



City of Newport Beach, CA

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Water Utility Financial Plan

August 2009

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Acronyms Used in the Report

AF	Acre Feet
AWWA	American Water Works Association
BMP	Best Management Practice
BPP	Basin Pumping Percentage
CUWCC	California Urban Water Conservation Council
CIP	Capital Improvement Program
ENR	Engineering News Record
FY	Fiscal Year
HCF	Hundred Cubic Feet
MET	Metropolitan Water District of Southern California
MWDOC	Municipal Water District of Orange County
OCWD	Orange County Water District
O&M	Operations & Maintenance

Executive Summary

Scope

The City of Newport Beach Utilities Division (the City) retained Red Oak Consulting to conduct a water rate study (the Study). This study includes the development of a five-year financial plan, cost-of-service analysis, and development of a conservation rate structure. For purposes of expediting the adoption of new rates, the Study has been divided into two phases:

1. The development of the financial plan, the allocation of fixed and variable revenue, and the proportioning of the monthly service charge by meter size; and
2. The redesign of the commodity charge from a uniform rate to a conservation rate structure.

This report documents the first phase of the Study, including the methodology used to develop the financial plan, the policy decisions reached, the proposed water rates, and the customer bill impacts. A separate report will be prepared for the second phase of the study upon its completion.

Financial Plan

In order to maintain the financial viability of the City water system, Red Oak, with the assistance of City staff, prepared a financial plan for the five-year period from fiscal year ending (FY) 2010 through FY2014. This financial plan includes the development of the City's annual revenue requirement, a financing plan for its capital improvement program (CIP), and review and recommendations for the City's reserve policies.

Red Oak used its proprietary electronic financial planning model, eForecast, to determine the appropriate amount of revenue necessary for the City to meet all of the above requirements.

Funds

The City currently maintains a single fund for its water operations, capital improvement financing, and reserves. Based on direction from the City's staff, Red Oak created a separate fund for capital-related expenditures, which is referred to as the 'Capital Fund.' The financial planning model isolates this fund from the City's Operating Fund in order to evaluate the financial viability of each fund separately. The City, with the assistance of

Red Oak, has developed target reserve levels for each fund, which will be explained in detail below.

Revenue Requirement

The City's revenue requirement is the total amount of revenue it must collect in order to meet its operations and maintenance (O&M) expenditures, debt service payments, and cash-financed capital expenditures. This revenue is collected through water rates and does not include revenue from incidental fees, charges, or other non-operating revenue. The City's O&M expenditures are accounted for in the Operating Fund while debt service payments and cash-financed capital are accounted for in the Capital Fund.

Operations & Maintenance

The City's operations & maintenance expenditures have steadily increased over the past four years, since its most-recent rate increase in FY2005. Table ES-1 presents the City's historical O&M expenditures for FY2005 through FY2008.

Table ES-1: Historical Operations & Maintenance Expenditures (in thousands)

Description	FY2005	FY2006	FY2007	FY2008
Purchased Water - MWDOC	\$ 3,350	\$ 3,800	\$ 3,350	\$ 3,400
Purchased Water - OCWD	2,929	2,880	3,280	3,280
Utilities	1,094	922	872	922
Salaries & Benefits	3,302	3,712	3,827	3,799
Equipment Maintenance & Replacement	345	341	348	417
Other O&M	3,013	3,453	3,444	3,593
Total	\$ 14,033	\$ 15,108	\$ 15,121	\$ 15,411

The City has seen a 29% increase in the average unit cost of purchased water from the Municipal Water District of Orange County (MWDOC) and a 37% increase in the average unit cost of purchased water from the Orange County Water District (OCWD) since 2005. O&M expenditures apart from purchased water and utilities include salaries and benefits, equipment maintenance and replacement, and other O&M. Other O&M includes the general fund service charge, minor capital expenditures, chemicals, and other supplies.

Table ES-2 presents the projected O&M expenditures for the City for the current fiscal year and the financial plan period FY2010 through FY2014.

Table ES-2: Projected Operations & Maintenance Expenditures (in thousands)

Description	Current	1	2	3	4	5
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
Purchased Water - MWDOC	\$ 3,354	\$ 4,931	\$ 5,991	\$ 6,440	\$ 6,762	\$ 7,100
Purchased Water - OCWD	3,857	3,922	3,947	4,081	4,232	4,351
Utilities	1,325	1,322	1,440	1,549	1,692	1,851
Salaries & Benefits	4,152	4,319	4,491	4,671	4,858	5,052
Equipment Maintenance & Replacement	423	444	467	490	514	540
Other O&M	3,579	3,856	4,159	4,491	4,853	5,250
Total	\$ 16,690	\$ 18,794	\$ 20,494	\$ 21,722	\$ 22,911	\$ 24,144

The City's O&M expenditures are projected to increase by over \$7 million, or 45%, from FY2009 to FY2014. Purchased water costs alone account for 57% of this increase.

Purchased water costs are projected to increase by \$3.7 million from MWDOC and \$0.5 million from OCWD from FY2009 through FY2014. These costs, combined with Other O&M, which is partially determined by the total amount of water purchased, account for nearly 80% of the total increase.

Capital Improvement Program Financing

Since FY2005, the City has cash-financed all of its capital improvement needs. The City has developed a 30-year capital improvement program as part of its 2009 Water Master Plan. This CIP totals approximately \$167.6 million in escalated dollars at 4% per annum.

The City will continue to finance its CIP on a pay-as-you-go basis during the financial plan period. Table ES-3 presents the financing plan for the City's CIP for the current fiscal year and the financial plan period FY2010 through FY2014. Future capital financing will be accounted for in the City's Capital Fund. An additional monthly capital charge will be assessed by meter size. This capital charge will be the primary source of revenue for the Capital Fund and be used to pay for cash-financed capital and debt service.

Table ES-3: Capital Improvement Program Financing (in thousands)

Description	Current	1	2	3	4	5
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
Capital Projects	\$ 1,600	\$ 3,210	\$ 1,830	\$ 3,542	\$ 2,700	\$ 1,033
Cash-Financed Capital Projects	1,600	3,210	1,830	3,542	2,700	1,033
Debt-Financed Capital Projects	-	-	-	-	-	-
Total Capital Projects Funded	\$ 1,600	\$ 3,210	\$ 1,830	\$ 3,542	\$ 2,700	\$ 1,033

Table ES-4 presents the two remaining debt service payments for the *1999 Refunding of Water Revenue Bonds* for the financial plan period FY2010 through FY2014.

Table ES-4: Projected Debt Service Payments (in thousands)

	Current	1	2	3	4	5
Description	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
Debt Service	\$ 1,618	\$ 130	-	-	-	-

Reserve Requirements

The following reserves are commonly maintained by utilities, and are recommended by Red Oak—at a minimum—to insulate the City from financial volatility.

Operating Stabilization Reserve (Operating Fund)

The City does not currently maintain an operating stabilization reserve. Red Oak recommends that the City maintain a reserve equivalent to 180 days of its operating budget, or 50%. This reserve level also provides a buffer period of 24 months at a 25% loss rate. Funds collected in excess of the operations stabilization reserve target would be available to offset future rate adjustments while extended reserve shortfalls would be recovered from future rate increases.

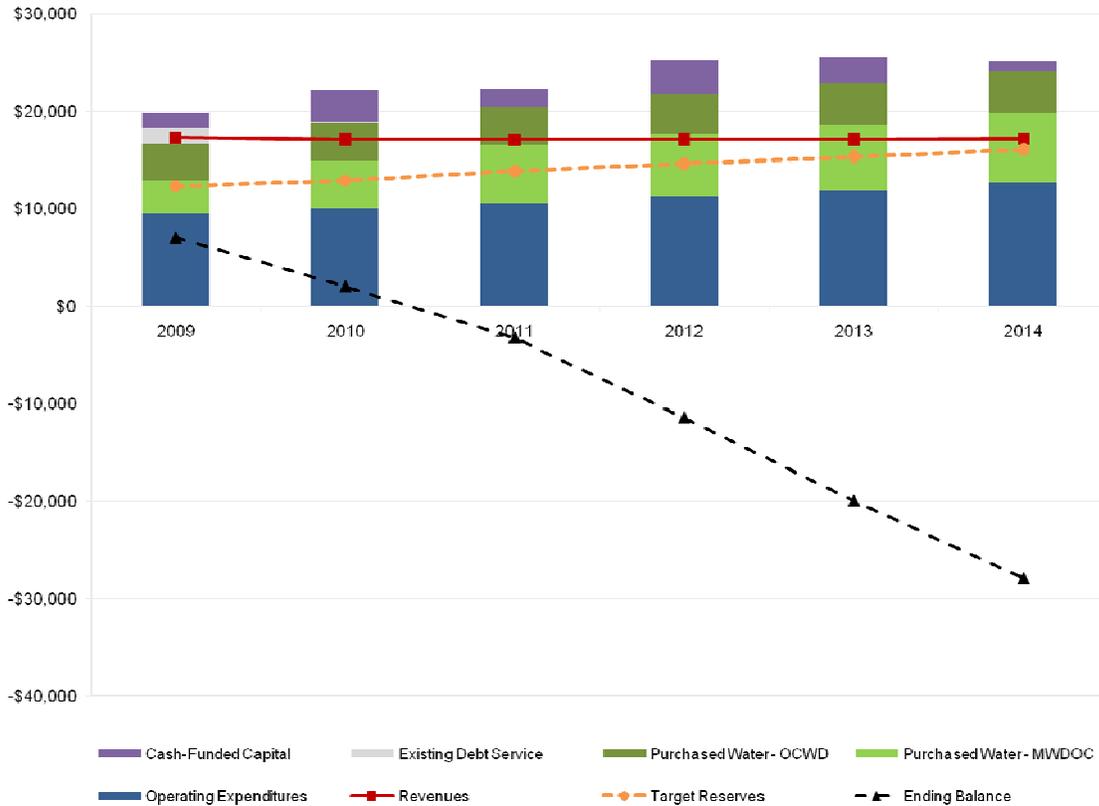
Contingency Reserve (Capital Fund)

The City currently maintains a contingency reserve equivalent to 35% of its annual budget, which is based on a historical approximation of capital replacement needs in the event of a catastrophe. In order to determine the appropriate level of emergency capital replacement reserves, the City should conduct a criticality assessment of its system facilities. This assessment involves quantifying the probability of its facilities being impaired, the level of impairment, and the cost of replacement should a catastrophe occur. Red Oak recommends that the City conduct such an assessment; however, if resources are limited, the City may wish to set its contingency reserve level based on an alternative method. Based on direction from the City's staff, Red Oak has evaluated a contingency reserve that parallels the annual revenue anticipated to be recovered through the proposed capital charge. Red Oak believes this amount may provide a sufficient reserve against unanticipated replacements or repairs. By FY2014, the target contingency reserve will be approximately \$4 million.

Current Financial Outlook

Based on the City's increasing O&M expenditures, capital financing needs, and proposed reserve requirements, current revenue are insufficient. Figure ES-1 presents the current fiscal year and the five-year financial outlook for FY2010 through 2014 with no rate revenue increases. Under current rate revenue, the City will be unable to maintain a positive balance in the combined Operating Fund and Capital Fund by FY2011.

Figure ES-1: Five-Year Financial Outlook with No Revenue Increases (in thousands)

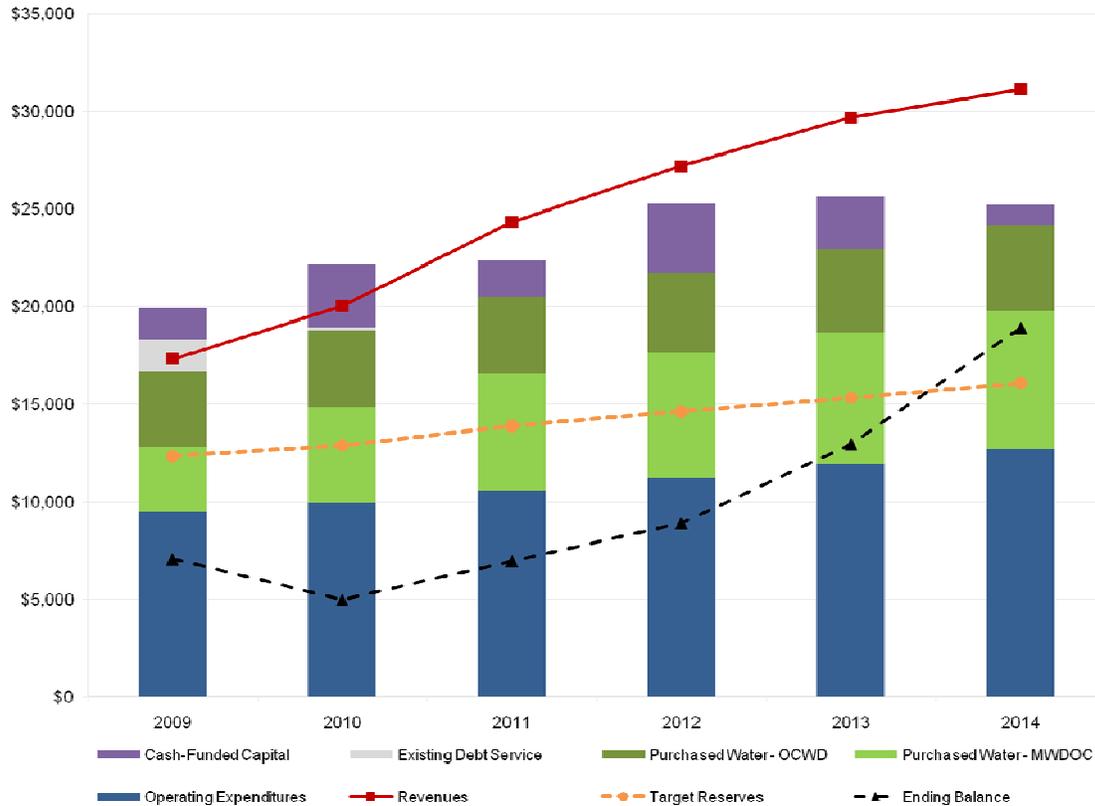


Proposed Five-Year Financial Plan

Red Oak, with the assistance of the City’s staff, has developed a five-year financial plan for the period FY2010 through FY2014. Based on the direction of the City’s Finance Committee, this financial plan has been developed such that rate shock to customers is minimal, capital projects are financed only through cash, and reserves are met by FY2014. Figure ES-2 presents the Combined Water Fund’s five-year financial plan.

The City is anticipating an annual deficiency of approximately \$2.6 million for the current fiscal year. The proposed financial plan eliminates this annual deficiency by FY2011. Reserves are drawn down in FY2009 and FY2010 in order to minimize the rate shock associated with the necessary rate revenue increases.

Figure ES-2: Five-Year Financial Plan (in thousands)



Current Fixed / Variable Rate Revenue

The City currently collects approximately 90% of its rate revenue through its commodity charge and the remaining 10% through its monthly service charge. Table ES-5 presents the current composition of the City’s rate revenue. A high proportion of variable revenue is potentially favorable in terms of affordability and conservation as customers that use less water are rewarded with lower bills. A high proportion of variable revenue, however, is less favorable in terms of revenue stability as less revenue is secure when water use is volatile.

Table ES-5: Current (FY2009) Fixed / Rate Variable Revenue

Rate Revenue Source	FY2009	Percent Share
Commodity Charge	\$ 14,938	90%
Monthly Service Charge	1,640	10%
Total Rate Revenue	\$ 16,578	

Proposed Fixed / Variable Revenue

The City is currently exceeding the requirements of California Urban Water Conservation Council’s (CUWCC) Best Management Practice (BMP) 11 by 20%. BMP 11 states that

in order for water rates to qualify as ‘conservation rates,’ variable revenue must be at least 70% of total rate revenue. Red Oak recommends that in order to reduce revenue instability generated by the City’s disproportionate share of variable revenue, the City should gradually reduce the commodity charge’s share of total rate revenue to slightly more than 70% by FY2014.¹ Table ES-6 presents the proposed blend of fixed and variable rate revenue for the financial plan period FY2010 through FY2014. The proposed blends of fixed and variable revenue will help the City maintain revenue stability while still meeting the requirements of California CUWCC’s BMP 11. Further, by increasing the proportion of revenue that is collected through fixed charges, the City can reduce its reliance on revenue collected through more aggressive conservation-based rates that it is planning to adopt in the future.

Table ES-6: Proposed Fixed / Variable Revenue (\$ in thousands)

Rate Revenue	Current	1	2	3	4	5
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
Total Rate Revenue	\$ 16,578	\$ 19,479	\$ 23,723	\$ 26,569	\$ 28,916	\$ 30,130
Fixed Revenue Share	10%	21%	27%	28%	28%	28%
Variable Revenue Share	90%	79%	73%	72%	72%	72%
Fixed Revenue - Monthly Service Charge	\$ 1,640	\$ 4,084	\$ 6,469	\$ 7,469	\$ 8,218	\$ 8,536
Variable Revenue - Commodity Charge	\$ 14,938	\$ 15,394	\$ 17,253	\$ 19,100	\$ 20,698	\$ 21,594
Projected Water Sales (Million HCF)	7,182	7,002	7,002	7,002	7,002	7,002
Variable Rate (\$/HCF)	\$ 2.08	\$ 2.20	\$ 2.46	\$ 2.73	\$ 2.96	\$ 3.08

Note: Projected Water Sales assumes 6% water loss rate.

Variable revenue projections rely on the City’s projected sales of approximately 7 million HCF for FY2010 through FY2014. Projected sales, however, will be revised to account for a conservation rate structure, during the second phase of the Study. Adjustments to these projections will vary according to how aggressive the conservation rate structure is.

Proposed Meter Equivalency Schedule

The current meter equivalency schedule for the City’s monthly service charge does not adequately reflect the relative costs of reading, maintaining, and replacing different meter sizes. Further, the current schedule does not account for the relative flow capacities of different meter sizes, which often serves as a basis for the relative amounts of meter-based charges. Red Oak recommends using the American Water Works Association’s (AWWA) estimate of meter flow capacity from the M6 manual as the basis for the City’s meter equivalency schedule. These flow estimates indicate the relative amounts of water

¹ To meet the requirements of BMP 11, the City should closely monitor its revenue to ensure that fixed charges do not exceed 30 percent of its revenue. This is important since the effects of conservation will reduce volume-related charges. As the City implements tiered water rates, it may consider requesting and exemption from the requirements of BMP 11.

that can flow through each meter size, expressed in gallons per minute. These relative capacities serve as an empirical basis for allocating costs among different meter sizes and provide a more defensible rationale for the determination of relative meter charges. California's Proposition 218 and Government Code §54999 both require proportionality in the determination of water rates, which the proposed meter equivalency schedule helps to address. Table ES-7 presents the current and proposed meter equivalency schedules.

Table ES-7: Current & Proposed Meter Equivalency Schedules

Meter Size	Number of Meters	Meter Equivalency Ratio	
		Current	Proposed
3/4"	17,445	1.00	1.00
1"	6,762	1.22	1.67
1 1/2"	495	1.56	3.33
2"	1,373	2.11	5.33
3"	48	4.00	10.00
4"	80	5.67	16.67
6"	28	8.56	33.33
8"	14	10.00	53.33
10"	0	10.00	95.87
12"	0	10.00	154.20

Proposed Rates

In order to implement the proposed financial plan, the City should adjust its current monthly service charge and commodity charge to the rates presented below for the financial plan period FY2010 through FY2014. These rates will allow the City to meet the revenue targets presented in the five-year financial plan, which will cover its rising expenditures for purchased water and other O&M items, capital improvement financing needs, and proposed reserve requirements. These rates will also meet the proposed transition to a composition of rate revenue in which fixed charges account for slightly less than 30% of total rate revenue, allowing for more revenue stability. Tables ES-8 through ES-11 present the proposed rates for the financial plan period FY2010 through FY2014. Note that these rates are anticipated to be implemented on January 1 of each year.

Table ES-8: Current & Proposed Commodity Charges

	Current	1	2	3	4	5
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
Commodity Charge	\$ 2.08	\$ 2.20	\$ 2.46	\$ 2.73	\$ 2.96	\$ 3.08

Table ES-9: Current & Proposed Monthly Service Charges

Monthly Service Charge	Current	1	2	3	4	5
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
3/4"	\$ 4.50	\$ 1.18	\$ 5.76	\$ 7.53	\$ 8.78	\$ 9.15
1"	5.50	1.97	9.60	12.55	14.63	15.24
1 1/2"	7.00	3.94	19.20	25.09	29.26	30.49
2"	9.50	6.31	30.72	40.14	46.81	48.78
3"	18.00	11.83	57.61	75.27	87.77	91.46
4"	25.50	19.71	96.01	125.45	146.28	152.43
6"	38.50	39.42	192.02	250.91	292.57	304.85
8"	45.00	63.07	307.23	401.45	468.10	487.76
10"	45.00	113.36	552.25	721.60	841.42	876.75
12"	45.00	182.34	888.28	1,160.69	1,353.41	1,410.24

Table ES-10: Proposed Capital Charges

Capital Charge	Current	1	2	3	4	5
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
3/4"	-	\$ 7.08	\$ 7.33	\$ 7.59	\$ 7.85	\$ 8.13
1"	-	11.80	12.22	12.65	13.09	13.55
1 1/2"	-	23.61	24.43	25.29	26.18	27.09
2"	-	37.77	39.10	40.46	41.88	43.35
3"	-	70.83	73.30	75.87	78.53	81.27
4"	-	118.04	122.17	126.45	130.88	135.46
6"	-	236.09	244.35	252.90	261.75	270.91
8"	-	377.74	390.96	404.64	418.80	433.46
10"	-	678.98	702.75	727.34	752.80	779.15
12"	-	1,092.13	1,130.35	1,169.92	1,210.86	1,253.24

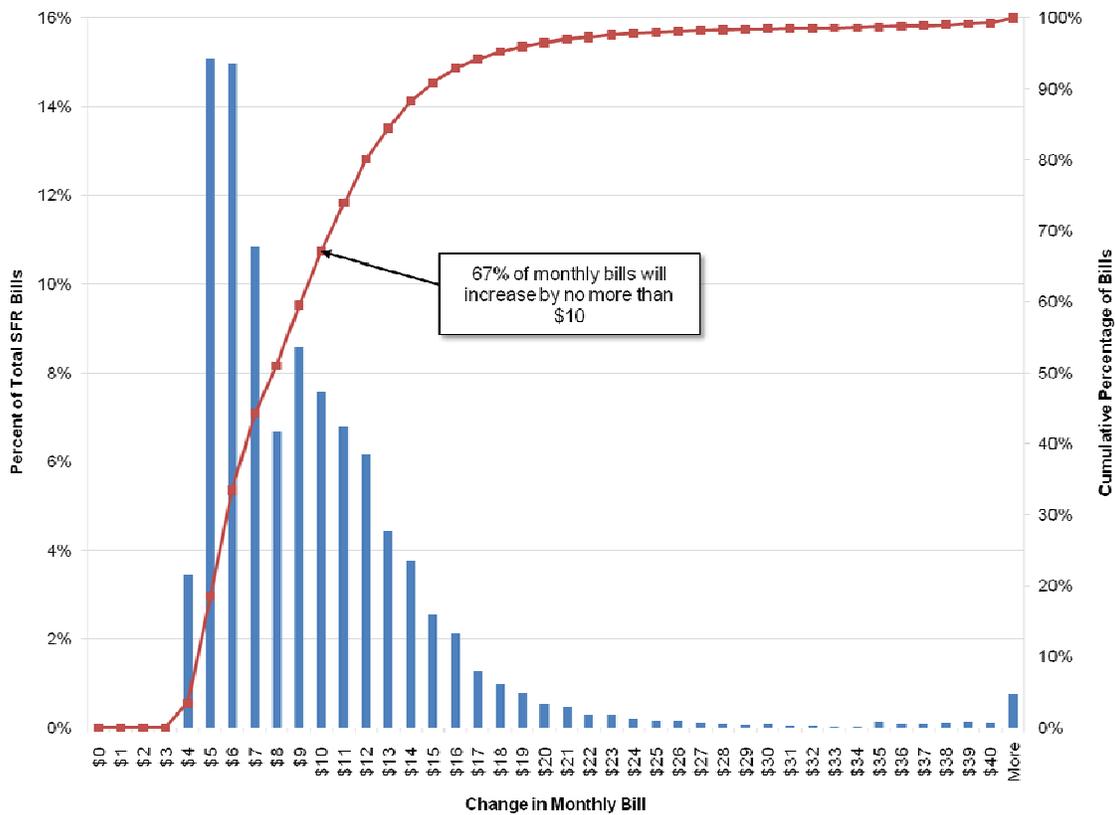
Table ES-11: Current & Proposed Combined Fixed Charges

Combined Fixed Charges	Current	1	2	3	4	5
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
3/4"	\$ 4.50	\$ 8.27	\$ 13.09	\$ 15.11	\$ 16.63	\$ 17.27
1"	5.50	13.78	21.82	25.19	27.72	28.79
1 1/2"	7.00	27.55	43.64	50.38	55.43	57.58
2"	9.50	44.08	69.82	80.61	88.69	92.12
3"	18.00	82.65	130.91	151.14	166.30	172.73
4"	25.50	137.75	218.18	251.90	277.16	287.88
6"	38.50	275.50	436.37	503.81	554.32	575.76
8"	45.00	440.80	698.19	806.09	886.91	921.22
10"	45.00	792.34	1,254.99	1,448.95	1,594.22	1,655.90
12"	45.00	1,274.47	2,018.64	2,330.61	2,564.27	2,663.48

Customer Bill Impact

Figure ES-3 presents the single-family residential monthly bill impact distribution for FY2010 rates. This bill distribution is based on the City’s calendar year 2007 consumption history. The blue columns indicate the percentage of single-family residential monthly bills that will increase by the corresponding amount on the horizontal axis, assuming consumption is similar to calendar year 2007. The red line indicates the cumulative percentage of monthly bills at each amount of change in bill. For example, the figure shows that 67% of monthly bills will increase by no more than \$10. It also shows that approximately 15% of monthly bills will increase by between \$4 and \$5. Note that over 90% of monthly bills will increase by no more than \$15.

Figure ES-3: FY2010 Single-Family Residential Customer Monthly Bill Impact



1. Introduction

1.1. Scope

The City of Newport Beach Utilities Division (the City) retained Red Oak Consulting to conduct a water rate study (the Study). This study includes the development of a five-year financial plan, cost-of-service analysis, and development of a conservation rate structure. For purposes of expediting the adoption of new rates, the Study has been divided into two phases:

1. The development of the financial plan, the allocation of fixed and variable revenue, and the proportioning of the monthly service charge by meter size; and
2. The redesign of the commodity charge from a uniform rate to a conservation rate structure.

This report documents the first phase of the Study, including the methodology used to develop the financial plan, the policy decisions reached, the proposed water rates, and the customer bill impacts. A separate report will be prepared for the second phase of the study upon its completion.

1.2. Background

The City of Newport Beach Utilities Division currently serves a population of over 86,000 within a service area of approximately fifty square miles. It is located on the Pacific coast of California, in Orange County, and surrounded by Huntington Beach and Costa Mesa to the north, Laguna Beach to the South, and Irvine to the east. The City currently has over 26,300 active connections and delivers over 18,000 acre feet (AF) of water per year on average. The City owns and operates three reservoirs: Big Canyon Reservoir (600 AF), Spyglass Hill Reservoir (4.5 AF), and 16th Street Reservoir (9.2 AF).

2. Financial Plan

In order to maintain the financial viability of the City's water system, Red Oak, with the assistance of the City's staff, has prepared a financial plan for the five-year period from fiscal year ending (FY) 2010 through FY2014. This financial plan includes the development of the City's annual revenue requirement, a financing plan for its capital improvement program (CIP), and review and recommendations for the City's reserve policies.

Red Oak used its proprietary electronic financial planning model, eForecast, to determine the appropriate amount of revenue necessary for the City to meet all of the above requirements.

2.1. Funds

The City currently maintains a single fund for its water operations, capital improvement financing, and reserves. Based on direction from the City's staff, Red Oak has created a separate fund for capital-related expenditures, which will be referred to as the 'Capital Fund.' The financial planning model isolates this fund from the City's Operating Fund in order to evaluate the financial viability of each fund separately. The City, with the assistance of Red Oak, has developed target reserve levels for each fund, which will be explained in detail below.

2.2. Revenue Requirement

The City's revenue requirement is the total amount of revenue it must collect in order to meet its operations and maintenance (O&M) expenditures, debt service payments, and cash-financed capital expenditures. This revenue is collected through water rates and does not include revenue from incidental fees, charges, or other non-operating revenue. The City's O&M expenditures are accounted for in the Operating Fund while debt service payments and cash-financed capital are accounted for in the Capital Fund.

2.2.1. Operations & Maintenance

The City's operations & maintenance expenditures have steadily increased over the past four years, since its most-recent rate increase in FY2005. Table 2-1 presents the City's historical O&M expenditures for FY2005 through FY2008.

Table 2-1: Historical Operations & Maintenance Expenditures (in thousands)

Description	FY2005	FY2006	FY2007	FY2008
Purchased Water – MWDOC	\$ 3,350	\$ 3,800	\$ 3,350	\$ 3,400
Purchased Water – OCWD	2,929	2,880	3,280	3,280
Utilities	1,094	922	872	922
Salaries & Benefits	3,302	3,712	3,827	3,799
Equipment Maintenance & Replacement	345	341	348	417
Other O&M	3,013	3,453	3,444	3,593
Total	\$ 14,033	\$ 15,108	\$ 15,121	\$ 15,411

2.2.1.1. Purchased Water Costs

The largest components of the City’s O&M expenditures are its purchased water costs and associated O&M, which are encompassed by the ‘Other O&M’ category in Table 2-1. The City currently obtains its water from two major sources: the Municipal Water District of Orange County (MWDOC), which imports its water from the State Water Project and the Colorado River Aqueduct through the Metropolitan Water District of Southern California (MET), and the Orange County Water District (OCWD), which manages the Orange County groundwater basin. Variations in purchased water costs occur year-to-year based on the City’s basin pumping percentage (BPP), which is the percentage of the City’s annual demand that can be pumped from the basin; weather conditions; and to a lesser extent, the economy and growth.

Table 2-2 presents the average unit cost of purchased water per AF by the City’s two major sources for FY2005 through FY2008. Note that the average cost per AF is the total amount of charges paid to each agency, divided by the amount of water purchased. The total amount of annual charges for MWDOC includes the cost of treated water, the capacity charge, the readiness-to-serve charge, and the meter charge. The total amount of annual charges for OCWD includes the cost of the replenishment assessment and annexation fee.

Table 2-2: Historical Average Unit Cost of Purchased Water per AF

Description	FY2005	FY2006	FY2007	FY2008
Purchased Water – MWDOC (\$/AF)	\$ 492	\$ 514	\$ 616	\$ 597
Purchased Water – OCWD (\$/AF)	233	255	344	279

The City has seen a 29% increase in the average cost of purchased water from MWDOC and a 37% increase in the average cost of purchased water from OCWD since 2005. Based on information obtained from MWDOC and OCWD, Red Oak projects the following average unit costs of purchased water per AF in Table 2-3. These projected unit costs are based on a projected purchased water amount of 17,100 AF per year.

Table 2-3: Projected Average Unit Cost of Purchased Water per AF

Description	Current	1	2	3	4	5
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
Purchased Water – MWDOC (\$/AF)	\$ 633	\$ 759	\$ 922	\$ 966	\$ 1,014	\$ 1,065
Purchased Water – OCWD (\$/AF)	319	361	364	382	397	408

Note that the projected unit cost of purchased water from MWDOC increases by over 65% and the projected unit cost of purchased water from OCWD increases by over 25% from FY2009 through FY2014. Rising MWDOC costs can partially be attributed to the State of California’s third consecutive year of drought and diminished supplies from the Bay Delta as part of efforts to protect endangered species. Purchased water costs from OCWD vary year-to-year based on the City’s BPP, which is a function of the Orange County Groundwater Basin’s rate of recharge. The unit costs also fluctuate due to the proportions of total water purchased from each of the City’s two sources.

2.2.1.2. Utilities

Utilities costs include electricity costs and telecommunications costs. The majority of these costs depend on the total amount of water pumped from the Orange County groundwater basin and have therefore been projected based on the projected amount of water that will be pumped.

2.2.1.3. Other O&M

O&M expenditures apart from purchased water and utilities include salaries and benefits, equipment maintenance and replacement, and other O&M. Other O&M includes the general fund service charge, minor capital expenditures, chemicals, and other supplies. Based on the historical changes in costs for these items and discussion with City staff, Red Oak estimates the following annual escalation factors for these O&M expenditures:

- Salaries & Benefits – 4%
- Equipment Maintenance & Replacement – 5%
- Other O&M
 - General Fund Service Charge – 4%
 - Minor Capital Expense – 0%
 - Chemicals & Supplies – 11%

2.2.1.4. Projected Operations & Maintenance Expenditures

Table 2-4 presents the projected O&M expenditures for the City for the current fiscal year and the financial plan period FY2010 through FY2014.

Table 2-4: Projected Operations & Maintenance Expenditures (in thousands)

Description	Current	1	2	3	4	5
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
Purchased Water - MWDOC	\$ 3,354	\$ 4,931	\$ 5,991	\$ 6,440	\$ 6,762	\$ 7,100
Purchased Water - OCWD	3,857	3,922	3,947	4,081	4,232	4,351
Utilities	1,325	1,322	1,440	1,549	1,692	1,851
Salaries & Benefits	4,152	4,319	4,491	4,671	4,858	5,052
Equipment Maintenance & Replacement	423	444	467	490	514	540
Other O&M	3,579	3,856	4,159	4,491	4,853	5,250
Total	\$ 16,690	\$ 18,794	\$ 20,494	\$ 21,722	\$ 22,911	\$ 24,144

The City's O&M expenditures are projected to increase by over \$7 million, or 45%, from FY2009 to FY2014. Purchased water costs alone account for 57% of this increase. Purchased water costs are projected to increase by \$3.7 million from MWDOC and \$0.5 million from OCWD from FY2009 through FY2014. These costs, combined with Other O&M, which is partially determined by the total amount of water purchased, account for nearly 80% of the total increase.

2.2.2. Capital Improvement Program Financing

2.2.2.1. Historical Capital Improvement Program Financing

Since FY2005, the City has cash-financed all of its capital improvement needs. Table 2-5 presents a summary of capital improvement financing from FY2005 through FY2008.

Table 2-5: Historical Capital Improvement Program Financing (in thousands)

Description	FY2005	FY2006	FY2007	FY2008
Capital Projects	\$ 8,634	\$ 7,794	\$ 4,924	\$ 5,363
Cash-Financed Capital Projects	8,634	7,794	4,924	5,363
Debt-Financed Capital Projects	-	-	-	-
Total Capital Projects Funded	\$ 8,634	\$ 7,794	\$ 4,924	\$ 5,363

2.2.2.2. Water Master Plan

The City has developed a 30-year capital improvement program as part of its 2009 Water Master Plan. Table 2-6 presents the 30-year CIP for the City as indicated in the 2009 Water Master Plan. The CIP is presented in annually escalated dollars to account for rising construction costs. Red Oak believes that the escalation rate of 4% used by the City to develop its CIP is reasonable and consistent with Engineering New Record (ENR) construction cost index. Note the average annual capital expenditure for the 30-year CIP is approximately \$5.6 million compared with \$2.5 million for the five-year financial plan period FY2010 through FY2014.

Table 2-6: 30-Year Capital Improvement Program (in thousands)

Year	Capital Expenditure	Year	Capital Expenditure
FY2009	\$ 1,600	FY2024	\$ 5,279
FY2010	3,210	FY2025	7,905
FY2011	1,830	FY2026	7,090
FY2012	3,542	FY2027	10,534
FY2013	2,700	FY2028	1,643
FY2014	1,033	FY2029	12,458
FY2015	3,610	FY2030	7,694
FY2016	8,408	FY2031	5,518
FY2017	4,890	FY2032	7,255
FY2018	5,382	FY2033	-
FY2019	5,597	FY2034	4,315
FY2020	5,821	FY2035	7,645
FY2021	4,933	FY2036	7,950
FY2022	4,975	FY2037	8,268
FY2023	7,584	FY2038	8,599
15-Year Total	\$ 65,115	30-Year Total	\$ 167,268

Note: Project costs are escalated at a rate of 4% annually

2.2.2.3. Future Capital Improvement Program Financing

The City will continue to finance its CIP on a pay-as-you-go basis during the financial plan period. Table 2-7 presents the financing plan for the City's CIP for the current fiscal year and the financial plan period FY2010 through FY2014. Future capital financing will be accounted for in the City's Capital Fund. An additional monthly capital charge will be assessed by meter size. This capital charge will be the primary source of revenue for the Capital Fund and be used to pay for cash-financed capital and debt service.

Table 2-7: Capital Improvement Program Financing (in thousands)

Description	Current	1	2	3	4	5
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
Capital Projects	\$ 1,600	\$ 3,210	\$ 1,830	\$ 3,542	\$ 2,700	\$ 1,033
Cash-Financed Capital Projects	1,600	3,210	1,830	3,542	2,700	1,033
Debt-Financed Capital Projects	-	-	-	-	-	-
Total Capital Projects Funded	\$ 1,600	\$ 3,210	\$ 1,830	\$ 3,542	\$ 2,700	\$ 1,033

2.2.2.4. Historical and Future Debt Service Payments

Table 2-8 presents the City's debt service payments from FY2005 through FY2008. These payments are among the six final payments for the *1999 Refunding of Water Revenue Bonds*.

Table 2-8: Debt Service Payments (in thousands)

Description	FY2005	FY2006	FY2007	FY2008
Debt Service	\$ 1,653	\$ 1,650	\$ 1,649	\$ 1,619

Table 2-9 presents the two remaining debt service payments for the *1999 Refunding*.

Table 2-9: Projected Debt Service Payments (in thousands)

Description	Current	1	2	3	4	5
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
Debt Service	\$ 1,618	\$ 130	-	-	-	-

2.3. Reserve Requirements

Reserve requirements are funds set aside for precautionary purposes such as for revenue stabilization, rate stabilization, or emergency capital replacement. These funds are typically required to maintain a predetermined balance or an amount based on annual operating results. The City currently maintains two reserves and a minimum capital contribution, referred to as the ‘designated reserve’:

- System Reserve – 35% of annual budget
- Stabilization Reserve – 25% of annual budget
- Designated Reserve – 10% of annual budget

The following reserves are commonly maintained by utilities, and are recommended by Red Oak—at a minimum—to insulate the City from financial volatility.

2.3.1. Operating Stabilization Reserve (Operating Fund)

An operating stabilization reserve is established primarily to maintain adequate levels of cash between the time expenses are incurred and revenue are received. It may also be used to insulate a utility from volatility in some operating expenditures such as for energy, and provide time for the utility to adjust rates. Utilities that bill monthly typically maintain a reserve equivalent to 45 to 90 days of operating expenditures, while utilities that bill bimonthly typically maintain a reserve equivalent to 90 to 180 days of operating expenditures. Seasonality is also a factor in determining the appropriate reserve level; utilities that have strong seasonal influences to their demand typically maintain larger reserves.

The City does not currently maintain an operating stabilization reserve. Red Oak recommends that the City maintain a reserve equivalent to 180 days of its operating budget, or 50%. This reserve level also provides a buffer period of 24 months at a 25% loss rate. Funds collected in excess of the operations stabilization reserve target would be available to offset future rate adjustments while extended reserve shortfalls would be recovered from future rate increases.

2.3.2. Contingency Reserve (Capital Fund)

A contingency reserve is established to fund the replacement or repair of system facilities in the event that these facilities are impaired due to a catastrophe. The reserve may also be used to insulate against early and/or unanticipated capital replacement costs.

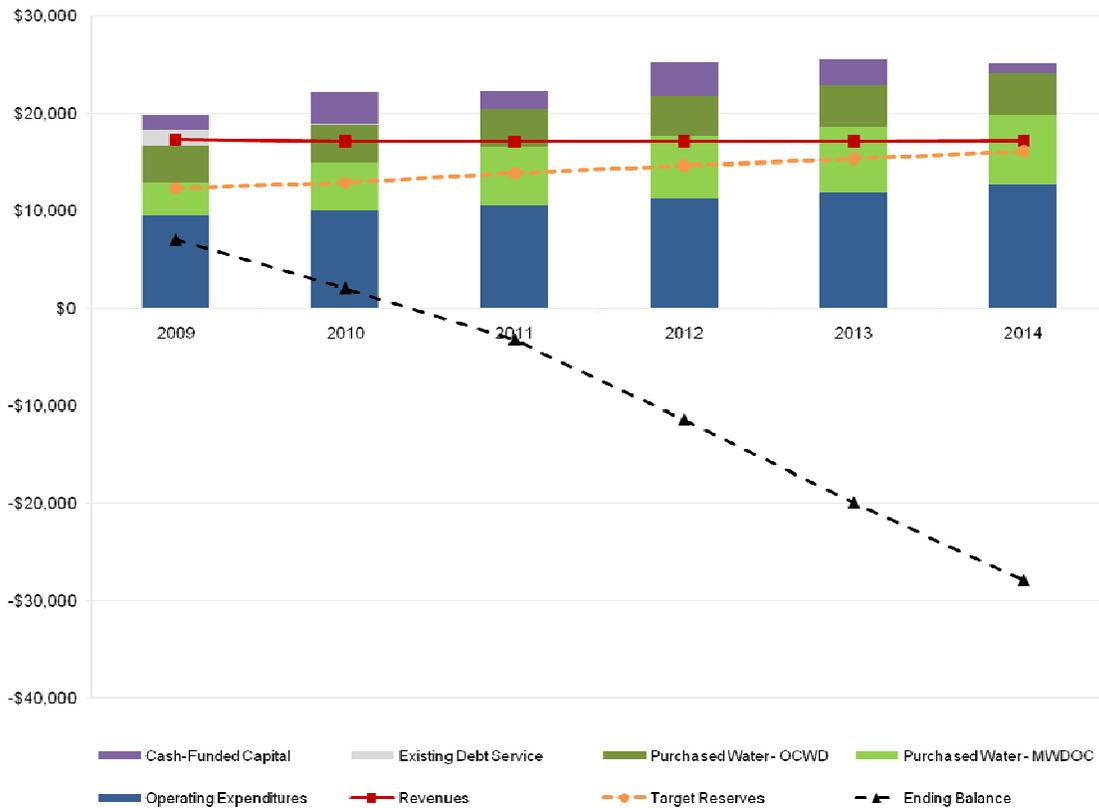
The City currently maintains a contingency reserve equivalent to 35% of its annual budget, which is based on a historical approximation of capital replacement needs in the event of a catastrophe. In order to determine the appropriate level of emergency capital replacement reserves, the City should conduct a criticality assessment of its system facilities. This assessment involves quantifying the probability of its facilities being impaired, the level of impairment, and the cost of replacement should a catastrophe occur. Red Oak recommends that the City conduct such an assessment; however, if resources are limited, the City may wish to set its contingency reserve level based on an alternative method. Based on direction from the City's staff, Red Oak has evaluated a contingency reserve that parallels the annual revenue anticipated to be recovered through the proposed capital charge. Red Oak believes this amount may provide a sufficient reserve against unanticipated replacements or repairs. By FY2014, the target contingency reserve will be approximately \$4 million.

2.4. Five-Year Financial Plan

2.4.1. Current Financial Outlook

Based on the City's increasing O&M expenditures, capital financing needs, and proposed reserve requirements, current revenue are insufficient. Figure 2-1 presents the current fiscal year and the five-year financial outlook for FY2010 through FY2014 with no rate revenue increases. Each column is broken into individual annual expenditures, indicated by a different color (see legend). The red line represents annual revenue, the black line represents ending balances, and the orange line represents target reserves. Under current rate revenue, the City will be unable to maintain a positive balance in the combined Operating Fund and Capital Fund by FY2011.

Figure 2-1: Five-Year Financial Outlook with No Revenue Increases (in thousands)



2.4.2. Proposed Five-Year Financial Plan

Red Oak, with the assistance of the City’s staff, has developed a five-year financial plan for the period FY2010 through FY2014. Based on the direction of the City’s Finance Committee, this financial plan has been developed such that rate shock to customers is minimal, capital projects are financed only by cash, and reserves are met by FY2014. Table 2-10 presents the five-year financial plan for the City’s Operating Fund.

Table 2-10: Operating Fund Five-Year Financial Plan (in thousands)

Operating Fund	Current	1	2	3	4	5
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
Commodity Charge Revenue	\$ 14,938	\$ 15,394	\$ 17,253	\$ 19,100	\$ 20,698	\$ 21,594
Monthly Service Charge Revenue	1,640	584	2,847	3,720	4,337	4,519
Miscellaneous Revenue	439	439	439	439	439	439
Interest Income	291	117	120	143	239	377
Total Revenue	17,309	16,535	20,660	23,403	25,714	26,930
Operations & Maintenance	9,480	9,941	10,557	11,201	11,917	12,693
Purchased Water - MWDOC	3,354	4,931	5,991	6,440	6,762	7,100
Purchased Water - OCWD	3,857	3,922	3,947	4,081	4,232	4,351
Total O&M	16,690	18,794	20,494	21,722	22,911	24,144
Capital Contribution	(3,300)	-	-	-	-	-
Annual Surplus / (Deficiency)	(2,682)	(2,258)	166	1,681	2,803	2,785
Beginning Balance	9,665	6,983	4,725	4,891	6,572	9,374
Ending Balance	\$ 6,983	\$ 4,725	\$ 4,891	\$ 6,572	\$ 9,374	\$ 12,160
Target Reserves	\$ 8,345	\$ 9,397	\$ 10,247	\$ 10,861	\$ 11,456	\$ 12,072

Note that cash-financed capital and debt service are accounted for in the Capital Fund. The removal of these items has a corresponding decrease in the rate revenue required and accounted for in the Operating Fund, as seen in FY2010. Total rate revenue for the combined Operating Fund and Capital Fund, however, increases year-to-year to meet increasing O&M expenditures, capital improvement financing needs, and the proposed reserve requirements. The City's proposed Operating Stabilization reserve is met by FY2014.

Table 2-11 presents the five-year financial plan for the City's Capital Fund.

Table 2-11: Capital Fund Five-Year Financial Plan (in thousands)

Capital Fund	Current	1	2	3	4	5
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
Capital Charge Revenue	-	\$ 3,500	\$ 3,623	\$ 3,749	\$ 3,881	\$ 4,016
Capital Contribution	3,300	-	-	-	-	-
Interest Income	1	3	29	55	89	181
Total Revenue	3,301	3,503	3,651	3,804	3,969	4,198
Cash-Funded Capital	1,600	3,210	1,830	3,542	2,700	1,033
Existing Debt Service	1,618	130	-	-	-	-
New Debt Service	-	-	-	-	-	-
Total Debt Service	1,618	130	-	-	-	-
Annual Surplus / (Deficiency)	84	163	1,821	262	1,269	3,165
Beginning Balance	-	84	247	2,069	2,331	3,601
Ending Balance	\$ 84	\$ 247	\$ 2,069	\$ 2,331	\$ 3,601	\$ 6,765
Target Reserves	\$ 4,000	\$ 3,500	\$ 3,623	\$ 3,749	\$ 3,881	\$ 4,016

Rate Revenue generated by the proposed Capital Charge is accounted for in the Capital Fund. This source of revenue, which begins in FY2010, is collected to recover the costs of cash-financed capital projects and debt service for the *1999 Refunding of Water Revenue Bonds*. The target contingency reserve, which is met by FY2014, is based on the anticipated annual capital charge revenue, which will be approximately \$4 million in FY2014.

Table 2-12 presents the five-year financial plan for the City's combined water fund.

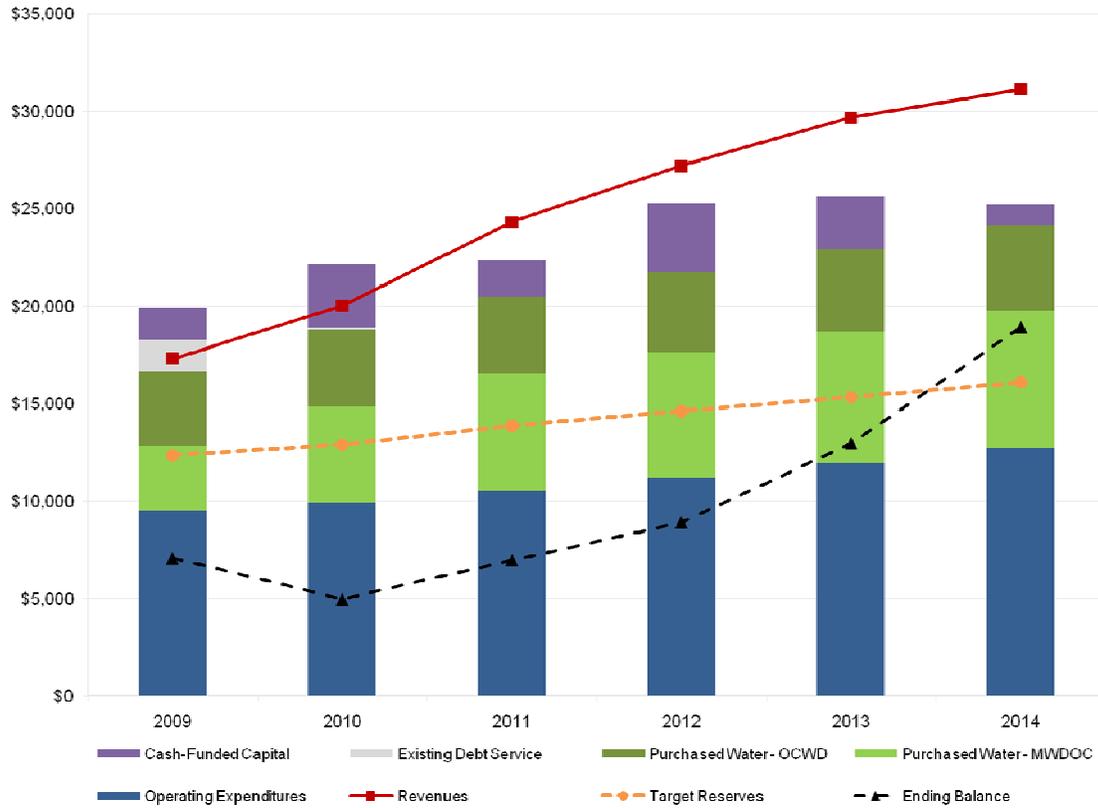
Table 2-12: Combined Water Fund Five-Year Financial Plan (in thousands)

Combined Water Fund	Current	1	2	3	4	5
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
Rate Revenue	\$ 16,578	\$ 19,479	\$ 23,723	\$ 26,569	\$ 28,916	\$ 30,130
Miscellaneous Revenue	439	439	439	439	439	439
Interest Income	293	120	149	198	328	558
Total Revenue	17,310	20,039	24,311	27,207	29,683	31,127
Operations & Maintenance	9,480	9,941	10,557	11,201	11,917	12,693
Purchased Water - MWDOC	3,354	4,931	5,991	6,440	6,762	7,100
Purchased Water - OCWD	3,857	3,922	3,947	4,081	4,232	4,351
Total O&M	16,690	18,794	20,494	21,722	22,911	24,144
Cash-Funded Capital	1,600	3,210	1,830	3,542	2,700	1,033
Existing Debt Service	1,618	130	-	-	-	-
New Debt Service	-	-	-	-	-	-
Total Debt Service	1,618	130	0	0	0	0
Total Expenditures	19,908	22,133	22,324	25,264	25,611	25,177
Annual Surplus / (Deficiency)	(2,598)	(2,095)	1,987	1,943	4,072	5,950
Beginning Balance	9,665	7,067	4,973	6,960	8,903	12,975
Ending Balance	\$ 7,067	\$ 4,973	\$ 6,960	\$ 8,903	\$ 12,975	\$ 18,925
Target Reserves	\$ 12,345	\$ 12,897	\$ 13,870	\$ 14,610	\$ 15,336	\$ 16,088

The City anticipates an annual deficiency of approximately \$2.6 million for the current fiscal year. The proposed financial plan eliminates this annual deficiency by FY2011. Reserves are drawn down in FY2009 and FY2010 in order to minimize the rate shock associated with the necessary rate revenue increases.

Figure 2-2 presents a graphical representation of the Combined Water Fund's five-year financial plan. Each column is separated into individual annual expenditures, indicated by a different color (see legend). The red line represents annual revenue, the black line represents ending balances, and the orange line represents target reserves. Note that target reserves are not met until FY2014. Rate revenue is gradually increased throughout the five-year financial plan such that 'rate shock' to customers is reduced.

Figure 2-2: Five-Year Financial Plan (in thousands)



3. Current Water Rates

As part of the first phase of the Study, Red Oak reviewed the City’s current water rates. These rates must be adjusted in order to follow Red Oak’s proposed financial plan as they are currently insufficient to meet the City’s rising O&M expenditures, capital improvement needs, and the proposed reserve requirements.

3.1. Monthly Service Charge

Table 3-1 presents the current monthly service charge for water accounts by meter size.

Table 3-1: Current Monthly Service Charge by Meter Size

Meter Size	Monthly Service Charge
3/4"	\$ 4.50
1"	5.50
1 1/2"	7.00
2"	9.50
3"	18.00
4"	25.50
6"	38.50
8"	45.00
10"	45.00
12"	45.00

3.2. Commodity Charge

The current commodity charge is \$2.08 per HCF. The City’s commodity charge is a uniform rate and does not vary by meter size, customer class, or season.

4. Fixed / Variable Revenue

4.1. Current Fixed / Variable Rate Revenue

The City currently collects approximately 90% of its rate revenue through its commodity charge and the remaining 10% through its monthly service charge. Table 4-1 presents the current composition of the City's rate revenue. A high proportion of variable revenue is potentially favorable in terms of affordability and conservation as customers that use less water are rewarded with lower bills. A high proportion of variable revenue, however, is less favorable in terms of revenue stability as less revenue is secure when water use is volatile.

Table 4-1: Current (FY2009) Fixed / Variable Rate Revenue (\$ in thousands)

Rate Revenue Source	FY2009	Percent Share
Commodity Charge	\$ 14,938	90%
Monthly Service Charge	1,640	10%
Total Rate Revenue	\$ 16,578	

4.2. California Urban Water Conservation Council Best Management Practice 11

The California Urban Water Conservation Council (CUWCC) has developed fourteen best management practices (BMPs) to reduce long-term urban water demand in California. Implementation of these BMPs can aid water agencies in receiving regional and/or state grants, in addition to reducing long-term demand.

CUWCC's BMP 11 concerns retail water service rates. It states that in order for water rates to qualify as 'conservation rates,' variable rate revenue must be at least 70% of total rate revenue. BMP 11 clarifies that uniform rates, seasonal rates, tiered rates, and allocation-based rates are all types of rates that can be used to meet its requirements.

4.3. Proposed Fixed / Variable Revenue

The City is currently exceeding the requirements of CUWCC's BMP 11 by 20%. Red Oak recommends that in order to reduce revenue instability generated by the City's disproportionate share of variable revenue, the City should gradually reduce the commodity charge's share of total rate revenue to slightly more than 70% by FY2014.¹

¹ To meet the requirements of BMP 11, the City should closely monitor its revenue to ensure that fixed charges do not exceed 30 percent of its revenue. This is important since the effects of conservation will reduce volume-related

Table 4-2 presents the proposed blend of fixed and variable rate revenue for the financial plan period FY2010 through FY2014. The proposed blends of fixed and variable revenue will help the city maintain revenue stability while still meeting the requirements of BMP 11. Further, by increasing the proportion of revenue that is collected through fixed charges, the City can reduce its reliance on revenue collected through more aggressive conservation-based rates that it is planning to adopt in the future.

Table 4-2: Proposed Fixed / Variable Revenue (\$ in thousands)

Rate Revenue	Current	1	2	3	4	5
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
Total Rate Revenue	\$ 16,578	\$ 19,479	\$ 23,723	\$ 26,569	\$ 28,916	\$ 30,130
Fixed Revenue Share	10%	21%	27%	28%	28%	28%
Variable Revenue Share	90%	79%	73%	72%	72%	72%
Fixed Revenue - Monthly Service Charge	\$ 1,640	\$ 4,084	\$ 6,469	\$ 7,469	\$ 8,218	\$ 8,536
Variable Revenue - Commodity Charge	\$ 14,938	\$ 15,394	\$ 17,253	\$ 19,100	\$ 20,698	\$ 21,594
Projected Water Sales (Million HCF)	7,182	7,002	7,002	7,002	7,002	7,002
Variable Rate (\$/HCF)	\$ 2.08	\$ 2.20	\$ 2.46	\$ 2.73	\$ 2.96	\$ 3.08

Note: Projected Water Sales assumes 6% water loss rate.

Note that the total rate revenue in the above table matches the rate revenue presented in Table 2-12. Variable revenue projections rely on the City's projected sales of approximately 7 million HCF for FY2010 through FY2014. Projected sales, however, will be revised to account for a conservation rate structure, during the second phase of the Study. Adjustments to these projections will vary according to how aggressive the conservation rate structure is.

charges. As the City implements tiered water rates, it may consider requesting and exemption from the requirements of BMP 11.

5. Monthly Service Charge Meter Equivalency

5.1. Current Meter Equivalency Schedule

Table 5-1 presents the current monthly service charge and the corresponding meter equivalency ratio for each meter size.

Table 5-1: Current Monthly Service Charge & Meter Equivalency Schedule

Meter Size	Monthly Service Charge	Meter Equivalency Ratio
3/4"	\$ 4.50	1.00
1"	5.50	1.22
1 1/2"	7.00	1.56
2"	9.50	2.11
3"	18.00	4.00
4"	25.50	5.67
6"	38.50	8.56
8"	45.00	10.00
10"	45.00	10.00
12"	45.00	10.00

5.2. Proposed Meter Equivalency Schedule

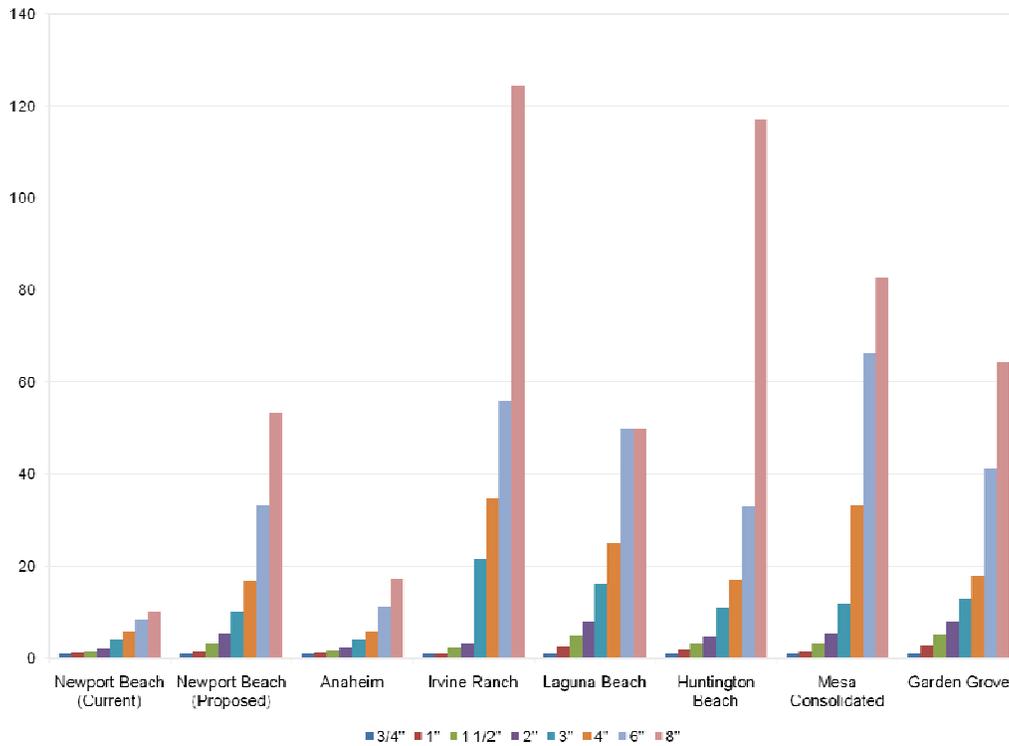
The current meter equivalency schedule for the City’s monthly service charge does not adequately reflect the relative costs of reading, maintaining, and replacing different meter sizes. Further, the current schedule does not account for the relative flow capacities of different meter sizes, which often serves as a basis for the relative amounts of meter-based charges. Red Oak recommends using the American Water Works Association’s (AWWA) estimate of meter flow capacity from the M6 manual as the basis for the City’s meter equivalency schedule. These flow estimates indicate the relative amounts of water that can flow through each meter size, expressed in gallons per minute. These relative capacities serve as an empirical basis for allocating costs among different meter sizes and provide a more defensible rationale for the determination of relative meter charges. California’s Proposition 218 and Government Code §54999 both require proportionality in the determination of water rates, which the proposed meter equivalency schedule helps to address. Table 5-2 presents the current and proposed meter equivalency schedules.

Table 5-2: Current & Proposed Meter Equivalency Schedules

Meter Size	Number of Meters	Meter Equivalency Ratio	
		Current	Proposed
3/4"	17,445	1.00	1.00
1"	6,762	1.22	1.67
1 1/2"	495	1.56	3.33
2"	1,373	2.11	5.33
3"	48	4.00	10.00
4"	80	5.67	16.67
6"	28	8.56	33.33
8"	14	10.00	53.33
10"	0	10.00	95.87
12"	0	10.00	154.20

Figure 5-1 presents the current and proposed meter equivalency schedules in comparison to other utilities within the region. Note that the current meter equivalency schedule for the City is conservative in its escalation compared to other water agencies in the region, with the exception of the City of Anaheim.

Figure 5-1: Meter Equivalency Schedule Regional Comparison (FY2009)



6. Proposed Water Rates

In order to implement the proposed financial plan, the City should adjust its current monthly service charge and commodity charge to the rates presented below for the financial plan period FY2010 through FY2014. These rates will allow the City to meet the revenue targets presented in the five-year financial plan, which will cover its rising expenditures for purchased water and other O&M items, capital improvement financing needs, and proposed reserve requirements. These rates will also meet the proposed transition to a composition of rate revenue in which fixed charges account for slightly less than 30% of total rate revenue, allowing for more revenue stability. Tables 6-1 through 6-4 present the proposed rates for the financial plan period FY2010 through FY2014. Note that these rates are anticipated to be implemented on January 1 of each year.

Table 6-1: Current & Proposed Commodity Charges

	Current	1	2	3	4	5
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
Commodity Charge	2.08	2.20	2.46	2.73	2.96	3.08

Table 6-2: Current & Proposed Monthly Service Charges

Monthly Service Charge	Current	1	2	3	4	5
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
3/4"	\$ 4.50	\$ 1.18	\$ 5.76	\$ 7.53	\$ 8.78	\$ 9.15
1"	5.50	1.97	9.60	12.55	14.63	15.24
1 1/2"	7.00	3.94	19.20	25.09	29.26	30.49
2"	9.50	6.31	30.72	40.14	46.81	48.78
3"	18.00	11.83	57.61	75.27	87.77	91.46
4"	25.50	19.71	96.01	125.45	146.28	152.43
6"	38.50	39.42	192.02	250.91	292.57	304.85
8"	45.00	63.07	307.23	401.45	468.10	487.76
10"	45.00	113.36	552.25	721.60	841.42	876.75
12"	45.00	182.34	888.28	1,160.69	1,353.41	1,410.24

Table 6-3: Proposed Capital Charges

Capital Charge	Current	1	2	3	4	5
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
3/4"	-	\$ 7.08	\$ 7.33	\$ 7.59	\$ 7.85	\$ 8.13
1"	-	11.80	12.22	12.65	13.09	13.55
1 1/2"	-	23.61	24.43	25.29	26.18	27.09
2"	-	37.77	39.10	40.46	41.88	43.35
3"	-	70.83	73.30	75.87	78.53	81.27
4"	-	118.04	122.17	126.45	130.88	135.46
6"	-	236.09	244.35	252.90	261.75	270.91
8"	-	377.74	390.96	404.64	418.80	433.46
10"	-	678.98	702.75	727.34	752.80	779.15
12"	-	1,092.13	1,130.35	1,169.92	1,210.86	1,253.24

Table 6-4: Current & Proposed Combined Fixed Charges

Combined Fixed Charges	Current	1	2	3	4	5
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014
3/4"	\$ 4.50	\$ 8.27	\$ 13.09	\$ 15.11	\$ 16.63	\$ 17.27
1"	5.50	13.78	21.82	25.19	27.72	28.79
1 1/2"	7.00	27.55	43.64	50.38	55.43	57.58
2"	9.50	44.08	69.82	80.61	88.69	92.12
3"	18.00	82.65	130.91	151.14	166.30	172.73
4"	25.50	137.75	218.18	251.90	277.16	287.88
6"	38.50	275.50	436.37	503.81	554.32	575.76
8"	45.00	440.80	698.19	806.09	886.91	921.22
10"	45.00	792.34	1,254.99	1,448.95	1,594.22	1,655.90
12"	45.00	1,274.47	2,018.64	2,330.61	2,564.27	2,663.48

7. Bill Comparisons & Impacts

Figure 7-1 presents the single family residential monthly bill impact distribution for FY2010 rates. This bill distribution is based on the City’s calendar year 2007 consumption history. The blue columns indicate the percentage of single family residential monthly bills that will increase by the corresponding amount on the horizontal axis, assuming consumption is similar to calendar year 2007. The red line indicates the cumulative percentage of monthly bills at each amount of change in bill. For example, the figure shows that 67% of monthly bills will increase by no more than \$10. It also shows that approximately 15% of monthly bills will increase by between \$4 and \$5. Note that over 90% of monthly bills will increase by no more than \$15.

Figure 7-1: FY2010 Single Family Residential Customer Monthly Bill Impact

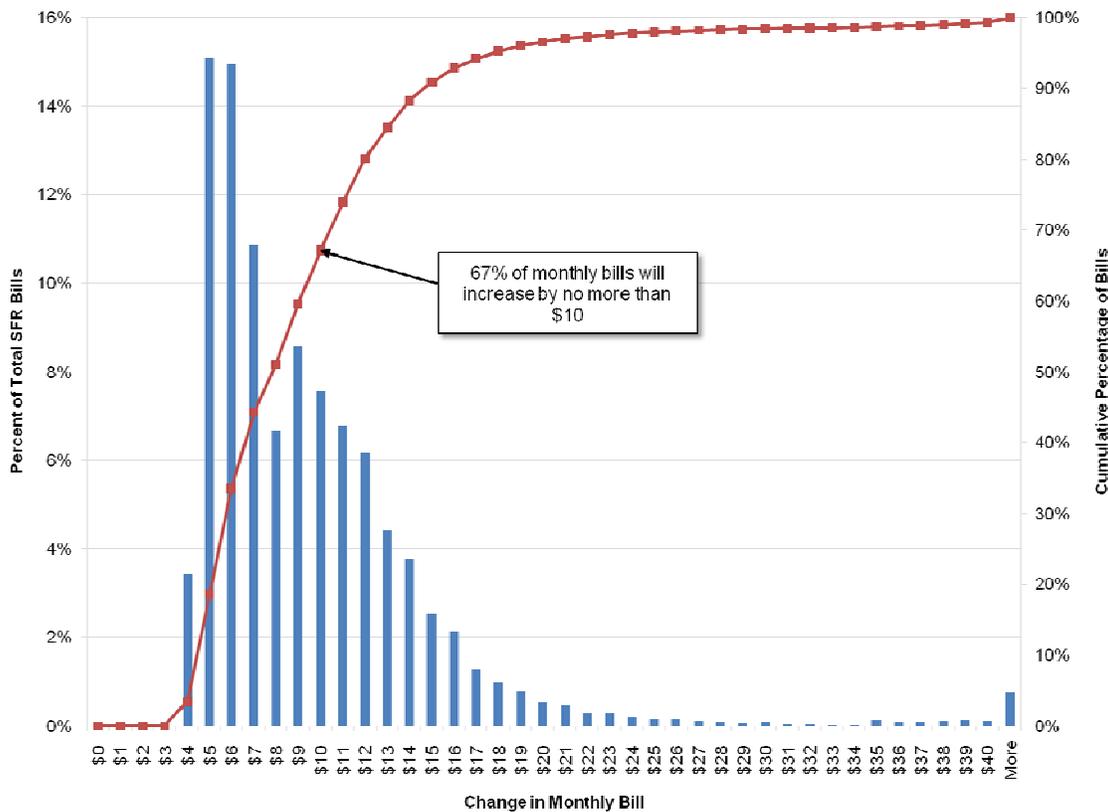


Figure 7-2 presents the current monthly bill for ¾” meters that consume 18 HCF per month, compared with the bill under the proposed rates for FY2010, and the bills at other agencies within the region. Note that it is anticipated that several, if not all of the regional agencies presented below, will likely increase their rates in FY2010 to address rising purchased water costs.

Figure 7-2: Monthly Regional Bill Comparison - 18 HCF

