



CITY OF NEWPORT BEACH

Sewer and Recycled Water Rate Study



October 13, 2015



HF&H Consultants, LLC

DRAFT

CITY OF NEWPORT BEACH

592 Superior Avenue
Newport Beach, CA 92663



SEWER AND RECYCLED WATER RATE STUDY

October 13, 2015

HF&H CONSULTANTS, LLC
201 North Civic Drive, Suite 230
Walnut Creek, CA 94596

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201 N. Civic Drive, Suite 230
Walnut Creek, California 94596
Telephone: 925/977-6950
Fax: 925/977-6955
www.hfh-consultants.com

Robert D. Hilton, CMC
John W. Farnkopf, PE
Laith B. Ezzet, CMC
Richard J. Simonson, CMC
Marva M. Sheehan, CPA
Robert C. Hilton, CMC

October 13, 2015

Mr. George Murdoch
Municipal Operations Director
City of Newport Beach
100 Civic Center Drive
Newport Beach, CA 92660

Subject: Sewer and Recycled Water Rate Study

Dear Mr. Murdoch:

HF&H Consultants, LLC, is pleased to submit this Sewer and Recycled Water Rate Study to the City of Newport Beach (City). The report summarizes the analysis that was conducted to develop the recommended rates. A copy of the rate model is included in the appendix.

The recycled water revenue increases and recycled water rate design sections presented in this report summarize the analysis that was previously submitted as a staff report and presented to City Council on April 29, 2014. The City Council subsequently adopted, by Resolution 2014-78 on September 9, 2014, the recommended Recycled Water rates in compliance with Proposition 218, effective October 10, 2014, updated January 1, 2016, and each January 1 thereafter.

The City has demonstrated leadership in improving rate payer equity during a time when costs are increasing in compliance with regulatory mandates. It has been a privilege to assist the City with this step forward.

Very truly yours,
HF&H CONSULTANTS, LLC

John W. Farnkopf, P.E., Senior Vice President
Sima Mostafaei, Senior Associate

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ACRONYMS

CIP	Capital Improvement Plan
EDU	Equivalent Dwelling Unit; an average single-family residential customer
EMU	Equivalent meter unit
FY	Fiscal Year
GPD	Gallons Per Day
HCF or CCF	Hundred Cubic Feet of metered water; 748 gallons; a cube of water 4.6 feet on edge
I&I	Inflow and Infiltration; stormwater runoff that enters collection systems through surface or subsurface connections, cracks, or other openings
O&M	Operations and Maintenance
OCSD	Orange County Sanitation District
OCWD	Orange County Water District

PAYGo	Pay-As-You-Go, in reference to funding capital improvements from cash rather than from borrowed sources of revenue
SFR	Single Family Residential

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ACKNOWLEDGEMENTS

City Council

Edward Selich, Mayor
Diane Dixon, Mayor Pro Tem
Kevin Muldoon, Council Member
Tony Petros, Council Member
Duffy Duffield, Council Member
Scott Peotter, Council Member
Keith Curry, Council Member

City Finance Commission:

Keith Curry (Chair), Council Member
Diane Dixon, Mayor Pro Tem
Tony Petros, Council Member
William C. O'Neill, Citizen Advisor
John Warner, Citizen Advisor
Larry Tucker, Citizen Advisor

City Staff

George Murdoch, Municipal Operations Director
Dan Matusiewicz, Finance Director
Rachell Wilfert, Management Assistant

HF&H Consultants, LLC

John Farnkopf, Sr. Vice President
Sima Mostafaei, Senior Associate

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**SEWER AND RECYCLED WATER RATE
STUDY**

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1. EXECUTIVE SUMMARY

This report summarizes the analysis of the City's sewer and recycled water rates. The analysis represents a collaborative effort of the City's Staff and consulting team. HF&H prepared the financial plan model using the City's FY 2015-16 preliminary operating budget for sewer, and the FY 2014-15 preliminary operating budget for recycled water.

FINDINGS AND RECOMMENDATIONS

Sewer

1. **Key Assumptions.** Rates were set to generate revenue sufficient to fund the City's collection system expenses, local capital improvements funded from cash, and to maintain the City's reserves.
2. **Revenue Projections.** The revenue increases enable the City to address collection and pump station improvement projects that were identified in the City's Sewer Master Plan. These increases enable the City to ramp up PAYGo funding for capital projects over the next five years; by the fifth year, the rates will enable the City to fund \$1,300,000 per year on a pay-as-you-go cash basis without issuing debt.
3. **Rate Design.** The City's current sewer customers pay the sum of the following: a fixed monthly sewer use charge that is the same for all customers and a commodity charge based on metered water use during the monthly period. In addition, for meters 2-inch or larger, a \$10.00 monthly surcharge is assessed, and for connections servicing two or more dwelling units on the same connection, a \$2.00 per unit per month surcharge is assessed for any additional dwelling units. We recommend combining the two surcharges into the monthly use charge, and maintaining the commodity charge. Under the revised rate structure, customers will pay the sum of only two charges: a monthly sewer use charge, graduated based on the capacity of the connection, and the commodity charge.
4. **Projected Rates.** **Figure 1-1** shows the sewer rates that are needed to cover the projected revenue requirements, and compares the revised structure to the current structure. In the revised rate structure, the service charges were graduated using an EMU multiplier that was based on the ratio of \$4.50 to \$14.50 (the current rate ratio), the effect of which is to increase the service charges for the larger services. The revised rate structure maintains the consumption charge, but includes the larger meter and additional dwelling unit surcharges as part of the monthly sewer use charge.

Figure 1-1. Current and Proposed Sewer Rates

Effective Increase Date	Current Structure	Revised Structure	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
			3/1/2016	1/1/2017	1/1/2018	1/1/2019	1/1/2020
Monthly Sewer Use Charge							
5/8" or 3/4"	\$4.50	\$5.44	\$6.04	\$6.71	\$7.44	\$8.26	\$9.17
1"	\$4.50	\$5.44	\$6.04	\$6.71	\$7.44	\$8.26	\$9.17
1 1/2"	\$4.50	\$5.99	\$6.65	\$7.38	\$8.19	\$9.09	\$10.09
2"	\$14.50	\$8.16	\$9.06	\$10.06	\$11.17	\$12.40	\$13.76
2 1/2"	\$14.50	\$8.71	\$9.67	\$10.73	\$11.91	\$13.22	\$14.68
3"	\$14.50	\$9.25	\$10.27	\$11.40	\$12.66	\$14.05	\$15.59
4"	\$14.50	\$10.89	\$12.08	\$13.41	\$14.89	\$16.53	\$18.34
6"	\$14.50	\$12.25	\$13.59	\$15.09	\$16.75	\$18.59	\$20.64
8"	\$14.50	\$13.61	\$15.11	\$16.77	\$18.61	\$20.66	\$22.93
10"	\$14.50	\$17.42	\$19.33	\$21.46	\$23.82	\$26.44	\$29.35
Monthly Sewer Use Charge (Sewer Only Customers)							
Rate per Account	\$6.25	\$9.46	\$10.51	\$11.66	\$12.94	\$14.37	\$15.95
Consumption Charge							
Rate per HCF	\$0.35	\$0.35	\$0.39	\$0.43	\$0.48	\$0.53	\$0.59
Sewer Surcharges							
Multi Unit surcharge (per DU)	\$2.00	Note 1	Note 1	Note 1	Note 1	Note 1	Note 1

Note 1: The surcharge has been incorporated into the Monthly Sewer Use Charge under the revised structure.

- Customer Bills.** Figure 1-2 shows an average monthly residential and non-residential bill at the current rates, and the average bills over the five year projection period. In addition to paying the monthly sewer use charge based on the size of the connection, each customer’s monthly bill includes a consumption charge that is determined by multiplying the consumption charge times the average monthly residential flow of 11.49 HCF and non-residential flow of 64 HCF, respectively.

Figure 1-2. Average Current and Proposed Monthly Sewer Bills

Effective Increase Date	Flow (HCF)	Current Structure	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
			3/1/2016	1/1/2017	1/1/2018	1/1/2019	1/1/2020
Single Family Residential	11.49	\$8.52	\$10.52	\$11.65	\$12.96	\$14.35	\$15.95
Non-Residential	64.00	\$36.90	\$34.02	\$37.58	\$41.89	\$46.32	\$51.52

Recycled Water

- Key Assumptions.** Rates were set to generate revenue sufficient to fund the City’s recycled water system’s operations and maintenance expense, the cost of

purchasing recycled water from OCWD, and capital replacement expense related to pump stations and meters.

2. **Rate Design.** The City's current recycled water customers pay the sum of two charges: a monthly fixed charge that is based on the size of the connection, and a commodity charge based on metered water use during the monthly period. The fixed and commodity charges are based on 80% of the potable water rate. We recommend unlinking the recycled water rate from the potable water rate and aligning the recycled fixed and commodity charges with the fixed costs and the cost of purchased water from OCWD, respectively. In addition to the fixed and commodity charges, pump station users will be charged a pump station charge based on the cost to operate and maintain the stations and convey recycled water.
3. **Projected Rates.** The rate projections are shown in **Figure 1-3**.

Figure 1-3. Current and Proposed Recycled Water Rates

Effective Increase Date	Current	FY 2014-15 10/10/2014	FY 2015-16 1/1/2016	FY 2016-17 1/1/2017	FY 2017-18 1/1/2018	FY 2018-19 1/1/2019
Monthly Service Charge						
5/8" or 3/4"	\$13.82	\$18.91	\$19.29	\$19.68	\$20.07	\$20.47
1"	\$23.03	\$31.53	\$32.16	\$32.80	\$33.46	\$34.13
1 1/2"	\$46.06	\$63.05	\$64.32	\$65.60	\$66.91	\$68.25
2"	\$73.70	\$100.88	\$102.90	\$104.95	\$107.05	\$109.19
3"	\$138.18	\$189.15	\$192.94	\$196.80	\$200.73	\$204.75
4"	\$230.30	\$315.25	\$321.56	\$327.99	\$334.55	\$341.24
6"	\$460.61	\$630.50	\$643.11	\$655.98	\$669.10	\$682.48
8"	\$736.98	\$1,008.81	\$1,028.99	\$1,049.57	\$1,070.56	\$1,091.97
Monthly Commodity Charge						
Rate per HCF	\$2.46	\$0.86	\$0.87	\$0.89	\$0.91	\$0.93
Monthly Pump Station Charge						
Rate per HCF	none	\$0.36	\$0.37	\$0.38	\$0.38	\$0.39

2. INTRODUCTION

STUDY PURPOSE

The purpose of this study is to update the City's rates to ensure that they generate sufficient revenue and that the rate structures for sewer and recycled water reflect the City's current rate-making objectives. The study was commissioned by the City to evaluate the effect of certain rate structure modifications in response to input from its customers.

RATE MAKING OBJECTIVES

The City's current rate-making objectives include the following:

- Provide revenue sufficiency and financial stability to cover the projected capital and O&M costs of providing recycled water and funding the City's Sewer fund.
- Meet the City's operations and capital funds reserve targets for the sewer enterprise fund.
- Rates should reflect equity of costs in proportion to the level of service.
- Provide for efficient administration and execution of utility billing.
- Minimize "rate shock" overall and to any specific customer class.
- Rates should be clear and understandable to the customers.
- The rates must comply with Proposition 218 and applicable State codes.

BACKGROUND

Sewer

The City provides sewer service to approximately 64,465 customers. The City's existing sewer collection system consists of a network of force main and gravity sewers. This system is composed of approximately 197 miles of mainline gravity pipes, 4.7 miles of force mains with 4,922 manholes and cleanouts, and 25,525 sewer laterals with an approximate length of 121 miles in the public-rights-of-way. The City's service area lies within the OCSD who is responsible for treating the City's sewer. The City also owns and operates 21 pump stations in various areas which lift sewer from the lower areas and several island communities for treatment at OCSD's treatment plant.

Recycled Water

The City currently has five recycled water customers totaling 14 water connections. The customers include Big Canyon and Newport Beach Country Club golf courses; East Bluff School, Our Lady Queen of Angels School, and the City which uses recycled water for irrigation of medians and parks.

In 1991, the City entered into an agreement with OCWD for the distribution and sale of Green Acres Project water. The agreement stipulates the rules and regulations for the

City to provide recycled water. Included in this agreement is the stipulation that recycled water rates may not exceed 80% of the potable water rate. The agreement term is for 25 years with five 5-year automatic extensions, with an estimated ending term year of 2041.

The City subsequently entered into “End User Agreements” for the sale of recycled water to large customers in 1996 for a 10-year term. These agreements, now expired, included provisions that OCWD and the City would provide funding to modify golf courses and construct pump stations to facilitate the use of recycled water. However, in 2011, the City and the Big Canyon Country Club entered into an agreement that provided for the delivery and sale of recycled water, and a pump station license agreement.

3. SEWER PROJECTED REVENUE INCREASES

REVENUE REQUIREMENTS

Rate analysis begins by determining the revenue requirements that must be met by rates. For purposes of this study, a ten-year rate projection period was developed using a spreadsheet model (see Appendix A). However, only the first five years are shown in **Figure 3-1** for rate-setting purposes. **Figure 3-1** summarizes the major categories comprised in the revenue requirements, indicating the annual change.

Figure 3-1. Annual Revenue Requirement Components

	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Salaries	\$ 947,547	\$ 975,973	\$ 1,005,253	\$ 1,035,410	\$ 1,066,472
Benefits	575,693	604,478	622,612	641,290	660,529
Operations & Maintenance	995,721	989,549	1,006,668	1,024,084	1,041,800
Internal Services Allocation	670,581	682,182	693,984	705,990	718,203
Operating Reserve Expense	1,580	(145,880)	(74,251)	39,254	149,401
Capital Reserve Expense	-	500,000	750,000	1,000,000	1,300,000
Miscellaneous Costs	13,477	13,710	13,947	14,188	14,434
Total Revenue Requirement	\$ 3,204,599	\$ 3,620,012	\$ 4,018,213	\$ 4,460,216	\$ 4,950,840

Salaries

This cost category includes regular and overtime pay and is projected to increase gradually at about 3% per year during the projection period. No staff headcount increases are anticipated; the cost trend is driven primarily by cost of living adjustments set in labor agreements.

Benefits

This cost category includes health, dental, and vision as well as Other Post-Employment (OPEB) and Public Employment (PERS) retirement benefits. During the projection period these costs are projected to increase at about 5% per year. The cost trend is driven primarily by increases in health care benefit costs set in labor agreements.

Operations & Maintenance

This cost category includes non-personnel related operating and maintenance expenses, such as electrical utility costs, fuel, and non-capital materials and equipment. During the projection period, these costs are expected to increase gradually at about 1.73% per year, based on the five-year historical average of inflation for the Los Angeles area.

Internal Services Allocation

The City has historically transferred funds from the Sewer Enterprise Fund to the General Fund as reimbursement for governmental costs incurred by the General Fund on behalf of the Enterprise. Much of this funding reimburses the General Fund for salaries, equipment, and program costs associated with general services. During the projection period, these costs are expected to increase gradually at about 1.73% per year, based on the five-year historical average of inflation for the Los Angeles area.

Operating Reserve Expense

The City transfers rate revenue to its Operating Reserve during the projection period to smooth out the annual revenue requirements and meet the minimum fund balance requirement. Please refer to the section titled 'minimum fund balance' in this report for further discussion of the fund policy.

Capital Reserve Expense

The City's 30-year capital improvement program planned expenditures are summarized in **Figure 3-2**.

Figure 3-2. Capital Projects

CIP Project Description	Project Cost
Collection System Capacity Improvements	\$1,281,391
Collection System Condition Improvements	\$16,648,060
Pump Station Improvements	\$11,088,000
Total	\$29,017,451

The City plans to fund these capital improvements with cash from rate revenue. To accomplish this goal, the program is phased based upon the implementation cost of the facilities, and the quantity of work the City can reasonably administer each year. The programmed rate increases over the next five years allow the City to ramp up funding for capital projects and provide the City approximately \$1.3 million annually by FY 2019-20 with the additional revenue generated from the recommended rate increases.

Miscellaneous Costs

This cost category includes non-capital office and shop equipment. During the projection period, these costs are expected to increase gradually at about 1.73% per year, based on the five-year historical average of inflation for the Los Angeles area.

REVENUE INCREASES

To determine how much additional rate revenue is required, the projected revenue requirements are compared to the revenue from current rates. The revenue from

current rates also reflects the impact of reduced water demand required of the City's customers to comply with the State Water Resources Control Board's emergency regulations. For the City's consumption charges, sewer flows from individual City customers are not metered; therefore water use data is the closest representation of flows that customers discharge to the City's system for conveyance and treatment. Estimating current rate revenue took into account 23,100 currently active meters whose flow equaled 4,320,000 HCF. We also included the annual surcharge revenue for meters 2" or larger, as well as the surcharge for multiple dwelling units serviced by the same meter. The resulting rate revenue for FY 2014-15, prior to rate increases, but net of 0.4% of bad debt, was estimated at \$3,092,000. Based on this estimate, annual revenue increases were projected as shown in **Figure 3-3**.

Figure 3-3. Projected Revenue Increases

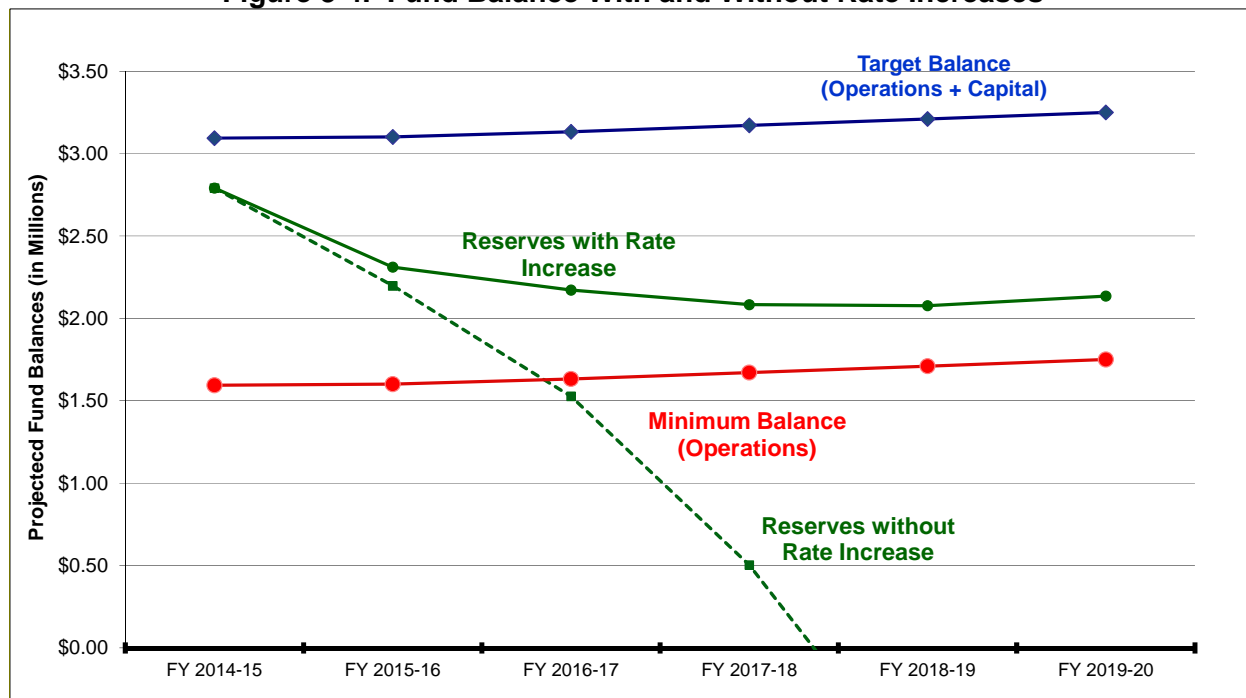
	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Increase in Revenue from Rates	11%	11%	11%	11%	11%
Revenue from Current Rates**	\$3,091,253	\$3,091,253	\$3,091,253	\$3,091,253	\$3,091,253
Revenue from Rate Increases					
FY15-16 (effective 3/1/16)	\$113,346	\$340,038	\$340,038	\$340,038	\$340,038
FY16-17 (effective 1/1/17)		\$188,721	\$377,442	\$377,442	\$377,442
FY17-18 (effective 1/1/18)			\$209,480	\$418,961	\$418,961
FY18-19 (effective 1/1/19)				\$232,523	\$465,046
FY19-20 (effective 1/1/20)					\$258,101
Subtotal - Revenue Increases	\$113,346	\$528,759	\$926,960	\$1,368,964	\$1,859,587
Total Rate Revenue	\$3,204,599	\$3,620,012	\$4,018,213	\$4,460,216	\$4,950,840
Net Revenue Requirements	\$3,204,599	\$3,620,012	\$4,018,213	\$4,460,216	\$4,950,840
Surplus/(Deficit) after Increase	\$0	\$0	\$0	\$0	\$0

**Includes bad debt allowance of 0.4% of existing revenue and cutbacks to consumption charge revenue based on conservation efforts

FUND BALANCE

The FY 2014-15 estimated year-end fund balance is projected to be \$2,790,000, which is higher than the minimum operations balance of \$1,593,000. **Figure 3-4** shows the fund balance is above the minimum balance throughout the five year rate projection period, however, the ten-year outlook shows the fund balance meeting the target in FY 2024-25 based on the projected revenue increases. Fluctuations in annual flow will affect revenue generation and the resulting fund balance. The City is advised to carefully monitor the fund balance in the event of downward fluctuations in flow.

Figure 3-4. Fund Balance With and Without Rate Increases



Minimum Fund Balance

The minimum balance (red line) is the balance that is required to meet the City’s operating expenses during the year. If this minimum balance were maintained, the Sewer Fund should be able to fund its monthly cash flow over this extended period without relying on the General Fund for a short-term loan. When the Operations Reserve balance is below the minimum balance, the likelihood increases that temporary funding from the General Fund will be required to meet cash flow needs. The City’s reserve policy dictates that the minimum Operations Reserve balance be set equal to 50% of annual O&M expenses.

Target Fund Balance

The proposed revenue increases move the fund balance (solid green line) upward toward the target balance (blue line). The target balance is the sum of the minimum balance for operations (red line) plus an allowance for capital projects. This allowance provides liquidity to fund construction for projects on a pay-as-you-go basis. With adequate capital reserves, the City is able to pay construction contractors without encroaching on the Operations Reserve. The allowance is based on the average annual budgeted capital improvement projects.

4. SEWER RATE DESIGN

CURRENT RATE STRUCTURE

The City currently has 23,100 active accounts who pay the sum of two charges every month for Sewer service: a basic service charge of \$4.50 per account plus a sewer consumption charge of \$0.35 per HCF based on metered water use during the billing period. In addition to the charges specified above, customers with a water service connection of 2" or greater pay a \$10.00 monthly surcharge. Moreover, customers with more than one dwelling unit that is serviced by the same connection pay a surcharge of \$2.00 for each additional dwelling unit. Lastly, the City's 485 sewer customers who do not purchase potable water from the City are charged \$6.25 per account per month.

PROPOSED RATE STRUCTURE

The proposed rate structure is based on the revenue generated by the current rate structure and categorizes the revenue into two categories: fixed revenue and variable revenue. Fixed revenue is considered fixed because it does not vary based on flow, while variable costs vary because they are based on the amount of water purchased, or sewage produced and therefore, are solely comprised of the sewer consumption charge. For the purpose of rate design, the sewer use charge for customers who do not purchase water from the City was analyzed separately. **Figure 4-1** presents the breakdown of the current revenue by revenue category:

Figure 4-1. Fixed and Variable Revenue

		Current Revenue
Fixed Revenue		
Sewer Use Charge (per account)	\$1,179,651	
Surcharge (2" meters or greater)	\$61,586	
Surcharge (per additional DU)	\$314,371	
Total Annual Fixed Revenue		\$1,555,608
Variable Revenue		
Consumption Charge (per HCF)	\$1,511,712	
Total Annual Variable Revenue		\$1,511,712
Subtotal		\$3,067,320
Sewer Use Charge (per account)*		36,268.00
Grand Total**		<u>\$3,103,588</u>

*Sewer Revenue from customers who do not purchase potable water from the City of Newport Beach

**Gross revenues; does not account for bad debt

In order to determine the monthly charge by size of connection, we first converted the number of active meters to equivalent meter units (EMU) as shown in **Figure 4-2**. The EMU multiplier by meter size is the same multipliers used to determine the fixed charge by meter size for the current sewer rates; in other words, it is the ratio between \$4.50 to \$14.50, or 1 to 3.2. The monthly charge for an EMU of 1.00 is derived by dividing the total fixed revenue of \$1,556,000 by the total number of EMUs, or 23,815. This quotient was then divided by 12 to convert from an annual charge of \$71.59 to a monthly charge of \$5.44. The service charges were then graduated using the EMU multipliers, the effect of which is to increase the service charges for the larger services. Note the total annual revenue of \$1,556,000 from fixed charges in **Figure 4-2** is equal to the total annual fixed revenue presented in **Figure 4-1**.

Figure 4-2. Calculation of Monthly Fixed Charges

Meter Size	Total Active Accounts	EMU Multiplier	Total EMUs	Monthly Service Charge	Total Annual Fixed Revenue
	a	b	a*b	c	a*c*12
5/8" or 3/4"	15,357	1.00	15,357	\$5.44	\$1,003,119
1"	6,276	1.00	6,276	\$5.44	\$409,948
1 1/2"	364	1.10	400	\$5.99	\$26,154
2"	886	1.50	1,329	\$8.16	\$86,810
2 1/2"	1	1.60	2	\$8.71	\$105
3"	34	1.70	58	\$9.25	\$3,775
4"	119	2.00	238	\$10.89	\$15,546
6"	54	2.25	122	\$12.25	\$7,936
8"	11	2.50	28	\$13.61	\$1,796
10"	2	3.20	6	\$17.42	\$418
	<u>23,104</u>		<u>23,815</u>		<u>\$1,555,608</u>

The sewer consumption charge was derived using the monthly meter readings in HCF for all customers. **Figure 4-3** presents the derivation of the proposed sewer consumption charges.

Figure 4-3. Calculation of Sewer Consumption Charge

Cost Category	Current Revenue	Usage (HCF)	Charge per HCF
Variable Revenue	\$1,511,712	4,320,000	\$0.35

For sewer customers who do not purchase potable water from the City, and therefore, do not have a proxy for their sewer flows, an average flow per account was derived by using average water use per single family residential account. The 11.49 HCF average

use was determined using FY 2011-12 customer billing data and dividing total single family consumption by the number of single family accounts. Next, using the revised rate structure, the \$9.46 charge shown in **Figure 4-4** represents the average single family bill per month. It was calculated as the monthly sewer use charge of \$5.44 per account plus the product of the \$0.35 consumption charge times 11.49 HCF.

Using the fixed and variable rates as calculated in **Figure 4-2** and **Figure 4-3**, a five-year rate plan was prepared based on the City's Sewer revenue requirements as presented in **Figure 3-1**. The rates included in the 5-year plan reflect annual rate increases starting in FY 2015-16 to keep pace with the increase in the revenue requirements. The proposed 5-year rate plan is shown in **Figure 4-4**.

Figure 4-4. Five Year Sewer Rate Projections

Effective Increase Date	Current	Revised	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
	Structure	Structure	3/1/2016	1/1/2017	1/1/2018	1/1/2019	1/1/2020
Monthly Sewer Use Charge							
5/8" or 3/4"	\$4.50	\$5.44	\$6.04	\$6.71	\$7.44	\$8.26	\$9.17
1"	\$4.50	\$5.44	\$6.04	\$6.71	\$7.44	\$8.26	\$9.17
1 1/2"	\$4.50	\$5.99	\$6.65	\$7.38	\$8.19	\$9.09	\$10.09
2"	\$14.50	\$8.16	\$9.06	\$10.06	\$11.17	\$12.40	\$13.76
2 1/2"	\$14.50	\$8.71	\$9.67	\$10.73	\$11.91	\$13.22	\$14.68
3"	\$14.50	\$9.25	\$10.27	\$11.40	\$12.66	\$14.05	\$15.59
4"	\$14.50	\$10.89	\$12.08	\$13.41	\$14.89	\$16.53	\$18.34
6"	\$14.50	\$12.25	\$13.59	\$15.09	\$16.75	\$18.59	\$20.64
8"	\$14.50	\$13.61	\$15.11	\$16.77	\$18.61	\$20.66	\$22.93
10"	\$14.50	\$17.42	\$19.33	\$21.46	\$23.82	\$26.44	\$29.35
Monthly Sewer Use Charge (Sewer Only Customers)							
Rate per Account	\$6.25	\$9.46	\$10.51	\$11.66	\$12.94	\$14.37	\$15.95
Consumption Charge							
Rate per HCF	\$0.35	\$0.35	\$0.39	\$0.43	\$0.48	\$0.53	\$0.59
Sewer Surcharges							
Multi Unit surcharge (p	\$2.00	Note 1	Note 1	Note 1	Note 1	Note 1	Note 1

Note 1: The surcharge has been incorporated into the Monthly Sewer Use Charge under the revised structure.

CURRENT AND PROPOSED CUSTOMER BILL COMPARISONS

Figure 4-5 presents a comparison of monthly customer bills using the current rate structure and the recommended revised rate structure. The rates used to calculate the revised bills are the FY 2015-16 charges presented in **Figure 4-4**. It is notable that current customers who are subjected to the multiple dwelling \$2.00 monthly surcharge will

experience a decrease in their monthly bill. This occurs based on the revisions to the monthly sewer use charge. The graduated rates, based on meter capacity, better reflect associated flow assumed per dwelling unit, and its equivalent.

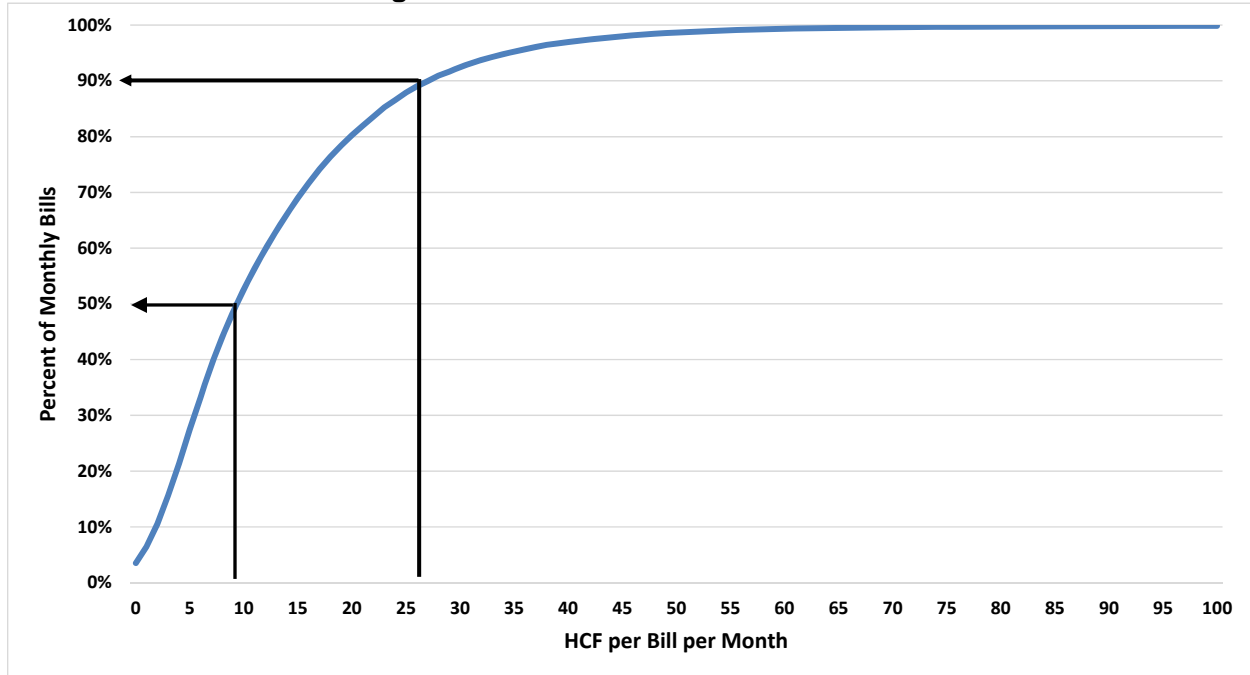
Figure 4-5. Customer Bill Comparison

Customer Name	Meter Size	Number of Dwelling Units	Average	Current Monthly Bill	FY 15-16 Monthly Bill	Difference (\$)
			Monthly Flow (HCF)			
Single Family Residential (low flow)	5/8" - 1"	1	2	\$ 5.20	\$ 6.82	\$1.62
Single Family Residential (avg flow)	5/8" - 1"	1	11	\$ 8.35	\$ 10.32	\$1.97
Single Family Residential (high flow)	5/8" - 1"	1	16	\$ 10.10	\$ 12.26	\$2.16
Multi Family Residential	3"	55	243	\$ 209.55	\$ 104.68	(\$104.87)
Commercial	4"	1	595	\$ 224.75	\$ 243.24	\$18.49
Commercial	8"	141	2,074	\$1,022.40	\$ 820.85	(\$201.55)
Commercial	6"	1	1,584	\$ 568.90	\$ 628.98	\$60.08

RESIDENTIAL CUSTOMER IMPACTS

Using the City's FY 2011-12 customer billing data, **Figure 4-6** illustrates the distribution of monthly billed sewer customer flow. It is important to note that the FY 2011-12 customer billing data is considered a snapshot in time and does not reflect continuous changes in customer behavior; additional factors (economic, climate) may impact consumption patterns in the future. Figure 4-6 indicates that customers who are billed 10 HCF or less on a monthly basis comprise 50% of total bills. Moreover, 90% of monthly bills are 27 HCF or less. This indicates that 90% of customers will not see more than an increase of \$2.00 per month, per year, over the five year projection period.

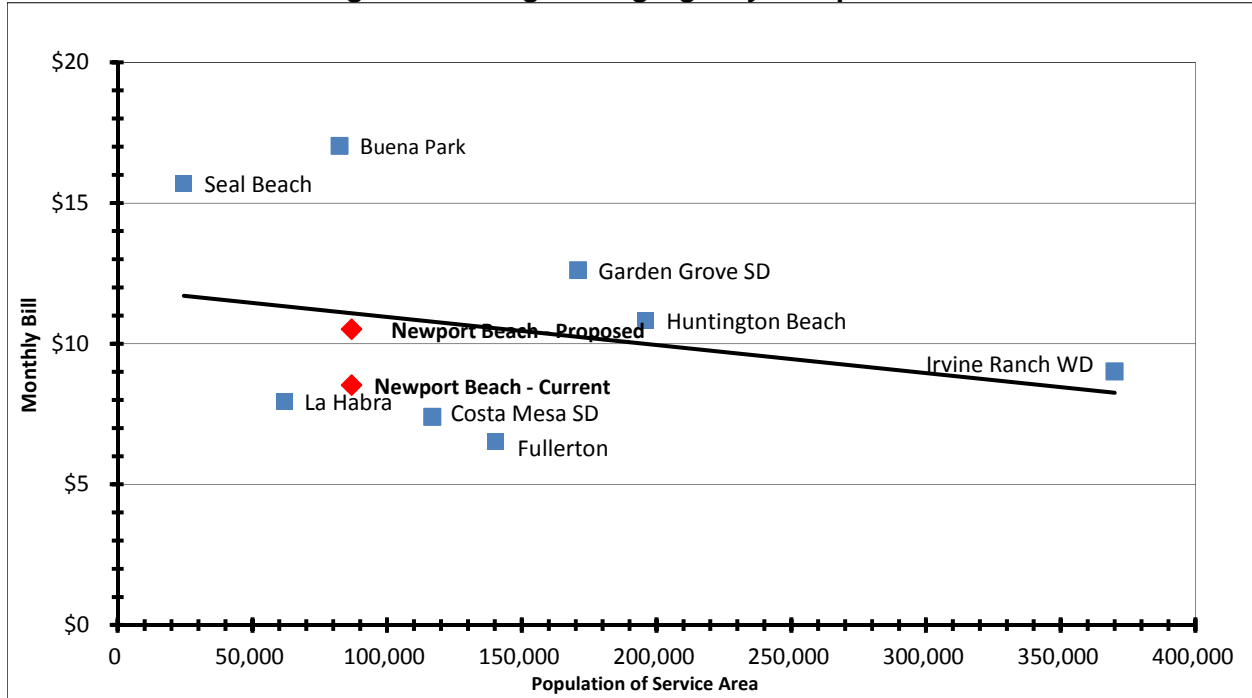
Figure 4-6. Cumulative Bill Distribution



COMPARISON WITH NEIGHBORING AGENCIES

Based on available sources, **Figure 4-7** shows the recent charges for sewer service among similar Orange County agencies, specifically ones that charge a fixed monthly use charge coupled with a flow-based commodity charge. Larger agencies tend to have lower rates because they can take advantage of economies of scale and have a larger base of customers over which to distribute fixed costs. **Figure 4-7** indicates that the City’s current and proposed sewer rates track the trend line along with its neighbors (identified with red diamonds in **Figure 4-7**).

Figure 4-7. Neighboring Agency Comparison



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5. RECYCLED WATER PROJECTED REVENUE INCREASES

REVENUE REQUIREMENTS

The City's FY 2013-14 revenue requirement served as the basis for determining the revenue requirement projections through FY 2018-19. **Figure 5-1** summarizes the sources and assumptions for the data as well as the projected expenditure trends:

Figure 5-1. Revenue Requirement Projections

	FY 13-14	FY 14-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Operating Costs	\$ 40,488	\$ 41,188	\$ 41,901	\$ 42,626	\$ 43,363	\$ 44,114
Purchased Recycled Water	167,598	173,417	179,438	182,810	186,245	189,745
Pump Station Operating & Mainte	39,408	47,218	48,104	49,007	49,927	50,864
Depreciation	17,500	17,543	17,587	17,632	17,678	17,724
Total Revenue Requirement	\$ 264,994	\$ 279,366	\$ 287,030	\$ 292,075	\$ 297,213	\$ 302,446

Operating Expenses

This cost category includes administration and overhead expenses that are calculated as 10% of the total recycled water revenue requirement and 1% of the budgeted general fund overhead charged to the water fund, respectively. During the projection period, the City's operating expenses are projected to increase gradually at about 1.73% per year, based on the five-year historical average of general inflation for the Los Angeles area.

Purchased Recycled Water

This cost category for FY 13-14 was based on the actual water purchases in FY 12-13 multiplied by the cost of purchased water from OCWD of \$360 per acre foot. During the projection period, the City's purchased water costs are projected to increase gradually at about 1.88% per year, based on the five-year historical average of OCWD purchased water charges per acre foot.

Pump Station Operating and Maintenance

This cost category for FY 13-14 was based on the actual cost of inspections, scheduled and corrective maintenance, source changeovers and pump station rehabilitation and maintenance as provided by the city. During the projection period, the City's pump station operating and maintenance costs are expected to increase gradually at about 1.73% per year, based on the five-year historical average of general inflation for the Los Angeles area.

Depreciation

This cost category includes replacement costs for pump station facilities and water meters. The annual pump station facility replacement cost was based on \$600,000 in

construction costs, amortized over 40 years. The annual meter replacement cost was based on the American Water Works Association's standard cost of \$259 per meter per year, amortized over 15 years. During the projection period, the City's pump station facility replacement costs are held constant at \$15,000 per year, while the meter replacement costs are projected to increase gradually at about 1.73% per year, based on the five-year historical average of inflation for the Los Angeles area.

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6. RECYCLED WATER RATE DESIGN

The following section was previously submitted as a separate report dated April 24, 2014. The City Council subsequently adopted the recommended rates in compliance with Proposition 218, effective October 10, 2014. The following text summarizes the rates documented in the April 2014 report and subsequently adopted by the City Council.

CURRENT RATE STRUCTURE

The City currently has five recycled water customers totaling 14 connections. These customers pay the sum of two charges every month for water service: a basic service charge based on the size of the service connection plus a commodity charge based on metered water use during the billing period. In 1991, the City entered into an agreement with OCWD for the distribution and sale of recycled water. The agreement stipulated that the recycled water rate may not exceed 80% of the potable water rate. It is the City's current practice to charge customers 80% of the potable water rate based on that agreement.

PROPOSED RATE STRUCTURE

Under the new rate structure, the recycled water rates will no longer be linked to 80% of the potable water rates. The proposed rate structure is based on the FY 2014-15 revenue requirement, and categorizes the expenses into three categories: fixed costs, variable costs and pump station-related costs. Fixed costs are considered fixed because they do not vary based on flow, and include the annual cost of meter reading and replacement, as well as administrative and overhead. Variable costs vary because they are based on the amount of water purchased, and therefore, are solely comprised of the annual cost of purchased water from OCWD. Pump station-related costs are comprised of inspections, maintenance, and rehabilitation & replacement that are directly related to the pump stations. **Figure 6-1** presents the breakdown of the FY 2014-15 revenue requirement by cost category:

Figure 6-1. FY 2014-15 Revenue Requirement by Cost Category

FY2014-15	
Fixed Costs	
Administration	\$25,433
Overhead	\$12,208
Meter Reading	\$1,514
Meter replacement	\$2,543
Other agency fees	\$2,035
Total Fixed Costs	<u>\$43,732</u>
Variable Costs	
Purchased Water	\$173,417
Total Variable Costs	<u>\$173,417</u>
Pump Station Costs	
Inspections	\$7,021
Maintenance	\$13,109
Rehab & Replacement	\$42,087
Total Pump Station Costs	<u>\$62,218</u>
Total Revenue Requirement	<u>\$279,366</u>

In order to determine the monthly charge by size of connection, we first converted the number of active meters to equivalent meter units (EMU) as shown in **Figure 3-2**. The EMU multiplier by meter size is the same multipliers used to determine the fixed charge by meter size for potable water rates. The monthly charge for an EMU of 1.00 is derived by dividing the total fixed costs of \$43,732 by the total number of EMUs or 192.70. This quotient was then divided by 12 to convert from an annual charge of \$226.94 to a monthly charge of \$18.91. The service charges were then graduated using the EMU multipliers, the effect of which is to increase the service charges for the larger services. Note the total annual revenue of \$43,732 from fixed charges in **Figure 6-2** is equal to the total fixed costs presented in **Figure 6-1**.

Figure 6-2. Calculation of Monthly Fixed Charges

Meter Size	Total Active Accounts	EMU Multiplier	Total EMUs	Monthly Service Charge	FY 14-15 Annual Revenue
	a	b	a*b	c	a*c*12
5/8" or 3/4"	0	1.00	0	\$18.91	\$0
1"	0	1.67	0	\$31.53	\$0
1 1/2"	0	3.33	0	\$63.05	\$0
2"	8	5.33	42.67	\$100.88	\$9,684
3"	3	10.00	30.01	\$189.15	\$6,810
4"	0	16.67	0	\$315.25	\$0
6"	2	33.34	66.68	\$630.50	\$15,132
8"	1	53.34	53.34	\$1,008.81	\$12,106
	<u>14</u>		<u>192.70</u>		<u>\$43,732</u>

The commodity and pump station charges were derived using the FY 2012-13 monthly meter readings in HCF for all customers, and FY 2012-13 monthly meter readings for pump station customers in HCF, respectively. **Figure 6-3** presents the derivation of the proposed commodity and pump station charges for FY 2014-15:

Figure 6-3. Calculation of Commodity and Pump Station Charges

Cost Category	FY14-15 Costs	FY12-13 Usage (HCF)	FY14-15 Charge per HCF
Variable Costs	\$173,417	202,793	\$0.86
Pump Station Costs	\$62,218	172,426	\$0.36

Using the FY 2014-15 rates as calculated in **Figure 6-2** and **Figure 6-3**, a five-year rate plan was prepared based on the City’s recycled water revenue requirements as presented in **Figure 5-1**. The proposed five-year rate plan is shown in **Figure 6-4**.

Figure 6-4. Five Year Recycled Water Rate Projections

Effective Increase Date	Current	FY 2014-15 10/14/2014	FY 2015-16 1/1/2016	FY 2016-17 1/1/2017	FY 2017-18 1/1/2018	FY 2018-19 1/1/2019
Monthly Service Charge						
5/8" or 3/4"	\$13.82	\$18.91	\$19.29	\$19.68	\$20.07	\$20.47
1"	\$23.03	\$31.53	\$32.16	\$32.80	\$33.46	\$34.13
1 1/2"	\$46.06	\$63.05	\$64.32	\$65.60	\$66.91	\$68.25
2"	\$73.70	\$100.88	\$102.90	\$104.95	\$107.05	\$109.19
3"	\$138.18	\$189.15	\$192.94	\$196.80	\$200.73	\$204.75
4"	\$230.30	\$315.25	\$321.56	\$327.99	\$334.55	\$341.24
6"	\$460.61	\$630.50	\$643.11	\$655.98	\$669.10	\$682.48
8"	\$736.98	\$1,008.81	\$1,028.99	\$1,049.57	\$1,070.56	\$1,091.97
Monthly Commodity Charge						
Rate per HCF	\$2.46	\$0.86	\$0.87	\$0.89	\$0.91	\$0.93
Monthly Pump Station Charge						
Rate per HCF	none	\$0.36	\$0.37	\$0.38	\$0.38	\$0.39

CUSTOMER BILL COMPARISONS

Figure 6-5 presents a comparison of monthly customer bills using the current rate structure and the recommended revised rate structure. The rates used to calculate the revised bills are the Year 1 charges presented in Figure 6-4. It is notable that all current recycled water customers will experience no less than a 44% bill decrease with the recommended structure change.

Figure 6-5. Customer Bill Comparison

Customer Name	Meter Size	Average Monthly Flow (HCF)	Current Monthly Bill	Revised Monthly Bill	Difference (\$)	Difference (%)
Newport Beach Country Club	6"	6,650	\$16,820	\$8,717	(\$8,103)	-48%
Our Lady Queen of Angels	2"	151	\$446	\$230	(\$215)	-48%
Big Canyon Country Club	8"	5,256	\$13,668	\$5,504	(\$8,164)	-60%
Big Canyon Country Club	6"	2,463	\$6,518	\$3,625	(\$2,894)	-44%
Eastbluff School	3"	321	\$928	\$464	(\$464)	-50%

APPENDIX A. SEWER AND RECYLED WATER RATE MODEL

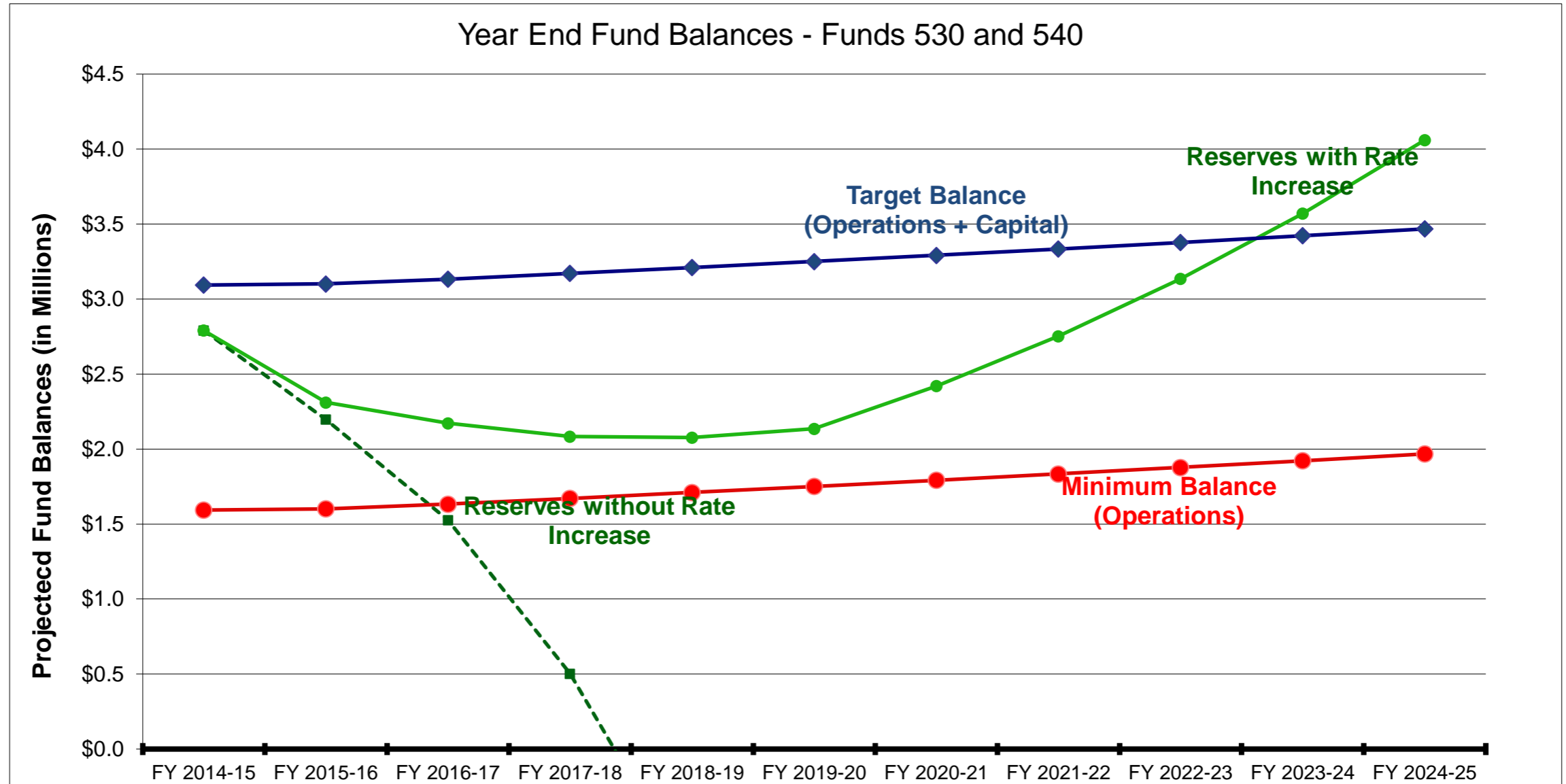
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City of Newport Beach
 Sewer Rate Study
 Table 1A. Summary

	Projected									
Fiscal Year:	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Revenue Increases - Sewer	11.0%	11.0%	11.0%	11.0%	11.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Cumulative Increase	11.0%	23.2%	36.8%	51.8%	68.5%	73.6%	78.8%	84.1%	89.7%	95.3%

Annual Revenue Requirement	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Salaries & Benefits	\$ 1,523,240	\$ 1,580,451	\$ 1,627,865	\$ 1,676,701	\$ 1,727,002	\$ 1,778,812	\$ 1,832,176	\$ 1,887,141	\$ 1,943,755	\$ 2,002,068
Operating Costs	995,721	989,549	1,006,668	1,024,084	1,041,800	1,059,823	1,078,158	1,096,811	1,115,785	1,135,088
Miscellaneous	33,000	33,571	34,152	34,743	35,344	35,955	36,577	37,210	37,854	38,508
Internal Service Allocation	670,581	682,182	693,984	705,990	718,203	730,628	743,268	756,127	769,208	782,515
Storm Drain Operating	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Storm Drain Capital	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sewer Operating Reserve Expense	\$1,580	(\$145,880)	(\$74,251)	\$39,254	\$149,401	\$403,128	\$477,147	\$553,784	\$633,122	\$715,252
Sewer Capital Reserve Expense	\$0	\$500,000	\$750,000	\$1,000,000	\$1,300,000	\$1,300,000	\$1,300,000	\$1,300,000	\$1,300,000	\$1,300,000
	\$ 3,224,122	\$ 3,639,873	\$ 4,038,417	\$ 4,480,770	\$ 4,971,750	\$ 5,308,346	\$ 5,467,326	\$ 5,631,072	\$ 5,799,724	\$ 5,973,432
Annual increase		12.9%	10.9%	11.0%	11.0%	6.8%	3.0%	3.0%	3.0%	3.0%



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	City of Newport Beach													
2	Sewer Rate Study													
3	Table 1B. General													
4														
5	Projected													
6			FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	Source	Notes
7	Factors													
8	a.	Interest on Reserve Balance	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%	City Estimate	To Table 4
9	b.	General inflation	Per Budget	1.73%	1.73%	1.73%	1.73%	1.73%	1.73%	1.73%	1.73%	1.73%	US Statistics, LA Area 5-year average	To Table 2
10	c.	Personnel Increases	Per Budget	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	Estimate	To Table 2
11	d.	Benefits cost increases	Per Budget	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	Estimate	To Table 2
12	e.	Percent of Bad Debt	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	Based on City's Fund Worksheet	To Table 3A,3B
13	f.	Utilities Increases	Per Budget	1.73%	1.73%	1.73%	1.73%	1.73%	1.73%	1.73%	1.73%	1.73%		
14	g.	Pct. increase in Sewer Accounts	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		To Table 3A
15	h.	Pct. increase in Water Consumption (for flow charge)	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		To Table 2, 8
16	i.	Percentage increase in Recycled Water Use	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		To Table 2, 3B
17	j.	Construction cost inflation	Per Budget	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	City Estimate	To Table 2B, 5
18	k.	Percent increase in purchased recycled water rate	1.58%	3.47%	1.88%	1.88%	1.88%	1.88%	1.88%	1.88%	1.88%	1.88%	OCWD \$/AF 5-year Average	To Table 2B
19														
20														
21	Reserve Policies													
22	<u>Operations Fund</u>													
23		Purpose	Working capital for O&M cash flow during the year.											
24		Funding priority	Highest. If not maintained, interfund loans are needed.											
25		Minimum balance	50% of annual O&M costs											
26														
27	<u>Infrastructure Replacement Funds</u>													
28		Purpose	For wastewater master plan construction projects.											
29		Funding priority	Second highest.											
30		Target balance	No Minimum or Maximum. Should be reviewed periodically											
31														
32	Model Tables Included													
33		Table 1A. Summary												
34		Table 1B. General												
35		Table 2A. Revenue Requirement Projection - Sewer												
36		Table 2B. Revenue Requirement Projection - Recycled Water												
37		Table 3A. Revenue Increases - Sewer												
38		Table 3B. Revenue Increases - Recycled Water												
39		Table 4. Reserves												
40		Table 5. CIP												
41		Table 7A. Rate Revenue - Sewer												
42		Table 7B. Rate Revenue - Recycled Water												

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	City of Newport Beach														
2	Sewer Rate Study														
3	Table 2A. Revenue Requirement Projection - Sewer														
4															
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1	City of Newport Beach															
2	Sewer Rate Study															
3	Table 2A. Revenue Requirement Projection - Sewer															
4																
5																
6				Table 1B	Budgeted	Projected										
7				Factors	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	Notes	
73	Miscellaneous															
74	9000	OFFICE EQUIPMENT	b.		\$ 2,000	\$2,035	\$2,070	\$2,106	\$2,142	\$2,179	\$2,217	\$2,255	\$2,294	\$2,334		
75	9010	COMPUTER EQUIPMENT	b.		5,000	\$5,087	\$5,174	\$5,264	\$5,355	\$5,448	\$5,542	\$5,638	\$5,735	\$5,835		
76	9200	SHOP EQUIPMENT	b.		1,000	\$1,017	\$1,035	\$1,053	\$1,071	\$1,090	\$1,108	\$1,128	\$1,147	\$1,167		
77	9300	EQUIPMENT, N.O.C.	b.		25,000	\$25,433	\$25,872	\$26,320	\$26,775	\$27,239	\$27,710	\$28,189	\$28,677	\$29,173		
78		Total Miscellaneous Expenses			33,000	33,571	34,152	34,743	35,344	35,955	36,577	37,210	37,854	38,508		
79																
80	Non-Operating Revenue															
81	5860	DAMAGE TO CITY PROPERTY	b.		\$ (8,194)	(\$8,335)	(\$8,480)	(\$8,626)	(\$8,776)	(\$8,927)	(\$9,082)	(\$9,239)	(\$9,399)	(\$9,561)		
82	5870	REVENUE, N.O.C.	b.		(11,330)	(\$11,526)	(\$11,725)	(\$11,928)	(\$12,134)	(\$12,344)	(\$12,558)	(\$12,775)	(\$12,996)	(\$13,221)		
83		Total Non-Operating Revenue			(19,523)	(19,861)	(20,205)	(20,554)	(20,910)	(21,272)	(21,640)	(22,014)	(22,395)	(22,782)		
84	Net Revenue Requirement (before Reserve Expense)				\$ 3,203,019	\$ 3,265,892	\$ 3,342,464	\$ 3,420,962	\$ 3,501,439	\$ 3,583,947	\$ 3,668,540	\$ 3,755,274	\$ 3,844,207	\$ 3,935,398		
85						2.0%	2.3%	2.3%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	
86	RESERVE EXPENSE To/(From)															
87	Ops Support - Storm Drain Budget															
88		Operations	b.		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0 From Table 1A	
89		Capital Projects			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0 From Table 1A		
90		Operating Reserve			1,580	(145,880)	(74,251)	39,254	149,401	403,128	477,147	553,784	633,122	715,252 From Table 4		
91		Infrastructure Replacement			-	500,000	750,000	1,000,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000 From Table 4		
92		Subtotal, Reserve Expense			\$ 1,580	\$ 354,120	\$ 675,749	\$ 1,039,254	\$ 1,449,401	\$ 1,703,128	\$ 1,777,147	\$ 1,853,784	\$ 1,933,122	\$ 2,015,252		
93																
94	Net Revenue Requirement				\$3,204,599	\$3,620,012	\$4,018,213	\$4,460,216	\$4,950,840	\$5,287,075	\$5,445,687	\$5,609,058	\$5,777,329	\$5,950,650	To Table 3A	
95						13.0%	11.0%	11.0%	11.0%	6.8%	3.0%	3.0%	3.0%	3.0%		

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	City of Newport Beach														
2	Sewer Rate Study														
3	Table 2B. Revenue Requirement Projection - Recycled Water														
4															
5			Table 1B		Budget	Projected									
6			Factors		FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	Notes
7	Shared Recycled Water Costs														
8			Purchased Water - OCWD	i,k	\$ 167,598	\$ 173,417	\$179,438	\$182,810	\$186,245	\$189,745	\$193,311	\$196,943	\$200,644	\$204,414	
9			Other agency fees	b.	\$ 2,000	\$2,035	\$2,070	\$2,106	\$2,142	\$2,179	\$2,217	\$2,255	\$2,294	\$2,334	
10			Administration	b.	25,000	\$25,433	\$25,872	\$26,320	\$26,775	\$27,239	\$27,710	\$28,189	\$28,677	\$29,173	
11			Overhead	b.	12,000	\$12,208	\$12,419	\$12,634	\$12,852	\$13,075	\$13,301	\$13,531	\$13,765	\$14,003	
12			Meter Reading	b.	1,488	\$1,514	\$1,540	\$1,567	\$1,594	\$1,621	\$1,649	\$1,678	\$1,707	\$1,736	4 hours/month @\$31/hr
13			Total - Shared Recycled Water Costs		208,086	214,605	221,339	225,436	229,609	233,859	238,187	242,596	247,087	251,661	
14															
15	Big Canyon Country Club														
16			Inpections	b.	\$ 3,451	\$3,511	\$3,571	\$3,633	\$3,696	\$3,760	\$3,825	\$3,891	\$3,959	\$4,027	
17			Scheduled Production Maintenance	b.	1,877	\$1,909	\$1,943	\$1,976	\$2,010	\$2,045	\$2,080	\$2,116	\$2,153	\$2,190	
18			Scheduled SCADA Maintenance	b.	1,579	\$1,606	\$1,634	\$1,662	\$1,691	\$1,720	\$1,750	\$1,780	\$1,811	\$1,843	
19			Corrective Maintenance	b.	3,851	\$3,918	\$3,985	\$4,054	\$4,124	\$4,196	\$4,268	\$4,342	\$4,417	\$4,494	
20			Source Changeovers	b.	700	\$712	\$724	\$737	\$750	\$763	\$776	\$789	\$803	\$817	
21			Pump Station Rehab/Maintenance (pumps, motors)	j.	11,280	\$18,584	\$18,956	\$19,335	\$19,722	\$20,116	\$20,519	\$20,929	\$21,348	\$21,775	(pumps, motors)
22			Total - Big Canyon Country Club		22,738	30,241	30,814	31,398	31,994	32,600	33,219	33,849	34,491	35,145	
23						33.0%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	
24	Newport Beach Country Club														
25			Inpections	b.	\$ 3,451	\$3,511	\$3,571	\$3,633	\$3,696	\$3,760	\$3,825	\$3,891	\$3,959	\$4,027	
26			Scheduled Production Maintenance	b.	1,408	\$1,432	\$1,457	\$1,482	\$1,508	\$1,534	\$1,561	\$1,588	\$1,615	\$1,643	
27			Scheduled SCADA Maintenance	b.	1,184	\$1,204	\$1,225	\$1,247	\$1,268	\$1,290	\$1,312	\$1,335	\$1,358	\$1,382	
28			Corrective Maintenance	b.	2,987	\$3,039	\$3,091	\$3,145	\$3,199	\$3,254	\$3,311	\$3,368	\$3,426	\$3,486	
29			Source Changeovers	b.	700	\$712	\$724	\$737	\$750	\$763	\$776	\$789	\$803	\$817	
30			Pump Station Rehab/Maintenance (pumps, motors)	j.	6,940	\$7,079	\$7,220	\$7,365	\$7,512	\$7,662	\$7,816	\$7,972	\$8,131	\$8,294	(pumps, motors)
31			Total - Newport Beach Country Club		16,670	16,977	17,290	17,609	17,933	18,264	18,600	18,943	19,292	19,648	
32						1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	
33															
34			Subtotal: Operating Expenses		\$ 247,494	\$ 261,823	\$ 269,443	\$ 274,443	\$ 279,535	\$ 284,723	\$ 290,006	\$ 295,388	\$ 300,870	\$ 306,454	
35						5.8%	2.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	
36	Depreciation Expenses To/(From) Reserves														
37			Pump Station Facility Replacement		\$ 15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	(roof, walls, concrete)
38			Meters replacement	b.	2,500	\$2,543	\$2,587	\$2,632	\$2,678	\$2,724	\$2,771	\$2,819	\$2,868	\$2,917	\$259/meter/year - City estimate (15-yr service life)
39			Subtotal, Depreciation Expense		\$ 17,500	\$ 17,543	\$ 17,587	\$ 17,632	\$ 17,678	\$ 17,724	\$ 17,771	\$ 17,819	\$ 17,868	\$ 17,917	
40			Net Revenue Requirement		\$264,994	\$279,366	\$287,030	\$292,075	\$297,213	\$302,446	\$307,777	\$313,207	\$318,738	\$324,371	To Table 3B
41						5.4%	2.7%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	
1	City of Newport Beach														
2	Water Rate Study														
3	Table 3A. Revenue Increases - Sewer														
4															
5		Months	Est. Actual	Projected											
6		in 1st FY of	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	Notes	
7		rate increase*													
8	Revenue from Rates without Rate Increases														
9	Revenue from Current Rates														
10				\$3,103,588	\$3,103,588	\$3,103,588	\$3,103,588	\$3,103,588	\$3,103,588	\$3,103,588	\$3,103,588	\$3,103,588	\$3,103,588	FY13-14 from Table 7A; Table 1B, g.	
11				(\$12,335)	(\$12,335)	(\$12,335)	(\$12,335)	(\$12,335)	(\$12,335)	(\$12,335)	(\$12,335)	(\$12,335)	(\$12,335)		
12				\$3,091,253	\$3,091,253	\$3,091,253	\$3,091,253	\$3,091,253	\$3,091,253	\$3,091,253	\$3,091,253	\$3,091,253	\$3,091,253		
13				\$3,204,599	\$3,620,012	\$4,018,213	\$4,460,216	\$4,950,840	\$5,287,075	\$5,445,687	\$5,609,058	\$5,777,329	\$5,950,650	From Table 2	
14				(\$113,346)	(\$528,759)	(\$926,960)	(\$1,368,963)	(\$1,859,587)	(\$2,195,822)	(\$2,354,434)	(\$2,517,805)	(\$2,686,076)	(\$2,859,397)	To Table 4	
15	Revenue from Rates with Rate Increases														
16				11.0%	11.0%	11.0%	11.0%	11.0%	3.0%	3.0%	3.0%	3.0%	3.0%	From Table 1A	
17				Cumulative Increase	3.3%	16.6%	29.5%	43.7%	59.5%	70.4%	75.5%	80.7%	86.2%	91.7%	To Table 1A
18	Total Revenue from Existing Rates														
19				\$3,091,253	\$3,091,253	\$3,091,253	\$3,091,253	\$3,091,253	\$3,091,253	\$3,091,253	\$3,091,253	\$3,091,253	\$3,091,253		
20	Revenue from Rate Increases														
21		FY15-16 (effective 3/1/16)	4	\$113,346	\$340,038	\$340,038	\$340,038	\$340,038	\$340,038	\$340,038	\$340,038	\$340,038	\$340,038		
22		FY16-17 (effective 1/1/16)	6		\$188,721	\$377,442	\$377,442	\$377,442	\$377,442	\$377,442	\$377,442	\$377,442	\$377,442		
23		FY11-18 (effective 1/1/11)	6			\$209,480	\$418,961	\$418,961	\$418,961	\$418,961	\$418,961	\$418,961	\$418,961		
24		FY18-19 (effective 1/1/18)	6				\$232,523	\$465,046	\$465,046	\$465,046	\$465,046	\$465,046	\$465,046		
25		FY19-20 (effective 1/1/19)	6					\$258,101	\$516,201	\$516,201	\$516,201	\$516,201	\$516,201		
26		FY20-21 (effective 1/1/20)	6						\$78,134	\$156,268	\$156,268	\$156,268	\$156,268		
27		FY21-22 (effective 1/1/21)	6							\$80,478	\$160,956	\$160,956	\$160,956		
28		FY22-23 (effective 1/1/22)	6								\$82,892	\$165,785	\$165,785		
29		FY23-24 (effective 1/1/23)	6									\$85,379	\$170,759		
30		FY24-25 (effective 1/1/24)	6										\$87,941		
31		Subtotal - Revenue from Rate Increases		\$113,346	\$528,759	\$926,960	\$1,368,964	\$1,859,587	\$2,195,822	\$2,354,434	\$2,517,805	\$2,686,077	\$2,859,397		
32		Total Rate Revenue		\$3,103,588	\$3,204,599	\$3,620,012	\$4,018,213	\$4,460,216	\$4,950,840	\$5,287,075	\$5,445,687	\$5,609,058	\$5,777,330	FY13-14 from Table 7A	
33		Net Revenue Requirements		\$2,845,911	\$3,204,599	\$3,620,012	\$4,018,213	\$4,460,216	\$4,950,840	\$5,287,075	\$5,445,687	\$5,609,058	\$5,777,329	\$5,950,650	From Table 2
34		Surplus/(Deficit) after Rate Increase		\$257,677	\$0	(\$0)	\$0	\$0	\$0	\$0	(\$0)	\$0	(\$0)	To Table 4	
35															
36		* Estimated # of months of collections in FY in which rate increase takes place													
37															

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O		
1	City of Newport Beach																
2	Water Rate Study																
3	Table 3B. Revenue Increases - Recycled Water																
4																	
5		Months	Est. Actual	Projected													
6		in 1st FY of	FY 2012-13	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	#REF!	Notes		
7		rate increase*															
8	Revenue from Rates without Rate Increases																
9	Revenue from Current Rates																
10	Bad Debt Expense			\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	#REF!	FY12-13 from Table 7B; Table 1B, i.	
11	Net Revenue			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	#REF!		
12	Net Revenue Requirements			\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	#REF!	FY13-14 from City; escalated by CPI	
13	Surplus/(Deficit) before rate increase			\$264,994	\$279,366	\$287,030	\$292,075	\$297,213	\$302,446	\$307,777	\$313,207	\$318,738	\$324,371	\$324,371	#REF!		
14				\$257,129	\$242,756	\$235,092	\$230,048	\$224,910	\$219,676	\$214,346	\$208,916	\$203,385	\$197,752	\$197,752	#REF!		
15	Revenue from Rates with Rate Increases																
16	Increase in Revenue from Rates			0.0%	-50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
17	Cumulative Increase			0.0%	-50.0%	-50.0%	-50.0%	-50.0%	-50.0%	-50.0%	-50.0%	-50.0%	-50.0%	-50.0%	#REF!		
18	Total Revenue from Existing Rates																
19	Revenue from Current Rates			\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	\$522,123	#REF!		
20	Revenue from Rate Increases																
22	FY14-15 (effective 7/1/14)	12			(\$261,061)	(\$261,061)	(\$261,061)	(\$261,061)	(\$261,061)	(\$261,061)	(\$261,061)	(\$261,061)	(\$261,061)	(\$261,061)	#REF!		
23	FY15-16 (effective 7/1/15)	12				\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	#REF!		
24	FY16-17 (effective 7/1/16)	12					\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	#REF!		
25	FY17-18 (effective 7/1/17)	12						\$0	\$0	\$0	\$0	\$0	\$0	\$0	#REF!		
26	FY18-19 (effective 7/1/18)	12							\$0	\$0	\$0	\$0	\$0	\$0	#REF!		
27	FY19-20 (effective 7/1/19)	12								\$0	\$0	\$0	\$0	\$0	#REF!		
28	FY20-21 (effective 7/1/20)	12									\$0	\$0	\$0	\$0	#REF!		
29	FY21-22 (effective 7/1/21)	12										\$0	\$0	\$0	#REF!		
30	FY22-23 (effective 7/1/22)	12											\$0	\$0	#REF!		
31	FY23-24 (effective 7/1/23)	12												\$0	#REF!		
32	Subtotal - Revenue from Rate Increases			\$0	(\$261,061)	(\$261,061)	(\$261,061)	(\$261,061)	(\$261,061)	(\$261,061)	(\$261,061)	(\$261,061)	(\$261,061)	(\$261,061)	#REF!		
33	Total Rate Revenue			\$522,123	\$261,061	\$261,061	\$261,061	\$261,061	\$261,061	\$261,061	\$261,061	\$261,061	\$261,061	\$261,061	#REF!		
34	Net Revenue Requirements			\$264,994	\$279,366	\$287,030	\$292,075	\$297,213	\$302,446	\$307,777	\$313,207	\$318,738	\$324,371	\$324,371	#REF!		
35	Surplus/(Deficit) after Rate Increase			\$522,123	\$257,129	(\$18,305)	(\$25,969)	(\$31,013)	(\$36,152)	(\$41,385)	(\$46,716)	(\$52,146)	(\$57,676)	(\$63,310)	#REF!	To Table 4	
36																	
37	* Estimated # of months of collections in FY in which rate increase takes place																
38																	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
1	City of Newport Beach															
2	Sewer Rate Study															
3	Table 4. Reserves															
4																
5			Budgeted	Projected												
6			FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	Notes		
6	Sewer Operating Reserve Funds With Rate Increase (530)															
7	Revenue Increase															
8				11.0%	11.0%	11.0%	11.0%	11.0%	3.0%	3.0%	3.0%	3.0%	3.0%	From Table 1A		
9				11.0%	23.2%	36.8%	51.8%	68.5%	73.6%	78.8%	84.1%	89.7%	95.3%			
10																
11	Operations Fund															
12				\$1,756,676	\$1,771,437	\$1,638,296	\$1,576,054	\$1,526,901	\$1,512,658	\$1,752,987	\$1,969,039	\$2,263,636	\$2,690,266			
13				\$0	(\$0)	\$0	\$0	\$0	\$0	\$0	(\$0)	\$0	(\$0)	From Table 3A		
14																
15	Transfers (to)/from															
16				1,580	(145,880)	(74,251)	39,254	149,401	403,128	477,147	553,784	633,122	715,252	To Table 2		
17							(\$100,000)	(\$175,000)	(\$175,000)	(\$275,000)	(\$275,000)	(\$225,000)	(\$225,000)	(to)/from below		
18				\$1,580	(\$145,880)	(\$74,251)	(\$60,746)	(\$25,599)	\$228,128	\$202,147	\$278,784	\$408,122	\$490,252			
19				\$1,758,256	\$1,625,557	\$1,564,045	\$1,515,308	\$1,501,302	\$1,740,786	\$1,955,134	\$2,247,823	\$2,671,759	\$3,180,518			
20				\$13,181	\$12,739	\$12,009	\$11,593	\$11,356	\$12,200	\$13,905	\$15,813	\$18,508	\$22,015			
21				Ending Balance	1,756,676	\$1,771,437	\$1,638,296	\$1,576,054	\$1,526,901	\$1,752,987	\$1,969,039	\$2,263,636	\$2,690,266	\$3,202,534		
22				<i>Minimum Balance</i>	\$1,593,406	\$1,601,509	\$1,632,946	\$1,671,232	\$1,710,481	\$1,750,719	\$1,791,973	\$1,834,270	\$1,877,637	\$1,922,104	\$1,967,699	50% of annual O&M
23	Sewer Infrastructure Replacement Reserve (540)															
24				\$1,033,854	\$539,733	\$533,743	\$507,333	\$550,075	\$622,293	\$666,804	\$783,211	\$871,100	\$879,483			
25																
26				(\$500,000)	(\$510,000)	(\$780,300)	(\$1,061,208)	(\$1,407,162)	(\$1,435,305)	(\$1,464,011)	(\$1,493,291)	(\$1,523,157)	(\$1,553,620)	From Table 5		
27	Transfers (to)/from															
28				\$0	\$500,000	\$750,000	\$1,000,000	\$1,300,000	\$1,300,000	\$1,300,000	\$1,300,000	\$1,300,000	\$1,300,000	From Table 1A		
29				\$0	\$0	\$0	\$100,000	\$175,000	\$175,000	\$275,000	\$275,000	\$225,000	\$225,000	(to)/from above		
30				\$0	\$500,000	\$750,000	\$1,100,000	\$1,475,000	\$1,475,000	\$1,575,000	\$1,575,000	\$1,525,000	\$1,525,000			
31				\$533,854	\$529,733	\$503,443	\$546,125	\$617,914	\$661,988	\$777,793	\$864,919	\$872,943	\$850,862			
32				\$5,879	\$4,010	\$3,889	\$3,950	\$4,380	\$4,816	\$5,417	\$6,180	\$6,540	\$6,489			
33				Ending Balance	1,033,854	\$539,733	\$533,743	\$507,333	\$550,075	\$622,293	\$666,804	\$783,211	\$871,100	\$879,483	\$857,351	
34				<i>Target Balance</i>	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	Average Annual CIP (per 20-YR)	
35	Recycled Water Infrastructure Replacement Reserve															
36	Revenue Increase															
37				0.0%	-50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	From Table 3B		
38																
39																
40				-	258,094	241,656	217,402	187,902	153,025	112,632	66,586	14,744	(42,932)			
41				\$257,129	(\$18,305)	(\$25,969)	(\$31,013)	(\$36,152)	(\$41,385)	(\$46,716)	(\$52,146)	(\$57,676)	(\$63,310)	From Table 3B		
42	Reimbursement to Water Fund															
43																
44																
45																
46				\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
47				257,129	239,789	215,687	186,388	151,751	111,640	65,916	14,440	(42,932)	(106,242)			
48				\$964	\$1,867	\$1,715	\$1,514	\$1,274	\$992	\$670	\$304	\$0	\$0			
49				Ending Balance	-	\$258,094	\$241,656	\$217,402	\$187,902	\$153,025	\$112,632	\$66,586	\$14,744	(\$42,932)	(\$106,242)	

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	City of Newport Beach												
2	Water Rate Study												
3	Table 5. CIP												
4													
5	Project #	Project Name	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	Total Cost
6													
7	C2002049	Grade Adjustments: Sewer Manhole Covers	\$100,000										\$ 100,000
8	C7002005	Saint James Rd. Sewer Relocation	\$225,000										\$ 225,000
9	C6002016	SCADA System Upgrade	\$100,000										\$ 100,000
10	C7001003	WW Master Plan Improvements	\$75,000										\$ 75,000
11		Additional Capital Funding	\$0	\$500,000	\$750,000	\$1,000,000	\$1,300,000	\$1,300,000	\$1,300,000	\$1,300,000	\$1,300,000	\$1,300,000	\$ 10,050,000
12		Total Projects	\$500,000	\$500,000	\$750,000	\$1,000,000	\$1,300,000	\$1,300,000	\$1,300,000	\$1,300,000	\$1,300,000	\$1,300,000	\$10,550,000
13													
14		Total Operating	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$ -
15		Total Replacement	\$500,000	\$500,000	\$750,000	\$1,000,000	\$1,300,000	\$1,300,000	\$1,300,000	\$1,300,000	\$1,300,000	\$1,300,000	\$ 10,550,000
16		Total Unfunded	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$ -
17		Total Annual Project Cost	\$500,000	\$500,000	\$750,000	\$1,000,000	\$1,300,000	\$1,300,000	\$1,300,000	\$1,300,000	\$1,300,000	\$1,300,000	\$10,550,000
18													
19		Construction Cost Inflation	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	
20													
21		Inflated Operating Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$ -
22		Inflated Replacement Total	\$500,000	\$510,000	\$780,300	\$1,061,208	\$1,407,162	\$1,435,305	\$1,464,011	\$1,493,291	\$1,523,157	\$1,553,620	\$ 11,728,055
23		Inflated Unfunded Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$ -
24													
25													
26	Source: City of Newport Beach WW CIP 13-14												
27													

	A	B	C	D	E	F	G	H
1	City of Newport Beach							
2	Sewer Rate Study							
3	Table 7A. Rate Revenue - Sewer							
4								
5	Monthly Sewer Use Charge (Customers with Water and Sewer Service) - Per Meter							
6		FY11-12	FY11-12	FY11-12	FY11-12	FY11-12	FY11-12	
7	Customer Class	Meter Count	Charge/meter	Annual Revenue	Meter Count	WW Surchg	Annual Revenue	
8	5/8"	15,354	\$ 4.50	\$ 829,116				
9	3/4"	3	\$ 4.50	\$ 162				
10	1"	6,276	\$ 4.50	\$ 338,904				
11	1.5"	364	\$ 4.50	\$ 19,656				
12	2"	886	\$ 4.50	\$ 47,844	478	\$ 10.00	\$ 57,360	
13	2.5"	1	\$ 4.50	\$ 54	0	\$ 10.00	\$ -	
14	3"	34	\$ 4.50	\$ 1,836	35	\$ 10.00	\$ 4,200	
15	4"	119	\$ 4.50	\$ 6,426	90	\$ 10.00	\$ 10,800	
16	6"	54	\$ 4.50	\$ 2,916	47	\$ 10.00	\$ 5,640	
17	8"	11	\$ 4.50	\$ 594	6	\$ 10.00	\$ 720	
18	10"	2	\$ 4.50	\$ 108	0	\$ 10.00	\$ -	
19		23,104		\$ 1,247,616	656		\$ 78,720	
20								
21	Source: SWR_RCY_study_meter count - Service 980 Meters Only - Active Accounts							
22								
23	Monthly Sewer Use Charge (Customers with Sewer Service only)							
24		FY11-12	FY11-12	FY11-12				
25	Customer Class	No Of Acct.	Charge/acct	Annual Revenue				
26	SWR	485	\$ 6.25	\$ 36,375				
27								
28	Source: SWR_RCY_study_meter count - SWR Accounts Only							
29								
30	Monthly Supplemental Sewer Use Charge (for each additional DU served by same connection)							
31		FY11-12	FY11-12	FY11-12	FY11-12			
32	Customer Class	NO of DUs	Charge/DU	Annual Revenue	Annual Revenue			
33	MULTI FAMILY RES	8477	\$ 2.00	\$ 203,448	\$ 1,327			
34	COMMERICAL	759	\$ 2.00	\$ 18,216	\$ 48,746			
35	CITY METER	42	\$ 2.00	\$ 1,008	\$ 48,746			
36	CONSOLIDATED	949	\$ 2.00	\$ 22,776	\$ 816			
37	SINGLE FAMILY RES	81	\$ 2.00	\$ 1,944	\$ 48			
38	SEWER ONLY	652	\$ 2.00	\$ 15,648	\$ 15,768			
39		10960		\$ 263,040	\$ 115,452			
40								
41	Source: FY 11-12 Customer Billing Analysis Service 901, 903 - Sewer Svc Multi/Bi-monthly, Sewer Svc Multi/Monthly and 904,910 SWR SRV HOSP-HOT/Bi-MO and Monthly							
42								
43	Sewer Consumption Charge (per ccf)							
44		FY 2014-15	FY11-12	FY 2014-15				
45	Customer Class	Consumption	Charge/CCF	Annual Revenue				
46	SINGLE FAMILY RES	2,982,858	\$ 0.35	\$ 1,044,000				
47	MULTI FAMILY RES	919,160	\$ 0.35	\$ 321,706				
48	CITY METER	-	\$ 0.35	\$ -			No Consumption Charge - Only Fixed Fee	
49	COMMERICAL	1,312,620	\$ 0.35	\$ 459,417				
50	POOL	29,248	\$ 0.35	\$ 10,237				
51	CONSOLIDATED	-	\$ 0.35	\$ -				
52	BOAT DOCK	-	\$ 0.35	\$ -			No Sewer Charge	
53	SPRINKLER	-	\$ 0.35	\$ -			No Sewer Charge	
54	FIRE	-	\$ 0.35	\$ -			No Sewer Charge	
55	PUMP STATION	-	\$ 0.35	\$ -			No Sewer Charge	
56		5,243,886		\$ 1,835,360				
57	Less: Mandatory Cutbacks @18%	(923,886)	\$ 0.35	\$ (323,360)			18%	
58	Total Consumption Revenue (estm.)	4,320,000		\$ 1,512,000		0.35		
59								
60	Source: Email from George Murdoch dated 4/27/2015 for FY13-14 metered water use							
61								
62								
63	Total Calculated Revenue			\$ 3,576,563	To Table 3A		\$ 12.90	
64	Total from Customer Billing Data			\$ 3,321,344				
65	Difference			\$ 255,219				
66				7%				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	City of Newport Beach														
2	Sewer Rate Study														
3	Table 7B. Rate Revenue - Recycled Water														
4															
5	Breakdown of Recycled Water Costs														
6	Fixed Costs (borne regardless of flow)														
7	Variable Costs (related to flow)														
8	Pump Station Costs														
9	Total - Recycled Water Costs														
10															
11	Total Metered Flow														
12	Total Pump Station Flow														
13	Charge per HCF - All Customers														
14	Charge per HCF - Pump Station														
15															
16															
17	Mo. Service Charge														
18	5/8" or 3/4"														
19	1"														
20	1 1/2"														
21	2"														
22	3"														
23	4"														
24	6"														
25	8"														
26															
27															
28															
29	Newport Beach Commodity Charge (per HCF)	202,793	\$ 2.46	\$499,682											
30	Pump Station Charge (per HCF)														
31															
32	Total Recycled Water Revenue														
33															
34															
35															
36															
37															
38	Per GAP Workbooks - Monthly Meter Reads														
39	July	31,828	27,605	30,285											
40	August	31,058	26,326	31,311											
41	September	13,620	10,963	11,132											
42	October	11,962	9,778	8,502											
43	November	6,881	5,541	3,082											
44	December	675	579												
45	January	4,032	3,188	6,156											
46	February	6,369	5,282	7,140											
47	March	12,458	10,791	9,481											
48	April	26,488	22,844	12,562											
49	May	29,488	25,733	29,175											
50	June	27,934	23,796	28,180											
51		202,793	172,426	177,006											
52			85%												
53															

FY14-15
\$43,732 From Table 2B
173,417 From Table 2B
62,218 From Table 2B
\$279,366

Total Active Accounts (excld City)	Current		Revised					Annual Revenue	Water Rates	Water Multiplier
	Monthly Service Charge	Annual Revenue	Total Active Accounts	EMU Multiplier	Total EMUs	Monthly Service Charge	Annual Revenue			
0	\$ 13.82	\$ -	0	1.00	0	\$18.91	\$0	\$ 17.27	1.00	
0	\$ 23.03	\$ -	0	1.67	0	\$31.53	\$0	\$ 28.79	1.67	
0	\$ 46.06	\$ -	0	3.33	0	\$63.05	\$0	\$ 57.58	3.33	
1	\$ 73.70	\$ 884	8	5.33	42.673	\$100.88	\$9,684	\$ 92.12	5.33	
1	\$ 138.18	\$ 1,658	3	10.00	30.005	\$189.15	\$6,810	\$ 172.73	10.00	
0	\$ 230.30	\$ -	0	16.67	0	\$315.25	\$0	\$ 287.88	16.67	
2	\$ 460.61	\$ 11,055	2	33.34	66.677	\$630.50	\$15,132	\$ 575.76	33.34	
1	\$ 736.98	\$ 8,844	1	53.34	53	\$1,008.81	\$12,106	\$ 921.22	53.34	
5		\$ 22,441	14		193		\$43,732			

\$279,366 To Table 3B

To Table 2B

DRAFT



HF&H Consultants, LLC
201 N. Civic Drive, Suite 230
Walnut Creek, CA 94596