Town of Windsor and Windsor Water District

WATER AND WATER RECLAMATION

FINANCIAL PLANS AND RATE UPDATE STUDY

FINAL REPORT

June 1, 2015



THE REED GROUP, INC.

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I. Executive Summary

The Town will set utility rates and user fees at levels that fully cover the total direct and indirect cost of the activity.

-- Town of Windsor, Financial Management Policies

Introduction

In December 2014, the Town of Windsor (Town) contracted with The Reed Group, Inc. to perform a financial plan and rate update study for the Windsor Water District's water and water reclamation utilities. The Town Council sits as the Board of Directors for the Windsor Water District, which owns and operates the two utilities. The water utility provides water service within the Town and in the Airport area. The water reclamation utility provides wastewater collection, treatment, and disposal services within the Town. A review of both water and wastewater rates is needed for the upcoming biennial budget cycle (FY 15-16 and FY 16-17). As part of the financial analysis, the study included updates of five-year financial plans for both utilities. The financial plans are consistent with the current two-year budget and the utilities' capital improvement programs (CIPs). The overall purpose of the financial plans is to provide the Town with plans and strategies for meeting the operating, maintenance, and replacement/ rehabilitation needs of the utilities.

One additional focus of this update was to develop a financial strategy, including changes to water rates, to address the financial deficit created by the reduced water sales that results from a sustained water shortage. Hydrologic conditions in 2013 and 2014 were extremely dry, and 2015 is looking to be the driest year on record for the state as a whole. In early 2014, the Town took steps to request a 20 percent reduction in water usage through voluntary measures. On April 1, 2015, the Governor issued an Executive Order requiring mandatory water rationing in urban areas statewide. Adopting and implementing new water shortage rate surcharges and excess use penalties may become a part of the Town's strategy of addressing the financial needs during the continued drought. This report includes recommendations for water shortage rates that should be incorporated into the Town's water shortage contingency plan and then implemented if the Town Council ever declares mandatory rationing.

In addition to general recommendations for adjusting water and wastewater rates, this study also includes a recommendation to re-adopt procedures from automatically adjusting water usage rates to reflect changes in charges for water purchased from the Sonoma County Water Agency (SCWA). Annual automatic rate adjustments have served the Town well over the past five years, and the procedures need to be re-adopted through a formal rate adoption process. In addition, the report includes an update to the Town's recycled water rates, as well as a recommendation for a new wholesale recycled water rate that is consistent with recent policy changes. The report also includes recommendations related to a transition from bi-monthly utility billing to monthly billing.

Five-Year Financial Plans

The five-year financial plans for the water and water reclamation utilities are intended to serve as planning and management tools. The plans enable the Town to take a multi-year look at each utility's financial needs. Rate recommendations extend through FY 19-20. The longer planning period allows the Town to anticipate needs on the horizon, and to evaluate how near term decisions can affect longer term needs. However, consistent with past practice, specific rate recommendations cover a shorter period thereby allowing the Town to be more responsive to changing conditions.

Both the water and water reclamation utilities are self-supporting independent enterprises of the Town. That is, the utilities are expected to generate the revenues (through user charges, capacity fees, and other revenues) to cover the ongoing costs of operations, maintenance, administration, debt service, capital improvements, and maintenance of prudent financial reserves.

The financial plan models reflect proposed utility budgets for FY 15-16 and FY 16-17, five-year capital improvement programs, existing financial reserve policies, contractual debt obligations, and current fund and reserve balances.

In September 2012, the Town adopted an overall 9 percent increase in water rates and a 3 percent overall increase in wastewater rates to address financial needs of the two utilities. Since then, the only rate adjustments have been related to automatic adjustments to water usage rates stemming from changes in SCWA water rates and charges. At present, the Town is experiencing the financial constraints created by water shortage and reduced water sales. In response to these conditions, the Town has taken steps to reduce costs wherever possible.

Of particular concern is the Town's ability to meet debt service coverage requirements during this period of water shortage. This requirement obligates the Town to maintain water and wastewater rates such that total utility revenues less annual operating and maintenance expenses are at least 1.20 times annual debt service. The debt service coverage obligation related to the 2012D CSCDA pooled bonds is a joint obligation of both the water and water reclamation utilities. The utilities are currently meeting this requirement, though the coverage is marginal due to current water shortage conditions and limited development activity. Continuing to meet this requirement is one of the criteria reflected in the financial plan model. To ensure that the Town can meet its debt obligations it is recommended that the Town:

- Designate a portion of FY 14-15 water and water reclamation utility revenues to be placed into water and wastewater Rate Stabilization Funds (as authorized in documents related to the Town's 2012D bonds).

- In FY 15-16 and beyond use, as necessary, monies from the Rate Stabilization Funds to meet debt service coverage requirements. Using the Rate Stabilization Funds in FY 15-16 is central to avoiding a large increase in the water and wastewater rates.

In addition to helping meet the debt service coverage requirements, the Rate Stabilization Funds would also provide an important source of funds for the utilities to help mitigate the financial deficits creates by water shortage and reduced rate revenues.

To assist the Town in meeting water service and financial obligations under continuing drought conditions, it is recommended that the water utility establish target funding of the Water Rate Stabilization Fund at $1.25 million. It appears that a large portion of this reserve could be funded in FY 14-15, but it may take several years to reach full funding.

To assist the Town in meeting wastewater service and financial obligations under continuing drought conditions, it is recommended that the water reclamation utility establish target funding of the Wastewater Rate Stabilization Fund at $750,000. It appears that a large portion of this reserve could be funded in FY 14-15. However, most or all of the fund's balance may be required in FY 15-16 in order to meet the debt service coverage requirement, and it may take several years to reach full funding.

Exhibit I-1 presents estimated overall water and wastewater rate increases covering the five-year planning period. These increases are needed to help ensure that the utilities continue to meet all service and financial obligations.

Exhibit I-1
Windsor Water District
Proposed Overall Level of Rate Increases Needed to Meet
Water and Water Reclamation Utility Service and Financial Obligations

	Water Utility		Water Reclamation Utility
	Water Usage Rates	Service Charges (1)	All WW Rate Components
August 2015	6.0%		7.0%
July 2016	SCWA Adjust.	2.0%	5.0%
July 2017	SCWA Adjust.	2.0%	5.0%
July 2018	SCWA Adjust.	2.0%	5.0%
July 2019	SCWA Adjust.	2.0%	5.0%
July 2020	SCWA Adjust.		

Notes:
(1) Applies to monthly service charges, private fire service charges, and additional charges for pumping, including pumping usage charges.

Section II of this report presents details of the five-year financial plans for the water and water reclamation utilities. It also includes a separate financial analysis of the impact of water shortage on the water utility. This analysis provides information to support recommendations for temporary water shortage rate surcharges.

Proposed Water, Wastewater, and Recycled Water Rates

Recommendations in this report address the Town's water, wastewater, and recycled water rates, including cost of service justifications and rate structure designs. To adopt new rates the Town is required to go through the Proposition 218 rate approval process, including a notice to all property owners/customers at least 45 days prior to a public hearing.

Water Rates

Exhibit I-2 presents schedules for proposed water rates for FY 15-16 through FY 19-20. The water rates for FY 15-16 reflect an overall increase in water rate revenue of 6 percent (for both usage rates and fixed service charges), which is based on the revenue requirements developed with the five-year financial plan. This proposed water rate increase incorporates a 6.0 percent increase in SCWA charges for diversions from the Russian River, a 4.15 percent increase in the cost of water from the Santa Rosa Aqueduct, and other costs of providing water service. The proposed water rate increases are also necessitated by the Town's debt service obligations and the requirement to maintain a debt service coverage ratio of 1.20.

The proposed water rate schedule for FY 15-16 generally maintains the current water rate structure, although water usage rates and service charges have been revised to reflect an updated cost of service analysis. The water rate structure includes a 4-tier residential water usage rate structure, a uniform water usage rate for commercial customers, seasonal water usage rates for irrigation accounts, fixed monthly service charges based on the size of the water meter, and pumping charges for customers in higher elevation (pumped) pressure zones. Water rates in the Airport area continue to be higher than within the Town, due to the higher cost of water from the Santa Rosa Aqueduct, which supplies the Airport area.

Exhibit I-2
Windsor Water District
Current and Proposed Monthly Water Rates (1)

		Current	Aug. 2015	July 2016	July 2017	July 2018	July 2019
Water Usage Rates ($/gallon)				(2)	(2)	(2)	(2)
Single Family Residential							
1st Tier	0-4,000 gal/mo	$ 0.00310	$ 0.00316	$ 0.00316	$ 0.00316	$ 0.00316	$ 0.00316
2nd Tier	4,001-7,000 gal/mo	$ 0.00341	$ 0.00344	$ 0.00344	$ 0.00344	$ 0.00344	$ 0.00344
3rd Tier	7,001-17,000 gal/mo	$ 0.00477	$ 0.00485	$ 0.00485	$ 0.00485	$ 0.00485	$ 0.00485
4th Tier	Over 17,000 gal/mo	$ 0.00572	$ 0.00587	$ 0.00587	$ 0.00587	$ 0.00587	$ 0.00587
Multi-Family Residential (per dwelling unit)							
1st Tier	0-2,000 gal/mo/DU	$ 0.00310	$ 0.00316	$ 0.00316	$ 0.00316	$ 0.00316	$ 0.00316
2nd Tier	2,001-3,000 gal/mo/DU	$ 0.00341	$ 0.00344	$ 0.00344	$ 0.00344	$ 0.00344	$ 0.00344
3rd Tier	3,001-5,500 gal/mo/DU	$ 0.00477	$ 0.00485	$ 0.00485	$ 0.00485	$ 0.00485	$ 0.00485
4th Tier	Over 5,500 gal/mo/DU	$ 0.00572	$ 0.00587	$ 0.00587	$ 0.00587	$ 0.00587	$ 0.00587
Town Commercial	All usage	$ 0.00378	$ 0.00371	$ 0.00371	$ 0.00371	$ 0.00371	$ 0.00371
Town Irrig. - Winter	Nov-May	$ 0.00275	$ 0.00316	$ 0.00316	$ 0.00316	$ 0.00316	$ 0.00316
Town Irrig. - Summer	Jun-Oct	$ 0.00413	$ 0.00389	$ 0.00389	$ 0.00389	$ 0.00389	$ 0.00389
Airport Commercial	All usage	$ 0.00572	$ 0.00587	$ 0.00587	$ 0.00587	$ 0.00587	$ 0.00587
Airport Irrig. - Winter	Nov-May	$ 0.00405	$ 0.00499	$ 0.00499	$ 0.00499	$ 0.00499	$ 0.00499
Airport Irrig. - Summer	Jun-Oct	$ 0.00608	$ 0.00620	$ 0.00620	$ 0.00620	$ 0.00620	$ 0.00620
Additional Usage Charge for Pumping							
Shiloh Mdws. - Zone 2	All usage	$ 0.00089	$ 0.00094	$ 0.00096	$ 0.00098	$ 0.00100	$ 0.00102
- Zone 3	All usage	$ 0.00226	$ 0.00240	$ 0.00245	$ 0.00250	$ 0.00255	$ 0.00260
- Zone 4	All usage	$ 0.00335	$ 0.00355	$ 0.00362	$ 0.00369	$ 0.00376	$ 0.00384
Mayacama	All usage	$ 0.00226	$ 0.00240	$ 0.00245	$ 0.00250	$ 0.00255	$ 0.00260
Vinecrest	All usage	$ 0.00218	$ 0.00231	$ 0.00236	$ 0.00241	$ 0.00246	$ 0.00251
Monthly Service Charges ($/month)							
All Water Services including Airport Area							
	Up to 3/4" meter	$ 9.13	$ 10.80	$ 11.02	$ 11.24	$ 11.46	$ 11.69
	1" meter	$ 13.97	$ 16.84	$ 17.18	$ 17.52	$ 17.87	$ 18.23
	1 1/2" meter	$ 25.95	$ 31.82	$ 32.46	$ 33.11	$ 33.77	$ 34.45
	2" meter	$ 40.39	$ 49.86	$ 50.86	$ 51.88	$ 52.92	$ 53.98
	3" meter	$ 74.10	$ 91.98	$ 93.82	$ 95.70	$ 97.61	$ 99.56
	4" meter	$ 122.25	$ 152.15	$ 155.19	$ 158.29	$ 161.46	$ 164.69
	6" meter	$ 242.52	$ 302.43	$ 308.48	$ 314.65	$ 320.94	$ 327.36
	8" meter	$ 386.90	$ 482.84	$ 492.50	$ 502.35	$ 512.40	$ 522.65
	10" meter	$ 555.39	$ 693.38	$ 707.25	$ 721.40	$ 735.83	$ 750.55
Additional Service Charges for Pumping							
Shiloh Mdws. - Zone 2	1" meter	$ 6.35	$ 6.73	$ 6.86	$ 7.00	$ 7.14	$ 7.28
- Zone 3	1" meter	$ 19.20	$ 20.35	$ 20.76	$ 21.18	$ 21.60	$ 22.03
- Zone 4	1" meter	$ 37.65	$ 39.91	$ 40.71	$ 41.52	$ 42.35	$ 43.20
Mayacama	1" meter	$ 19.20	$ 20.35	$ 20.76	$ 21.18	$ 21.60	$ 22.03
	1 1/2" meter	$ 38.30	$ 40.60	$ 41.41	$ 42.24	$ 43.08	$ 43.94
	2" meter	$ 61.30	$ 64.98	$ 66.28	$ 67.61	$ 68.96	$ 70.34
Vinecrest	Up to 1" meter	$ 23.80	$ 25.23	$ 25.73	$ 26.24	$ 26.76	$ 27.30
Private Fire Service Charges							
	4" meter	$ 61.13	$ 76.08	$ 77.60	$ 79.15	$ 80.73	$ 82.34
	6" meter	$ 121.26	$ 151.22	$ 154.24	$ 157.32	$ 160.47	$ 163.68
	8" meter	$ 193.45	$ 241.42	$ 246.25	$ 251.18	$ 256.20	$ 261.32
	10" meter	$ 277.70	$ 346.69	$ 353.62	$ 360.69	$ 367.90	$ 375.26
	6" meter - Mayacama - Additional	$ 191.65	$ 203.15	$ 207.21	$ 211.35	$ 215.58	$ 219.89

Notes:
(1) Actual billing occurs bi-monthly.
(2) Automatic adjustments to water usage rates may occur each July from 2016 through 2020 due to from changes in SCWA water rates and charges. Those potential future adjustments are not reflected in the water usage rates shown in this schedule.

The highest residential tier rate continues to incorporate the cost of water from the Santa Rosa Aqueduct as the marginal cost of additional water supplies. The first tier rate reflects the cost of water from the Russian River Well Field (RRWF). Rates in the middle tiers reflect blended water costs. The tier structures also continue to reflect the preferences expressed by the Town Council through prior direction to staff. Additional details of water rate recommendations are described and presented in **Section III** of this report.

Wastewater Rates

Exhibit I-3 presents schedules of proposed wastewater rates for FY 15-16 through FY 19-20. The wastewater rates have not been adjusted for the past three years. The wastewater rates for FY 15-16 reflect an overall increase in wastewater rate revenue of 7 percent, which is based on the revenue requirements developed with the five-year financial plan. Proposed wastewater rates reflect the costs of ongoing operation and maintenance, debt service obligations, and capital replacement needs. In particular, the wastewater rate increase is necessitated by the Town's debt service obligations and the requirement to maintain a debt service coverage ratio of 1.20.

The proposed wastewater rate schedule for FY 15-16 generally maintains the current wastewater rate structure, which includes residential usage charges based on the lesser of winter water use or actual monthly water use, non-residential usage charges based on actual monthly water use and strength classification, fixed monthly service charges based on the size of the water meter, and lift station charges for customers in areas requiring pumping to move wastewater to the wastewater treatment plant. To reduce the revenue volatility in wastewater rate revenue increased emphasis has been place on the monthly service charges.

Exhibit I-3
Windsor Water District
Current and Proposed Monthly Wastewater Rates (1)

	Current	Aug. 2015	July 2016	July 2017	July 2018	July 2019
Wastewater Usage Rates ($/gallon)						
Single Family (2)	$ 0.01206	$ 0.01229	$ 0.01291	$ 0.01356	$ 0.01424	$ 0.01495
Multi-Family / Mobile Homes (2)	$ 0.01206	$ 0.01229	$ 0.01291	$ 0.01356	$ 0.01424	$ 0.01495
Commercial (3)						
Low strength	$ 0.01085	$ 0.01106	$ 0.01162	$ 0.01220	$ 0.01281	$ 0.01345
Medium strength	$ 0.01464	$ 0.01476	$ 0.01550	$ 0.01628	$ 0.01709	$ 0.01794
High strength	$ 0.02559	$ 0.02548	$ 0.02675	$ 0.02809	$ 0.02949	$ 0.03096
Schools (3)	$ 0.01064	$ 0.01085	$ 0.01139	$ 0.01196	$ 0.01256	$ 0.01319
Monthly Service Charges						
Single Family	$ 6.10	$ 9.20	$ 9.70	$ 10.20	$ 10.75	$ 11.30
Multi-Family / Mobile Homes (per DU)	$ 4.95	$ 7.51	$ 7.90	$ 8.30	$ 8.75	$ 9.20
Commercial						
Up to 3/4" meter	$ 6.10	$ 9.20	$ 9.70	$ 10.20	$ 10.75	$ 11.30
1" meter	$ 9.57	$ 14.43	$ 15.20	$ 16.00	$ 16.80	$ 17.65
1 1/2" meter	$ 18.17	$ 27.39	$ 28.80	$ 30.25	$ 31.80	$ 33.40
2" meter	$ 28.53	$ 42.99	$ 45.15	$ 47.45	$ 49.85	$ 52.35
3" meter	$ 52.71	$ 79.44	$ 83.45	$ 87.65	$ 92.05	$ 96.70
4" meter	$ 87.26	$ 131.49	$ 138.10	$ 145.05	$ 152.35	$ 160.00
Additional Monthly Lift Station Charges						
Greens Subdivision	$ 14.35	$ 15.40	$ 16.20	$ 17.05	$ 17.95	$ 18.85
Vintage Greens Subdivision	$ 12.30	$ 13.20	$ 13.90	$ 14.60	$ 15.35	$ 16.15
Wastewater-Only Accounts						
Single Family (per DU)	$ 53.80	$ 60.90	$ 63.95	$ 67.15	$ 70.55	$ 74.10
Mobile Homes (per DU)	$ 42.00	$ 46.90	$ 49.25	$ 51.75	$ 54.35	$ 57.10
Commercial (per ESFD) (4)	$ 53.80	$ 60.90	$ 63.95	$ 67.15	$ 70.55	$ 74.10

Notes:
(1) Actual billing occurs bi-monthly.
(2) Residential usage charges determined based on the lower of: (1) actual monthly water usage, or (2) average winter water usage determined from the three lowest use months during the prior period from December through March. Bill adjustments based on winter water usage occur in July each year.
(3) Non-residential wastewater usage rates apply to actual monthly water usage.
(4) Each equivalent single family dwelling (ESFD) is equivlent to 20 fixture units.

The wastewater rate structures continue to reflect the preferences expressed by the Town Council through prior direction to staff. Details of wastewater rate recommendations are described and presented in **Section IV** of this report.

Recycled Water Rates

Proposed recycled water rates for FY 15-16 are presented in **Exhibit I-4**. The proposed recycled water rates reflect the pricing policies adopted by the Town Council in 2012, as well as changes in urban recycled water operations resulting from a new policy adopted by the Town Council in November 2014. Under the new policy, the distribution of recycled water to urban customers is part of the water utility's operation. With this framework, the water reclamation utility sells recycled water on a wholesale basis to the water utility for distribution to urban customers. Delivery of recycled water to agricultural customers continues to be part of the disposal operation of the water reclamation utility.

Exhibit I-4
Windsor Water District
Current and Proposed Monthly Recycled Water Rates

		Current	Aug. 2015	July 2016	July 2017	July 2018	July 2019
Urban Recycled Water Customers (1)				(2)	(2)	(2)	(2)
Water Usage Rate ($/gallon)	All Usage	$ 0.00303	$ 0.00297	$ 0.00297	$ 0.00297	$ 0.00297	$ 0.00297
Monthly Service Charge	Up to 3/4" meter	$ 7.30	$ 8.64	$ 8.82	$ 8.99	$ 9.17	$ 9.35
	1" meter	$ 11.17	$ 13.47	$ 13.74	$ 14.02	$ 14.30	$ 14.58
	1 1/2" meter	$ 20.76	$ 25.46	$ 25.97	$ 26.49	$ 27.02	$ 27.56
	2" meter	$ 32.31	$ 39.89	$ 40.69	$ 41.50	$ 42.34	$ 43.18
	3" meter	$ 59.28	$ 73.58	$ 75.06	$ 76.56	$ 78.09	$ 79.65
	4" meter	$ 97.80	$ 121.72	$ 124.15	$ 126.63	$ 129.17	$ 131.75
	6" meter	$ 194.02	$ 241.94	$ 246.78	$ 251.72	$ 256.75	$ 261.89
	8" meter	$ 309.52	$ 386.27	$ 394.00	$ 401.88	$ 409.92	$ 418.12
	10" meter	$ 444.31	$ 554.70	$ 565.80	$ 577.12	$ 588.66	$ 600.44
Vineyards (3)				(2)	(2)	(2)	(2)
Water Usage Rate ($/gallon)	All Usage	$ 0.00084	$ 0.00093	$ 0.00093	$ 0.00093	$ 0.00093	$ 0.00093
Monthly Service Charge	2" meter	$ 10.10	$ 12.47	$ 12.72	$ 12.97	$ 13.23	$ 13.50
	3" meter	$ 18.53	$ 23.00	$ 23.46	$ 23.93	$ 24.40	$ 24.89
	4" meter	$ 30.56	$ 38.04	$ 38.80	$ 39.57	$ 40.37	$ 41.17
	6" meter	$ 60.63	$ 75.61	$ 77.12	$ 78.66	$ 80.24	$ 81.84
	8" meter	$ 96.72	$ 120.71	$ 123.13	$ 125.59	$ 128.10	$ 130.66
	10" meter	$ 138.85	$ 173.35	$ 176.81	$ 180.35	$ 183.96	$ 187.64
Pasture and Other Non-Vineyard Agriculture (3)				(2)	(2)	(2)	(2)
Water Usage Rate ($/gallon)	All Usage	$ 0.00042	$ 0.00046	$ 0.00046	$ 0.00046	$ 0.00046	$ 0.00046
Monthly Service Charge	2" meter	$ 5.05	$ 6.23	$ 6.36	$ 6.49	$ 6.62	$ 6.75
	3" meter	$ 9.26	$ 11.50	$ 11.73	$ 11.96	$ 12.20	$ 12.45
	4" meter	$ 15.28	$ 19.02	$ 19.40	$ 19.79	$ 20.18	$ 20.59
	6" meter	$ 30.32	$ 37.80	$ 38.56	$ 39.33	$ 40.12	$ 40.92
	8" meter	$ 48.36	$ 60.36	$ 61.56	$ 62.79	$ 64.05	$ 65.33
	10" meter	$ 69.42	$ 86.67	$ 88.41	$ 90.18	$ 91.98	$ 93.82
Wholesale Recycled Water (4)				(2)	(2)	(2)	(2)
Water Usage Rate ($/AF)			$ 456.63	$ 456.63	$ 456.63	$ 456.63	$ 456.63

Notes:
(1) Urban customers include parks, schools, commercial landscapes, and residential landscapes in the Vintage Greens Subdivision. Dual plumbed homes using recycled water for landsape irrigation are exempt from the recycled water monthly service charges. Revenue from urban recycled water sales accrues to the water utility. Actual billing is bi-monthly.
(2) Automatic adjustments to water usage rates may occur each July from 2016 through 2020 due to from changes in SCWA water rates and charges. Those potential future adjustments are not reflected in the water usage rates shown in this schedule.
(3) Revenue from agricultural recycled water sales accrues to the water reclamation utility. Actual billing is bi-monthly.
(4) New wholesale recycled water rate established in July 2015 for sale of recycled water to the Town's water utility for distribution to urban recycled water customers.

Under the new framework, a wholesale water rate from recycled water is proposed to be set at 50 percent of the rate the Town pays SCWA for water from the Santa Rosa Aqueduct. This wholesale water rate represents a reasonable cost for recycled water for the water utility, as well as fair compensation to the water reclamation utility for recycled water.

Beginning in FY 15-16, water rate revenue from the sale of recycled water within the Town (urban reuse) will be revenue to the water utility. Revenue from recycled water sales to agricultural customers will continue to be revenue of the water reclamation utility. The agricultural water usage rates shown in Exhibit I-3 reflect the final step in the phasing in of the pricing policy adopted by the Town Council in 2012 occurring in August 2015.

Beyond FY 15-16 recycled water rates should be adjusted commensurate with existing recycled water pricing policies, which ties recycled water rates to potable water rates. Details of proposed recycled water rates are included in **Section V** of this report.

Bill Impacts and Comparison of Utility Rates with Other Communities

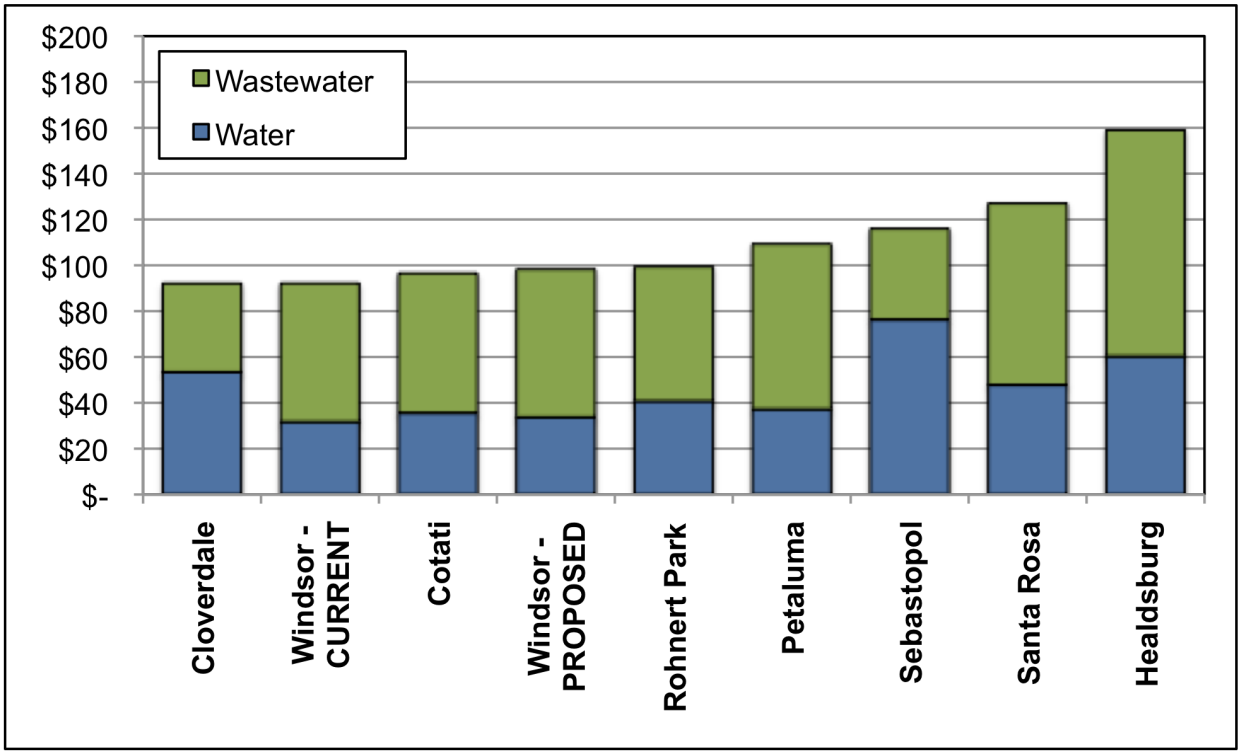
The amount for a combined monthly water and wastewater bill for a typical single family customer in Windsor will increase from $92.13 to $98.27 under the proposed rates for August 2015, as summarized in **Exhibit I-5**. This calculation is based on a customer with a standard 5/8" water meter and using 7,000 gallons of water per month, and wastewater billing based on 4,500 gallons per month.

Exhibit I-6 graphically illustrates how a combined water and wastewater bill for a typical single family customer within the Town compares with other jurisdictions in the County under both current and proposed water and wastewater rates for FY 15-16. Even with the proposed increases in water and wastewater rates, the combined bill for typical residential customers continues to be in the low end of the range of other communities.

Exhibit I-5
Windsor Water District
Change in Utility Bill for Typical Residential Customer

	Current	Aug. 2015	$ Change	% Change
Monthly Water Bill	$ 31.76	$ 33.76	$ 2.00	6.3%
Monthly Wastewater Bill	$ 60.37	$ 64.51	$ 4.14	6.9%
Total Utility Bill	$ 92.13	$ 98.27	$ 6.14	6.7%

Exhibit I-6
Windsor Water District
Comparison of Typical Single Family Bills with Neighboring Communities



Automatic Adjustments to Water Rates for Changes in SCWA Water Costs

In August 2009, the Town approved the automatic adjustment of water usage rates whenever the SCWA adjusts the rates charged to the Town for water supplies. These rate changes have occurred each July. The automatic adjustments have functioned well, and help ensure that water rates continue to accurately reflect the cost of providing water service. The SCWA recently adopted new rates for FY 15-16, and those changes are reflected in the rate recommendations presented herein for FY 15-16.

Consistent with statutory requirements, the Town's automatic water rate adjustment procedures were adopted for a five-year period. Because the procedures were originally adopted in August 2009, the July 2014 adjustment was the last authorized automatic rate adjustment, until the Town re-adopts the procedures. Adopting the procedures will require the Town to go through the Proposition 218 rate approval process, including a notice to all property owners/customers at least 45 days prior to a public hearing. It is recommended the Town re-adopt automatic water rate adjustment procedures as part of the process for adopting new water and wastewater rates for FY 15-16.

The specific mechanism for adjusting water usage rates to reflect changes in the cost of wholesale water purchases is presented in **Section III** of this report.

Water Shortage Financial Analysis and Water Shortage Rate Surcharges

Because of the current and continuing dry year conditions, this water rate update also includes a separate analysis of the financial implications of sustained reduced water sales that coincides with water shortage conditions. The financial analysis includes the development of temporary water shortage rate surcharges that could be implemented during periods of mandatory water use reductions and prohibitions.

Water shortage conditions result in (1) reduced water sales, (2) reduced water supply purchase and pumping costs, and (3) increased water conservation education/assistance costs. The net effect of these impacts is to create a financial deficit during period of water shortage (i.e., revenue will decline more than the decline in expenses).

To counter the financial impact of water shortage, a three-prong strategy is proposed that includes: (1) establishing a Water Rate Stabilization Fund and using the fund to offset a portion of the financial deficit created by reduced water sales, (2) adopting and implementing water shortage charges to generate additional revenue, and (3) in the most severe shortages reducing the annual contribution to the replacement and rehabilitation fund for capital projects. This strategy, including the Rate Stabilization Fund and temporary water shortage rate surcharges, should be incorporated into the Town's water shortage contingency plan.

The Town has defined five stages of water shortage (beyond normal water supply conditions). These include:

- Stage 1 – Voluntary program
- Stage 2 – Mandatory program with 20 percent water use reduction goal
- Stage 3 – Mandatory program with 30 percent water use reduction goal
- Stage 4 – Mandatory program with 40 percent water use reduction goal
- Stage 5 – Mandatory program with 50 percent water use reduction goal

Proposed water shortage charges would be implemented whenever the Town Council declares a water shortage requiring mandatory measures (Stages 2 through 5). Water shortage rates would include a water shortage surcharge that would be applied to all water usage rates (but not monthly service charges or pumping charges), as well as an excess use penalty that would only be implemented in Stages 4 and 5, and would only apply to fourth tier water usage. The water shortage charge would mean that all customers would bear a share of the financial burden created by water shortage. However, the surcharges have been designed such that customers meeting water use reduction goals will have lower water bills than their normal water bills. The excess use penalty is intended to discourage excessive water usage in the more severe situations. It is not expected to generate any revenue for the utility, but to serve as an incentive for meeting water use reduction goals.

Exhibit I-7 presents the proposed temporary water shortage surcharges and excess use penalties. The water shortage surcharge is expressed as a percentage increase in all water usage rates. The amount of increase depends on the stage of shortage. It is expressed as a percentage so that it can be applied to any future rate schedule. Proposed excess use penalties are a percentage increase in the combined water usage rate and water shortage surcharge. However, the excess use penalty is only applied in Stage 4 and 5, and only to the fourth tier. The specific rates shown in Exhibit I-7 are an application of the water shortage rate percentages to the proposed FY 15-16 water usage rates.

Exhibit I-7
Windsor Water District
Proposed Water Shortage Rate Surcharges Applied to Normal Water Rates for FY 15-16 (1)

		Normal	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Water Use Reduction Goal -->		None	10%	20%	30%	40%	50%
Water Usage Rates ($/gallon)							
Water Shortage Surcharge (2)				**10%**	**20%**	**30%**	**40%**
Excess Use Penalty (3)						**25%**	**50%**
Excess Use Penalty Applied to:						Tier 4	Tier 4
Single Family Residential							
1st Tier	0-4,000 gal/mo	$ 0.00316	No change	$ 0.00348	$ 0.00379	$ 0.00411	$ 0.00442
2nd Tier	4,001-7,000 gal/mo	$ 0.00344	No change	$ 0.00378	$ 0.00413	$ 0.00447	$ 0.00482
3rd Tier	7,001-17,000 gal/mo	$ 0.00485	No change	$ 0.00534	$ 0.00582	$ 0.00631	$ 0.00679
4th Tier	Over 17,000 gal/mo	$ 0.00587	No change	$ 0.00646	$ 0.00704	$ 0.00954	$ 0.01233
Multi-Family Residential (per dwelling unit)							
1st Tier	0-2,000 gal/mo/DU	$ 0.00316	No change	$ 0.00348	$ 0.00379	$ 0.00411	$ 0.00442
2nd Tier	2,001-3,000 gal/mo/DU	$ 0.00344	No change	$ 0.00378	$ 0.00413	$ 0.00447	$ 0.00482
3rd Tier	3,001-5,500 gal/mo/DU	$ 0.00485	No change	$ 0.00534	$ 0.00582	$ 0.00631	$ 0.00679
4th Tier	Over 5,500 gal/mo/DU	$ 0.00587	No change	$ 0.00646	$ 0.00704	$ 0.00954	$ 0.01233
Town Commercial	All usage	$ 0.00371	No change	$ 0.00408	$ 0.00445	$ 0.00483	$ 0.00520
Town Irrigation - Winter	Nov-May	$ 0.00316	No change	$ 0.00347	$ 0.00379	$ 0.00411	$ 0.00442
Town Irrigation - Summer	Jun-Oct	$ 0.00389	No change	$ 0.00428	$ 0.00467	$ 0.00506	$ 0.00545
Airport Commercial	All usage	$ 0.00587	No change	$ 0.00645	$ 0.00704	$ 0.00763	$ 0.00821
Airport Irrigation - Winter	Nov-May	$ 0.00499	No change	$ 0.00549	$ 0.00599	$ 0.00649	$ 0.00698
Airport Irrigation - Summe	Jun-Oct	$ 0.00620	No change	$ 0.00682	$ 0.00744	$ 0.00806	$ 0.00868
Recycled Water - Urban	All usage	$ 0.00297	No change	$ 0.00327	$ 0.00356	$ 0.00386	$ 0.00416

Notes:
(1) The percentages shown for the water shortage surcharge and excess use surcharge would be applied to any future water rate schedule.
(2) Water shortage surcharges are a percentage increase to all normal water use rates, but not pumping charges or fixed service charges.
(3) Excess use penalties are a percentage increase to the combined water usage rate and water shortage surcharge applied only to the residential fourth tier.

Water shortage surcharges will also need to be adopted through a Proposition 218 notice and public hearing process. It is recommended that the water shortage surcharges be adopted with other water and wastewater rates proposed for FY 15-16. Excess use penalties are separate from water rates, and do not require the Proposition 218 approval process. The excess use penalties should be adopted by the Town as guided by the Town's legal counsel. Once adopted, the shortage surcharges and excess use penalties could then be implemented during the current or any future declared water shortage. Details of the water shortage financial analysis are presented in **Section II** of this report, and proposed water shortage rate surcharges are presented in **Section III** of this report.

II. Water and Water Reclamation Five-Year Financial Plans

This section of the report describes the five-year financial plans developed for the Town's water and water reclamation utilities. The financial plans reflect the utilities' operation and maintenance costs, debt service obligations, and capital improvement plans, as well as various sources of revenues and the reserves maintained by the Town for various purposes. The financial plans are intended to serve as planning and management tools, and enable the Town to take a multi-year look at each utility's financial needs.

Fund/Reserve Structure and Cash Flows

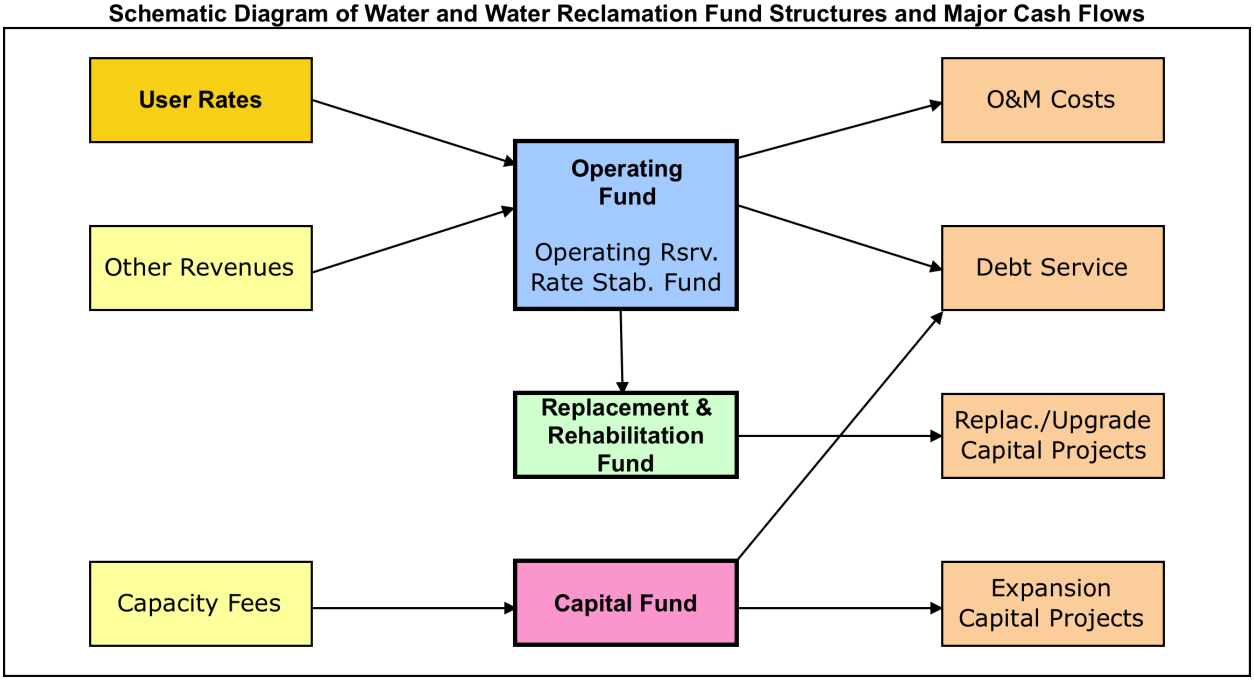
The financial plans are multi-year cash flow models. As cash flow models, they differ from financial accounting income statements and balance sheets. The financial plans model the sources and uses of funds into and out of the various funds and reserves of the Town's water and water reclamation utilities.

The Town's fund and reserve structure for each utility has three primary elements: an operating fund, a replacement and rehabilitation fund, and a capital fund. Within these funds are various reserves, and each fund has a specific purpose (as described below).

Exhibit II-1, on the following page, schematically illustrates the fund and reserve structure used for financial planning and analysis purposes, as well as the major revenue inflows and expenditure outflows. An understanding of the fund/reserve structure is important in understanding the financial plan exhibits that model the flow of funds through each utility from one year to the next. Each of the funds and reserves is described below.

- Operating Fund – The operating fund is the primary fund for each utility. Most utility revenues, including user rates and other service revenues, flow into this fund. All operating and maintenance expenditures, including administrative costs and debt service payment obligations, are paid out of the operating fund. Embedded within the water and water reclamation operating funds are the following reserves:
    - *Operating Reserves* – The Town's financial management policies state that "[t]he Town's enterprise funds will strive to maintain a minimum balance of retained earnings of at least 25 percent of operating expenses. The primary purpose of this balance is to set aside funds to maintain cash balances sufficient to pay expenses as needed and to provide for unanticipated or emergency expenditures that could not be reasonably foreseen during the preparation of the budget." The financial plan model seeks to maintain minimum operating reserves throughout the five-year planning period. In the financial planning model, the target operating reserve is shown as a sub-total of the overall Operating Fund balance.
    - *Rate Stabilization Funds* – The rate stabilization funds (RSFs) currently do not exist in the utilities, but are recommended to serve two important functions. First, RSFs are authorized in the bond documents related to the 2012D bonds, which is a joint obligation of both utilities. As described later in this section, the RSF can be used to help meet debt service coverage requirements. Second, the financial deficits that can be created by water shortage conditions, described later in this section, also create a need for emergency reserves. It is recommended that the Town establish RSFs with target balances equal to $1.25 million in the water utility and $750,000 in the water reclamation utility.

Exhibit II-1
Windsor Water District
Schematic Diagram of Water and Water Reclamation Fund Structures and Major Cash Flows



- *Uncommitted Fund Balance* – The balance in the Operating Funds in excess of the operating reserve and the rate stabilization funds is shown in the financial plan model as the uncommitted fund balance. When the total fund balance exceeds the target amount for the operating reserve and the amount in the RSF the uncommitted balance is positive. When the fund balance is below the desired reserve amount for the operating reserve the uncommitted balance is negative. This is a convenient way to monitor the status of the operating fund over the planning period.

- Replacement and Rehabilitation Fund – The replacement rehabilitation (R&R) fund is a capital fund from which expenditures are made for rehabilitation and upgrade capital projects. This fund is supported through annual transfers from the operating fund. Capital projects that rehabilitate and upgrade the utility systems are paid for from this fund. With this structure, contributions to the fund are made at a uniform level (commensurate average annual capital program needs) and the fund balance fluctuates inversely with annual expenditures. This structure effectively reduces rate volatility and improves the ability to support the capital program on a pay-as-you-go basis.

  As a goal, it is recommended that the Town strive to transfer an amount into the repair and replacement fund equal to the annual accounting depreciation expense. At present, annual transfers for the water utility are $750,000 relative to a depreciation expense of about $1,090,000, and annual transfers for the water reclamation utility are $1,600,000 relative to a depreciation expense of about $2,070,000. Annual transfers are maintained during the five-year planning period. However, financial plan analysis indicates that the transfer to the water reclamation R&R fund can be reduced to $1.4 million annually for the next two years. Proposed transfers are sufficient to meet the capital replacement needs for both utilities as reflected in the five-year capital improvement plans.

- Capital Funds – The financial plan also reflects the capital funds used to track capacity fee revenues and expenditures related to the expansion projects of the capital improvement program. The funds are used to meet statutory requirements for accounting for capacity fee revenues, and helps ensure that costs associated with accommodating new growth are paid for by new development. Money in each capital fund is used to pay for expansion-related capital improvement projects, and can also be used for debt service related to expanding capacity for new development. The water reclamation capital fund currently has a negative balance, which is brought to a zero balance at the end of FY 14-15 in the financial plan presented herein to provide greater transparency on the overall financial condition of the utility.

Financial Plan Assumptions and Analyses

The five-year financial plans reflect a number of assumptions. The financial plans were developed based on the Town's proposed biennial operating budget (FY 15-16 and FY 16-17), existing long-term debt obligations and debt service schedules as reflected in official statements and related documents, and the five-year capital improvement plans for the two utilities. While financial plan exhibits presented later in this section provide a comprehensive summary of these documents, the financial plan and rate analyses start with the line-item level of detail contained in the Town's detailed budget and accounting system.

Basic Assumptions

A number of assumptions are also reflected in the financial plans, including inflation rates, interest rates, customer growth rates, water demand estimates, etc. Many of the assumptions and related information are summarized in **Exhibit II-2**. Primary assumptions are described below.

- Inflation and Interest Rates – The financial plan model includes the following assumptions for annual inflation and interest rates:
    - General inflation is assumed to be 3 percent per year and applies to all operating cost items, except water purchase costs
    - Construction inflation is assumed to be 3 percent per year and applies to capital projects contained in the Town's CIP, as well as to annual increases in water and water reclamation capacity fees
    - Interest earnings on working capital balances is assumed to be as budgeted through FY 16-17. Then interest rates are estimated as 0.5 percent from FY 17-18 through FY 19-20. Interest earnings are estimated based on each fund's beginning-of-year balances and accrues to each fund
- Current Customer Base – The Town's water utility currently has about 8,800 water service accounts and the water reclamation utility has about 8,300 wastewater accounts. Complete customer account and water use data for all customer accounts were obtained from CY 2014 utility billing data. In addition, the most recent winter water use data (December 2014 through March 2015) has been obtained and is used for wastewater rate purposes.
- Growth Projections – As a financially conservative assumption, the financial plans presented herein assume 0.25 percent annual growth for FY 15-16, and 0.5 percent annual growth thereafter. Actual growth will be a function of economic trends, the Town's development policies, and the status of new projects within the development pipeline. It is believed that these growth assumptions are reasonable given current economic conditions.

Exhibit II-2
Windsor Water District
Water and Water Reclamation Financial Plan Assumptions

	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
Inflation and Interest Rates							
General Inflation			3.0%	3.0%	3.0%	3.0%	3.0%
Construction Inflation			3.0%	3.0%	3.0%	3.0%	3.0%
Interest Earnings					0.50%	0.50%	0.50%
Customer Base							
No. of Water Accounts	8,742	8,808	8,830	8,874	8,918	8,963	9,008
No. of Water Equiv. Mtrs.	11,112	11,178	11,200	11,244	11,288	11,333	11,378
Growth Rate	0.21%	0.25%	0.25%	0.50%	0.50%	0.50%	0.50%
No. of Wastewater Accounts	8,199	8,275	8,296	8,337	8,379	8,421	8,463
No. of Wastewater EDUs	9,846	9,922	9,943	9,984	10,026	10,068	10,110
Water Sales, Water Production, and Water Supply Costs							
Estimated Water Sales (tg)							
Town	1,005,500	895,200	897,400	974,000	998,400	1,013,400	1,028,700
Airport	110,000	110,500	110,800	120,300	123,300	125,200	127,100
Total Water Sales	1,115,500	1,005,700	1,008,200	1,094,300	1,121,700	1,138,600	1,155,800
Estimated Water Sales (AF)	3,423	3,086	3,094	3,358	3,442	3,494	3,547
Water Use Factor	-7.2%	-10.1%	0.0%	8.0%	2.0%	1.0%	1.0%
Estimated Water Production (AF)							
Russian River Well Field	3,217	2,823	2,830	3,071	3,149	3,196	3,244
Santa Rosa Aqueduct	478	460	461	501	513	521	529
Total Water Production	3,695	3,283	3,291	3,572	3,662	3,717	3,773
Unaccouted for Losses	7.4%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Est. Water Production Costs							
RRWF Pumping ($/AF)	$ 70.63	$ 72.75	$ 74.93	$ 77.18	$ 79.50	$ 81.89	$ 84.35
RRWF Sub-Charges ($/AF)	$ 139.89	$ 146.89	$ 155.70	$ 155.70	$ 155.70	$ 155.70	$ 155.70
S Rosa Aq Charges ($/AF)	$ 846.36	$ 876.85	$ 913.26	$ 913.26	$ 913.26	$ 913.26	$ 913.26
RRWF Pumping Costs	$ 227,200	$ 205,400	$ 212,100	$ 237,000	$ 250,300	$ 261,700	$ 273,700
RRWF Sub-Charges	$ 450,000	$ 414,700	$ 440,700	$ 478,200	$ 490,300	$ 497,600	$ 505,200
SR Aqueduct Wtr. Purchases	$ 404,500	$ 403,400	$ 421,000	$ 457,500	$ 468,500	$ 475,800	$ 483,100
Wastewater Generation							
Est. Wastewater Flow (tg)	536,600	482,900	473,200	494,600	517,000	530,000	538,000
Wtr. Recl. Use Factor		-10.0%	-2.0%	4.0%	4.0%	2.0%	1.0%
Whls. Recycled Water Rate ($/AF)			$ 456.63	$ 456.63	$ 456.63	$ 456.63	$ 456.63
Whls. Recycled Water Sales (AF)			223	$ 241	$ 246	$ 249	$ 251
Whls. Recycled Water Revenue			$ 102,029	$ 110,191	$ 112,395	$ 113,519	$ 114,654
Capacity Fees							
Water Capacity Fee	$ 7,548	$ 7,712	$ 7,943	$ 8,181	$ 8,426	$ 8,679	$ 8,939
Water Capacity Fee Revenue	$ 176,209	$ 512,304	$ 166,932	$ 391,782	$ 371,000	$ 391,000	$ 402,000
Wastewater Capacity Fee	$ 10,560	$ 10,789	$ 11,113	$ 11,446	$ 11,789	$ 12,143	$ 12,507
Wastewater Capac. Fee Rev.	$ 111,370	$ 817,564	$ 83,939	$ 676,646	$ 495,000	$ 510,000	$ 525,000

- Customer Water and Wastewater Demand – Due to current water shortage conditions and a statewide call for 25 percent mandatory water user reduction in 2015, water sales and wastewater flows are estimated to be lower than normal in FY 15-16 and FY 16-17. While water supply conditions are assumed to return to normal in 2016, the financial model reflects a gradual rebound in water and wastewater demand. This is a reasonable assumption given historical responses to drought conditions.
- Capacity Fee Revenue – Annual capacity fee revenue in FY 15-16 and FY 16-17 is based on estimates provided in the proposed biennial budget. In future years, capacity fee revenues are estimated based new development assumptions and on the current water and wastewater capacity fees. Capacity fees are adjusted annually based on construction inflation.
- Water Supplies – Water provided to the Airport area is SCWA water delivered through the Santa Rosa Aqueduct. This water is more expensive than the Town's other water

resources. Water rates for the Airport area are higher than general rates inside the Town for this reason. Water from the Santa Rosa Aqueduct also represents the marginal cost for additional water delivered to the Town's customers. For this reason, the highest tier rate reflects the cost of this water supply.

Most of the water within the Town service area is supplied from the Russian River Well Field (RRWF), which draws water from the Russian River. Production from these facilities is subject to SCWA Russian River Diversion charges, as well as the cost of pumping.

- Water Purchase Costs – The Town pays the SCWA for water purchased from the Santa Rosa Aqueduct, as well as for water pumped from the RRWF. For FY 15-16, SCWA adopted a 4.15 percent increase in the rate for water from the Santa Rosa Aqueduct and a 6.0 percent increase in the rate for RRWF water. These cost increases are reflected in the proposed water rates for FY 15-16. In 2009, the Town adopted procedures to automatically adjust water usage rates to reflect any changes in the cost of SCWA water purchases. This report recommends that these procedures be re-adopted for the next five years. For this reason, SCWA water rate increases beyond FY 15-16 are not included in the financial plan.

- Long-Term Debt Obligations – The water and water reclamation utilities both have outstanding long-term debt obligations. The financial plans reflect scheduled debt service payments, as well as requirements for debt service coverage. **Exhibit II-3** summarizes annual debt obligations during the planning period. In addition to the debt obligations within the utilities, both utilities pay 11.5 percent of the Town's 2012A Lease Revenue Bonds related to the Town Civic Center. That obligation is reflected in the financial plan as a transfer to the 2012A Debt Service Fund. No new debt is anticipated during the five-year planning period.

- Debt Service Coverage – Existing bond covenants require the Town to maintain water and water reclamation revenues such that total revenues are sufficient to pay all operating and maintenance costs, plus 120 percent of annual debt service. Drought conditions have resulted in reduced water demand and reduced water rate and wastewater rate revenues. As a result, the ability of the Town to meet debt service coverage requirements FY 14-15 and in future years is uncertain. The proposed water and wastewater rates are intended to correct this situation, in part, by using the recommended Rate Stabilization Fund. Use of the Rate Stabilization Fund is described later in this section.

- Capital Improvement Program – The Town's 2016-2020 water and water reclamation capital improvement programs are reflected in the financial plans, as prepared by staff. Individual projects for the next five years, including project costs and project timing are reflected in **Exhibits II-4 and II-5**. Projects are funded from either the R&R funds (rehabilitation and upgrade projects) or the capital funds (expansion projects), and the funding source is shown for each project. In some cases project costs are covered by both funds. CIP costs in Exhibits II-4 and II-5 are shown in current (2015) dollars. They are then escalated at 3 percent per year to the year of construction in the financial plan models.

- Recycled Water Sales – Consistent with a new policy adopted by the Town Council in 2014, the distribution of recycled water within the Town's water service area (urban reuse) will become a water utility function in FY 15-16. In addition, the water utility will buy water from the water reclamation utility for urban reuse, and revenue from the sale of this recycled water will accrue to the water utility. As described later in this report, it is recommended that the wholesale price of recycled water be set at 50 percent of cost of water from the Santa Rosa Aqueduct. This price provides reasonable compensation to the water reclamation utility for providing recycled water for urban use, and also represents a fair price to be paid by the water utility.

Exhibit II-3
Windsor Water District
Summary of Water and Water Reclamation Long-Term Debt Obligations

	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
1999 SRF Loan (Wastewater Trtmt. and Expan. Project -- 100% Water Reclamation)							
Principal Payment	458,121	471,407	485,078	499,145	513,620	528,515	543,842
Interest Payment	134,420	121,135	107,464	93,397	78,922	64,027	48,700
Total Payment	592,541	592,542	592,542	592,542	592,542	592,542	592,542
Remaining Balance	4,177,065	3,705,658	3,220,580	2,721,435	2,207,815	1,679,300	1,135,458
2009 ARRA Loan for Water Supply Development Program (100% Water)							
Principal Payment	$ 23,768	$ 24,367	$ 24,980	$ 25,609	$ 26,253	$ 26,915	$ 27,592
Interest Payment	$ 11,392	$ 10,793	$ 10,179	$ 9,551	$ 8,907	$ 8,245	$ 7,568
DS Reserve Contribution	$ 3,516	$ 3,516	$ 3,516	$ 3,516	$ 3,516	$ 3,516	
Total Payment	$ 38,676	$ 38,676	$ 38,675	$ 38,676	$ 38,676	$ 38,676	$ 35,160
Remaining Balance	$ 437,493	$ 413,126	$ 388,146	$ 362,537	$ 336,284	$ 309,369	$ 281,777
2012A Refunding Lease Revenue Bonds (Town Center -- 11.5% Water & 11.5% Water Reclamation)							
Principal Payment	$ 346,100	$ 354,100	$ 361,700	$ 368,500	$ 379,600	$ 384,900	$ 395,300
Interest Payment	$ 104,727	$ 96,442	$ 87,970	$ 79,320	$ 70,485	$ 61,420	$ 52,197
Total Payment	$ 450,827	$ 450,542	$ 449,670	$ 447,820	$ 450,085	$ 446,320	$ 447,497
Remaining Balance	$ 4,140,200	$ 3,786,100	$ 3,424,400	$ 3,055,900	$ 2,676,300	$ 2,291,400	$ 1,896,100
2012D CSCDA Pooled Financing (Corp. Yard -- 50% Water and 50% Water Reclamation) (1)							
Principal Payment	$ 405,000	$ 415,000	$ 420,000	$ 435,000	$ 450,000	$ 465,000	$ 485,000
Interest Payment	$ 248,075	$ 239,975	$ 231,675	$ 219,075	$ 206,025	$ 188,025	$ 169,425
Total Payment	$ 653,075	$ 654,975	$ 651,675	$ 654,075	$ 656,025	$ 653,025	$ 654,425
Remaining Balance	$ 7,175,000	$ 6,760,000	$ 6,340,000	$ 5,905,000	$ 5,455,000	$ 4,990,000	$ 4,505,000
Total Annual Debt Service Obligations							
Water System	$ 417,059	$ 417,976	$ 416,224	$ 417,213	$ 418,448	$ 416,515	$ 413,835
Water Reclamation System	$ 970,924	$ 971,842	$ 970,092	$ 971,079	$ 972,314	$ 970,381	$3,871,433

Notes:

(1) Allocated 50 percent each to the Water and Water Reclamation systems. Portions of the 2012D bonds are also paid by the Town's General Fund, the Public Facilities Fund, and capacity fee revenues transferred from the Capital Funds.

Exhibit II-4
Windsor Water District
Water System Capital Improvement Program (1)

Project Name	Proj. #	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	5-Yr Total	Fund 442	Fund 460
New Supply Well at Esposti	1310	610,000	610,000	720,000	1,936,350		3,876,350	26%	74%
New Supply Well at North Windsor						520,000	520,000	0%	100%
New Well at Russian River Well Field					500,000	1,150,000	1,650,000	63%	37%
Water Meter Transmitter Upgr.				330,000			330,000	100%	0%
Tank Site Enclosures	1312	155,000					155,000	100%	0%
Chlorine Generation System Improv.		80,000					80,000	100%	0%
Recycled Water Hydrant System		85,000					85,000	0%	100%
Total		**930,000**	**610,000**	**1,050,000**	**2,436,350**	**1,670,000**	**6,696,350**	39%	61%
Total from Fund 442 (with infl.)		394,000	159,000	533,000	868,000	792,000			
Total from Fund 460 (with infl.)		536,000	451,000	549,000	1,716,000	1,033,000			

Notes:
(1) From Appropriations Plan Summary for Water Projects, received March 12, 2015. Recycled water hydrant system added May 5, 2015.

Exhibit II-5
Windsor Water District
Water Reclamation System Capital Improvement Program (1)

Project Name	Proj. #	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	5-Yr Total	Fund 411	Fund 430
Mitchell Lane Pump Sta. Upgrade	1404			200,000	1,810,000		2,010,000	100%	0%
Mitchell Lane Transfer Pipeline	1401			40,000	660,000		700,000	100%	0%
Grit Removal System Rpr. & Upgrade	1111	10,000	110,000				120,000	100%	0%
Headworks Screening Upgrade	1113	60,000	330,000				390,000	100%	0%
Influent Wet Well Screen Installation	1114	75,000	575,000				650,000	100%	0%
Security Fencing Repair & Upgrade	1110			240,000			240,000	100%	0%
Return Activated Sludge Screening	1112					300,000	300,000	100%	0%
Valve and Piping Improvements	New	170,000					170,000	100%	0%
FY 16-18 Trtmt. Plant Eq. Repl. /Refurb.	New		90,000	450,000			540,000	100%	0%
West Trunk Sewer - Phase 3	New					1,540,000	1,540,000	0%	100%
Blower Building Upgrades	New		30,000	245,000			275,000	100%	0%
Ponds 8, 9, and 10	New	100,000	80,000				180,000	100%	0%
Total		**415,000**	**1,215,000**	**1,175,000**	**2,470,000**	**1,840,000**	**7,115,000**		
Total from Fund 411 (with infl.)		415,000	1,215,000	1,210,000	2,620,000	328,000			
Total from Fund 430 (with infl.)		-	-	-	-	1,683,000			

Notes:
(1) From Appropriations Plan Summary for Water Reclamation Projects, received March 24, 2015.

Fund Balances and Cash Flows

The financial plan models are annual cash flow models that reflect beginning working capital balances, revenues and transfers in, expenditures and transfers out, and ending balances for each fund each year of the planning period. The financial plan models include actual FY 13-14 revenues and expenditures, estimates for FY 14-15, proposed budgets for FY 15-16 and FY 16-17, and estimates based on inflation and growth for FY 17-18 through FY 19-20.

Actual working capital balances in each fund were obtained as of June 30, 2014, which was the end of last fiscal year. Fund balances are then calculated for the end of each year based on revenues, expenditures, and transfers occurring each year. Fiscal year-end balances for each fund of the water and water reclamation utilities as of June 30, 2014 were as follows:

	Water	Wtr. Recl.
Operating Fund	$6,037,000	$8,428,000
Repair & Replacement Fund	$3,026,000	$5,719,000
Capital Fund	$4,352,000	($3,103,000)
Total	$13,415,000	$11,044,000

Central to water and wastewater rate analyses are transfer activities within the operating funds, including the following:

- Transfers to the General Fund related to direct cost reimbursement
- Transfers to the 2012A Debt Service Fund related to debt obligations outside of the water and water reclamation utilities (Town Center)
- Transfers from the General and Public Facilities funds related to debt service obligations within the water and water reclamation utilities (Corporation Yard debt)
- Transfers to the R&R funds as contributions to ongoing rehabilitation and upgrade project needs
- Transfers from the capital funds reflecting capacity fee revenue applied to debt service obligations.

The financial plan models also include the anticipated cash flows into and out of the R&R funds and the capital funds in order to ensure sufficient cash for capital project costs. Transfers into both the water and water reclamation R&R funds are maintained at current levels with one exception. Transfers to the water reclamation R&R fund have been reduced from $1.6 million per year to $1.4 million per year for FY 15-16 and FY 16-17 due to drought-related reduced wastewater rate revenue. This temporary reduction in the annual transfer will not affect the timing of planned capital improvements.

Historically, a portion of the capacity fee revenues in both the water and water reclamation capital funds has been transferred annually to the operating fund to pay a portion of annual debt service on the 2012D bonds (Corporation Yard). The water reclamation capital fund has also been used to pay debt service on the SRF loan. Because of these transfers, the water reclamation fund currently shows a negative cash balance, and it continues to become increasingly negative each year. It is recommended that the Town zero out this negative cash balance with a transfer from the water reclamation repair and replacement fund at the end of FY 14-15. This will provide greater transparency regarding the financial condition of the water reclamation utility (which may be misinterpreted now). In future years, use of the capital funds to pay a portion of debt service should be limited to available cash, with consideration of the capital project needs in each of the capital funds. In order to preserve funds in the water reclamation capital fund for future capital projects, the fund is not used for debt service during the planning period.

Financial Plan Findings and Recommendations

At present (FY 14-15), the water and water reclamation utilities are both experiencing a financial deficit, due in part to reduced water sales stemming from drought conditions. This is expected to continue until water supply and water demand conditions normalize. The financial plan models assume a return to normal water supply conditions in 2016, and a rebound in demand over several years. Later in this section information is presented on the potential impacts of extended water shortage, and includes recommendations for establishing Rate Stabilization Funds in each utility and for adopting water shortage rates. Financial plan findings on the current financial situation for the water and water reclamation utilities are summarized below.

Debt Service Coverage

The debt service coverage obligation associated with the 2012D bonds is a joint obligation of the water and water reclamation utilities. An estimate of the debt service coverage calculation reflecting both utilities was developed based on estimates for FY 14-15 and financial plan estimates for FY 15-16, which reflect expectations for continued reduced water and water reclamation revenue. The Town anticipates receiving significant water and wastewater capacity fee revenue in FY 14-15, which should enable the utilities to jointly exceed the debt service coverage requirement of 1.20 times annual debt service.

The Town has the ability to establish Rate Stabilization Funds (RSFs) for purposes in assisting in meeting debt service coverage obligations. In years when money is added to the RSFs that amount is deducted from gross revenue for purposes of the debt service coverage calculation. Then, in years when money is withdrawn from the RSF, that amount is included in gross revenue for purposes of debt service coverage calculations. It is recommended that any excess revenue (revenue in excess of that needed to meet the 1.20 coverage requirement in FY 14-15) from both utilities be placed in RSFs (one for each utility) and thereby be available for use in FY 15-16.

While the Town has not used the RSF for this purpose in the past, it is allowed in bond documents related to 2012D long-term debt. Funding the RSF in FY 14-15 and using funds, as necessary, in FY 15-16 substantially mitigates the need for rate increases in the two utilities.

Exhibit II-6 summarizes the debt service coverage calculation for FY 14-15 based on estimates through the end of the year, as well as the calculation for FY 15-16 based on financial plan estimates and the recommendations for increasing water and wastewater rates contained in this report. Even with the general rate increases recommended at this time, the Town should closely monitor the water and water reclamation debt service coverage requirements related to the 2012D bond. In particular, the coverage calculation is sensitive to estimated water and wastewater capacity fee revenue from new development.

In addition to using the RSFs to meet debt service coverage obligations, the RSFs can also be a source of funds for bridging the financial deficit caused by water shortages. The use of the RSFs for this purpose is presented later in this section.

Water Utility

Exhibit II-7 (on two pages) presents the financial plan for the water utility. Primary findings and recommendations related to the water utility include:

Exhibit II-6
Windsor Water District
Debt Service Coverage Calculations

For Fiscal Year Ending June 30, 2015 -- Based on Estimates for Year-End

	Water	Water Reclamation	Combined
Revenues			
User Rates	5,658,400	7,239,700	12,898,100
Other Operating Fund Revenue	440,215	493,961	934,176
Capital Funds Revenues	547,304	873,472	1,420,776
Transfers In From Gen. Fund	65,498	65,498	130,996
Transfers in From PFF Fund	39,299	39,299	78,598
From/(To) Rate Stab. Fund	(850,000)	(500,000)	(1,350,000)
Total Revenues	**5,900,716**	**8,211,930**	**14,112,646**
Operating & Maintenance Expenses			
Operation & Maintenance	5,229,937	6,953,201	12,183,138
General Fund Cost Reimb.	53,220	54,200	107,420
2001A Debt Service Fund	51,812	51,812	103,624
Total Oper. & Maint. Expenses	**5,334,969**	**7,059,213**	**12,394,182**
Net System Revenue	**565,747**	**1,152,717**	**1,718,464**
Debt Service			
General Obligation Bonds			
Principal		7,000	7,000
Interest		1,550	1,550
1999 SRF Loan			
Principal		471,407	471,407
Interest		121,135	121,135
2009 SDW SRF Loan			
Principal	24,367		24,367
Interest	10,793		10,793
2012D CSCDA Bond			
Principal	207,500	207,500	415,000
Interest	119,988	119,988	239,975
Total Debt Service	**362,648**	**928,580**	**1,291,227**
DS Coverage Ratio	1.56	1.24	**1.33**
Minimum Required			1.20

For Fiscal Year Ending June 30, 2016 -- Based on Financial Plan Estimates

	Water	Water Reclamation	Combined
Revenues			
User Rates	6,334,300	7,484,800	13,819,100
Other Operating Fund Revenue	333,150	419,709	752,859
Capital Funds Revenues	201,932	141,108	343,040
Transfers In From Gen. Fund	65,168	65,168	130,336
Transfers in From PFF Fund	39,101	39,101	78,202
From/(To) Rate Stab. Fund	-	500,000	500,000
Total Revenues	**6,973,651**	**8,649,886**	**15,623,537**
Operating & Maintenance Expenses			
Operation & Maintenance	5,950,117	7,653,873	13,603,990
General Fund Cost Reimb.	42,144	45,576	87,720
2001A Debt Service Fund	51,712	51,712	103,424
Total Oper. & Maint. Expenses	**6,043,973**	**7,751,161**	**13,795,134**
Net System Revenue	**929,678**	**898,725**	**1,828,403**
Debt Service			
General Obligation Bonds			
Principal		8,000	8,000
Interest		1,200	1,200
1999 SRF Loan			
Principal		485,078	485,078
Interest		107,464	107,464
2009 SDW SRF Loan			
Principal	24,980		24,980
Interest	10,179		10,179
2012D CSCDA Bond			
Principal	210,000	210,000	420,000
Interest	115,838	115,838	231,675
Total Debt Service	**360,997**	**927,580**	**1,288,576**
DS Coverage Ratio	2.58	0.97	**1.42**
Minimum Required			1.20

Exhibit II-7
Windsor Water District
Water System Financial Plan

	FY 13-14A	FY 14-15E	FY 15-16B	FY 16-17B	FY 17-18	FY 18-19	FY 19-20
Rate Increase (Excl. SCWA Auto. Adjust.) -->			**6.0%** August	**2.0%** July	**2.0%** July	**2.0%** July	**2.0%** July
WATER OPERATING FUND (440)							
Working Capital Beginning Balance	5,273,439	6,036,891	5,874,317	5,572,268	5,671,420	5,762,520	5,811,220
Revenues and Transfers							
Uses of Money	15,183	25,006	25,000	25,000	28,400	28,800	29,100
Water Usage Charges	4,555,582	3,890,000	3,979,000	4,318,800	4,427,200	4,493,800	4,561,400
Water Service Charges	1,661,479	1,170,000	1,398,000	1,433,000	1,469,000	1,505,800	1,543,600
Pressure Zone Pumping Charges		129,300	137,000	139,700	142,500	145,400	148,300
Recycled Water Usage Charges			216,200	216,200	216,200	216,200	216,200
Recycled Water Service Charges			19,900	20,300	20,700	21,100	21,500
Fireline Service Charges		469,100	584,200	595,900	607,800	620,000	632,400
Backflow/Pres. Reduc. Fees	101,135	94,844	95,150	97,053	100,000	103,000	106,100
Other Revenue	296,917	320,364	213,000	73,000	75,200	77,500	79,800
Transfers In							
From Gen. Fund for 2012D DS	65,308	65,498	65,168	65,408	65,600	65,300	65,400
From PF Fund for 2012D DS	39,185	39,299	39,101	39,245	39,400	39,200	39,300
From Wtr Cap Fund for 2012D DS	84,900	85,147	84,718	85,030	85,300	84,900	85,100
Total Revs. and Transfers	6,819,690	6,288,559	6,856,437	7,108,636	7,277,300	7,401,000	7,528,200
Expenditures and Transfers							
Personnel	2,370,353	2,466,221	2,547,240	2,565,394	2,642,400	2,721,700	2,803,400
Administration	175,759	239,551	290,931	299,996	309,000	318,300	327,800
Maintenance	269,315	224,204	323,004	337,445	347,600	358,000	368,700
Operations	923,756	1,267,361	1,563,142	1,312,827	1,352,200	1,392,800	1,434,600
RRWF/GW Pumping	227,200	205,400	212,100	237,000	250,300	261,700	273,700
SCWA Water Purchases	853,690	818,100	861,700	935,700	958,800	973,400	988,300
Recycled Water Purchases			102,000	110,200	112,400	113,500	114,700
Capital Outlay	-	9,100	50,000	-	-	-	-
Debt Service							
On 2009 SDW SRF Loan	38,676	38,676	38,675	38,676	38,700	38,700	35,200
On 2012D Bond (Water portion)	326,538	327,488	325,838	327,038	328,000	326,500	327,200
Transfers Out							
To General Fund	69,107	53,220	42,144	43,710	45,000	46,400	47,800
To 2012A Debt Service Fund	51,845	51,812	51,712	51,499	51,800	51,300	51,500
To Water R&R Fund (442)	750,000	750,000	750,000	750,000	750,000	750,000	750,000
Total Expend. and Transfers	6,056,239	6,451,133	7,158,485	7,009,484	7,186,200	7,352,300	7,522,900
Ending Balance	**6,036,891**	**5,874,317**	**5,572,268**	**5,671,420**	**5,762,520**	**5,811,220**	**5,816,520**
Water Operating Reserve (25%)	1,327,000	1,425,000	1,602,000	1,565,000	1,609,000	1,651,000	1,693,000
Water Rate Stabilization Fund		850,000	850,000	1,250,000	1,250,000	1,250,000	1,250,000
Uncommitted Fund Balance	4,709,891	3,599,317	3,120,268	2,856,420	2,903,520	2,910,220	2,873,520
Water DS Coverage (min. 1.20)	5.60	1.56	2.58	3.19	4.22	4.17	4.05

- The estimated financial deficit in the water operating fund for FY 14-15 is about $163,000, and in FY 15-16 without a rate increase may be about $750,000 based on assumptions reflected in the financial plan. However, estimated end-of-year fund balances in both years are also more than three times the target operating reserve level. As a result, the financial deficit is not a critical issue at this time, ***except*** as it impacts the calculation of debt service coverage.
- As part of a strategy to protect the water utility from the potential financial effects of water shortages, it is recommended that the Town establish a RSF, with a target funding goal of $1.25 million. Because money moving into the RSF is deducted from gross revenue for the debt service coverage calculation, the RSF for the water utility can only be partially funded in FY 14-15.
- The transfer from the water operating fund to the R&R fund is less than the target amount, equal to annual depreciation expense, by about $340,000 per year. However, planned capital projects to be funded by the R&R fund will have sufficient funding at the current level of annual transfer. No change is the annual transfer is needed at this time.

Exhibit II-7 -- Continued
Windsor Water District
Water System Financial Plan

	FY 13-14A	FY 14-15E	FY 15-16B	FY 16-17B	FY 17-18	FY 18-19	FY 19-20
WATER REPLACEMENT & REHABILITATION FUND (442)							
Beginning Balance	2,344,891	3,026,037	3,418,757	3,386,038	3,806,112	4,042,112	3,944,312
Revenues and Transfers							
Uses of Money	3,526	15,000	15,000	15,000	19,000	20,200	19,700
Grant Revenue	-	-	-	-	-	-	-
Transfers From Wtr. Oper. Fund	750,000	750,000	750,000	750,000	750,000	750,000	750,000
Total Revs. and Transfers	753,526	765,000	765,000	765,000	769,000	770,200	769,700
Expenditures and Transfers							
Salaries & Wages	45,981	20,580	43,919	43,626			
Professional Services	16,778	-	50,000	65,000			
Other Expenses	-	-	309,800	77,300			
Capital Improvement Program	9,621	351,700	394,000	159,000	533,000	868,000	792,000
Total Expend. and Transfers	72,380	372,280	797,719	344,926	533,000	868,000	792,000
Ending Balance	**3,026,037**	**3,418,757**	**3,386,038**	**3,806,112**	**4,042,112**	**3,944,312**	**3,922,012**
WATER CAPITAL FUND (460)							
Beginning Balance	4,288,856	4,351,672	4,737,573	4,281,677	4,135,467	3,892,867	2,502,467
Revenues and Transfers							
Uses of Money	52,858	20,000	20,000	20,000	20,700	19,500	12,500
Water Capacity Fees	176,209	512,304	166,932	391,782	371,000	391,000	402,000
Total Revs. and Transfers	229,067	532,304	186,932	411,782	391,700	410,500	414,500
Expenditures and Transfers							
Salaries & Wages	43,690	28,205	22,110	21,962			
Transfer to Wtr. Oper. Fund for DS	84,900	85,147	84,718	85,030	85,300	84,900	85,100
Capital Improvement Program	37,661	33,051	536,000	451,000	549,000	1,716,000	1,033,000
Total Expend. and Transfers	166,251	146,403	642,828	557,992	634,300	1,800,900	1,118,100
Ending Balance	**4,351,672**	**4,737,573**	**4,281,677**	**4,135,467**	**3,892,867**	**2,502,467**	**1,798,867**

- A moderate general water rate increase is needed at this time in order to (1) offset the effects of the current drought and reduced water sales, (2) incorporate increases costs associated with SCWA's rate increases for FY 15-16, and (3) help ensure the Town will continue to meet debt service coverage obligations. The FY 15-16 annual water rate revenue requirement for potable water, including pressure zone pumping charges, is $5,514,000. This represents an overall water rate increase of 6 percent over current water rates. Estimated water rate increases through the five-year planning period necessary to meet the utility's service and financial obligations are summarized below, and described in greater detail in Section III of this report.
  - August 2015 — 6% overall for all rate components
  - July 2016 — SCWA adjustment for water usage charges
2% for service charges and pumping charges
  - July 2017 — SCWA adjustment for water usage charges
2% for service charges and pumping charges
  - July 2018 — SCWA adjustment for water usage charges
2% for service charges and pumping charges
  - July 2019 — SCWA adjustment for water usage charges
2% for service charges and pumping charges
- The mechanism for incorporating automatic adjustments to the water usage rates to offset increased costs stemming from changes in charges from the SCWA has expired. This has been an important mechanism to limit water rate increases and ensure greater financial stability for the water utility, and the automatic adjustment mechanism should be re-adopted. The proposed updated automatic adjustment mechanism is described in

Section III of this report and will enable annual adjustments from July 2016 through July 2020. Re-adoption will require going through the Proposition 218 rate adoption process.

In conclusion, the water operating fund has an annual financial deficit stemming from water shortage conditions and reduced water sales. A moderate water rate increase is immediately needed in order to ensure compliance with debt service coverage requirements, as well as to reflect increases water supply and other costs of providing water service.

Water Reclamation Utility

Exhibit II-8 (on two pages) presents the financial plan for the water reclamation utility. Primary findings and recommendations related to the water reclamation utility include:

- The estimated financial deficit in the water reclamation operating fund for FY 14-15 is about $1.12 million, and in FY 15-16 without a rate increase may be about $2.6 million based on assumptions reflected in the financial plan. However, estimated end-of-year fund balances in both years are also more than two times the target operating reserve level. As a result, the financial deficit is not a problem from a cash flow standpoint, ***except*** as it affects the calculation for debt service coverage.
- As part of a strategy to protect the water reclamation utility from the potential financial effects of water shortages, it is recommended that the Town establish a RSF, with a target funding goal of $750,000. Because money moving into the RSF is deducted from gross revenue for the debt service coverage calculation, the RSF for the water reclamation utility can only be partially funded in FY 14-15, and it may require several years to reach full funding.
- The current transfer from the water reclamation operating fund to the capital repair and replacement fund is less than the target amount, equal to annual depreciation expense, by about $470,000 per year. However, planned capital projects to be funded by the R&R fund will have sufficient funding at a reduced level of annual transfer. To help limit wastewater rate increases in the planning period, it is recommended that the annual transfer to the R&R fund be temporarily reduced to $1.4 million for the next two years.
- A moderate wastewater rate increase is needed at this time in order to (1) offset the effects of reduced wastewater rate revenue stemming from the drought, (2) adequately cover the costs of providing wastewater service, and (3) to meet debt service coverage obligations. The FY 15-16 annual wastewater rate revenue requirement, excluding lift station fees, is $7,287,000. This represents an overall wastewater rate increase of 7 percent over current wastewater rates. Estimated wastewater rate increases through the five-year planning period necessary to meet the utility's service and financial obligations are summarized below, and described in greater detail in Section IV of this report.
    - August 2015 — 7% overall for all rate components
    - July 2016 — 5% overall for all rate components
    - July 2017 — 5% overall for all rate components
    - July 2018 — 5% overall for all rate components
    - July 2019 — 5% overall for all rate components

In conclusion, the water reclamation operating fund has an annual financial deficit stemming from water shortage conditions and reduced wastewater rate revenue. A moderate wastewater rate increase is immediately needed in order to ensure compliance with debt service coverage requirements, as well as to reflect the increased costs associated with providing service to customers.

Exhibit II-8
Windsor Water District
Water Reclamation System Financial Plan

	FY 13-14A	FY 14-15E	FY 15-16B	FY 16-17B	FY 17-18	FY 18-19	FY 19-20
		Rate Increase -->	7.0%	5.0%	5.0%	5.0%	5.0%
			August	July	July	July	July
WATER RECLAMATION OPERATING FUND (410)							
Working Capital Beginning Balance	8,656,114	8,427,736	7,305,387	5,244,626	4,272,593	3,617,593	3,390,693
Revenues and Transfers							
Uses of Money	(5,667)	30,000	30,000	30,000	21,400	18,100	17,000
Wastewater Usage Rate Rev.	6,974,494	5,820,000	6,193,950	6,797,600	7,460,000	8,029,600	8,558,000
Wastewater Service Charge Rev.	393,374	1,090,000	1,093,050	1,153,400	1,217,200	1,284,400	1,355,400
Lift Station Fees	79,830	68,400	73,200	76,900	80,700	84,700	88,900
Recycled Water Sales	173,070	261,300	22,600	23,700	24,900	26,100	27,400
Wholesale Recycled Water Sales			102,000	110,200	112,400	113,500	114,700
Other Revenue	449,615	463,961	389,709	406,206	418,400	431,000	443,900
Transfers In							
From Gen. Fund for 2012D DS	65,308	65,498	65,168	65,408	65,600	65,300	65,400
From PF Fund for 2012D DS	39,185	39,299	39,101	39,245	39,400	39,200	39,300
From WR Cap Fund for 2012D DS	84,900	85,147	-	-	-	-	-
From WR Cap Fund for SRF Loan	533,287	533,288	-	-	-	-	-
Total Revs. and Transfers	8,787,395	8,456,893	8,008,778	8,702,659	9,440,000	10,091,900	10,710,000
Expenditures and Transfers							
Personnel	2,736,345	2,860,549	3,126,091	3,158,526	3,253,300	3,350,900	3,451,400
Administration	285,844	254,549	278,715	290,378	299,100	308,100	317,300
Maintenance	388,629	481,021	543,179	400,319	412,300	424,700	437,400
Operations	754,753	1,258,463	1,540,509	1,129,740	1,163,600	1,198,500	1,234,500
Chemicals and Utilities	649,584	665,040	698,000	698,000	718,900	740,500	762,700
Geysers Pipeline Pmt. to S Rosa	706,897	741,379	741,379	775,862	799,100	823,100	847,800
Biosolids Removal	853,690	650,000	700,000	800,000	824,000	848,700	874,200
Capital Outlay	-	42,200	26,000	5,000	5,200	5,400	5,600
Debt Service							
On 1999 SRF Loan	592,541	592,542	592,542	592,542	592,500	592,500	592,500
On 2012D Bond Wtr. Recl. portion)	326,538	327,488	325,838	327,038	328,000	326,500	327,200
Transfers Out							
To General Fund	69,107	54,200	45,576	45,789	47,200	48,600	50,100
To 2012A Debt Service Fund	51,845	51,812	51,712	51,499	51,800	51,300	51,500
To Wtr. Recl. R&R Fund (411)	1,600,000	1,600,000	1,400,000	1,400,000	1,600,000	1,600,000	1,600,000
Total Expend. and Transfers	9,015,773	9,579,242	10,069,540	9,674,692	10,095,000	10,318,800	10,552,200
Ending Balance	**8,427,736**	**7,305,387**	**5,244,626**	**4,272,593**	**3,617,593**	**3,390,693**	**3,548,493**
Wtr. Recl. Operating Reserve (25%)	1,854,000	1,995,000	2,167,000	2,069,000	2,124,000	2,180,000	2,238,000
Wtr. Recl. Rate Stabilization Fund		500,000	-	750,000	750,000	750,000	750,000
Uncommitted Fund Balance	6,573,736	4,810,387	3,077,626	1,453,593	743,593	460,693	560,493
Wtr. Recl. DS Coverage (min. 1.20)	1.99	1.24	0.97	1.44	2.56	3.08	3.51

Water Shortage Financial Analysis

This section has been prepared as part of our assistance in evaluating the potential financial implications of a water shortage, and suggests a strategy for addressing the financial deficit that is created by the reduced water sales resulting from a water shortage. While the previous financial plan analysis focuses on the current situation, and reflects current water use reductions, the analysis in this section examines a range of water shortage situations (stages) and leads to a strategy for addressing water shortage conditions regardless of magnitude.

Potential for Water Shortage

Coming on the heels of very dry years in 2013 and 2014, 2015 appears to be the driest year on record for California and the Governor has ordered a 25 percent reduction in water usage. Drought conditions have adversely impacted the Town's water and wastewater rate revenues, and there are no guarantees that shortage conditions will not continue next year, worsen, or new droughts will occur in future years. In order to develop an effective strategy for dealing with water shortage situations, it is first necessary to understand the financial vulnerability that shortages can create. The analysis begins with defining various stages of water shortage.

Exhibit II-8 -- Continued
Windsor Water District
Water Reclamation System Financial Plan

	FY 13-14A	FY 14-15E	FY 15-16B	FY 16-17B	FY 17-18	FY 18-19	FY 19-20
WATER RECLAMATION REPLACEMENT & REHABILITATION FUND (411)							
Beginning Balance	4,265,372	5,718,957	3,249,092	3,608,774	3,593,736	3,932,736	2,861,436
Revenues and Transfers							
Uses of Money	(9,161)	25,000	25,000	25,000	18,000	19,700	14,300
Grant Revenue	-	-	-	-	-	-	-
Transfers From Wtr. Oper. Fund	1,600,000	1,600,000	1,400,000	1,400,000	1,600,000	1,600,000	1,600,000
Total Revs. and Transfers	1,590,839	1,625,000	1,425,000	1,425,000	1,618,000	1,619,700	1,614,300
Expenditures and Transfers							
Salaries & Wages	110,254	71,489	77,818	78,038			
Professional Services	17,379	536,100	180,000	80,000			
Other Expenses	-	-	367,500	67,000	69,000	71,000	73,000
Capital Improvement Program	9,621	614,276	440,000	1,215,000	1,210,000	2,620,000	328,000
Transfer to Wtr. Recl. Cap. Fund		2,873,000					
Total Expend. and Transfers	137,254	4,094,865	1,065,318	1,440,038	1,279,000	2,691,000	401,000
Ending Balance	**5,718,957**	**3,249,092**	**3,608,774**	**3,593,736**	**3,932,736**	**2,861,436**	**4,074,736**
WATER RECLAMATION CAPITAL FUND (430)							
Beginning Balance	(2,666,889)	(3,103,037)	-	116,108	826,209	1,325,309	1,841,909
Revenues and Transfers							
Uses of Money	40,869	(24)	-	-	4,100	6,600	9,200
Wastewater Capacity Fees	111,370	817,564	83,939	676,646	495,000	510,000	525,000
Other Revenue	29,800	30,932	32,169	33,456			
Transfer from Wtr. Recl. R&R Fund	-	2,873,000	-	-	-	-	-
Total Revs. and Transfers	182,039	3,721,472	116,108	710,102	499,100	516,600	534,200
Expenditures and Transfers							
To WR Oper. Fund for 2012D DS	84,900	85,147	-	-	-	-	-
To WR Oper. Fund for SRF Loan DS	533,287	533,288	-	-	-	-	-
Capital Improvement Program	-	-	-	-	-	-	1,683,000
Total Expend. and Transfers	618,187	618,435	-	-	-	-	1,683,000
Ending Balance	**(3,103,037)**	**-**	**116,108**	**826,209**	**1,325,309**	**1,841,909**	**693,109**

The Town is in the process of updating and revising its Water Shortage Contingency Plan (previously contained in the Urban Water Management Plan). The revised plan includes new definitions for various stages of water use reductions in relation to water shortage conditions. These include:

- Normal Conditions
- Stage 1 – Voluntary conservation
- Stage 2 – Mandatory program with 20% water use reduction goal
- Stage 3 – Mandatory program with 30% water use reduction goal
- Stage 4 – Mandatory program with 40% water use reduction goal
- Stage 5 – Mandatory program with 50% water use reduction goal

The revised water shortage contingency plan will include specific water shortage emergency measures and prohibitions for each stage. The analysis in the section develops water shortage rate surcharges for each mandatory stage of water shortage. Water shortage surcharges are not recommended for periods of voluntary water conservation.

Financial Implications of Water Shortage

The financial condition of the Town's water utility can be affected in several ways by a water shortage. Changes in operating and maintenance costs and revenues may include:

- Reduce water sales and water sales revenue
- Reduce water purchases and pumping and reduced water purchase and pumping costs
- Increased water conservation program costs

While the reduction in water sales revenue will be partially offset by the reduction in water purchase and pumping costs, revenue will decline more than costs, creating a financial deficit. In addition, the water utility may be faced with increased water conservation costs as it works to inform and assist customers in meeting water use reduction goals.

In response to the water shortage, and the financial deficit created, the water utility has the ability to take a variety of actions. The analysis presented herein focuses on three potential courses of action, including:

- Utilizing a portion of money available in the Rate Stabilization Fund
- Implementing water shortage surcharges to partially offset lost revenue and to also increase the financial incentive for customers to reduce water usage
- Reducing transfers to the R&R Fund (and potentially deferring planned capital projects).

The water utility could also reduce operating and maintenance costs, where possible, seek additional outside revenues, or seek other water supplies to reduce the shortage. However, the analysis herein focuses on only the three primary response actions.

Water Shortage Financial Analysis

Building from the water utility financial plan model presented in Section II, an analysis of the potential financial impacts of water shortages was developed. The analysis includes estimating the magnitude of reduced revenue, reduced costs, and increased costs that may be associated with each stage of water shortage. Using FY 15-16 financial information as a basis for the analysis, **Exhibit II-9** summarizes the water utility's estimated operating revenues and expenses under *normalized* water supply conditions and under various stages of water shortage.

The normalized FY 15-16 financial estimates include revenues and expenses in near balance, with a slight increase in the reserve balances. Under water shortage conditions, a financial deficit would likely materialize due to reduced water sales. While total expenses would also decline, the fall in revenues would exceed the decline in expenses. As shown in Exhibit III-9, the financial deficit could grow to over $2.0 million in a Stage 5 situation. The financial magnitude of each of the factors contributing to the deficit at each stage of water shortage is shown in Exhibit III-9.

To mitigate the financial impacts resulting from a water shortage, a three-pronged approach is suggested. The Town could decide to rely on one, or two, or all three potential courses of action. However, spreading the response across all three areas helps to mitigate the impact in any single area. The three suggested responses are described below, and graphically presented in **Exhibit II-10**:

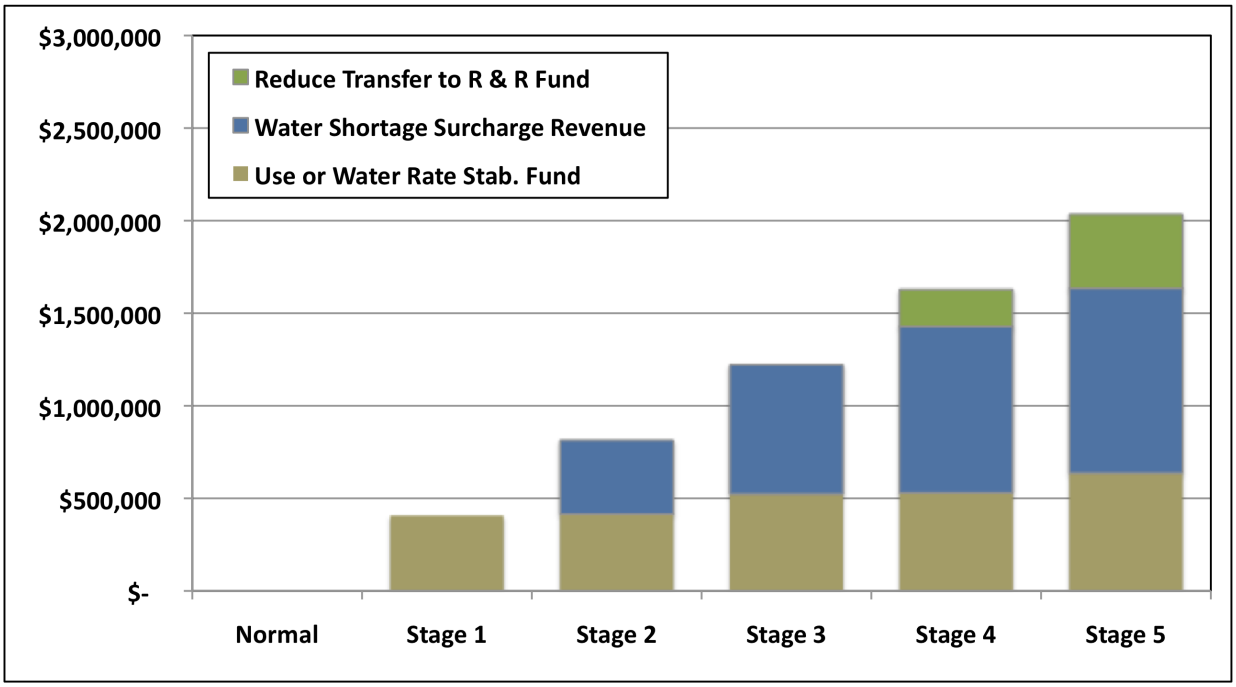
1. ***Drawdown the Rate Stabilization Fund*** – As described earlier in this report, it is recommended that the Town establish and fund a Rate Stabilization Fund in the water utility for the purpose of helping to mitigate the financial risk associated with water shortages, as well as meeting debt service coverage obligations. During a water shortage the water utility could absorb a portion of the financial deficit created by using money from the RSF. The financial analysis presented herein reflects an annual drawdown of the RSF by about $407,000 in Stage 1 and increasing up to about $637,000 in Stage 5. Therefore, the water shortage contingency reserve could provide financial support to the water utility for two to three years at the recommended $1.25 million level of funding.

Exhibit II-9
Windsor Water District
Estimated Financial Impact Created by Water Shortages (Normalized FY 15-16)

	Normal Supply (1)	Stage 1 Voluntary	Stage 2 Mandatory	Stage 3 Mandatory	Stage 4 Mandatory	Stage 5 Mandatory
Use Reduction Goals -->	None	10%	20%	30%	40%	50%
Est. Financial Impact from Water Shortage						
Reduced Water Sales Revenue		$ (499,000)	$ (998,000)	$ (1,497,000)	$ (1,996,000)	$ (2,494,000)
Reduced Water Purch./Pumping Costs		$ 125,800	$ 251,700	$ 377,500	$ 503,400	$ 629,100
Reduced Chemical Costs		$ 6,000	$ 12,000	$ 18,000	$ 24,000	$ 30,000
Increased Water Conserv. Costs		$ (39,900)	$ (79,800)	$ (119,700)	$ (159,600)	$ (199,600)
Est. Total Financial Deficit	$ -	$ (407,100)	$ (814,100)	$ (1,221,200)	$ (1,628,200)	$ (2,034,500)
Multi-Pronged Corrective Strategy						
Use of Wtr. Rate Stab. Fund (2)		$ 407,100	$ 415,100	$ 523,200	$ 530,200	$ 636,500
Reduce Transfer to Water R&R Fund		$ -	$ -	$ -	$ 200,000	$ 400,000
Impose Water Shortage Charges (3)		$ -	$ 399,000	$ 698,000	$ 898,000	$ 998,000
Total Corrective Actions	**$ -**	**$ 407,100**	**$ 814,100**	**$ 1,221,200**	**$ 1,628,200**	**$ 2,034,500**
Water Shortage Charge -->		0%	10%	20%	30%	40%

Notes:
(1) Estimates for FY 15-16 have been normalized and assumed to be in financial balance.
(2) Amounts shown are the reduction of the balance in the proposed Water Rate Stabilization Fund due to water shortage.
(3) Water shortage surcharges would apply only to water usage charges (not the service charges or pumping charges), and represent about 6.9%, 12.5%, 17.0%, and 20.4% of total annual water rate revenue in Stages 2, 3, 4, and 5, respectively.

Exhibit II-10
Windsor Water District
Bridging the Deficit Gap With Reserves and New Revenues



2. ***Impose Water Shortage Surcharges*** – In water shortage emergencies, many water utilities implement temporary water shortage surcharges to (1) help reduce the financial deficit created by the shortage, and (2) provide customers with a greater financial incentive for reducing water usage. The analysis herein suggests imposing water shortage surcharges in Stages 2, 3, 4, and 5 of a declared water shortage. While the details of the water shortage surcharges are explained in Section III of this report, the surcharges would effectively increase the water usage rates (but not the monthly service charges or pumping charges) during the period of shortage. It is suggested that water shortage surcharges provide an incremental increase to the water usage rates of 10 percent in Stage 2, 20 percent in Stage 3, 30 percent in Stage 4, and 40 percent in Stage 5. These charges would provide an estimated additional, $400,000, $700,000, $900,000, and $1,000,000, respectively, during these four stages of shortage involving mandatory conservation.

3. ***Reduce Transfer to Capital Repair and Replacement Fund*** – The financial plan model reflects annual transfers from the Operating Fund to the R&R Fund in support of the ongoing capital improvement program. The water financial plan includes annual transfers of $750,000 for capital projects. The Town could reduce the transfer for capital projects in the most severe shortage conditions, depending on the balance in the R&R Fund this could potentially require deferring a portion of the capital program, during periods of water shortage. The analysis herein reflects a reduction in the capital program transfer of $200,000 in Stage 4 and $400,000 in Stage 5. No reduction in capital program funding is suggested in earlier stages.

Exhibit II-11 presents the analysis of estimated annual revenues and expenses at each stage of water shortage, based on implementation of the response actions suggested above and estimated FY 15-16 financial conditions. This strategic approach would have similar affects in future water shortage situations as well.

Section III of this report presents recommendations for the water shortage rate surcharges and excess use penalties.

While not analyzed in the same detail, water shortages and reduced water sales due to drought also has a financial impact on the water reclamation utility. It is recommended that the Town use the wastewater RSF in a similar manner, to offset some of the deficit created by shortage conditions. A target balance for the wastewater RSF of $750,000 is recommended.

Exhibit II-11
Windsor Water District
Estimated Impact of Water Shortage on Revenues and Expenditures with Mitigation Responses (Normalized FY 15-16)

	Stage 1 Normal Supply	Stage 1 Voluntary	Stage 2 Mandatory	Stage 3 Mandatory	Stage 4 Mandatory	Stage 5 Mandatory
Use Reduction Goals -->	None	10%	20%	30%	40%	50%
Revenues						
Service Charge Revenue	$ 1,398,000	$ 1,398,000	$ 1,398,000	$ 1,398,000	$ 1,398,000	$ 1,398,000
Water Usage Charge Revenue (1)	$ 4,989,000	$ 4,490,000	$ 3,991,000	$ 3,492,000	$ 2,993,000	$ 2,495,000
Water Shortage Surcharges (2)	$ -	$ -	$ 399,000	$ 698,000	$ 898,000	$ 998,000
Excess Use Charges (3)						
Other Operating Revenue	$ 1,153,500	$ 1,153,500	$ 1,153,500	$ 1,153,500	$ 1,153,500	$ 1,153,500
Transfers In	$ 189,000	$ 189,000	$ 189,000	$ 189,000	$ 189,000	$ 189,000
Total Revenues	$ 7,729,500	$ 7,230,500	$ 7,130,500	$ 6,930,500	$ 6,631,500	$ 6,233,500
(% of normal)		94%	92%	90%	86%	81%
Expenditures and Transfers						
Personnel	$ 2,410,600	$ 2,410,600	$ 2,410,600	$ 2,410,600	$ 2,410,600	$ 2,410,600
Administration	$ 280,500	$ 280,500	$ 280,500	$ 280,500	$ 280,500	$ 280,500
Maintenance	$ 311,900	$ 311,900	$ 311,900	$ 311,900	$ 311,900	$ 311,900
Operations - Fixed	$ 1,183,300	$ 1,183,300	$ 1,183,300	$ 1,183,300	$ 1,183,300	$ 1,183,300
Water Conservation Program (4)	$ 399,100	$ 439,000	$ 478,900	$ 518,800	$ 558,700	$ 598,700
RRWF/GW Pumping (5)	$ 250,400	$ 225,400	$ 200,300	$ 175,300	$ 150,200	$ 125,200
SCWA Water Purchases (5)	$ 1,007,900	$ 907,100	$ 806,300	$ 705,500	$ 604,700	$ 504,000
Chemical Costs	$ 60,000	$ 54,000	$ 48,000	$ 42,000	$ 36,000	$ 30,000
Capital Outlay	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000
Debt Service	$ 364,500	$ 364,500	$ 364,500	$ 364,500	$ 364,500	$ 364,500
Transfer to Water R&R Fund (442)	$ 750,000	$ 750,000	$ 750,000	$ 750,000	$ 550,000	$ 150,000
Other Transfers (6)	$ 661,300	$ 661,300	$ 661,300	$ 661,300	$ 661,300	$ 661,300
Total Uses of Funds	$ 7,729,500	$ 7,637,600	$ 7,545,600	$ 7,453,700	$ 7,161,700	$ 6,670,000
(% of normal)		99%	98%	96%	93%	86%
Surplus/(Deficit) in Operations	**$ -**	**$ (407,100)**	**$ (415,100)**	**$ (523,200)**	**$ (530,200)**	**$ (436,500)**

Notes:
(1) Water usage revenue would decline in proportion to water sales.
(2) Water shortage surcharges would be imposed in Stages 2, 3, 4, and 5 to limit the financial impact of a shortage.
(3) No revenue is expected from excess use charges, as they should be totally avoidable by customers. Any revenue received from excess use charges should to directed to conservation programs and reducing the financial deficit.
(4) Estimated additional costs associated with expanded water conservation efforts during water shortages.
(5) Pumping energy and wholesale water purchase costs would be reduced by reduced water supply purchases/production.
(6) The normalized FY 15-16 financial estimates include about $318,000 in increased reserves during the year. Under water shortage conditions this would decrease and become a deficit depending on the stage of shortage.

III. Water Rates

This section of the report describes and presents recommendations for updating water rates to provide sufficient revenues for the water utility's ongoing operations, debt service obligations, and capital improvement needs.

The annual water rate revenue requirement was presented in the previous section of the report as a result of the development of the five-year financial plan. The annual water rate revenue requirement for FY 15-16 was used for cost of service analysis and water rate calculations. Rate schedules presented herein reflect the timing of proposed rate increases as shown in Exhibit II-7, of the previous section. It is recommended that the Town continue to review its financial situation and revenue needs every two years.

For the past five years, the Town has automatically adjusted water usage rates to reflect the changes in wholesale water purchase costs due to changes in SCWA's water rates. The automatic adjustment mechanism has expired, and this section also includes recommendation for re-adopting this mechanism for another five-year period.

This section also proposes water shortage rate surcharges to provide supplemental revenues to help offset the financial deficit created by drought conditions. The rate surcharges stem from the water shortage financial analysis presented at near the end of Section II.

Finally, at the request of Town staff, this section also includes a discussion of issues related to a transition from bi-monthly to monthly utility billing.

Existing Water Rates

Exhibit III-1, on the following page, summarizes the current water rates of the Town's water utility. Water rates were last adjusted in July 2014 with an automatic adjustment to water usage rates resulting from changes in the SCWA's rate and charges applicable to the Town. The rate schedule shown in Exhibit III-1, as well as all rate scheduled presented in this report, show rates on a monthly basis. Utility billing within the Town occurs on a bi-monthly basis.

Residential customers are subject to monthly service charges based on the size of the water meter, as well as a 4-tier water usage rate structure. The tier structure for multi-family customers is applied on a per-dwelling-unit basis and has different tier allocations due to differences in water usage patterns between single family and multi-family dwellings. Commercial and irrigation accounts are also subject to monthly service charges based on meter size, with commercial accounts subject to a uniform water usage rate for all water usage and irrigation accounts subject to a seasonal water usage rate structure.

Water for customers located in the Airport area is provided from SCWA's Santa Rosa Aqueduct. In agreeing to provide water service to this area the decision was made to charge Airport area customers for the cost of this more expensive water supply. As a result, the water usage rates for the Airport area are higher than within the Town. In addition to customers in the Airport area there are two commercial accounts and six single family accounts that are customers of the SCWA. These customers receive water directly from SCWA but are charged for water service by the Town. Currently, the Town charges the same water rates to these few customers as commercial customers in the Airport area, plus a SCWA service charge.

Exhibit III-1
Windsor Water District
Current Monthly Water Rates (1)

			Current
Water Usage Rates ($/gallon)			
Single Family Residential			
1st Tier	0-4,000 gal/mo	$	0.00310
2nd Tier	4,001-7,000 gal/mo	$	0.00341
3rd Tier	7,001-17,000 gal/mo	$	0.00477
4th Tier	Over 17,000 gal/mo	$	0.00572
Multi-Family Residential (per dwelling unit)			
1st Tier	0-2,000 gal/mo/DU	$	0.00310
2nd Tier	2,001-3,000 gal/mo/DU	$	0.00341
3rd Tier	3,001-5,500 gal/mo/DU	$	0.00477
4th Tier	Over 5,500 gal/mo/DU	$	0.00572
Town Commercial	All usage	$	0.00378
Town Irrig. - Winter	Nov-May	$	0.00275
Town Irrig. - Summer	Jun-Oct	$	0.00413
Airport Commercial	All usage	$	0.00572
Airport Irrig. - Winter	Nov-May	$	0.00405
Airport Irrig. - Summer	Jun-Oct	$	0.00608
Additional Usage Charge for Pumping			
Shiloh Mdws. - Zone 2	All usage	$	0.00089
- Zone 3	All usage	$	0.00226
- Zone 4	All usage	$	0.00335
Mayacama	All usage	$	0.00226
Vinecrest	All usage	$	0.00218
Monthly Service Charges ($/month)			
All Water Services including Airport Area			
	Up to 3/4" meter	$	9.13
	1" meter	$	13.97
	1 1/2" meter	$	25.95
	2" meter	$	40.39
	3" meter	$	74.10
	4" meter	$	122.25
	6" meter	$	242.52
	8" meter	$	386.90
	10" meter	$	555.39
Additional Service Charges for Pumping			
Shiloh Mdws. - Zone 2	1" meter	$	6.35
- Zone 3	1" meter	$	19.20
- Zone 4	1" meter	$	37.65
Mayacama	1" meter	$	19.20
	1 1/2" meter	$	38.30
	2" meter	$	61.30
Vinecrest	Up to 1" meter	$	23.80
Private Fire Service Charges			
	4" meter	$	61.13
	6" meter	$	121.26
	8" meter	$	193.45
	10" meter	$	277.70
	6" meter - Mayacama - Additional	$	191.65

Notes:
(1) Effective July 1, 2014. Actual billing occurs bi-monthly.

Water delivered to homes in Shiloh Meadows, the Mayacama subdivision, and on Vinecrest Road must have water pumped up to them. Because of this additional pumping requirement, the Town previously established additional service charges and an additional pumping charge applicable to water service in these areas. These charges help ensure that these customers are bearing the estimated additional costs associated with providing service to the higher elevations.

The Town also has separate service charges for private fire lines. These are connections to the water system intended to provide the required fire flows for fire protection purposes. These standby services normally do not have any water usage. However, the private fire lines represent a significant potential demand on the water system. Current private fire line charges are one-half of the standard service charges.

Rates for recycled water are addressed in Section V of this report.

Rate Setting Objectives

The development of water rate recommendations has been guided by several rate-setting objectives. These objectives have guided rate-setting decisions for a number of years. They include:

- Rates should generate sufficient revenues to meet the utility's financial obligations related to operations, debt service, and capital improvement needs
- Rates should be equitable by reflecting the cost of providing water service to each customer group
- Rates should encourage water conservation and efficient water use, and meet the best management practices for conservation-oriented water rates
- Rates should be administratively simple and easy to explain to customers
- Rate should be defensible.

These objectives guided decisions related to water rates and rate structures.

Customer Account Data and Water Use Estimates

Water rate calculations are based on a number of factors related to the Town's customers. Factors include the number of customers, customer classes, meter size, and actual water usage. **Exhibit III-2** summarizes customer account and water usage data obtained from the Town's utility billing system for 2014. Customer account data is summarized by customer class and meter size. Water usage is expressed in 1,000s of gallons (tg).

Customers of different meter sizes can place different demands on the water system. Much more water can be delivered through a 4" water meter than through a 3/4" meter. To relate the potential demands on the water system from customers with different sized water meters, hydraulic capacity factors are used to determine the number of 3/4" equivalent water meters represented by the total customer base with variable meter sizes. The ratio of instantaneous flow capacity of the various meter sizes to the capacity of a 3/4" meter is used to determine the 3/4" meter equivalencies.

Exhibit III-2
Windsor Water District
Summary of Potable Water System Accounts and Annual Water Usage (1)

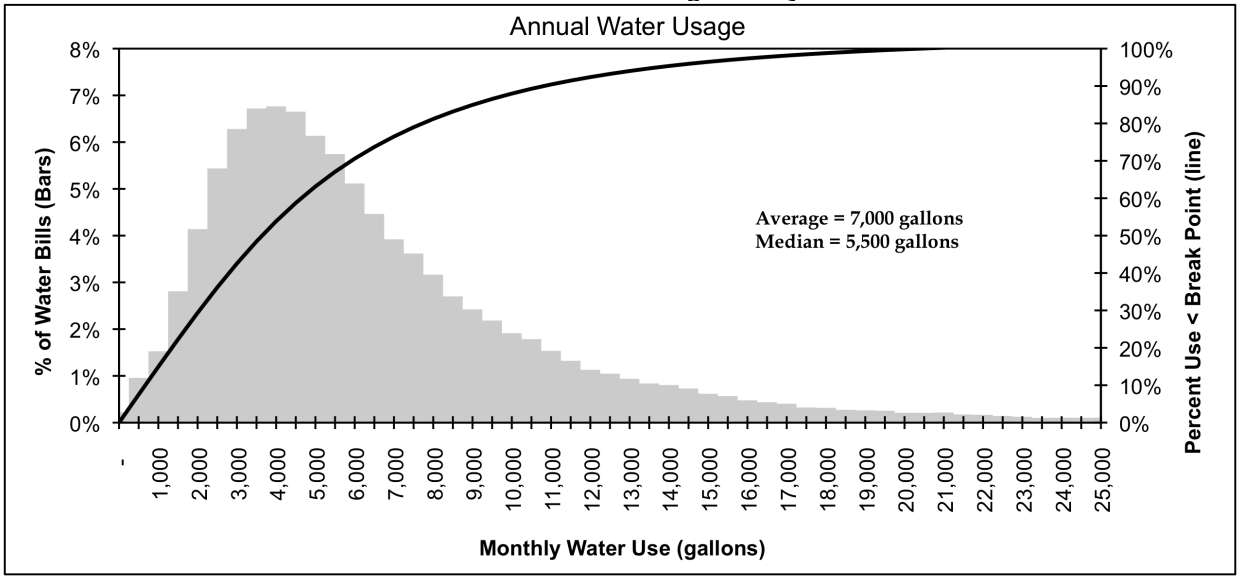
Customer Class	No. of Accounts by Meter Size (1) Up to 3/4"	1"	1 1/2"	2"	3"	4"	6"	8"	10"	Total	Annual Wtr. Use (tg)
Single Family Residential	7,126	719	1	1						7,847	655,000
Multi-Family Residential	41	8	5	8	5					67	40,500
Commercial & Irrigation	98	464	92	217	15	7			1	894	312,000
Total Accounts	7,265	1,191	98	226	20	7	-	-	1	8,808	1,007,500

Notes:
(1) Based on CY 2014 data from the utility billing system.

The analysis of tiered water rates requires detailed monthly water use data for all customers subjected to the tiered rates. Detailed water use data are used to develop information on the distribution of water usage across the spectrum of potential uses. **Exhibit III-3** shows single family residential water use data from 2014. The bars making up the bell-shaped curve indicate the number (or percentage) of water bills using various amounts of water. The line on each graph indicates the percentage of total water usage (using the right scale) that is at or below any given level of usage. For example, median monthly water usage for single family customers over the year under normal conditions is 5,500 gallons. Water usage of up to 5,500 gallons accounts for about 67 percent of all water used by single family customers.

Similar graphs and information were also developed for multi-family customers. Those data were expressed on a per-dwelling-unit basis. Frequency distributions for both single family and multi-family water usage data are integrated in the rate calculation model.

Exhibit III-3
Windsor Water District
Water Use Characteristics for Single Family Customers



The data and the information supporting these graphs are critical to tier rate design. With this information it is possible to anticipate the amount of water sales, and therefore revenues, which will result from any tier structure.

Water Rate Calculations

There are three steps to determining water rates. These are:

- Determine annual water rate revenue requirements
- Analyze the cost of providing service to each customer class
- Design water rates to recover costs from each customer class.

Water Rate Revenue Requirements

The five-year financial plan was used to identify the water rate revenue needs for each fiscal year of the planning period. Water rate calculations presented herein are based on the revenue need for FY 15-16. The total annual water rate revenue needed in FY 15-16 is $5,514,000 for potable water and pressure zone pumping charges, as shown in the financial plan (see Exhibit II-7). This is the revenue requirement used for the rate calculations presented herein.

Cost of Service Analysis

Once the annual water rate revenue requirement has been determined, the next step in the rate setting process is to evaluate the cost of providing service. Water rate calculations contained herein are intended to generate the level of revenue commensurate with the revenue requirement from the Town's water service customers. The manner in which each customer is responsible for the water utility's costs is the subject of the cost of service analysis.

The water utility incurs certain types of costs associated with making water service available to customers. Other costs are incurred as a direct result of customer water usage. The cost of service analysis is intended to allocate the costs of providing water service to customers in proportion to the extent each customer causes the costs to be incurred. There are many approaches to cost of service analysis; some are more complex than others. The approach used herein is commensurate with the data available, the distinctions currently made between various types of customers, the requirement to fairly and reasonably reflect differences is service provisions to differently situated customers.

The cost allocation methodology used herein begins by assigning all costs to one of three categories. The cost allocation process considers the level of detail available in the Town's budget and accounting documents. The three categories include:

- Customer costs, such as meter reading and billing, are fixed costs that tend to vary as a function of the number of customers being served. Customer costs are allocated to customers based on the number of accounts. That is, every customer will pay an equal share of customer-related costs.
- Capacity costs are also fixed costs; however, these tend to vary in relation to the capacity of the water system. Customers that place greater or lesser burdens on the capacity of the water system should bear greater or lesser shares of these costs. The sizing of the water system is based on the potential demand that each customer could place on the water system. Capacity costs are allocated to customers based on the size (hydraulic

capacity) of the water meter. The hydraulic capacity reflects the potential demand that a customer could place on the water system at any given time. A customer with a large meter size will be assigned a larger share of fixed capacity-related costs than one with a smaller meter. Capacity costs include costs associated with the water system's capacity including contributions to the capital program, debt service, maintenance costs, etc.

- Commodity costs are variable costs that vary with the amount of actual water use. Water purchases costs and energy costs are two primary examples. However, in an effort to encourage water conservation, fixed costs are frequently included in commodity components such that a majority of costs are recovered on the basis of usage. This is a common practice that is justified as a reasonable way to recover certain fixed costs on the basis of actual water usage.

The water conservation best management practice for retail water rates (BMP 1.4), as promulgated by the Californian Urban Water Conservation Council (CUWCC) requires that at least 70 percent of water rate revenue be generated through water usage charges. The Town's current water rates exceed this requirement, even though usage-based revenue has declined with reduced water sales. The allocation of costs, as well as the resulting water rate calculations, reflects this requirement. At present, about 77 percent of the Town's water rate revenue is derived water rate usage charges, and about 23 percent form monthly service charges. The cost allocation resulted in a distribution of costs to customer, capacity, and commodity categories of about 3.5 percent, 22.5 percent, and 74 percent, respectively. This places slightly more emphasis on the monthly service charges, and will help improve revenue stability.

To generally maintain the revenue split over time, it is recommended that future scheduled water rate adjustments affect only the monthly service charges and pumping charges, but not water usage rates. Water usage rates will be adjusted annually based on changes to SCWA water rates and charges. Under current practices, the entire water rate structure is adjusted with scheduled water rate increases. Overtime this shifts the emphasis to water usage-based revenue, and exacerbates revenue volatility.

Airport Area Water Supply

The Airport area is provided water via the Santa Rosa Aqueduct, whereas the Town is provided water primarily from the Russian River Well Field (RRWF). The cost of water from the Santa Rosa Aqueduct is much more expensive than the well supply. In calculating water rates, the higher cost of Santa Rosa Aqueduct water is factored into the rates for the Airport area. The balance of water supply costs is assigned to the rates for customers within the Town.

The financial plan reflects that estimated water supplies for FY 15-16 will include 461 AF of water from the Santa Rosa Aqueduct and about 2,830 AF from the RRWF. Cost of the RRWF supply includes the Town's pumping of wells as well as Russian River Diversion sub-charges imposed by the SCWA. These estimates reflect an estimated six percent unaccounted for water loss rate.

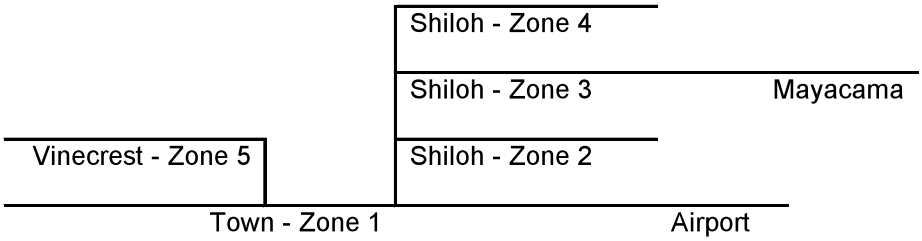
The FY 15-16 cost of water from the Santa Rosa Aqueduct is about $913 per AF, and the SCWA charge for Russian River Diversions is about $156 per AF. The estimated cost for the Town to pump water from the RRWF is about $75 per AF. This brings the total variable cost for RRWF production to about $231 per AF.

Pressure Zones and Related Pumping Costs

As described earlier in the section, the Town's current water rates include additional service charges and an additional pumping charge for customers served by pressure zones located above the main pressure zone serving the Town (Zone 1). **Exhibit III-4** schematically illustrates the

relative relationship between the various pressure zones. Water delivered beyond Zone 1 to Zones 2 and 5 must be pumped once. Water delivered to Zone 3 is pumped twice from Zone 1. That water can also be delivered to the Mayacama subdivision. Water delivered to Zone 4 must be pumped three times from Zone 1.

Exhibit III-4
Town of Windsor
Pressure Zone Schematic Diagram



The 2012 rate update study included a comprehensive review and update of the pumping charges. This study includes adjustments to the charges to reflect the overall change in revenue needs, but did not include a detailed update of the cost of service analysis, as the data for an update is not readily available and other issues are more urgent at this time. In the prior cost analysis, costs associated with pumping into Zone 2 are allocated to customers and water usage within Zone 2, Zone 3, Zone 4, and Mayacama. Similarly, costs of pumping from Zone 2 into Zone 3 are allocated to customers and water usage in Zone 3, Zone 4, and Mayacama. Costs of pumping into Zone 4 are allocated to customers and water usage within Zone 4.

By including the additional service charges and water usage charges for pumping to higher elevations in the rates paid by customers living in higher elevation zones, the additional costs of delivering water to these customers are not borne by the Town's other customers.

Water Rate Design

The third step in the rate setting process is the design of water rates to recover costs from each customer class. The Town's water rates include both fixed service charges and water usage rates. The calculation of each of these is described below.

Service Charges

Service charges are intended to recover the customer and capacity costs identified through the cost of service analysis. Service charges apply to all customer water bills, regardless of the amount of water actually used. In calculating service charges customer costs are allocated equally to all customers and capacity costs based on meter size and in relation to the hydraulic capacity associated with the various meter sizes.

Exhibit III-5 presents the calculation of service charges for the water rates proposed for August 2015. The monthly service charge for a standard ¾" water meter would be $10.80. This is an increase of $1.67 from the current service charge of $9.13. Other service charges are also higher than current service charges. The allocation reflects the fact that a relatively small portion of water system costs are directly related to the number of customers served. A majority of fixed costs are

allocated on a capacity basis as reflect by the meter size. The changes to the service charges across the range of meter sizes better reflects the cost of providing service to customers of varying meter sizes.

Consistent with current practice, charges for private fire lines are set at one-half the general water service charge. Private fire lines are normally only used in emergency situations and represent intermittent demands on the water system.

Exhibit III-5
Windsor Water District
Water Service Charge Calculation for FY 15-16

	No. of Accounts by Meter Size (1)									Total
	Up to 3/4"	**1"**	**1 1/2"**	**2"**	**3"**	**4"**	**6"**	**8"**	**10"**	**Accts.**
Water Service Accounts	7,265	1,191	98	226	20	7	-	-	1	8,808
Monthly Service Charges										
Customer Costs	$ 1.78	$ 1.78	$ 1.78	$ 1.78	$ 1.78	$ 1.78	$ 1.78	$ 1.78	$ 1.78	
Capacity Costs	$ 9.02	$15.06	$30.04	$48.08	$90.20	$150.37	$300.65	$481.06	$691.60	
Total Water Serv. Chrg.	**$ 10.80**	**$16.84**	**$31.82**	**$49.86**	**$91.98**	**$152.15**	**$302.43**	**$482.84**	**$693.38**	
Est. Serv. Chrg. Rev. ($1,000s)	$ 941	$ 241	$ 37	$ 135	$ 22	$ 13	$ -	$ -	$ 8	$1,398
Summary of FY 15-16 Water Rate Revenue Requirement										
Customer Costs	$ 188,000	3.5%								
Capacity Costs	$ 1,210,000	22.5%								
Commodity Costs	$ 3,979,000	74.0%	$ 0.00395	Composite average water usage rate						
Pressure Zone Costs	$ 137,000									
Total Revenue Rqmt.	**$ 5,514,000**									

Water Usage Rates

Since July 2012, water usage rates have been expressed in dollars per gallon and billing occurs in single-gallon units. This change results in increased equity, as well as greater responsiveness in the water bill to even small changes in water usage.

As shown at the bottom of Exhibit III-5, the commodity costs to be recovered from water usage charges in FY 15-16 is $3,979,000. Total annual water sales volume is estimated to be about 1,008 MG. This would result in an average water usage rate of $0.00395 per gallon, which would be the rate if all customers paid the same amount. However, as previously described, water delivered to the Airport area comes from the Santa Rosa Aqueduct and is more costly than water produced at the Town's RRWF. As a result, the average rate for water in the Airport area should be higher than the average rate for the Town service area. Based on the costs to be recovered through the water usage charges, the costs for water from both the Santa Rosa Aqueduct and the RRWF, and the annual volumes of water delivered to both the Airport and Town service areas, the average water usage rate in each area was determined to be $0.00587 per gallon in the Airport service area and $0.00371 per gallon in the Town service area. These amounts include both water supply costs, as well as other costs to be recovered through water usage.

The above rates are recommended to apply to water use by commercial customers in the Airport and Town service areas, respectively. However, the Town's residential customers are subject to tiered water rates and dedicated irrigation accounts are subject to seasonal rates. In both instances the weighted average water rate within these structures, for each customer class, is the average rate for the service area. In this way, the different rate structures are equitable across the various customer classes as well as across service areas. In addition, individual tier rates for residential customers, as well as the seasonal rates for irrigation accounts reflect specific proportionate allocations of water supply and other commodity costs.

Residential Tier Rates

The water usage tier structure for single family and multi-family customers the following monthly water usage allocations within each tier:

	Single Family	**Multi-Family (per DU)**
Tier 1	0-4,000 gal/mo	0-2,000 gal/mo
Tier 2	4,001-7,000 gal/mo	2,001-3,000 gal/mo
Tier 3	7,001-17,000 gal/mo	3,001-5,500 gal/mo
Tier 4	>17,000 gal/mo	>5,500 gal/mo

The tier allocations for single family and multi-family customers were determined in a previous rate studies. A review of water usage across the tiers indicated that the tier structure is functioning as intended, and no changes to the tier allocations are proposed at this time.

Tiered rate structures for single family and multi-family customers have been designed to meet cost of service requirements as follows:

- The weighted average water usage rate across all tiers is set equal to the average water in the Town service area to provide balance between customer classes
- The rate for the first tier reflects the cost of water from the RRWF, as well as other costs to be recovered from water usage charges, with the exception of water conservation costs, which have been allocated across second, third, and fourth tiers
- The rate for the fourth (and highest) residential tier reflects the cost of the Town's most expensive supply, which is water from the Santa Rosa Aqueduct, on top of the other costs to be recovered from water usage charges
- The specific rates for the second and third tier were derived such that they reflect the proportionate allocation of costs to the residential customer class, as well as the effects of tier rate calculations for the first and last tiers and other rate setting objectives.

A small percentage of water delivered within the Town service area is water from the Santa Rosa Aqueduct (the Town's most expensive supply source), and water usage in the fourth tier is very close to this supply percentage. In effect, this highest tier reflects the cost of meeting increased water demands with water from the Santa Rosa Aqueduct. As the Russian River Well supply reaches its limitations (particularly during peak demand periods), the cost of Santa Rosa Aqueduct water becomes the marginal cost for meeting additional water demands. This provides a sound cost basis for the highest of the Town's tier rates. Following these procedures, the proposed residential water use tiers for FY 15-16 were determined to be $0.00316 per gallon, $0.00344 per gallon, $0.00485 per gallon, and $0.00587 per gallon in the first through fourth tiers, respectively.

Seasonal Irrigation Rates

In 2010, the Town introduced seasonal water rates for dedicated irrigation accounts. The seasonal rates are intended to help encourage water conservation and efficient water use during the irrigation season. To maintain equity with other water rates, the seasonal rates are calculated such that the overall annual cost for irrigation water use within each service area is the same as the average rate within the service area. That is, the weighted average between the summer and winter rates (weighted by usage in each season) equals the average rate.

Seasonal rates include a five-month peak summer period (June through October) and a seven-month off-peak winter period (November through May). This is consistent with water restrictions

imposed by the SCWA a few years ago. The five-month peak period includes about 75 percent of annual irrigation water usage.

Within the Town service area, the winter water rate is the same at the first tier rate for residential customers, and reflects the cost of the RRWF water supply and other costs to be recovered through water usage charges, with the exception of conservation program costs. It is reasonable to assign conservation costs to be recovered from irrigation customers to water usage during the peak summer season, which is when water conservation is most needed. The Town summer irrigation water usage rate was derived based on the total allocation of costs to Town irrigation customers, less the revenue estimated from other rate components.

Within the Airport area, the seasonal irrigation water usage rates were derived in a manner similar to the rates in the Town service area, except that the source of supply in the Airport area is the higher cost water from the Santa Rosa Aqueduct.

Seasonal water rates derived as described above result in seasonal rate differential approaching 25 percent. This differential provides additional financial incentive for customers to wisely manage their water usage during the peak season. The proposed irrigation rates in the Town service area are $0.00316 per gallon and $0.00389 per gallon for the off-peak and peak seasons, respectively. The winter season rate for irrigation customers in the Town is the same as the first tier rate for residential customers. In the Airport area the seasonal rates are proposed to be $0.00499 per gallon and $0.00620 per gallon in the off-peak and peak seasons, respectively.

Uniform Commercial Rates

It is recommended that the Town continue to use a uniform water usage rate for commercial customers both in the Town and in the Airport service areas, as well as the small number of residential accounts in the Airport area. The commercial rate in the Town service areas would be the $0.00371 per gallon average rate in that service area, and the commercial/residential rate in the Airport service area would be the $0.00587 per gallon average rate in the Airport area. In addition, the Airport area commercial rate should also be applied to the few customers served directly by the SCWA but billed by the Town for water service. The uniform rate in the Town service area reflects the water supply blend of primarily RRWF water (as well as other costs to be recovered through water usage charges, including water conservation program costs. The uniform rate in the Airport area reflects the cost water from the Santa Rosa Aqueduct that is used in that area, as well as the other costs to be recovered through water usage charges.

Proposed Rate Schedules

Exhibit III-6 summarizes proposed water rate schedules for August 2015 through July 2019. The rate schedule for August 2015 reflects the cost of service analysis and rate design described in this section, and is intended to generate $5,514,000 in annual revenue from potable water customers based on customer account and water use information provided by the Town. The rate schedule for August 2015 also reflects the increase in SCWA rates and charges for FY 15-16.

Water rate schedules for July 2016 through July 2019 each reflect a 2 percent across-the-board rate increase for monthly service charges, pumping charges, and private fire service charges, as identified in the financial plan presented in Section II. These increases do not apply to water usage rates. Water usage rates would be subject to annual automatic adjustment in July of each year, based on changes in wholesale water supply costs, as described below.

Exhibit III-6
Windsor Water District
Current and Proposed Monthly Water Rates (1)

		Current	Aug. 2015	July 2016	July 2017	July 2018	July 2019
Water Usage Rates ($/gallon)				(2)	(2)	(2)	(2)
Single Family Residential							
1st Tier	0-4,000 gal/mo	$ 0.00310	$ 0.00316	$ 0.00316	$ 0.00316	$ 0.00316	$ 0.00316
2nd Tier	4,001-7,000 gal/mo	$ 0.00341	$ 0.00344	$ 0.00344	$ 0.00344	$ 0.00344	$ 0.00344
3rd Tier	7,001-17,000 gal/mo	$ 0.00477	$ 0.00485	$ 0.00485	$ 0.00485	$ 0.00485	$ 0.00485
4th Tier	Over 17,000 gal/mo	$ 0.00572	$ 0.00587	$ 0.00587	$ 0.00587	$ 0.00587	$ 0.00587
Multi-Family Residential (per dwelling unit)							
1st Tier	0-2,000 gal/mo/DU	$ 0.00310	$ 0.00316	$ 0.00316	$ 0.00316	$ 0.00316	$ 0.00316
2nd Tier	2,001-3,000 gal/mo/DU	$ 0.00341	$ 0.00344	$ 0.00344	$ 0.00344	$ 0.00344	$ 0.00344
3rd Tier	3,001-5,500 gal/mo/DU	$ 0.00477	$ 0.00485	$ 0.00485	$ 0.00485	$ 0.00485	$ 0.00485
4th Tier	Over 5,500 gal/mo/DU	$ 0.00572	$ 0.00587	$ 0.00587	$ 0.00587	$ 0.00587	$ 0.00587
Town Commercial	All usage	$ 0.00378	$ 0.00371	$ 0.00371	$ 0.00371	$ 0.00371	$ 0.00371
Town Irrig. - Winter	Nov-May	$ 0.00275	$ 0.00316	$ 0.00316	$ 0.00316	$ 0.00316	$ 0.00316
Town Irrig. - Summer	Jun-Oct	$ 0.00413	$ 0.00389	$ 0.00389	$ 0.00389	$ 0.00389	$ 0.00389
Airport Commercial	All usage	$ 0.00572	$ 0.00587	$ 0.00587	$ 0.00587	$ 0.00587	$ 0.00587
Airport Irrig. - Winter	Nov-May	$ 0.00405	$ 0.00500	$ 0.00500	$ 0.00500	$ 0.00500	$ 0.00500
Airport Irrig. - Summer	Jun-Oct	$ 0.00608	$ 0.00620	$ 0.00620	$ 0.00620	$ 0.00620	$ 0.00620
Additional Usage Charge for Pumping							
Shiloh Mdws. - Zone 2	All usage	$ 0.00089	$ 0.00094	$ 0.00096	$ 0.00098	$ 0.00100	$ 0.00102
- Zone 3	All usage	$ 0.00226	$ 0.00240	$ 0.00245	$ 0.00250	$ 0.00255	$ 0.00260
- Zone 4	All usage	$ 0.00335	$ 0.00355	$ 0.00362	$ 0.00369	$ 0.00376	$ 0.00384
Mayacama	All usage	$ 0.00226	$ 0.00240	$ 0.00245	$ 0.00250	$ 0.00255	$ 0.00260
Vinecrest	All usage	$ 0.00218	$ 0.00231	$ 0.00236	$ 0.00241	$ 0.00246	$ 0.00251
Monthly Service Charges ($/month)							
All Water Services including Airport Area							
	Up to 3/4" meter	$ 9.13	$ 10.80	$ 11.02	$ 11.24	$ 11.46	$ 11.69
	1" meter	$ 13.97	$ 16.84	$ 17.18	$ 17.52	$ 17.87	$ 18.23
	1 1/2" meter	$ 25.95	$ 31.82	$ 32.46	$ 33.11	$ 33.77	$ 34.45
	2" meter	$ 40.39	$ 49.86	$ 50.86	$ 51.88	$ 52.92	$ 53.98
	3" meter	$ 74.10	$ 91.98	$ 93.82	$ 95.70	$ 97.61	$ 99.56
	4" meter	$ 122.25	$ 152.15	$ 155.19	$ 158.29	$ 161.46	$ 164.69
	6" meter	$ 242.52	$ 302.43	$ 308.48	$ 314.65	$ 320.94	$ 327.36
	8" meter	$ 386.90	$ 482.84	$ 492.50	$ 502.35	$ 512.40	$ 522.65
	10" meter	$ 555.39	$ 693.38	$ 707.25	$ 721.40	$ 735.83	$ 750.55
Additional Service Charges for Pumping							
Shiloh Mdws. - Zone 2	1" meter	$ 6.35	$ 6.73	$ 6.86	$ 7.00	$ 7.14	$ 7.28
- Zone 3	1" meter	$ 19.20	$ 20.35	$ 20.76	$ 21.18	$ 21.60	$ 22.03
- Zone 4	1" meter	$ 37.65	$ 39.91	$ 40.71	$ 41.52	$ 42.35	$ 43.20
Mayacama	1" meter	$ 19.20	$ 20.35	$ 20.76	$ 21.18	$ 21.60	$ 22.03
	1 1/2" meter	$ 38.30	$ 40.60	$ 41.41	$ 42.24	$ 43.08	$ 43.94
	2" meter	$ 61.30	$ 64.98	$ 66.28	$ 67.61	$ 68.96	$ 70.34
Vinecrest	Up to 1" meter	$ 23.80	$ 25.23	$ 25.73	$ 26.24	$ 26.76	$ 27.30
Private Fire Service Charges							
	4" meter	$ 61.13	$ 76.08	$ 77.60	$ 79.15	$ 80.73	$ 82.34
	6" meter	$ 121.26	$ 151.22	$ 154.24	$ 157.32	$ 160.47	$ 163.68
	8" meter	$ 193.45	$ 241.42	$ 246.25	$ 251.18	$ 256.20	$ 261.32
	10" meter	$ 277.70	$ 346.69	$ 353.62	$ 360.69	$ 367.90	$ 375.26
	6" meter - Mayacama - Additional	$ 191.65	$ 203.15	$ 207.21	$ 211.35	$ 215.58	$ 219.89

Notes:
(1) Actual billing occurs bi-monthly.
(2) Automatic adjustments to water usage rates may occur each July from 2016 through 2020 due to from changes in SCWA water rates and charges. Those potential future adjustments are not reflected in the water usage rates shown in this schedule.

Automatic Adjustments to Water Rates for Changes in SCWA Costs

Article XIII D of the California Constitution (Proposition 218) requires the Town to notify all customers of proposed changes to water and wastewater rates at least 45 days prior to holding a public hearing to adopt increased rates. Government Code Section 53756 authorizes the Town to adopt procedures for automatically adjusting water rates to counter the effects of inflation and/or changes in wholesale water supply costs. These procedures can be adopted for a five-year period.

In 2009, the Town adopted procedures to automatically adjust water usage rates each year to reflect the changes in costs from the Sonoma County Water Agency (SCWA). The last automatic rate adjustment occurred in July 2014 to reflect SCWA's water rates and charges for FY 14-15. The automatic adjustment mechanism has since expired. The proposed rates for FY 15-16 already reflect SCWA's new rates and charges for FY 15-16. It is recommended that the Town re-adopt the automatic adjustment procedures for the next five years (2016 through 2020).

Exhibit III-7 includes a worksheet to be used to calculate the automatic rate adjustments for changes in SCWA water charges on an annual basis. The worksheet shows the calculation for a *hypothetical* 5 percent increase in SCWA rates and charges for FY 16-17. The same worksheet and embedded calculations would be used for actual annual rate adjustments. The worksheet reflects the mix of water supplies (RRWF and Santa Rosa Aqueduct) and the two service areas (Town and Airport areas) served by the water system.

Exhibit III-8 presents the hypothetically adjusted water rate schedule effective July 1, 2016 based on the automatic rate adjustment calculations shown in Exhibit III-7. Only the water usage rates are affected by the adjustment. The monthly service charges and pressure zone pumping charges would be unaffected by the automatic rate adjustments. The bottom portion of Exhibit III-8 shows how the automatic adjustments to water usage rates would affect the typical single family residential bill. Because water supply costs represent only a portion of the total cost of providing water service, the adjustment for changes in wholesale water costs is largely diluted in the total water bill.

Water Shortage Rate Surcharges

Proposed water shortage rate surcharges, presented below, supplement the discussion of the financial impact of water shortages presented near the end of Section II.

Water Shortage Charges

To help encourage water conservation and to help bridge the financial deficit created by a water shortage, it is suggested that the Town adopt and implement water shortage surcharges in the higher (mandatory) stages of water shortage (Stages 2, 3, 4, and 5). The water shortage surcharges would be incremental increases in the water usage rates. Even though the water shortage surcharges represent an increase in the water rates, total water rate revenue will still decline with reduced water sales in each stage of shortage. In addition, because a multi-pronged approach is suggested for addressing the financial deficit created by a shortage, customers that meet water use goals will have lower water bills with the water shortage surcharges than they would with normal water usage and normal water rates. Customers not conserving will pay more for water service.

Exhibit III-7
Windsor Water District
Worksheet for Automatic Water Rate Adjustments Related to Changes in SCWA's Water Rates and Charges (1)

	Current		Adjusted		Change		
Fiscal Year -->	*FY 15-16*		*FY 16-17*				
SCWA Water Charges	$/AF	$/Gal.	$/AF	$/Gal.	$/AF	$/Gal.	
RRD Sub-Charges (2)	*$ 155.70*	$ 0.00048	*$ 163.49*	$ 0.00050	$ 7.79	$ 0.00002	5.00%
Santa Rosa Aqueduct (3)	*$ 913.26*	$ 0.00280	*$ 958.92*	$ 0.00294	$ 45.66	$ 0.00014	5.00%

Water Supplies (AF)		
Local Groundwater (off river)	-	
Russian River Well Field	*3,071*	Estimate for FY 15-16
Santa Rosa Aqueduct	*501*	Estimate for FY 15-16
Total Water Supplies	3,572	
Unaccounted For Losses (4)	6.0%	
Estimated Water Sales (AF)		
Town Service Area	*2,989*	Estimate for FY 15-16
Airport Service Area	*369*	Estimate for FY 15-16
Total Estimated Sales	3,358	
Water Supply Places of Use (AF) (5)		
Town Service Area		
Local Groundwater	-	0%
Russian River Well Field	3,071	97%
Santa Rosa Aqueduct	108	3%
Total Town	3,180	
Airport Service Area		
Local Groundwater	-	0%
Russian River Well Field	-	0%
Santa Rosa Aqueduct	393	100%
Total Airport	393	
Total Water Supplies	3,572	

Windsor Water Usage Rates ($/gallon)	Effective Aug. 2015	Rate Adjustment	Adjusted July 2016	Tier Steps (6)	Tier Usage (7)	Goal Seek (8)
Town Residential Tier Rates						
1st Tier	*$ 0.00316*	**$ 0.00002**	$ 0.00318		*53%*	*$ 0.00374*
2nd Tier	*$ 0.00344*	**$ 0.00002**	$ 0.00346	*9%*	*21%*	
3rd Tier	*$ 0.00485*	**$ 0.00002**	$ 0.00487	*41%*	*21%*	
4th Tier	*$ 0.00587*	**$ 0.00014**	$ 0.00601	(9)	*5%*	
Town Commercial Rate	*$ 0.00371*	**$ 0.00003**	$ 0.00374			
Town Irrigation Rate - Winter	*$ 0.00316*	**$ 0.00003**	$ 0.00319			
Town Irrigation Rate - Summer	*$ 0.00389*	**$ 0.00003**	$ 0.00392			
Airport Commercial Rate	*$ 0.00587*	**$ 0.00015**	$ 0.00601			
Airport Irrigation Rate - Winter	*$ 0.00500*	**$ 0.00012**	$ 0.00512			
Airport Irrigation Rate - Summer	*$ 0.00620*	**$ 0.00015**	$ 0.00635			
Recycled Water - Urban	*$ 0.00297*	**$ 0.00002**	$ 0.00299			
Recycled Water - Vineyard	*$ 0.00093*	**$ 0.00001**	$ 0.00094			
Recycled Water - Pasture/Non-Vineyard	*$ 0.00046*	**$ 0.00001**	$ 0.00047			
Recycled Water - Wholesale	*$ 456.63*	**$ 22.83**	$ 479.46	/AF		

Notes:

(1) Input fields include values shown in italics in shaded areas. Other values are automatically calculated. Worksheet illustrates a hypothetcal 5 percent increase in SCWA rates and charges.
(2) Includes sub-charges for water management planning, watershed planning/restoration, recycled water/local supply, and water conservation.
(3) Equal to 120% of highest rate of other contractors using Santa Rosa Aqueduct.
(4) Calculated based on supply and demand data inputs. Recent values have been about 6% to 8%.
(5) Town priority is groundwater, RRWF, and SR Aqueduct. Airport priority is SR Aqueduct, RRWF, groundwater.
(6) Rate increase relative to prior tier rate. Tier 4 is set to be equal to Airport rate as marginal cost of water supply.
(7) From water use frequency distribution updated with CY 2014 usage. Should be periodically reviewed and updated.
(8) Goal seek to set cell J38 to value of Town commercial rate (cell F42) by adjusting value for Tier 1 rate (cell F38).
(9) Highest residential tier rate tied to rate for water from Santa Rosa Aqueduct (i.e., Airport commercial rate).

Exhibit III-8
Windsor Water District
Pass-Through Water Rate Adjustments Due to Changes in SCWA's Rates and Charges (1)

		Current Aug. 2015 (2)	Rate Adjustment	Adjusted July 2016 (3)
Water Usage Rates ($/gallon)				
Single Family Residential				
1st Tier	0-4,000 gal/mo	$ 0.00316	$ 0.00002	**$ 0.00318**
2nd Tier	4,001-7,000 gal/mo	$ 0.00344	$ 0.00002	**$ 0.00346**
3rd Tier	7,001-17,000 gal/mo	$ 0.00485	$ 0.00002	**$ 0.00487**
4th Tier	Over 17,000 gal/mo	$ 0.00587	$ 0.00014	**$ 0.00601**
Multi-Family Residential (per dwelling unit)				
1st Tier	0-2,000 gal/mo/DU	$ 0.00316	$ 0.00002	**$ 0.00318**
2nd Tier	2,001-3,000 gal/mo/DU	$ 0.00344	$ 0.00002	**$ 0.00346**
3rd Tier	3,001-5,500 gal/mo/DU	$ 0.00485	$ 0.00002	**$ 0.00487**
4th Tier	Over 5,500 gal/mo/DU	$ 0.00587	$ 0.00014	**$ 0.00601**
Town Commercial	All usage	$ 0.00371	$ 0.00003	**$ 0.00374**
Town Irrigation - Winter	Nov-May	$ 0.00316	$ 0.00003	**$ 0.00319**
Town Irrigation - Summer	Jun-Oct	$ 0.00389	$ 0.00003	**$ 0.00392**
Airport Commercial	All usage	$ 0.00587	$ 0.00015	**$ 0.00601**
Airport Irrigation - Winter	Nov-May	$ 0.00500	$ 0.00012	**$ 0.00512**
Airport Irrigation - Summer	Jun-Oct	$ 0.00620	$ 0.00015	**$ 0.00635**
Recycled Water - Urban	All usage	$ 0.00297	$ 0.00002	**$ 0.00299**
Recycled Water - Vineyard	All usage	$ 0.00093	$ 0.00001	**$ 0.00094**
Rec. Wtr. - Pasture/Non-Vineyard	All usage	$ 0.00046	$ 0.00001	**$ 0.00047**
Rec. Wtr. - Wholesale ($/AF)	All usage	$ 456.63	$ 22.83	**$ 479.46**
Additional Usage Charge for Pump	All usage	Varies	No change	No change
Monthly Service Charges ($/month)				
All Water Services including Airport Area		Varies	No change	No change
Additional Service Charges for Pumping		Varies	No change	No change
Private Fire Service Charges		Varies	No change	No change

Notes:
(1) Sonoma County Water Agency (SCWA) water rates for FY 16-17 were formally adopted on _____, 2016.
(2) Water usage rates were last adjusted in August 2015, along with pumping charges and service charges.
(3) Adjusted water usage rates will go into effect in July 2016 to reflect increased costs due to SCWA's FY 16-17. rate changes. No changes to the monthly service charges or pumping charges will occur at that time.

Typical single family water customer using 7,500 gallons per month.

	Current	Adjusted
Service Charge	$ 10.80	$ 10.80
Usage Charge	$ 25.39	$ 25.54
Total Monthly Bill	**$ 36.19**	**$ 36.34**
Change		**$ 0.15**
Change %		**0.4%**

Exhibit III-9 presents a FY 15-16 water rate schedule, including the effect of water shortage charges in Stages 2, 3, 4, and 5. As an example, the residential first tier water rates would increase from $0.00319/gal to $0.00351/gal in Stage 2 (10 percent water shortage surcharge). Because the water shortage surcharges would only apply to the water usage rates (and not the fixed service charges or pumping charges), the water shortage surcharge revenue would represent approximately 6.9 percent, 12.5 percent, 17.0 percent, and 20.4 percent increases in shortage-reduced water rate revenue in Stages 2, 3, 4, and 5, respectively.

Exhibit III-9
Windsor Water District
Proposed Water Shortage Rate Surcharges Applied to Normal Water Rates for FY 15-16 (1)

		Normal	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Water Use Reduction Goal -->		None	10%	20%	30%	40%	50%
Water Usage Rates ($/gallon)							
Water Shortage Surcharge (2)				**10%**	**20%**	**30%**	**40%**
Excess Use Penalty (3)						**25%**	**50%**
Excess Use Penalty Applied to:						Tier 4	Tier 4
Single Family Residential							
1st Tier	0-4,000 gal/mo	$ 0.00316	No change	$ 0.00348	$ 0.00379	$ 0.00411	$ 0.00442
2nd Tier	4,001-7,000 gal/mo	$ 0.00344	No change	$ 0.00378	$ 0.00413	$ 0.00447	$ 0.00482
3rd Tier	7,001-17,000 gal/mo	$ 0.00485	No change	$ 0.00534	$ 0.00582	$ 0.00631	$ 0.00679
4th Tier	Over 17,000 gal/mo	$ 0.00587	No change	$ 0.00646	$ 0.00704	$ 0.00954	$ 0.01233
Multi-Family Residential (per dwelling unit)							
1st Tier	0-2,000 gal/mo/DU	$ 0.00316	No change	$ 0.00348	$ 0.00379	$ 0.00411	$ 0.00442
2nd Tier	2,001-3,000 gal/mo/DU	$ 0.00344	No change	$ 0.00378	$ 0.00413	$ 0.00447	$ 0.00482
3rd Tier	3,001-5,500 gal/mo/DU	$ 0.00485	No change	$ 0.00534	$ 0.00582	$ 0.00631	$ 0.00679
4th Tier	Over 5,500 gal/mo/DU	$ 0.00587	No change	$ 0.00646	$ 0.00704	$ 0.00954	$ 0.01233
Town Commercial	All usage	$ 0.00371	No change	$ 0.00408	$ 0.00445	$ 0.00483	$ 0.00520
Town Irrigation - Winter	Nov-May	$ 0.00316	No change	$ 0.00348	$ 0.00379	$ 0.00411	$ 0.00443
Town Irrigation - Summer	Jun-Oct	$ 0.00389	No change	$ 0.00428	$ 0.00467	$ 0.00506	$ 0.00545
Airport Commercial	All usage	$ 0.00587	No change	$ 0.00645	$ 0.00704	$ 0.00763	$ 0.00821
Airport Irrigation - Winter	Nov-May	$ 0.00500	No change	$ 0.00549	$ 0.00599	$ 0.00649	$ 0.00699
Airport Irrigation - Summe	Jun-Oct	$ 0.00620	No change	$ 0.00682	$ 0.00744	$ 0.00806	$ 0.00868
Recycled Water - Urban	All usage	$ 0.00297	No change	$ 0.00327	$ 0.00356	$ 0.00386	$ 0.00416

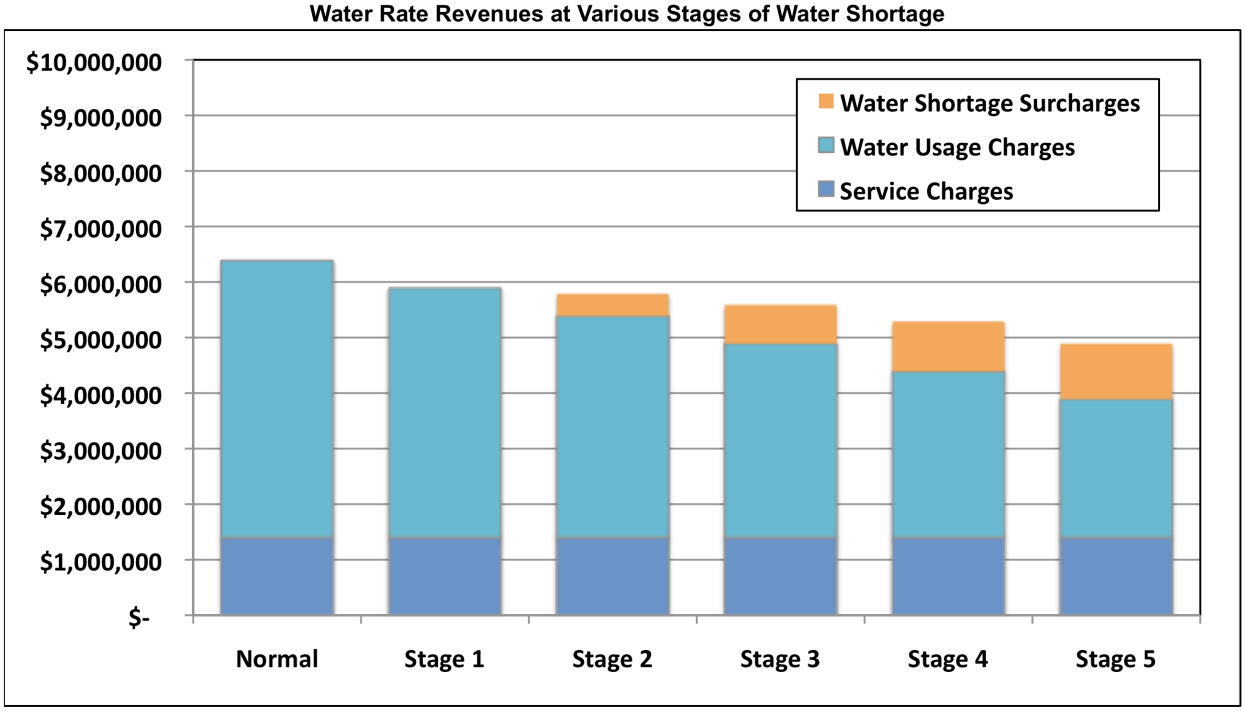
Notes:
(1) The percentages shown for the water shortage surcharge and excess use surcharge would be applied to any future water rate schedule.
(2) Water shortage surcharges are a percentage increase to all normal water use rates, but not pumping charges or fixed service charges.
(3) Excess use penalties are a percentage increase to the combined water usage rate and water shortage surcharge applied only to the residential fourth tier.

Water shortage surcharges would provide relatively modest revenue increases for dealing with significant water supply shortages. As illustrated graphically in **Exhibit III-10**, the water shortage surcharge revenue only partially replaces lost revenue due to reduced water sales. As a result, even with the water shortage surcharges, the proposed water rates for water shortage conditions are less than the total cost of providing service to customers.

Excess Use Penalties

To serve as an additional incentive to achieving water use reduction goals in the more severe stages of water shortage, an excess use penalty is proposed for the Town's residential water rates. The excess use penalty would effectively be an additional charge on top of the combined fourth tier water usage rate and water shortage surcharge, and are shown in Exhibit III-9, presented previously. The excess use penalty would be 25 percent in Stage 4 and 50 percent in Stage 5. The fourth tier of the water rate structure applies to water usage in excess of 17,000 gallons per month (567 gpd) for single family customers and in excess of 5,500 gallons per month (183 gpd) per dwelling unit for multi-family customers.

Exhibit III-10
Windsor Water District
Water Rate Revenues at Various Stages of Water Shortage



No revenue is anticipated from the excess use penalty, as the water usage by all customers should be below the fourth tier threshold in both Stage 4 and Stage 5 conditions. Any revenue that may be collected from the excess use penalty should be directed towards water conservation education and assistance programs, as well as reducing the financial deficit created by shortage conditions. In effect, the excess use penalty would serve as a strong financial deterrent to, and penalty for, excessive water use. Excess use penalties are not proposed for non-residential accounts for a variety of reasons.

Adopting Water Shortage Surcharges and Excess Use Penalties

In order to adopt the proposed water shortage surcharges the Town will need to follow the same procedures as other rate approvals, and follow the requirements contained in Article XIII D of the California Constitution (Proposition 218). This includes a notice mailed to all affected property owners and customers at least 45 days prior to a public hearing.

Penalties are not subject to the same procedures as water rates. The Town should follow the guidance of legal counsel in establishing the proposed excess use penalties.

It is recommended that the Town combine the adoption of the automatic water rate adjustment procedures (described in previously in Section III) and the adoption of the water shortage rates into a single rate notice for all water and wastewater rate changes for FY 15-16. This will save the utility both time and expenses

Utility Billing Frequency

At present, the Town bills customers for water and wastewater services on a bi-monthly basis (every two months). Many utilities have moved to monthly billing as a convenience to customers, in effect, by splitting a large bi-monthly utility bill into smaller monthly bills. In addition, monthly billing provides customers with more timely water use information, allowing for improved water management by customers.

In 2010, the Town began reading water meters on a monthly basis, so the added cost of that activity has already been absorbed by the utilities. However, customers only have access to billed water use data (bi-monthly totals after billing has occurred). In order to convert to monthly billing the Town will need to make several changes and incur additional costs. These include:

- Modify utility billing software
- Modify contract with third party utility billing vendor
- Modify utility bill payment and delinquency schedule (past due notices, shut offs, etc.)
- Incur increased printing and postage costs (estimated at an additional $40,000 annually split between water and water reclamation utilities)
- Anticipate increased customer service activity (phone, front office, etc.)

Undoubtedly, there are increased costs associated with more frequent utility billing, and the Town should consider the potential need for increased customer service staffing to accommodate the increased in volume for all aspects of the billing cycle. It is estimated that the increase in ongoing costs associated with monthly utility billing would be less than one percent of current operating and maintenance costs. The customer service and other benefits of more frequent billing likely justify the increased expense. A change to monthly billing would provide the following benefits:

- Increased customer convenience and more timely water use information
- Improved cash flow for the water and water reclamation utilities (decrease in accounts receivables)
- Reduced number of and dollar amounts for delinquencies and bad debts
- Reduced number of shut offs and turn on call outs of field staff
- Improved water conservation effectiveness.

Administrative Services staff has been gradually paving the way for an eventual transition to monthly utility billing, including the transition to monthly meter reading in 2010. Two significant obstacles that will likely need to be rectified prior to a transition are (1) an upgrade in the telephone system to accommodate anticipated call volume, and (2) an expansion or reconfiguration of the lobby/counter for Administrative Services to accommodate increased walk-in traffic. The need for these changes is driven by more than the billing frequency issue. Nevertheless the billing frequency issue contributes to the need for these changes.

It is recommended that the Town continue to take steps to move towards providing monthly utility billing to customers, and commit to making the change as soon as practical. The change would be particularly helpful during periods of water shortage with a heightened need for water conservation. While not available during the current water shortage, providing improved and more timely water use information to customers during a future shortage would aid the Town's efforts to reduce overall water demands.

IV. Wastewater Rates

This section of the report describes and presents recommendations for updating wastewater rates to provide sufficient revenues for the water reclamation utility's ongoing operations, debt service obligations, and capital improvement needs.

The annual wastewater rate revenue requirement was presented in Section II of the report as a result of the development of the five-year financial plan. The revenue requirement for FY 15-16 was used for the cost of service analysis and to develop the wastewater rate schedule presented in this section. As indicated by the financial plan, additional increases in wastewater rates are anticipated beyond that proposed for FY 15-16. It is recommended that the Town continue to review its financial situation and revenue needs every two years.

Existing Wastewater Rates

Exhibit IV-1, on the following page, summarizes the current wastewater rates. Wastewater rates were last adjusted in July 2012 with a 3 percent increase. The rate schedule shown in Exhibit IV-1, as well as all rate schedules presented in this report, shows rates on a monthly basis. Utility billing within the Town occurs on a bi-monthly basis. As with water rates, in July 2012 the Town modified billing such that usage charges are determined on a single-gallon usage basis, rather than with 1,000-gallon increments.

Residential customers are subject to fixed monthly service charges based on the lesser of winter water usage or actual monthly water use. Each year, the Town monitors water usage during the winter (low use) months to determine the average winter use for each residential customer. To do this, the Town averages the monthly water usage from the three lowest use months during the period from December through March. Winter water usage is assumed to be primarily indoor water usage. In July of each year, the Town updates the winter water use value for each residential customer, based on the most recent data.

Non-residential wastewater customers are subject to usage rates based on actual water use within each billing cycle. Non-residential customers are first assigned to low, medium, or high strength category depending on the type of business and the strength of wastewater generated. The rates are determined based on standard strength characteristics for each category. A separate rate applies to schools. Non-residential wastewater rates apply to actual water usage, however, in determining the rates it is assumed that ninety percent of the water usage results in wastewater flow.

In July 2012, a new fixed monthly service charge was introduced to the wastewater rate structure. This fixed monthly service charge applies to all customer accounts. Residential service charges apply to each dwelling unit, while non-residential service charges are based on meter size. Customers that do not receive water service from the Town pay flat monthly wastewater charges based on average winter water use (for residential) or number of fixture units (for non-residential).

Homes in The Greens and Vintage Greens subdivisions are located at lower elevations and must have wastewater pumped through lift stations to convey wastewater to the Town's water reclamation treatment plant. Because of this additional pumping requirement, the Town previously established additional service charges applicable to wastewater service in these areas. These charges help ensure that these customers are bearing the costs associated with lift station operation, maintenance, and replacement.

Exhibit IV-1
Windsor Water District
Current Monthly Wastewater Rates (1)

	Current
Wastewater Usage Rates ($/gallon)	
Single Family (2)	$ 0.01206
Multi-Family / Mobile Homes (2)	$ 0.01206
Commercial (3)	
Low strength	$ 0.01085
Medium strength	$ 0.01464
High strength	$ 0.02559
Schools (3)	$ 0.01064
Monthly Service Charges	
Single Family	$ 6.10
Multi-Family / Mobile Homes (per DU)	$ 4.95
Commercial	
Up to 3/4" meter	$ 6.10
1" meter	$ 9.57
1 1/2" meter	$ 18.17
2" meter	$ 28.53
3" meter	$ 52.71
4" meter	$ 87.26
Additional Monthly Lift Station Charges	
Greens Subdivision	$ 14.35
Vintage Greens Subdivision	$ 12.30
Wastewater-Only Accounts	
Single Family	$ 53.80
Mobile Homes (per DU)	$ 42.00
Commercial (4)	$ 53.80

Notes:
(1) Effective July 2012. Actual billing occurs bi-monthly.
(2) Residential usage charges determined based on the lower of: (1) actual monthly water usage, or (2) average winter water usage determined from the three lowest use months during the prior period from December through March. Bill adjustments based on winter water usage occur in July each year.
(3) Non-residential water reclamation usage rates apply to actual water usage.
(4) For each equivalent single family dwelling (ESFD).

Rate Setting Objectives

The development of wastewater rate recommendations has been guided by several rate-setting objectives. These objectives have guided rate-setting decisions for a number of years. They include:

- Rates should generate sufficient revenues to meet the utility's financial obligations related to operations, debt service, and capital improvement needs
- Rates should be equitable by reflecting the cost of providing water service to each customer group
- Rates should encourage water conservation and efficient water use, and meet the *best management practices* for conservation-oriented water rates

- Rates should be administratively simple and easy to explain to customers
- Rate should be defensible.

These objectives guided decisions related to wastewater rates and rate structures.

Customer Account Data and Wastewater Flow and Loading Estimates

Wastewater rate calculations are based on a number of factors related to the Town's customers. Factors include the number of customers, customer classes, water usage and wastewater flows, and strength characteristics of wastewater as determined by biochemical oxygen demand (BOD) and suspended solids (SS). **Exhibit IV-2** summarizes customer account and water usage data obtained from the Town's utility billing system for 2014 and winter water use from 2015, as well as estimates of resulting wastewater flow and loading characteristics.

Residential wastewater flows are estimated based winter water usage, as previously described. Non-residential wastewater flows are based on ninety percent of annual water usage. The ninety percent rate of return factors were used in prior rate analyses and appear reasonable as most non-residential irrigation occurs through separate dedicated irrigation water service connections.

Water reclamation customers are all classified into user groups with similar wastewater strength characteristics of BOD and SS. A comprehensive rate study performed for the Town in 2004 contained recommendations to make low, medium, and high strength distinctions between its commercial customers. The distinctions developed at that time were based on consultant recommendations and guidelines published by the California State Water Resources Control Board (SWRCB). The strength factors used have subsequently been refined in an effort to better match estimated wastewater flow and strength with treatment plant inflow and loading characteristics. The changes made resulted in a better match to estimated loading into the water reclamation treatment plant with actual sampling done of wastewater influent at the treatment plant. The changes are still consistent with the SWRCB guidelines.

Wastewater Rate Calculations

There are three steps to determining wastewater rates. These are:

- Determine annual wastewater rate revenue requirements
- Analyze the cost of providing service to each customer class
- Design wastewater rates to recover costs from each customer class.

Wastewater Rate Revenue Requirements

The five-year financial plan presented in Section II was used to identify the wastewater rate revenue needs for each fiscal year of the five-year planning period. As described at the end of Section II, it is recommended that wastewater rates be adjusted annually each July. The initial rate adjustment of 7 percent would go into effect in August 2016, allowing time for the required rate approval process. Wastewater rate calculations presented herein are based on the revenue needed in FY 15-16. Total annual wastewater rate revenues for FY 15-16 are shown in the financial plan (see Exhibit II-8) to be $7,287,000, excluding lift station charges. Lift station fees are estimated to produce an additional $73,200 annually, based on estimated costs and an updated fee analysis, as presented herein.

Exhibit IV-2
Windsor Water District
Wastewater Customer Account Data and Estimated Wastewater Flows and Loadings

Customer Class	No. of Accts./ DUs (1)	No. of ESFDs (2)	Annual Water Usage (1)	Rate of Return	Estimated Annual Wastewater Flow (3)	Estimated Annual Wastewater Flow	BOD Strength (4)	Annual BOD Loading	SS Strength (4)	Annual SS Loading
			1,000 Gal.		1,000 Gal.	MG	mg/l	lbs	mg/l	lbs
Residential										
Single Family	7,774	7,774	621,173	55%	338,905	338.91	150	423,970	100	282,647
Single Family - Sewer Only	180	180	16,628	55%	9,072	9.07	150	11,349	100	7,566
Multi-Family / Mobile Homes	953	746	40,362	81%	32,534	32.53	150	40,700	100	27,133
Mobile Home - Sewer Only	561	439	26,710	81%	21,530	21.53	150	26,934	100	17,956
Non-Residential										
Low Strength	159	381	17,604	90%	15,844	15.84	150	19,821	100	13,214
Medium Strength	65	215	39,712	90%	35,740	35.74	300	89,422	240	71,538
High Strength	39	107	16,047	90%	14,442	14.44	800	96,360	600	72,270
Schools	9	59	4,617	90%	4,155	4.16	130	4,505	100	3,465
Commercial - Sewer Only	20	20	1,135	90%	1,022	1.02	150	1,278	100	852
Totals	**9,760**	**9,922**	**783,988**		**473,244**	**473.24**	**181**	**714,339**	**126**	**496,641**

Notes:
(1) From Town's utility billing system for 2014. DU = dwelling units. ESFDs = equivalent single family dwellings.
(2) Multi-family dwellings are equivalent to 78 percent of single family dwelling, based on wastewater flow. Non-residential ESFDs based on meter size.
(2) Wastewater flow for residential customers based on the lesser of actual monthly usage or the average of the three lowest use months during the period from December through March. Wastewater flow for non-residential customers is estimated at 90 percent of annual water usage.
(3) Based on previous water reclamation rate analyses, SWRCB guidelines, and adjustments to better match actual treatment plant flows and loadings.

Cost of Service Analysis

Once the annual wastewater rate revenue requirement has been determined, the next step in the rate setting process is to evaluate the cost of providing service. Wastewater rate calculations contained herein are intended to generate the level of revenue commensurate with the revenue requirement from the Town's wastewater service customers. The manner in which each customer is responsible for the water reclamation utility's costs is the subject of the cost of service analysis.

To develop equitable wastewater rates, the revenue requirement is allocated to various customer classifications according to the services provided and the demands placed on the water reclamation system. The Town has historically allocated all water reclamation costs on the basis of water usage (wastewater flows), BOD, and SS. The wastewater rates also include fixed service charges as part of the rate calculation.

The cost of service analysis for water reclamation differs from water in another important way. Treatment costs are separated from collection system costs. Collection system costs are allocated entirely on the basis of flow, whereas treatment costs are allocated on the basis of flow, BOD, and SS.

The Town's budget structure does not easily lend itself to the segregation of costs into collection and treatment components. However, the rate analyses in previous years included allocation factors for allocating both operating and maintenance costs and capital costs for rate-setting purposes. For the proposed rate analysis, 15 percent of the revenue requirement is assigned to fixed service charges, with the remaining 85 percent to usage charges. This 85 percent is further allocated between estimated collection system costs (flow allocation only), and treatment/disposal costs (allocation based on flow and loading factors). A distinction is also made between operating costs and capital costs (including debt service), based on the approach used in previous rate studies.

Exhibit IV-3 summarizes how the annual wastewater rate revenue requirement was allocated to fixed charges, as well as flow, BOD, and SS components. Once total costs are allocated, unit costs were determined by dividing the total cost for each component by the number of units identified in Exhibit IV-2. These units include number of customer accounts, number of equivalent single family dwellings (ESFDs), millions of gallons for wastewater flow volume, and pounds of BOD and SS in the wastewater influent.

Unit costs are applied to the annual wastewater flows, as well as BOD and SS loadings associated with each customer class to arrive at the allocation of total costs to each customer class. **Exhibit IV-4** presents the allocation of costs to each user class.

Exhibit IV-5 presents the wastewater service charges and usage rates for each customer class. Residential customers will be subject to a fixed service charge for each dwelling unit and a usage rate applied to each customer's winter water use. Non-residential (low, medium, and high) customers are subject to wastewater usage rates applied to actual monthly water usage, as well as monthly service charges based on the size of the water meter.

Lift Stations and Related Pumping Costs

Similar to the water utility, the water reclamation utility has additional charges associated with pumping. In the case of water reclamation, the charges are associated with the pumping required to convey wastewater from low-lying areas to the Town's water reclamation treatment plant. These lift station charges are associated with customers located within Deer Creek, The Greens, and Vintage Greens subdivisions.

Exhibit IV-3
Windsor Water District
Determination of Water Reclamation Unit Costs

Cost Category	Component Allocation Percentages (1)	Parameter Allocation Percentages (2)	Annual Cost Allocated to Each Parameter	Quantities for Each Parameter (3)	Unit Cost for Each Parameter
Fixed Service Charge Cost Component	15%				
Customer Accounts		15%	$ 163,958	9,760	$ 16.80
Equivalent Single Family Dwellings (ESFDs)		85%	$ 929,093	9,922	$ 93.64
Variable O&M Cost Component for Collection	20%				
Flow (MG)		100%	$ 1,457,400	473.24	$ 3,080
Variable O&M Cost Component for Treatment	40%				
Flow (MG)		50%	$ 1,457,400	473.24	$ 3,080
BOD (lbs)		25%	$ 728,700	714,339	$ 1.020
SS (lbs)		25%	$ 728,700	496,641	$ 1.467
Capital and Debt Service Cost Component	25%				
Flow (MG)		70%	$ 1,275,225	473.24	$ 2,695
BOD (lbs)		15%	$ 273,263	714,339	$ 0.383
SS (lbs)		15%	$ 273,263	496,641	$ 0.550
Total Costs (excluding lift station costs)			**$ 7,287,000**		

Notes:
(1) Total revenue requirement is about 75 percent for O&M and about 25 percent for capital projects and debt service.
(2) Allocations to parameters are consistent with prior rate studies and rate setting practices.
(3) From Exhibit IV-2.

The 2012 rate update study included a comprehensive review and update of the lift station charges. This study includes adjustments to the charges to reflect the overall change in revenue needs, but did not include a detailed update of the cost of service analysis, as the data for an update is not readily available and other issues are more urgent at this time.

The additional lift station service charges are intended to recover the estimated energy, material, labor, and capital replacement costs associated with lift station facilities. The resulting charges should be added to the monthly wastewater charges applicable to each customer described in the preceding pages. The lift station charges help ensure that customers required to have wastewater pumped to the water reclamation treatment plant bear the costs associated with that pumping.

Wastewater Rate Design

As described previously, the Town of Windsor has maintained wastewater rates based on water usage. This results in volumetric rates applicable to water usage for non-residential customers. Rates vary for low, medium, and high strength customers commensurate with the treatment requirements of wastewater of various strengths.

Fixed Service Charges

Proposed wastewater rates include a fixed monthly service charge and a usage charge. For residential customers the fixed charge applies to each dwelling unit. The charge for multi-family dwellings is less than the charge for single family dwellings because multi-family dwelling place a lesser demand on the wastewater system. Non-residential service charges are based on the size of the water meter. The meter size if reflective of the potential load each customer can place on the system, similar to water rates.

Exhibit IV-4
Windsor Water District
Allocation of Water Reclamation Costs to Users

No. of DUs/ Accts.	Customer Class	Service Charge Costs: Collection and Treatment — Customer Unit Cost = $ 16.80	Service Charge Costs: Collection and Treatment — Capacity Unit Cost = $ 93.64	Variable O&M Costs: Collection — Flow Unit Cost = $ 3,079.60	Variable O&M Costs: Treatment — Flow Unit Cost = $ 3,079.60	Variable O&M Costs: Treatment — BOD Unit Cost = $ 1.020	Variable O&M Costs: Treatment — SS Unit Cost = $ 1.467	Capital and Debt Service Costs: Collection and Treatment — Flow Unit Cost = $ 2,694.65	Capital and Debt Service Costs: Collection and Treatment — BOD Unit Cost = $ 0.383	Capital and Debt Service Costs: Collection and Treatment — SS Unit Cost = $ 0.550	Allocation of Total Costs
	Residential										
7,774	Single Family	$ 130,596	$ 727,984	$ 1,043,691	$ 1,043,691	$ 432,494	$ 414,716	$ 913,229	$ 162,185	$ 155,518	$ 5,024,103
180	Single Family - Sewer Only	$ 3,024	$ 16,856	$ 27,938	$ 27,938	$ 11,577	$ 11,101	$ 24,446	$ 4,341	$ 4,163	$ 131,385
953	Multi-Family / Mobile Homes	$ 16,009	$ 69,884	$ 100,191	$ 100,191	$ 41,518	$ 39,811	$ 87,667	$ 15,569	$ 14,929	$ 485,770
561	Mobile Home - Sewer Only	$ 9,419	$ 41,114	$ 66,303	$ 66,303	$ 27,475	$ 26,346	$ 58,015	$ 10,303	$ 9,880	$ 315,157
	Non-Residential										
159	Low Strength	$ 2,671	$ 35,678	$ 48,792	$ 48,792	$ 20,219	$ 19,388	$ 42,693	$ 7,582	$ 7,270	$ 233,087
65	Medium Strength	$ 1,092	$ 20,133	$ 110,066	$ 110,066	$ 91,220	$ 104,964	$ 96,308	$ 34,208	$ 39,362	$ 607,418
39	High Strength	$ 655	$ 10,020	$ 44,477	$ 44,477	$ 98,297	$ 106,039	$ 38,917	$ 36,862	$ 39,765	$ 419,509
9	Schools	$ 151	$ 5,525	$ 12,796	$ 12,796	$ 4,596	$ 5,085	$ 11,197	$ 1,723	$ 1,907	$ 55,776
20	Commercial - Sewer Only	$ 341	$ 1,898	$ 3,146	$ 3,146	$ 1,304	$ 1,250	$ 2,753	$ 489	$ 469	$ 14,795
9,760	**Totals**	**$ 163,958**	**$ 929,093**	**$ 1,457,400**	**$ 1,457,400**	**$ 728,700**	**$ 728,700**	**$ 1,275,225**	**$ 273,263**	**$ 273,263**	**$ 7,287,000**

Notes:
(1) Unit costs at the top of each column are multiplied by the wastewater flow, the BOD loading, or the SS loading for each customer class from Exhibit IV-2.

Exhibit IV-5
Windsor Water District
FY 15-16 Wastewater Rate Determination

No. of DUs/ Accts.	Customer Class	Annual Water Use	Rate of Return	Estimated Annual Wastewater Flow	BOD Strength	SS Strength	Monthly Service Charges	Usage Rates (1)	Total Service Charge Revenue	Total Usage Charge Revenue	Total Annual Wastewater Rate Revenue	Monthly Flat Rate per DU or ESFD (2)
		1,000 gal.		1,000 gal.	mg/l	mg/l	$/DU	$/gallon				
	Residential											
7,774	Single Family	621,173	55%	338,905	150	100	**$ 9.20**	**$ 0.01229**	$ 858,580	$ 4,165,523	$ 5,024,103	
180	Single Family - Sewer Only	16,628	55%	9,072	150	100	$ 9.20	$ 0.01229	$ 19,880	$ 111,505	$ 131,385	**$ 60.90**
953	Multi-Family / Mobile Homes	40,362	81%	32,534	150	100	**$ 7.51**	**$ 0.01229**	$ 85,893	$ 399,876	$ 485,770	
561	Mobile Home - Sewer Only	26,710	81%	21,530	150	100	$ 7.51	$ 0.01229	$ 50,533	$ 264,625	$ 315,157	**$ 46.90**
	Non-Residential											
159	Low Strength	17,604	90%	15,844	150	100	Varies by	**$ 0.01106**	$ 38,349	$ 194,738	$ 233,087	
65	Medium Strength	39,712	90%	35,740	300	240	Meter	**$ 0.01476**	$ 21,225	$ 586,193	$ 607,418	
39	High Strength	16,047	90%	14,442	800	600	Size	**$ 0.02548**	$ 10,675	$ 408,834	$ 419,509	
9	Schools	4,617	90%	4,155	130	100	(see below)	**$ 0.01085**	$ 5,676	$ 50,099	$ 55,776	
20	Commercial - Sewer Only	1,135	90%	1,022	150	100	$ 9.20	$ 0.01106	$ 2,239	$ 12,557	$ 14,795	**$ 60.90**
9,760	**Totals**	**783,988**		**473,244**					**$ 1,093,050**	**$ 6,193,950**	**$ 7,287,000**	

Notes:
(1) For residential customers, the usage rate applies to the lesser of: (1) average winter water usage determined as the average of the three lowest use months during the period from December through march of each year, or (2) actual monthly water use. For non-residential customers, the usage rate applies to actual monthly water usage.
(2) Flat rate monthly wastewater charges for wastewater-only accounts are applied to each dwelling unit for residential accounts, and to each ESFD for non-residential accounts.

Non-Resid. Service Charges

Mtr. Size	Amount
Up to 3/4"	**$ 9.20**
1"	**$ 14.43**
1 1/2"	**$ 27.39**
2"	**$ 42.99**
3"	**$ 79.44**
4"	**$ 131.49**

Residential Usage Charges

Residential winter water usage is determined as the average of the three lowest use months during the period from December through March. In other words, the highest use month is excluded from the averaging. This helps to avoid situations where irrigation may be included during part of the winter period.

Commercial Business Usage Charges

Usage rates for commercial businesses continue with three strength categories (low, medium, and high), plus a separate rate for schools. Schools traditionally exhibit lower strength characteristics than commercial establishments, and the proposed usage rate for schools is less than the low strength rate for businesses. These categories fairly reflect the potential range of wastewater strength characteristics and are consistent with state guidelines. In calculating commercial usage rates it is assumed that about 90 percent of annual water usage returns to the wastewater system. This is a reasonable estimate as most irrigation occurs through dedicated irrigation service connections, which are not included in wastewater bill calculations.

Flat Rates for Reclamation-Only Accounts

Customers receiving wastewater service, but not water service, from the Town should continue to be charged for wastewater service based on the average rates charged for customers in the same class. Therefore, the reclamation-only residential flat rates for single family homes and mobile homes are proposed to be $60.90 per month, and $46.90 per month, respectively. Non-residential reclamation-only customers should continue to be charged for service based on the number of fixture units, with 20 fixture units equivalent to one single family dwelling.

Proposed Rate Schedules

Exhibit IV-6 summarizes proposed wastewater rate schedules for FY 15-16, reflecting an overall 7 percent increase in wastewater rate revenue. Additional increases of 5 percent per year are anticipated for the remainder of the five-year planning period.

Exhibit IV-6
Windsor Water District
Current and Proposed Monthly Wastewater Rates (1)

	Current	Aug. 2015	July 2016	July 2017	July 2018	July 2019
Wastewater Usage Rates ($/gallon)						
Single Family (2)	$ 0.01206	$ 0.01229	$ 0.01291	$ 0.01356	$ 0.01424	$ 0.01495
Multi-Family / Mobile Homes (2)	$ 0.01206	$ 0.01229	$ 0.01291	$ 0.01356	$ 0.01424	$ 0.01495
Commercial (3)						
Low strength	$ 0.01085	$ 0.01106	$ 0.01162	$ 0.01220	$ 0.01281	$ 0.01345
Medium strength	$ 0.01464	$ 0.01476	$ 0.01550	$ 0.01628	$ 0.01709	$ 0.01794
High strength	$ 0.02559	$ 0.02548	$ 0.02675	$ 0.02809	$ 0.02949	$ 0.03096
Schools (3)	$ 0.01064	$ 0.01085	$ 0.01139	$ 0.01196	$ 0.01256	$ 0.01319
Monthly Service Charges						
Single Family	$ 6.10	$ 9.20	$ 9.70	$ 10.20	$ 10.75	$ 11.30
Multi-Family / Mobile Homes (per DU)	$ 4.95	$ 7.51	$ 7.90	$ 8.30	$ 8.75	$ 9.20
Commercial						
Up to 3/4" meter	$ 6.10	$ 9.20	$ 9.70	$ 10.20	$ 10.75	$ 11.30
1" meter	$ 9.57	$ 14.43	$ 15.20	$ 16.00	$ 16.80	$ 17.65
1 1/2" meter	$ 18.17	$ 27.39	$ 28.80	$ 30.25	$ 31.80	$ 33.40
2" meter	$ 28.53	$ 42.99	$ 45.15	$ 47.45	$ 49.85	$ 52.35
3" meter	$ 52.71	$ 79.44	$ 83.45	$ 87.65	$ 92.05	$ 96.70
4" meter	$ 87.26	$ 131.49	$ 138.10	$ 145.05	$ 152.35	$ 160.00
Additional Monthly Lift Station Charges						
Greens Subdivision	$ 14.35	$ 15.40	$ 16.20	$ 17.05	$ 17.95	$ 18.85
Vintage Greens Subdivision	$ 12.30	$ 13.20	$ 13.90	$ 14.60	$ 15.35	$ 16.15
Wastewater-Only Accounts						
Single Family (per DU)	$ 53.80	$ 60.90	$ 63.95	$ 67.15	$ 70.55	$ 74.10
Mobile Homes (per DU)	$ 42.00	$ 46.90	$ 49.25	$ 51.75	$ 54.35	$ 57.10
Commercial (per ESFD) (4)	$ 53.80	$ 60.90	$ 63.95	$ 67.15	$ 70.55	$ 74.10

Notes:
(1) Actual billing occurs bi-monthly.
(2) Residential usage charges determined based on the lower of: (1) actual monthly water usage, or (2) average winter water usage determined from the three lowest use months during the prior period from December through March. Bill adjustments based on winter water usage occur in July each year.
(3) Non-residential wastewater usage rates apply to actual monthly water usage.
(4) Each equivalent single family dwelling (ESFD) is equivlent to 20 fixture units.

V. Recycled Water Rates

This section of the report describes and presents recommendations for updating the Town's recycled water rates. Recycled water rates and related policies have been evolving in the past several years, and this section reflects a continuation of that evolution.

Evolution of Recycled Water Pricing and Operational Policies

The Town of Windsor owns and operates a water reclamation utility system, which includes a wastewater collection system, a water reclamation treatment plant, recycled water storage ponds, a transmission system that discharges to Mark West Creek, a recycled water distribution system providing for agricultural irrigation and urban uses, and infrastructure for delivery to the Geysers Geothermal Project. The sale of recycled water by the water reclamation utility provides supplemental revenue and is used to reduce the rates required to support utility operations

The Town has been studying and improving its water reclamation treatment and water recycling program for over ten years. Throughout this planning process, the Town has indicated that its top priority for wastewater disposal is reuse within the Town limits or sphere of influence.

Recycled Water Pricing Policy

In 2012 the Town established new pricing policies for recycled water customers. New pricing policies were scheduled for phased implementation, as outlined below.

- ***Urban (Priority) Customers*** – Recycled water rates and service charges have been established at 80 percent of potable water rates. Recycled water used in the urban setting provides the Town with both water supply and wastewater disposal benefits. The reduced rates and service charges are believed reasonable as an allowance for the increased customer costs associated with use of recycled water (relative to potable water service). These rates were completely phased in as of January 2014.
- ***Vineyard Customers*** – Recycled water rates and service charges have been established at 25 percent of potable water rates. The reduced rates and service charges reflect the fact that vineyard water use is primarily a benefit to wastewater disposal operations of the water reclamation utility, and the rates are necessary to encourage use of this water supply. The phasing-in of these rates is scheduled to be complete in January 2016.
- ***Pasture and Non-Vineyard Agriculture Customers*** – Recycled water rates and service charges have been established at 12.5 percent of potable water rates. The reduced rates and service charges reflect the fact that agricultural water use is primarily a benefit to wastewater disposal operations of the water reclamation utility, and the rates are necessary to encourage use of this water supply. The phasing-in of these rates is scheduled to be complete in January 2016.
- ***Discretionary Lands*** – These are agricultural lands either owned or controlled by the Town to facilitate efficient wastewater disposal operations. The Town only provides water to these lands when all other demands have been met. Nevertheless, it must also maintain a certain amount of disposal capability in order to ensure all disposal needs can be met during periods of high water volumes, but low demand. No charges are applied for water disposed on discretionary lands.

In California, the use of recycled water is regulated by the Regional Water Quality Control Board (RWQCB) and the State Department of Public Health (DPH). Regulatory requirements have been incorporated into the Town's Municipal Code under Title XII – Windsor Water District, Chapter 7 –

Recycled Water. Users of recycled water are required to obtain a permit from the Town governing the use of recycled water. Among other obligations, users of recycled water are required to: (1) designate a Site Supervisor with certified training in the rules, regulations, and standards for recycled water use, (2) comply with all requirements of applicable federal, state and local statutes, ordinances, regulations including the Recycling Criteria, and other requirements, (3) (3) comply with additional restrictions on the use and application of recycled water, as described in the Code.

The restrictions on the use of recycled water, as well as the additional water management efforts required when using recycled water were deemed, by the Town Council, to justify charging users of recycled water reduced water rates (relative to potable water service).

Operational Changes

In 2013, the Town completed an *Urban Recycled Water Facilities Study* with a grant from the State Water Resources Control Board. That study included a market assessment of potential recycled water demand and an analysis of recycled water project alternatives, and indicated the potential for significant expansion of urban recycled water usage with favorable project areas south of Shiloh Road and west of Highway 101 and in the Airport area. In addition, these areas may be best served with recycled water from Sonoma County Water Agency's (SCWA) Airport/Larkfield/Wikiup Sanitation Zone (ALWSZ), rather than with recycled water from the Town's water reclamation treatment plant.

Beyond the need to dispose of treated wastewater, the Town is increasingly looking at recycled water for its water supply benefits. Recycled water can offset uses of potable water and help to firm up the Town's supply reliability. As the Town considers plans for expanding urban recycled water delivery, in 2014 attention was turned to the operational aspects of the recycled water program, as well as the water supply benefits that recycled water offers. The current framework with recycled water housed within the water reclamation utility does not reflect the co-equal benefits the program provides of wastewater disposal and supplemental water supply for the Town.

In November 2014, the Town Council adopted new policies affecting recycled water. Beginning in FY 15-16, the distribution and sale of recycled water to urban water users will be a function of the water utility, rather than part of the water reclamation utility. Primary benefits of the new framework include:

- Clearer alignment of water and water supply issues residing within the water utility and wastewater treatment and disposal issues residing within the water reclamation utility
- Improved operational efficiency, as the operational requirements of the recycled water distribution system are very similar to potable water distribution
- Stronger financial capacity in the water utility to support additional capital investment in recycled water distribution infrastructure
- A stronger nexus for justifying recycled water rates and recycled water capacity fees
- An enhanced public view of urban recycled water as an integral element of the Town's water supply and water resource management strategy (the status quo emphasizes wastewater disposal)
- A structure to distinguish and separately address water and water reclamation issues, and to consider each from their own perspective, particularly if recycled water is obtained from ALWSZ

- Water reclamation maintains primary focus on wastewater treatment and disposal while the wholesale water rate serves as a convenient and equitable means of cost coverage.

Under the new framework the water utility will buy recycled water, on a wholesale basis, from the water reclamation utility for delivery to urban users. Therefore, the purchase of recycled water will become a new cost to the water utility. In addition, the cost of distributing recycled water to urban users will become a cost of water utility operations. To offset these costs, all revenue from the sale of recycled water to urban users will accrue to the water utility.

Financial and Cost of Service Analysis

Water Utility

The financial plan for the water utility presented in Section II of this report reflects the operational changes that will occur at the beginning of FY 15-16. Under this framework, (1) the purchase of recycled water from the water reclamation utility will be a new cost of water production for the water utility, (2) the cost of distributing recycled water to urban users will be a cost of the water utility, and (3) all revenue derived from the sale of recycled water to urban users will be revenue to the water utility.

In effect, beginning in FY 15-16, urban recycled water customers will be receiving "water service" from the Town's water utility. In addition, the water rates to be paid by urban recycled water customers will be identical to potable water customers, including future water adjustments, and justified using the same cost of service basis, except that the urban recycled water rates will be reduced to offset the increased customer costs placed on users of recycled water, as described previously in this section.

Water Reclamation Utility

The financial plan for the water reclamation utility presented in Section II of this report reflects the operational changes that will occur at the beginning of FY 15-16. Under this framework, (1) the sale of recycled water to the water utility will be a new revenue for the water reclamation utility, (2) the cost of distributing recycled water to agricultural users will continue to be part of the water reclamation utility's operation (as a disposal cost), and (3) all revenues derived from the sale of recycled water to agricultural users will be revenue to the water reclamation utility.

In effect, revenue from the sale of recycled water to agricultural users, as well as wholesale water sales to the water utility, represent supplemental revenue to the water reclamation utility, and is applied to offset costs that would otherwise need to be recovered from wastewater customers. Both the rates applicable to agricultural recycled water sales and the proposed rate for the wholesale sale of recycled water to the water utility are believed to provide reasonable compensation to the water reclamation utility.

Current and Proposed Recycled Water Rates

Current and proposed recycled water rates are summarized in **Exhibit V-1**. The rate schedule reflects the pricing policies described above, including the final phasing of the recycled water usage rates for vineyard and agricultural users.

Exhibit V-1
Windsor Water District
Current and Proposed Monthly Recycled Water Rates

		Current	Aug. 2015	July 2016	July 2017	July 2018	July 2019
Urban Recycled Water Customers (1)				(2)	(2)	(2)	(2)
Water Usage Rate ($/gallon)	All Usage	$ 0.00303	$ 0.00297	$ 0.00297	$ 0.00297	$ 0.00297	$ 0.00297
Monthly Service Charge	Up to 3/4" meter	$ 7.30	$ 8.64	$ 8.82	$ 8.99	$ 9.17	$ 9.35
	1" meter	$ 11.17	$ 13.47	$ 13.74	$ 14.02	$ 14.30	$ 14.58
	1 1/2" meter	$ 20.76	$ 25.46	$ 25.97	$ 26.49	$ 27.02	$ 27.56
	2" meter	$ 32.31	$ 39.89	$ 40.69	$ 41.50	$ 42.34	$ 43.18
	3" meter	$ 59.28	$ 73.58	$ 75.06	$ 76.56	$ 78.09	$ 79.65
	4" meter	$ 97.80	$ 121.72	$ 124.15	$ 126.63	$ 129.17	$ 131.75
	6" meter	$ 194.02	$ 241.94	$ 246.78	$ 251.72	$ 256.75	$ 261.89
	8" meter	$ 309.52	$ 386.27	$ 394.00	$ 401.88	$ 409.92	$ 418.12
	10" meter	$ 444.31	$ 554.70	$ 565.80	$ 577.12	$ 588.66	$ 600.44
Vineyards (3)				(2)	(2)	(2)	(2)
Water Usage Rate ($/gallon)	All Usage	$ 0.00084	$ 0.00093	$ 0.00093	$ 0.00093	$ 0.00093	$ 0.00093
Monthly Service Charge	2" meter	$ 10.10	$ 12.47	$ 12.72	$ 12.97	$ 13.23	$ 13.50
	3" meter	$ 18.53	$ 23.00	$ 23.46	$ 23.93	$ 24.40	$ 24.89
	4" meter	$ 30.56	$ 38.04	$ 38.80	$ 39.57	$ 40.37	$ 41.17
	6" meter	$ 60.63	$ 75.61	$ 77.12	$ 78.66	$ 80.24	$ 81.84
	8" meter	$ 96.72	$ 120.71	$ 123.13	$ 125.59	$ 128.10	$ 130.66
	10" meter	$ 138.85	$ 173.35	$ 176.81	$ 180.35	$ 183.96	$ 187.64
Pasture and Other Non-Vineyard Agriculture (3)				(2)	(2)	(2)	(2)
Water Usage Rate ($/gallon)	All Usage	$ 0.00042	$ 0.00046	$ 0.00046	$ 0.00046	$ 0.00046	$ 0.00046
Monthly Service Charge	2" meter	$ 5.05	$ 6.23	$ 6.36	$ 6.49	$ 6.62	$ 6.75
	3" meter	$ 9.26	$ 11.50	$ 11.73	$ 11.96	$ 12.20	$ 12.45
	4" meter	$ 15.28	$ 19.02	$ 19.40	$ 19.79	$ 20.18	$ 20.59
	6" meter	$ 30.32	$ 37.80	$ 38.56	$ 39.33	$ 40.12	$ 40.92
	8" meter	$ 48.36	$ 60.36	$ 61.56	$ 62.79	$ 64.05	$ 65.33
	10" meter	$ 69.42	$ 86.67	$ 88.41	$ 90.18	$ 91.98	$ 93.82
Wholesale Recycled Water (4)				(2)	(2)	(2)	(2)
Water Usage Rate ($/AF)			$ 456.63	$ 456.63	$ 456.63	$ 456.63	$ 456.63

Notes:
(1) Urban customers include parks, schools, commercial landscapes, and residential landscapes in the Vintage Greens Subdivision. Dual plumbed homes using recycled water for landsape irrigation are exempt from the recycled water monthly service charges. Revenue from urban recycled water sales accrues to the water utility. Actual billing is bi-monthly.
(2) Automatic adjustments to water usage rates may occur each July from 2016 through 2020 due to from changes in SCWA water rates and charges. Those potential future adjustments are not reflected in the water usage rates shown in this schedule.
(3) Revenue from agricultural recycled water sales accrues to the water reclamation utility. Actual billing is bi-monthly.
(4) New wholesale recycled water rate established in July 2015 for sale of recycled water to the Town's water utility for distribution to urban recycled water customers.

Recycled water rates should be adjusted commensurate with any changes to the Town's water rates, including automatic adjustments to water usage rates based on changes in water purchase costs associated with changes in SCWA water rates and charges. The changes to recycled water rates for urban customers will ensure that all water service customers continue to pay a fair and proportionate share of the costs of providing water service. Also, the changes to recycled water rates for agricultural customers will help ensure that the water reclamation utility continues to receive reasonable compensation for providing water for agricultural purposes.

The recycled water rates, as shown in Exhibit V-1, have been incorporated into the financial plan analyses presented in Section II of this report, and the estimated recycled water rate revenues (to both utilities) effectively offset the water and wastewater rates needed in FY 15-16 and beyond.

Wholesale Recycled Water Rate

It is recommended that the Town establish a wholesale rate for the sale of recycled water from the water reclamation utility to the water utility at a rate equal to 50 percent of the rate charged to the

Town by the SCWA for water from the Santa Rosa Aqueduct. This places the cost of recycled water at about twice the cost of producing water from the RRWF (SCWA Russian River Diversion charges plus the Town's cost for pumping) and at half the cost purchasing water from the Santa Rosa Aqueduct. This is considered a reasonable cost for the water utility, as well as reasonable compensation to the water reclamation utility. By pegging the wholesale water rate to the cost of water from the Santa Rosa Aqueduct the Town this "fair market value" will be carried forward in time. The proposed wholesale water rate for recycled water for FY 15-16 is $456.63 per AF, and is also shown in Exhibit V-1.