operations Practices

Comments:

See the complete MOU: View MOU

See the coverage requirements for this BMP:

Conservation Coordinator

Conservation Coordinator (•) Yes ( ) No

Contact Information

First Name	Daniel
Last Name	Muelrath
Title	Water Conservation Program Coordi
Phone	7075433988
Email	dmuelrath@srcity.org

Note that the contact information may be the same as the primary contact information at the top of the page. If this is your case, excuse the inconvenience but please enter the information again.

Water Waste Prevention

Water Agency shall do one or more of the following:

a. Enact and enforce an ordinance or establish terms of service that prohibit water waste
b. Enact and enforce an ordinance or establish terms of service for water efficient design in new development
c. Support legislation or regulations that prohibit water waste
d. Enact an ordinance or establish terms of service to facilitate implementation of water shortage response measures
e. Support local ordinances that prohibit water waste
f. Support local ordinances that establish permits requirements for water efficient design in new

To document this BMP, provide the following:

a. A description of, or electronic link to, any ordinances or terms of service
b. A description of, or electronic link to, any ordinances or requirements adopted by local jurisdictions or regulatory agencies with the water agency's service area.
c. A description of any water agency efforts to cooperate with other entities in the adoption or enforcement of local requirement
d. description of agency support positions with respect to adoption of legislation or regulations

You can show your documentation by providing files, links (web addresses), and/or entering a description.

File name(s): Email files to natalie@cuwcc.org

Web address(s) URL: comma-separated list

http://ci.santa-rosa.ca.us/doclib/Documents/waterwasteordinance.pdf

http://ci.santa-rosa.ca.us/departments/utilities/conserve/Pages/WaterWasteReportForm.aspx

Enter a description:

The file address is a link to our policy. I also included a link to the public interface and how they report water waste to the City in addition to phone calls.

The fields in red are required.

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Primary contact:

First name: Daniel

Last name: Muelrath

Email: dmuelrath@srcity.org

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Link to FAQs

2010 BMP 1.2 Water Loss Control

View MOU

AWWA Water Audit

Agency to complete a Water Audit & Balance Using The AWWA Software ⦿ Yes ○ No

Email to natalie@cuwcc.org - Worksheets (AWWA Water Audit). Enter the name of the file below:

santa rosa m36 0910.xls

Water Audit Validity Score from AWWA spreadsheet: 97

Agency Completed Training In The AWWA Water Audit Method ⦿ Yes ○ No

Agency Completed Training In The Component Analysis Process ⦿ Yes ○ No

Completed/Updated the Component Analysis (at least every 4 years)? ⦿ Yes ○ No

Component Analysis Completed/Updated Date: 2008

Water Loss Performance

Agency Repaired All Reported Leaks & Breaks To The Extent Cost Effective ⦿ Yes ○ No

Recording Keeping Requirements:

Date/Time Leak Reported	Leak Location
Type of Leaking Pipe Segment or Fitting	Leak Running Time From Report to Repair
Leak Volume Estimate	Cost of Repair

Agency Located and Repaired Unreported Leaks to the Extent Cost Effective ⦿ Yes ○ No

Type of Program Activities Used to Detect Unreported Leaks

All data is managed in our Asset Management database. Additionally the City has a full time leak detection/repair crew that uses visual and audio devices to locate leaks.

Annual Summary Information

Complete the following table with annual summary information (required for reporting years 2-5 only)

Total Leaks Repaired	Economic Value Of Real Loss	Economic Value Of Apparent Loss	Miles Of System Surveyed For Leaks	Pressure Reduction Undertaken for loss reduction	Cost Of Interventions	Water Saved (AF/Year)
473	$24,966.00	$554,696.00	50	✓	$30,000.00	27.70

Comments:

AWWA WLCC Free Water Audit Software: Reporting Worksheet

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WAS v4.1

Back to Instructions

? Click to access definition

Water Audit Report for: City of Santa Rosa Utilities Department

Reporting Year: 7/2009 - 6/2010

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: ACRE-FEET PER YEAR

WATER SUPPLIED

<< Enter grading in column 'E'

Volume from own sources:	?	10	1,282.800	acre-ft/yr
Master meter error adjustment (enter positive value):	?	10	0.000	acre-ft/yr
Water imported:	?	10	17,529.500	acre-ft/yr
Water exported:	?	10	0.000	acre-ft/yr
WATER SUPPLIED:			18,812.300	acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

					Pcnt:	Value:
Billed metered:	?	10	17,919.200	acre-ft/yr		
Billed unmetered:	?	10	0.000	acre-ft/yr		
Unbilled metered:	?	10	213.850	acre-ft/yr		
Unbilled unmetered:	?	10	213.850	acre-ft/yr		213.850
AUTHORIZED CONSUMPTION:	?		18,346.900	acre-ft/yr		

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption)

465.400 acre-ft/yr

Apparent Losses

					Pcnt:	Value:
Unauthorized consumption:	?		47.031	acre-ft/yr	0.25%	
Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed						
Customer metering inaccuracies:	?	10	276.138	acre-ft/yr	1.50%	
Systematic data handling errors:	?	10	94.062	acre-ft/yr		
Apparent Losses:	?		417.230			

? Choose this option to enter a percentage of billed metered consumption. This is NOT a default value

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses:	?		48.170	acre-ft/yr
WATER LOSSES:			465.400	acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: ? 893.100 acre-ft/yr

= Total Water Loss + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	?	10	617.0	miles	
Number of active AND inactive service connections:	?	10	52,187		
Connection density:			85	conn./mile main	
Average length of customer service line:	?	10	15.0	ft	(pipe length between curbstop and customer meter or property boundary)
Average operating pressure:	?	10	55.0	psi	

COST DATA

Total annual cost of operating water system:	?	10	$39,651,482	$/Year
Customer retail unit cost (applied to Apparent Losses):	?	10	$4.08	$/1000 gallons (US)
Variable production cost (applied to Real Losses):	?	10	$518.30	$/acre-ft/yr

PERFORMANCE INDICATORS

Financial Indicators

Non-revenue water as percent by volume of Water Supplied:	4.7%
Non-revenue water as percent by cost of operating system:	2.0%
Annual cost of Apparent Losses:	$554,696
Annual cost of Real Losses:	$24,966

Operational Efficiency Indicators

Apparent Losses per service connection per day:	7.14	gallons/connection/day
Real Losses per service connection per day*:	0.82	gallons/connection/day
Real Losses per length of main per day*:	N/A	
Real Losses per service connection per day per psi pressure:	0.01	gallons/connection/day/psi
? Unavoidable Annual Real Losses (UARL):	246.48	million gallons/year
From Above, Real Losses = Current Annual Real Losses (CARL):	48.17	million gallons/year
? Infrastructure Leakage Index (ILI) [CARL/UARL]:	0.06	

* only the most applicable of these two indicators will be calculated

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 97 out of 100 *****

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Unauthorized consumption

2: Volume from own sources

3: Master meter error adjustment

For more information, click here to see the Grading Matrix worksheet

AWWA WLCC Free Water Audit Software: Water Balance

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WAS v4.1

Water Audit Report For:	Report Yr:
Department	

Own Sources (Adjusted for known errors) 1,282.800	Water Exported 0.000	Billed Water Exported			
	Water Supplied 18,812.300	Authorized Consumption 18,346.900	Billed Authorized Consumption 17,919.200	Billed Metered Consumption (inc. water exported) 17,919.200	Revenue Water 17,919.200
				Billed Unmetered Consumption 0.000	
			Unbilled Authorized Consumption 427.700	Unbilled Metered Consumption 213.850	Non-Revenue Water (NRW) 893.100
				Unbilled Unmetered Consumption 213.850	
		Water Losses 465.400	Apparent Losses 417.230	Unauthorized Consumption 47.031	
				Customer Metering Inaccuracies 276.138	
				Systematic Data Handling Errors 94.062	
Water Imported 17,529.500			Real Losses 48.170	Leakage on Transmission and/or Distribution Mains Not broken down	
				Leakage and Overflows at Utility's Storage Tanks Not broken down	
				Leakage on Service Connections Not broken down	

The fields in red are required.

Agency name: City of Santa Rosa

Reporting unit name (District name): City of Santa Rosa

Reporting unit number: 90

Primary contact:

First name: Daniel

Last name: Muelrath

Email: dmuelrath@srcity.org

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

BMP 1.3 Metering with Commodity 2010

Link to FAQs

See the complete MOU: View MOU

See the coverage requirements for this BMP:

Implementation

Does your agency have any unmetered service connections? ○ Yes ◉ No

If YES, has your agency completed a meter retrofit plan? ○ Yes ○ No

Enter the number of previously unmetered accounts fitted with meters during reporting year:

Are all new service connections being metered? ◉ Yes ○ No

Are all new service connections being billed volumetrically? ◉ Yes ○ No

Has your agency completed and submitted electronically to the Council a written plan, policy or program to test, repair and replace meters? ◉ Yes ○ No

Please Fill Out The Following Matrix

Account Type	# Metered Accounts	# Metered Accounts Read	# Metered Accounts Billed by Volume	Billing Frequency Per Year	# of estimated bills/yr
Single-Family	43,438	43,438	43,438	Monthly	0
Multi-Family	3,120	3,120	3,120	Monthly	0
Commericial	2,252	2,252	2,252	Monthly	0
Industrial	101	101	101	Monthly	0
Institutional	530	530	530	Monthly	0
Dedicated Irrigatic	1,715	1,715	1,715	Monthly	0
Fire Lines	1,031	1,031	1,031	Monthly	0
Other				Other	
Other				Other	
Other				Other	

Number of CII Accounts with Mixed-use Meters: 428

Number of CII Accounts with Mixed-use Meters Retrofitted with Dedicated Irrigation Meters during Reporting Period: 0

Feasibility Study

Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters? ◉ Yes ○ No

If YES, please fill in the following information:

A. When was the Feasiblity Study conducted: 01/01/2000

B. Describe, upload or provide an electronic link to the Feasibility Study Upload File

File name(s): Email files to natalie@cuwcc.org

Web address(s) URL: comma-separated list: http://ci.santa-rosa.ca.us/doclib/Documents/servicesplit.pdf

http://ci.santa-rosa.ca.us/doclib/Documents/servicesplit.pdf

Comments:

We offer the service split incentive to commercial customers. The brochure link that i

The fields in red are required.

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Reporting unit number: 90

Primary contact:

First name: Daniel

Last name: Muelrath

Email: dmuelrath@srcity.org

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

CUWCC

2010

Link to FAQs

View MOU

BMP 1.4 Retail Conservation Pricing

If you are reporting more rate structures than this form allows, add the structures to a spreadsheet and send the file to natalie@cuwcc.org.

Implementation (Water Rate Structure)

Enter the Water Rate Structures that are assigned to the majority of your customers, by customer class

Rate Structure	Customer Class	Total Revenue Commodity Charges	Total Revenue Customer Meter/Service (Fixed Charges)
Increasing Block	Other	24,298,764.00	5,762,734.00
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		

Implementation Option (Conservation Pricing Option)

- (•) Use Annual Revenue As Reported
- ( ) Use Canadian Water & Wastewater Association Rate Design Model

If CWWA is select, enter the file name and email the spreadsheet to natalie@cuwcc.org

Retail Waste Water (Sewer) Rate Structure by Customer Class

Agency Provide Sewer Service (•) Yes ( ) No

Select the Retail Waste Water(Sewer) Rate Structure assigned to the majority of your customers within a specific customer class.

Rate Structure	Customer Class	Total Revenue Commodity Charges	Total Revenue Customer Meter/Service (Fixed Charges)
Uniform	Other	38,942,374.00	12,511,746.00
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		
Select a Rate Struc	Other		

Comments:

New billing system cannot break out by customer class so all information provid

The fields in red are required.

Agency name: City of Santa Rosa

Reporting unit name (District name): City of Santa Rosa

Reporting unit number: 90

Primary contact:

First name: Daniel

Last name: Muelrath

Email: dmuelrath@srcity.org

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

Link to FAQs

2010

BMP 2.1 Public Outreach - Retail Reporting

View MOU

Is a Wholesale Agency Performing Public Outreach?

Are there one or more wholesale agencies performing public outreach which can be counted to help your agency comply with the BMP? (•) Yes ( ) No

Enter the name(s) of the wholesale agency (comma delimited): Sonoma County Water Agency

Is your agency performing public outreach?

Report a minimum of 4 water conservation related contacts your agency had with the public during the year.

Public Information Programs List

Did at least one contact take place during each quarter of the reporting year? ✓

Number of Public Contacts	Public Information Programs
640,000	Newsletter articles on conservation
1,280,000	Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets
2,500	Website
500	Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets
180	General water conservation information

Contact with the Media

Are there one or more wholesale agencies performing media outreach which can be counted to help your agency comply with the BMP? (•) Yes ( ) No

Enter the name(s) of the wholesale agency (comma delimited): Sonoma County Water Agency

OR Retail Agency (Contacts with the Media)

Media Contacts List

Did at least one contact take place during each quarter of the reporting year? ✓

Number of Media Contacts	Did at least one contact take place during each quarter of the reporting year?	Media Contact Types
160,000		Newspaper contacts
160,000		Radio contacts
160,000		News releases
		Select a type of media contact
		Select a type of media contact
		Select a type of media contact

Is a Wholesale Agency Performing Website Updates?

Did one or more CUWCC wholesale agencies agree to assume your agency's responsibility for meeting the requirements of and for CUWCC reporting of this BMP? ○ Yes ◉ No

Enter the name(s) of the wholesale agency (comma delimited)

Is Your Agency Performing Website Updates?

Enter your agency's URL (website address): www.srcity.org/wue

Describe a minimum of four water conservation related updates to your agency's website that took place during the year:

Annoucements for workshops, updated water savings numbers, water shortage information, turf-time watering information updated weekly.

Did at least one Website Update take place during each quarter of the reporting year? ◉ Yes ○ No

Public Outreach Annual Budget

Enter budget for public outreach programs. You may enter total budget in a single line or brake the budget into discrete categories by entering many rows. Please indicate if personnel costs are included in the entry.

Category	Amount		Personnel Costs Included? If yes, check the box.	Comments	
Public Outreach	$150,000				

Comments:

Sonoma County Water Agency does some public outreach that overlaps in our service area, but we also meet this BMP through our own efforts too.

The fields in red are required.

Agency name: City of Santa Rosa

Reporting unit name (District name): City of Santa Rosa

Reporting unit number: 90

Primary contact:

First name: Daniel

Last name: Muelrath

Email: dmuelrath@yahoo.com

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

Link to FAQs

2010

BMP 2.1 Public Outreach Cont'd

View MOU

Public Outreach Expenses

Enter expenses for public outreach programs. Please include the same kind of expenses you included in the question related to your budget (Section 2.1.7, above). For example, if you included personnel costs in the budget entered above, be sure to include them here as well.

Expense Category	Expense Amount	Personnel Costs Included?	
Public Outreach	$150,000	☐	If yes, check the check box.
		☐	
		☐	
		☐	

Additional Public Information Program

Please report additional public information contacts. List these additional contacts in order of how your agency views their importance / effectiveness with respect to conserving water, with the most important/ effective listed first (where 1 = most important).

Were there additional Public Outreach efforts? ◉ Yes ○ No

Public Outreach Additional Information

Public Information Programs	Importance
Public Events	$1
Workshops	$1

Social Marketing Programs

Branding

Does your agency have a water conservation "brand," "theme" or mascot? ◉ Yes ○ No

Describe the brand, theme or mascot. Water: our future in every drop

Market Research

Have you sponsored or participated in market research to refine your message? ○ Yes ◉ No

Market Research Topic

Brand Message

Brand Mission Statement

Community Committees

Do you have a community conservation committee? ○ Yes ◉ No

Enter the names of the community committees:

Training

Training Type	# of Trainings	# of Attendees	Description of Other
Workshops	$10	$300	

Social Marketing Expenditures

Public Outreach Social Marketing Expenses

Expense Category	Expense Amount	Description
Website	0	Facebook, Twitter and Website

Partnering Programs - Partners

Name	Type of Program
☐ CLCA?	
☐ Green Building Programs?	
☐ Master Gardeners?	
☐ Cooperative Extension?	
☐ Local Colleges?	
☐ Other	

☑ Retail and wholesale outlet; name(s) and type(s) of programs:

Saving Water Partnership

Partnering Programs - Newsletters

Number of newsletters per year: 4

Number of customers per year	160000

Partnering with Other Utilities

Describe other utilities your agency partners with, including electrical utilities	PG&E, Clean Energy Advocates, Sonoma County Water Agency, Local Retail Water Agencies.

Conservation Gardens

Describe water conservation gardens at your agency or other high traffic areas or new	We have a few City sponsored low water use sites in Santa Rosa. Additionally, provide a map of businesses that have installed low water use gardens in Santa Rosa.

Landscape contests or awards

Describe water wise landscape contest or awards program conducted by your agency	School poster contest for 3rd & 4th grade students. Citizen and Business awards for low water use or innovative reductions in water use.

Comments:

The fields in red are required.

Agency name: City of Santa Rosa

Reporting unit name (District name): City of Santa Rosa

Reporting unit number: 90

Primary contact:

First name: Daniel

Last name: Muelrath

Email: dmuelrath@yahoo.com

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

Link to FAQs

2010

BMP 2.2 School Education Programs, Retail Agencies

View MOU

School Programs

Is a wholesale agency implementing school programs which can be counted to help your agency comply with this BMP? ⦿ Yes ○ No

Enter Wholesaler Names, separated by commas: Sonoma County Water Agency

☐ Materials meet state education framework requirements?

Description of Materials

☐ Materials distributed to K-6 Students?

Description of materials distributed to K-6 Students

Number of students reached

☐ Materials distributed to 7-12 Students?

Description of materials distributed to 7-12 Students

Number of Distribution

Annual budget for school education program

Description of all other water supplier education programs

School Program Activities

Classroom presentations:

Number of presentations

Number of attendees

Large group assemblies:

Number of presentations

Number of attendees

Children's water festivals or other events:

Number of presentations

Number of attendees

Cooperative efforts with existing science/water education programs (various workshops, science fair awards or judging) and follow-up:

Number of presentations

Number of attendees

Other methods of disseminating information (i.e. themed age-appropriate classroom loaner kits):

Description

Number distributed

Staffing children's booths at events & festivals:

Number of booths | Number of attendees

Water conservation contests such as poster and photo:

Description

Number distributed

Offer monetary awards/funding or scholarships to students:

Number Offered | Total Funding

Teacher training workshops:

Number of presentations | Number of attendees

Fund and/or staff student field trips to treatment facilities, recycling facilities, water conservation gardens, etc.:

Number of tours or field trips | Number of participants

College internships in water conservation offered:

Number of internships | Total funding

Career fairs/workshops:

Number of presentations | Number of attendees

Additional program(s) supported by agency but not mentioned above:

Description

Number of events (if applicable) | Number of participants

Total reporting period budget expenditures for school education programs (include all agency costs):

Comments

We also implement a school poster contest too, but are fully compliant through the Sonoma County Water Agency (wholesale

City of
Santa Rosa
California