



SEWER SERVICE CHARGE RATE STUDY

January 2016

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SECTION 1. PURPOSE AND OVERVIEW OF THE STUDY

A. PURPOSE

The Napa Sanitation District (“the District”) retained NBS in August 2015 to re-evaluate its wastewater rates for a number of reasons, including meeting long-term revenue requirements and providing adequate funding for capital improvements. The rates developed in this study meet Proposition 218 (Prop 218) requirements and were developed in a manner that is consistent with industry standards. This report is provided with the intent of assisting the District’s effort to communicate transparently with the residents and businesses it serves.

In developing proposed wastewater rates, NBS and District staff worked cooperatively in developing study results and rate alternatives. The District’s stakeholders group had input into the financial planning process, while the District Board of Directors reviewed the initial study results and recommendations as part of two public workshops. In subsequent meetings, the Board of Directors reviewed recommendations and provided NBS and District staff with direction and feedback. Based on this input, NBS has recommended the rates summarized in this report.

B. OVERVIEW OF THE STUDY

Key Issues Addressed –The primary focus in this rate study was on the District’s longer-range financial plans and the associated rate impacts. District staff and NBS prepared a broad spectrum of financial plan alternatives that closely examined capital improvement funding alternatives, including varying levels of financing for future projects. As part of the financial planning process, the Board approved an alternative that included: (1) the cost of two additional full time staff and (2) beginning in FY 2019/20 an additional \$1.9 million annually on renewal and replacement projects above currently planned capital projects as part of the rate study.

Recommendations – NBS recommends the District take the following actions:

- Adopt the long-range financial plan which includes the two additional full time staff and an additional \$1.9 million annually, beginning in FY 2019/20, for renewal and replacement projects.
- Adopt recommend reserve fund targets.
- Retain the District’s current rate design, with updated rates that incorporate annual rate increases of 15%, 15%, 6%, 5%, and 4% beginning in FY 2016/17.
- Provide the normal legal review of the recommended rates by a qualified attorney.
- Proceed with Prop 218 noticing requirements necessary for legal adoption and implementation of the proposed rates.
- Assuming no successful Prop 218 protest of the rates, adopt the rates summarized in this report.
- At the conclusion of this report, possible considerations for future rate updates are discussed. As part of any future rate adjustment NBS recommends those topics be reviewed.

The next section discusses the wastewater rate study.

SECTION 2. WASTEWATER RATE STUDY

A. KEY WASTEWATER RATE STUDY ISSUES

The specific concerns that were addressed in the wastewater rate analysis included:

- Generating additional revenue needed to meet projected funding requirements, particularly capital improvement costs. In particular, the District has under-funded repair and replacement of the sewer system for many years. As a direct result, there are many assets that are at the end of their useful life, which makes them more prone to failure. The District has evaluated emergency repairs and concluded that proactive replacement is typically far less costly than waiting until an asset fails and requires an emergency repair.
- Continuing use of the District's existing rate structure, which applies the same number of equivalent dwelling units (EDUs) the District currently uses. As a part of the rate study, NBS evaluated potential changes to the rate structure and concluded that, while there are potential changes that could be considered, the current rate structure is fair and equitable under Prop 218 requirements.

In light of these objectives, and based on NBS' analysis, maintaining the existing rate structure results in applying the proposed rate increases to existing rates in an "across-the-board" manner. The following sections present an overview of the methodologies, assumptions, and data used along with the financial plans and rates developed during this study.

B. RATE STUDY METHODOLOGY

Components of the Rate Study Methodology – A comprehensive utility rate study typically encompasses three major components: (1) preparation of a financial plan which identifies the net revenue requirements for the utility; (2) analysis of the cost to serve each customer class, and; (3) the rate structure design.

These three steps, which are shown in **Figure 1**, are intended to follow industry standards and reflect the fundamental principles of cost-of-service rate making embodied in the American Water Works Association (AWWA) Principles of Water Rates, Fees, and Charges¹, also referred to as the Manual M1. These steps address general requirements for equity and fairness. They also address requirements under California Constitution article XIII D, Section 6 (commonly referred to as Proposition 218) that rates not exceed the cost of providing the service and be proportionate to the cost of service for all customers. In terms of the chronology of the study, these three steps represent the order they were performed in this study.

Figure 1. PRIMARY COMPONENTS OF A RATE STUDY



¹ *Principles of Water Rates, Fees, and Charges, Manual of Water Supply Practices, M1, AWWA, sixth edition, 2012.*

C. FINANCIAL AND PLANNING ASSUMPTIONS

Following are the key assumptions used in the rate analyses:

- **Funding of Capital Projects** – After the District's extensive review of the planned capital improvement projects (CIP) and funding requirements, the District has decided that the utility should fund the currently planned CIP. The capital improvement projects included in the rate program are designed to keep existing infrastructure in good repair and maintain current service levels. This includes the planned use of financing in the future for some CIP projects.
- **Reserve Targets** – Target reserves for operations and maintenance (O&M) and capital rehabilitation and replacement (R&R), follow industry standards for utility reserve fund management, are set at the following levels:
 - ✓ Cash Flow Reserve target level – approximately 180-days of O&M expenses.
 - ✓ Operating & Maintenance Reserve level – approximately 3.0% of net assets.
- **Inflation and Growth Projections:**
 - ✓ Customer Growth is based on adding between 90 and 600 equivalent residential dwelling units per year. This translates to an average of 0.84% annually for the next 10 years.
 - ✓ General costs (such as professional and contractual services, fuel, vehicle maintenance, electricity, etc.) are inflated by 2% annually.
 - ✓ Chemicals costs are inflated at 5% annually and energy costs are inflated by 4% annually.
 - ✓ Labor costs are inflated between 3% and 3.5% annually. Health benefits are inflated between 6% and 6.66% annually, and retirement benefits are inflated by 3.25% in FY 2016/17 and by² 2.25% each year thereafter. Worker's Compensation was depreciated 23.75% for FY 2016/17² and left flat thereafter.
 - ✓ No inflation is added to other budget items, such as late fee revenue, lease income, and availability fees.

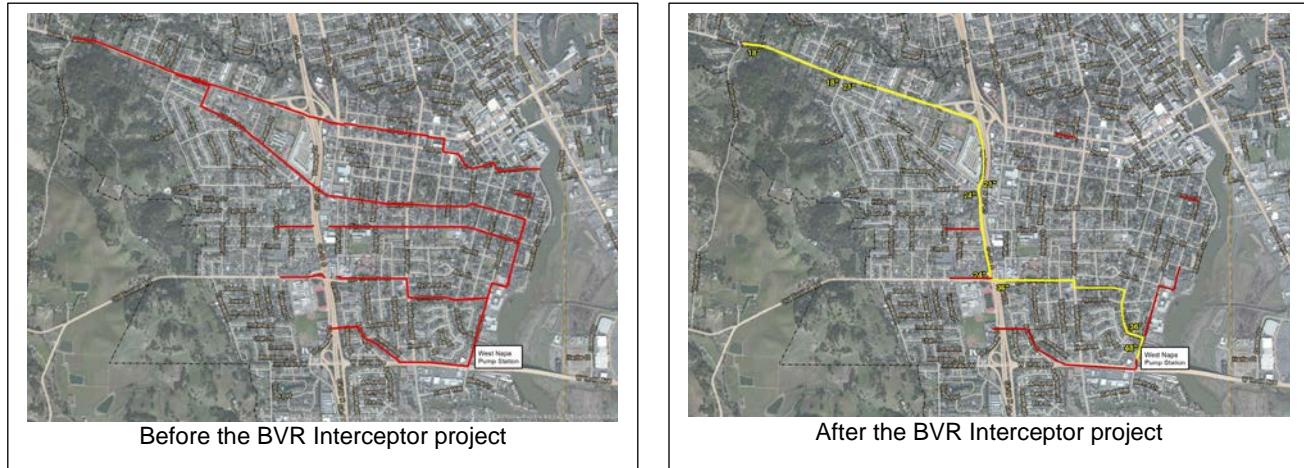
D. CAPITAL IMPROVEMENT PROGRAM

The following is District staff's outline of the major components of the District's capital improvement program, including a description of largest projects and their timing and costs.

- **Browns Valley Road Sewer Interceptor**
 - ✓ FY 2015/16 – 2018/19
 - ✓ Estimated Cost: \$15.3 million
 - ✓ Debt Funded
 - ✓ Description: The sewer pipes in downtown Napa are over capacity in many areas, meaning that these pipes are in danger of overflowing when there are high flow events, such as a large storm. Overflows are particularly bad because they can result in untreated sewage getting into storm drains and flowing to creeks or the river, which is bad for both human health and for environmental health. The Browns Valley Road Sewer Interceptor project is designed to divert flow from sewer lines that are over capacity. In the map on the left below, you can see the red lines that show sewers that can overflow during large storm events. The map on the right shows the interceptor project's proposed alignment (yellow) as well as the reduction in pipes that can overflow – the number of overcapacity pipes (red) significantly reduces from this project.

² Based upon staff budget estimates

The Browns Valley Road Interceptor project is estimated to cost approximately \$15 million. Because it is such a large project, the District plans to issue debt to pay for this project. This will allow the costs to be spread out over time, and keep the annual rate impact of this project lower than it would be if it were built entirely with cash on hand. The project should be built now, rather than delaying, because of the significant impact it can have on reducing the possibility of sewer overflows. It is also important to complete prior to the City of Napa completing road paving in this area.



- **Inflow & Infiltration Reduction Projects**

- ✓ Projects planned for each year
- ✓ \$2.4 million - \$3.6 million annually
- ✓ Description: During rainstorm events and when groundwater levels are high, stormwater and groundwater can get into the sewers. This is a problem for two reasons. First, this extra water can overwhelm the sewer system during large rain events, causing untreated sewage to escape and flow into creeks and the river, and potentially can cause backups into homes and businesses. Second, all the water in the sewers has to be treated, so extra water means increased treatment costs. Additional costs are also possible if the District were to be fined by the Regional Water Quality Control Board for not addressing this problem.

By lining or replacing pipes that are cracked or damaged, the District can reduce the risks to public health and the environment from overflows caused by rainwater and groundwater overwhelming the system. Over the next decade, the District plans to rehabilitate almost 3 miles of sewer mains and laterals every year, based on studies that show the areas with the greatest amount of inflow and infiltration of rainwater and groundwater during storm events. This investment will reduce the risks of overflows of untreated sewage, and reduce the costs of electricity and chemicals used to treat the water.

- **Second Digester and Third Aeration Basin Construction**

- ✓ FY 2020/21 – FY 2022/23
- ✓ \$25 million
- ✓ Debt Funded
- ✓ Description: Based on anticipated increased flows in the sewer system, it will be necessary to expand the treatment plant's capacity. This project will build a second anaerobic digester to process increased amounts of biosolids, and will also construct the treatment plant's third aeration basin, which is used to remove solids from wastewater.

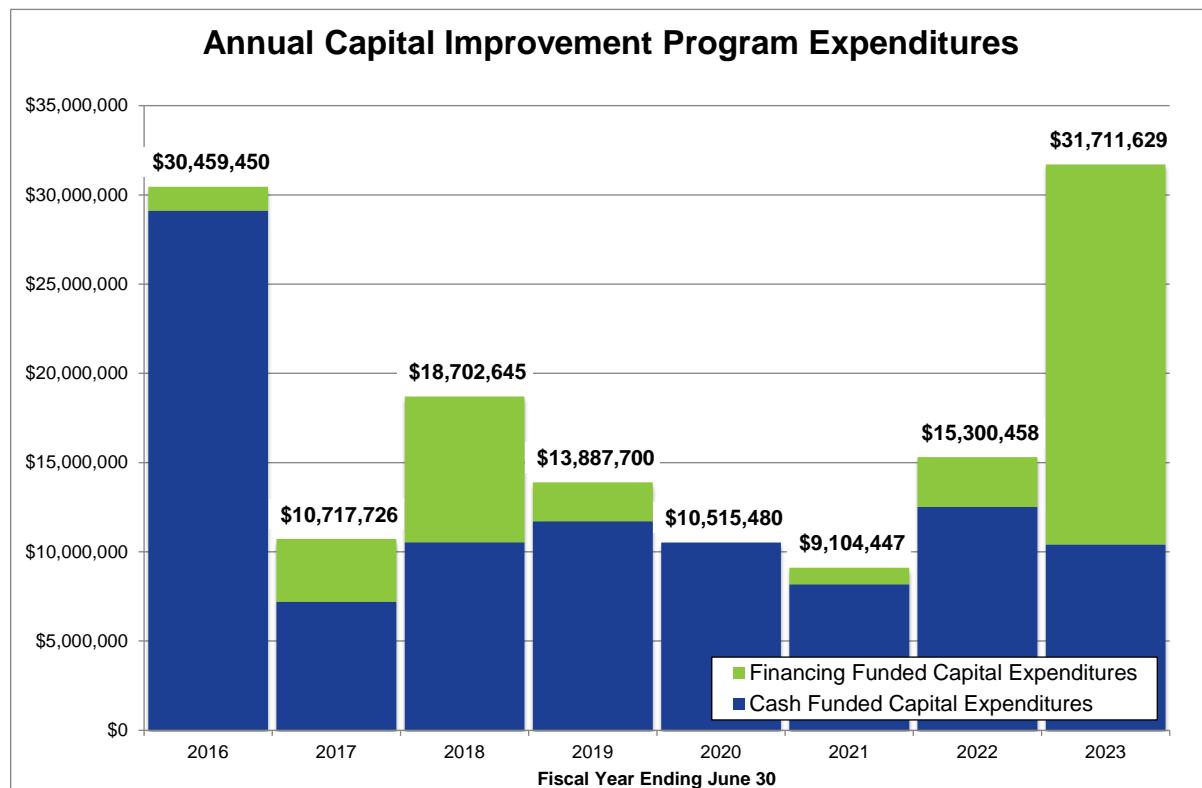
- **Sewer Main Rehab and Replacement**

- ✓ FY 2017/18 – 2025/26
- ✓ \$33.4 million
- ✓ Description: Sewer pipes last a long time, but they don't last forever. The constant flow of water and materials, along with hydrogen sulfide and other corrosive elements, means that sewer pipes deteriorate over time. The goal is to replace or rehabilitate old pipes when they are at the end of their useful life, but before they have collapsed or failed. While rehabilitating a 100 feet of sewer pipe through a planned pipe lining project would typically cost about \$5,000, the replacement of that same pipe through an open trench because of it has collapsed could cost over \$50,000, or about 10 times as much.

The District has evaluated the age, type of pipe and overall condition of the pipes in its system, and it has put together a plan to replace or rehabilitate pipes over the next ten years. The specific pipes to be replaced will be based on an analysis of the pipe's condition (using CCTV cameras to look for cracks and other evidence of damage) and the consequences of that pipe's failure or collapse. This approach will ensure that the District is replacing the most critical pipes at the right time in an effort to avoid costly emergency repairs.

Figure 2 shows the annual expenditures of all planned CIP projects from the current year through FY 2022/23. This figure demonstrates vast year over year variance in planned project cost. Use of the reserves and debt funding prevent this variance from causing large year over year changes in rates.

Figure 2. Annual Capital Improvement Expenditures



E. REVENUE REQUIREMENTS

It is important for municipal utilities to maintain reasonable reserves in order to handle emergencies, fund working capital, maintain a good credit rating, and generally follow sound financial management practices. The District's rate increases are governed by the need to meet operating and capital costs, maintain and build reserve funds. The current state of the District is as follows:

- **Meeting Net Revenue Requirements:** The District is currently running a significant structural deficit, and will result in a negative annual impact of \$6.0 million in FY 2015/16. This deficit would continue annually through FY 2020/21 if no rate increases are implemented. While there is currently sufficient revenue to cover operating costs and debt expenditures, planned expenditures on capital projects drive the deficit. Projected net revenue requirement (i.e., total annual expenses plus debt service and rate-funded capital costs, less non-rate revenues) increases from approximately \$19.53 million to \$31.38 million in FY 2015/16 through FY 2020/21. If no rate increases are implemented, the District will also not meet its debt coverage requirements for its outstanding debt, which would likely preclude the District from issuing new debt as planned to help finance CIP projects.
- **Building and Maintaining Reserve Funds:** The District should maintain sufficient reserves for the Utility. NBS recommends that the District adopt and maintain the following reserve fund targets:
 - ✓ **Cash Flow Reserve** equal to approximately 180-days of the Utility's budgeted annual operating expenses. This reserve target is equal to a six-month (or 50%) cash cushion for normal operations. A Cash Flow Reserve is intended to promote financial viability in the event of any short-term fluctuation in revenues and/or expenditures. While many other utilities maintain a 90-day reserve, NBS believes the District's current practice of a 180-day reserve should be continued because the vast majority of cash influx is semi-annual.
 - ✓ **Operating and Maintenance Reserve** is currently equal to 15% of annual operating expenses (or approximately \$2.9 million based on annual operating expenses of \$19.6 million). An Operating and Maintenance Reserve is intended to promote financial viability in the event of any short-term fluctuation in revenues and/or expenditures. The reserve also assists the District in the event of natural disaster or other events that cause significant damage to critical infrastructure. NBS is recommending changing this reserve to equal a minimum of 3% of net depreciable capital assets (or approximately \$6.7 million based on a total system asset value of approximately \$200 million) as this is more consistent with industry standards.
 - ✓ **Debt Reserve** equal to the reserve requirements for the existing and planned debt, which is approximately \$2 million for FY2015/16, but increases as the District issues more debt. This reserve is required as part of bond covenants on existing debt.

Figure 3 summarizes the sources and uses of funds, including net revenue requirements, and the recommended annual percent increases in total rate revenue for the next five years. As this figure shows, the District has a large deficit in FY 2015/16, and without rate increases will incur additional deficits in FY 2016/17 through FY 2020/21. The surpluses created by rate increases are used to rebuild reserve levels over the five-year period.

Figure 4 summarizes the projected reserve fund balances and reserve targets for the next five years. A summary of the District's proposed 10-year financial plan is included in Appendix A – Sewer Rate Study Summary Tables. These tables include revenue requirements, reserve funds, revenue source and proposed rate increases for the 10-year period. As shown in Figure 4, under the proposed rate increases, the District still does not quite meet the recommended minimum target at the end of the five-year rate period.

Figure 5 summarizes the financial plan and annual revenue requirements through FY 2022/23.

Figure 3. Summary of Sewer Revenue Requirements

Summary of Sources and Uses of Funds and Net Revenue Requirements	Budget	Projected				
	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21
Sources of Wastewater Funds						
Rate Revenue Under Prevailing Rates (1)	\$ 19,534,000	\$ 19,577,523	\$ 19,739,524	\$ 20,027,258	\$ 20,312,575	\$ 20,501,173
Recycled Water Sales	\$ 507,000	\$ 1,085,000	\$ 1,157,000	\$ 1,250,000	\$ 1,303,000	\$ 1,356,000
Other Operating Revenue	1,190,000	602,681	616,607	630,694	644,846	660,164
Interest Earnings (in Operating & Capital Reserves) (2)	77,000	32,442	60,136	90,144	108,434	150,428
Total Sources of Funds	\$ 21,308,000	\$ 21,297,646	\$ 21,573,267	\$ 21,998,096	\$ 22,368,855	\$ 22,667,765
Uses of Wastewater Funds						
Operating Expenses	\$ 14,830,650	\$ 15,541,725	\$ 16,011,454	\$ 16,517,613	\$ 17,042,751	\$ 17,588,100
Debt Service	4,772,256	6,074,207	6,074,257	6,065,782	6,062,992	6,069,346
Rate-Funded Capital Expenses	7,738,050	6,613,399	10,537,748	11,709,593	10,515,480	8,182,697
Total Use of Funds	\$ 27,340,957	\$ 28,229,331	\$ 32,623,458	\$ 34,292,987	\$ 33,621,222	\$ 31,840,142
Surplus (Deficiency) before Rate Increase	\$ (6,032,957)	\$ (6,931,685)	\$ (11,050,192)	\$ (12,294,890)	\$ (11,252,367)	\$ (9,172,377)
Additional Revenue from Rate Increases	-	2,936,628	6,365,997	8,047,954	9,586,367	10,882,437
Surplus (Deficiency) after Rate Increase	\$ (6,032,957)	\$ (3,995,056)	\$ (4,684,195)	\$ (4,246,937)	\$ (1,666,000)	\$ 1,710,059
Projected Annual Rate Increase	0.00%	15.00%	15.00%	6.00%	5.00%	4.00%
Cumulative Rate Increases	0.00%	15.00%	32.25%	40.19%	47.19%	53.08%
Net Revenue Requirement (1)	\$ 25,566,957	\$ 26,509,208	\$ 30,789,716	\$ 32,322,149	\$ 31,564,942	\$ 29,673,551

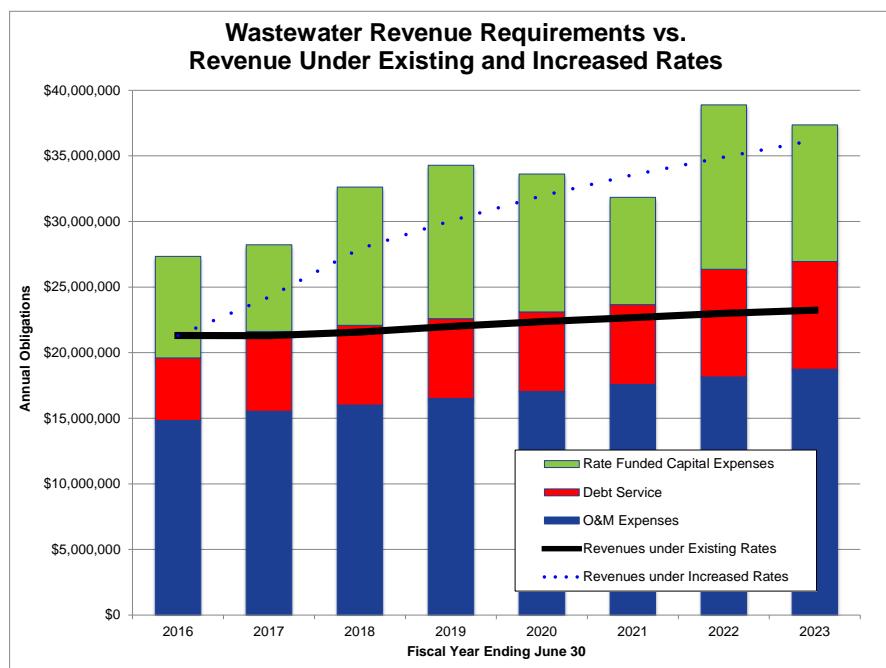
1. Revenues for proposed FY 2015/16 are from the District's Fiscal Year 2015-16 Operating and Capital Budget (files: 1 - FY 15-16 Operating and Capital Budget.pdf and 2 - FY 1516 Revenue.xlsx).

2. Interest earnings are per the District's budget in FY 2015/16, and calculated in the Financial Plan for all future years.

Figure 4. Summary of Sewer Reserve Funds

Beginning Reserve Fund Balances and Recommended Reserve Targets	Budget	Projected				
	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21
Cash Flow Reserve						
Ending Balance	\$ 6,488,319	\$ 7,771,000	\$ 8,006,000	\$ 8,259,000	\$ 8,521,000	\$ 8,794,000
<i>Recommended Minimum Target</i>	<i>7,415,000</i>	<i>7,771,000</i>	<i>8,006,000</i>	<i>8,259,000</i>	<i>8,521,000</i>	<i>8,794,000</i>
Operating & Maintenance Reserve						
Ending Balance	\$ -	\$ 247,094	\$ 1,008,376	\$ 415,751	\$ 1,507,524	\$ 6,075,452
<i>Recommended Minimum Target</i>	<i>6,684,400</i>	<i>6,795,700</i>	<i>7,136,100</i>	<i>7,326,200</i>	<i>7,357,100</i>	<i>7,346,000</i>
Debt Reserves						
Ending Balance	\$ 1,961,254	\$ 3,263,654	\$ 3,263,654	\$ 3,258,979	\$ 3,257,943	\$ 3,257,943
<i>Recommended Minimum Target</i>	<i>1,961,254</i>	<i>3,263,654</i>	<i>3,263,654</i>	<i>3,258,979</i>	<i>3,257,943</i>	<i>3,257,943</i>
Total Ending Balance	\$ 8,449,573	\$ 11,281,748	\$ 12,278,030	\$ 11,933,730	\$ 13,286,467	\$ 18,127,396
Total Recommended Minimum Target	\$ 16,060,654	\$ 17,830,354	\$ 18,405,754	\$ 18,844,179	\$ 19,136,043	\$ 19,397,943

Figure 5. Summary of Revenue Requirements and Financial Plan



F. CURRENT VS. PROPOSED WASTEWATER RATES

As previously mentioned in this report, several alternative financial plans were evaluated in this study. In addition to the selected plan, the District has also chosen to maintain the existing rate structure and increase existing rates by the percentage increases in an across-the-board manner.

The current rate design, which will be continued over the planned five-year rate period will be as follows:

- **Single family residential, condominium, townhouse and duplex customers** billed annually and assigned one EDU per dwelling unit.
- **Apartments, mobile home parks and overnight trailer parks** are billed annually and assigned EDUs based on the number of dwelling units. With a ratio of .6 EDUs for every dwelling unit for apartments & mobile home parks, and .4 EDUs per dwelling unit for overnight trailer parks.
- **Commercial and Industrial customers** are billed based upon a calculated number of EDUs, which is based upon water consumption and type of use.

$$\text{Number of EDUs} = \frac{\text{Customer Consumption}}{\text{Assumed Single Family Consumption}} * \text{Strength Factor}^3$$

- **Commercial Customers** are generally billed annually. The strength factor for all commercial customers is based upon the customer class to which they are assigned.
- **Industrial customers** are billed monthly. The strength factor for some industrial customers is based upon assigned class, while for others it is based upon sampled effluent.
- **Unmetered schools** are billed annually with the number of EDUs assigned based on average daily attendance for each school. For Elementary school it is one EDU for every 48 students, for Secondary schools, one EDU for every 17 students.

Sometimes there is a concern about irrigation for commercial and industrial customers that have a water-consumption component to their sewer bills; these customers can, if they so choose, install separate irrigation meters and, therefore, remove irrigation water use from the calculation of their wastewater charges.

Figure shows current and proposed wastewater rates for FY 2015/16 through FY 2020/21. Although the \$/EDU “rate” is the same for all customers, differences in charges are the result of how EDU’s are calculated, and the charges differ based on the number of EDU’s.

³ Strength Factor is dependent upon the Total Suspended Solids (TSS) and Biochemical Oxygen Demand (BOD) values of customer effluent. Both are measures of the difficulty, and cost, to treat customer effluent.

Figure 6. Current vs. Proposed Sewer Rates

Sewer Rate Schedule	Current Rates ¹	Recommended Sewer Rates				
		FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21
Projected Increase in Rate Revenue per Financial Plan:		15.00%	15.00%	6.00%	5.00%	4.00%
Fixed Annual Service Charge (per dwelling unit)						
Residential						
Single Family Dwelling	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Duplexes	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Apartments	\$289.50	\$332.93	\$382.86	\$405.84	\$426.13	\$443.17
Condominiums / Townhouses	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Mobile Home Spaces	\$289.50	\$332.93	\$382.86	\$405.84	\$426.13	\$443.17
Overnight Trailer Parking	\$196.94	\$226.48	\$260.45	\$276.08	\$289.88	\$301.48
Pool House/Rec Room	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Apartments / S.R.O.	\$289.50	\$332.93	\$382.86	\$405.84	\$426.13	\$443.17
Volumetric Charge (\$/76,650 gal²)						
Commercial						
Automobile Sales & Service	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Bakeries/Candy/Ice Cream Manufacturing	\$1,302.75	\$1,498.16	\$1,722.89	\$1,826.26	\$1,917.57	\$1,994.28
Banks/Business Offices	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Bars/Nightclubs	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Bed and Breakfast Inns	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Car Wash	\$337.75	\$388.41	\$446.67	\$473.47	\$497.15	\$517.03
Carpet & Rug Cleaners	\$675.50	\$776.83	\$893.35	\$946.95	\$994.30	\$1,034.07
Churches	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Convalescent/Care Homes/Hospitals	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Daycare Facilities	\$386.00	\$443.90	\$510.49	\$541.11	\$568.17	\$590.90
Delicatessen (No Cooking)	\$675.50	\$776.83	\$893.35	\$946.95	\$994.30	\$1,034.07
Delicatessen (Cooking)	\$965.00	\$1,109.75	\$1,276.21	\$1,352.79	\$1,420.42	\$1,477.24
Dry Type Industries	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Funeral Homes	\$1,254.50	\$1,442.68	\$1,659.08	\$1,758.62	\$1,846.55	\$1,920.41
Hotels/Motels (Without Restaurants)	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Hotels/Motels (With Restaurants)	\$965.00	\$1,109.75	\$1,276.21	\$1,352.79	\$1,420.42	\$1,477.24
Laundries - Commercial	\$675.50	\$776.83	\$893.35	\$946.95	\$994.30	\$1,034.07
Laundries - Self Service	\$434.25	\$499.39	\$574.30	\$608.75	\$639.19	\$664.76
Markets (With Disposals)	\$1,254.50	\$1,442.68	\$1,659.08	\$1,758.62	\$1,846.55	\$1,920.41
Markets (Without Disposals)	\$675.50	\$776.83	\$893.35	\$946.95	\$994.30	\$1,034.07
Membership Organizations (With Kitchens)	\$1,302.75	\$1,498.16	\$1,722.89	\$1,826.26	\$1,917.57	\$1,994.28
Membership Organizations (Without Kitchens)	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Merchandising/Department/Retail Stores	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Mixed Use (1 Water Meter)	\$772.00	\$887.80	\$1,020.97	\$1,082.23	\$1,136.34	\$1,181.79
Physicians/Medical/Dental Offices	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Printers/Newspapers	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Repair Shops/Service Stations	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Restaurants and Caterers	\$1,302.75	\$1,498.16	\$1,722.89	\$1,826.26	\$1,917.57	\$1,994.28
Service Related Enterprises	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Theaters	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Industrial						
Wineries -- 11.25 SF (Strength Factor)	\$5,428.13	\$6,242.34	\$7,178.70	\$7,609.42	\$7,989.89	\$8,309.48
Wineries -- Measured SF ³	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62

1. Rates are as of July 1, 2015 (source: Rates and Fees.pdf)

2. 76,650 gallons is the assumed indoor consumption for a single family home.

3. Wineries -- Measured SF, volumetric rate is modified by the monthly calculated strength factor

Because billing structure will remain exactly the same, all customers will see the same percentage increase to their bill. **Figure 7** compares the annual bill for residential customers under current and proposed rates.

Figure demonstrates the proposed average bill for three different commercial customer classes. **Figure** through **Figure 11** demonstrate the impact of water consumption those same commercial customer classes. The classes were chosen as they demonstrate both the impact of the strength factor and water consumption on bills.

Figure 7. Single Family Residential Sewer Bill Comparison – Current vs. Proposed Rates

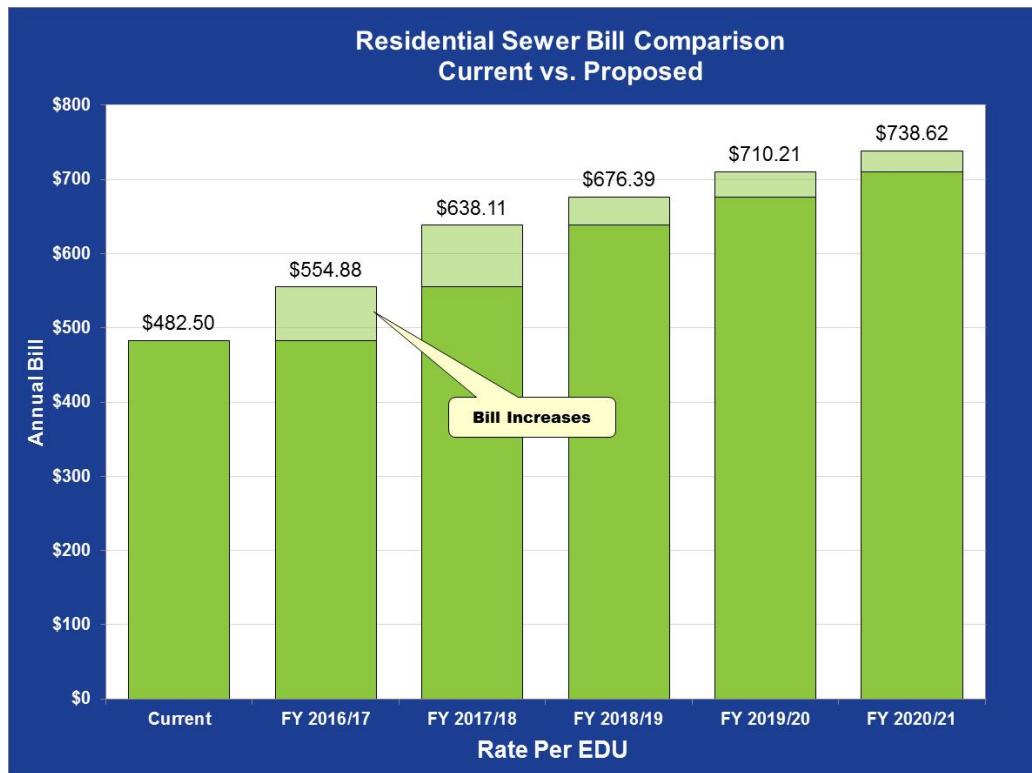


Figure 8. Proposed Bill for Average Commercial Customers

Customer Class	Sample Consumption	Strength Factor	EDUs	Sample Annual Bill	Sample Monthly Bill
Laundries - Commercial	1,581,400	1.4	28.88	\$ 16,027.02	\$ 1,335.58
Restaurants/Caterers	465,826	2.7	16.41	\$ 9,104.80	\$ 758.73
Daycares/Private Schools	140,588	0.8	1.47	\$ 814.18	\$ 67.85

Figure 9. Commercial Laundry Sewer Bill Comparison – Current vs. Proposed Rates

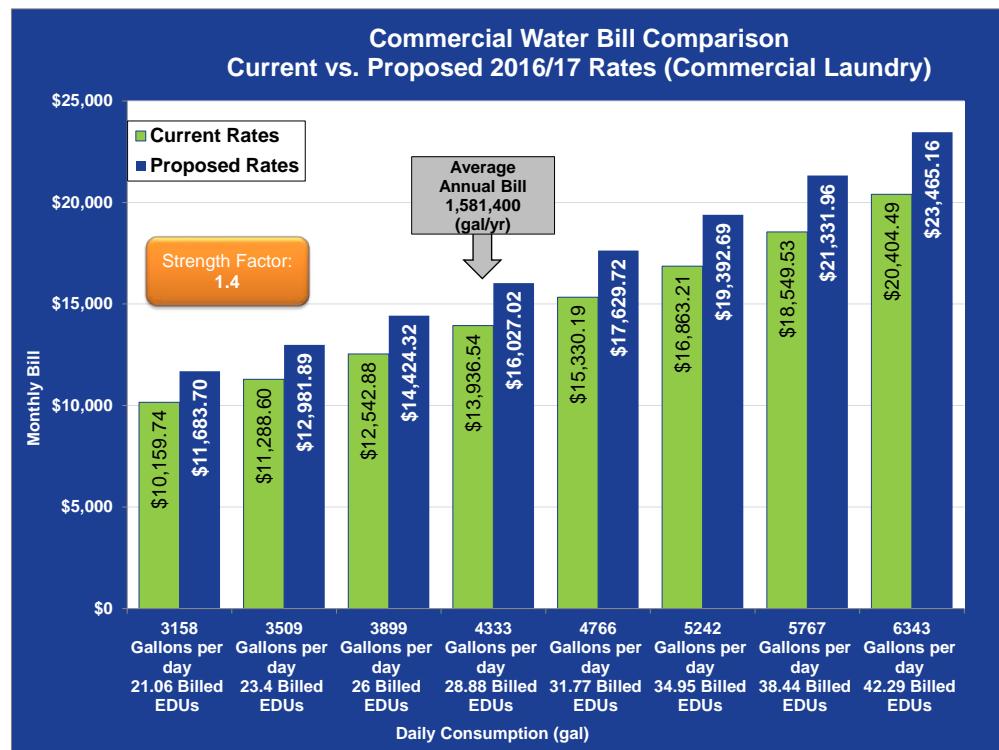


Figure 10. Restaurant Sewer Bill Comparison – Current vs. Proposed Rates

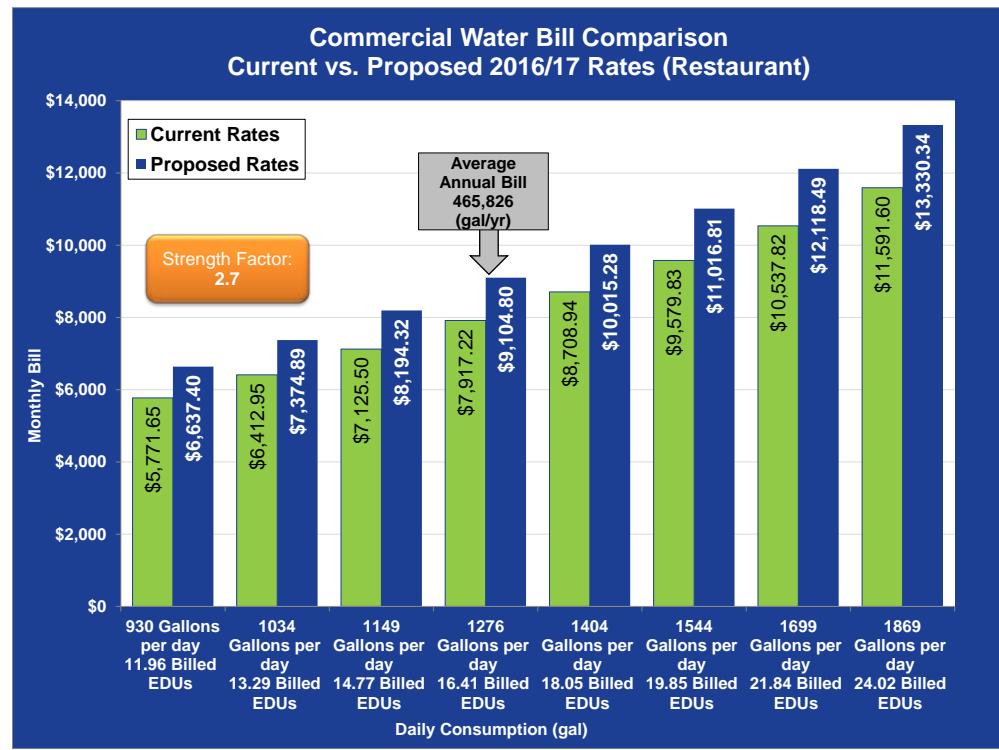
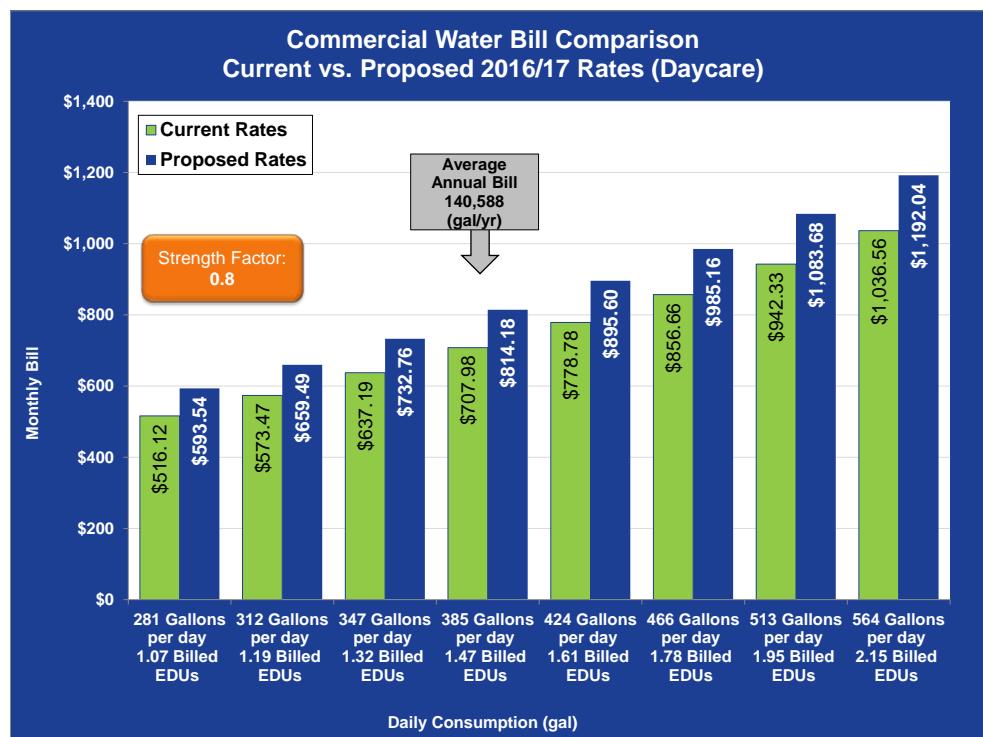


Figure 11. Daycare Sewer Bill Comparison – Current vs. Proposed Rates



SECTION 3. RECOMMENDATIONS AND NEXT STEPS

A. CONSULTANT RECOMMENDATIONS

NBS recommends the District take the following actions for the wastewater rates:

- **Approve and Accept This Study Report:** NBS recommends the District Board of Directors formally approve and accept this report and its recommendations. This will provide documentation of the rate study analyses and the basis for analyzing potential changes to future rates.
- **Complete a Review by a Qualified Attorney:** This rate study outlines proposed new rates. Prior to adoption, these rates should be reviewed by competent legal counsel with respect to compliance with Prop 218 and related State laws, as well as legal assistance developing acceptable language for new resolutions to implement these rates.
- **Implement Recommended Levels of Rate Increases and Proposed Rates:** Based on the analysis presented in this report, the District Board of Directors should implement the proposed rates recommended in this report for the next five years as shown in **Figure 6**. These rate increases are structured based on industry standards and are necessary to maintain the financial health of the District while maintaining the current level of service.
- **Adopt Reserve Fund Targets:** NBS recommends the District Board of Directors adopt the reserve fund targets described in the previous Section of this report. The District should periodically evaluate reserve fund levels and make it a long-term goal to achieve these levels for the Cash Flow, Operating & Maintenance and Debt Reserves.

B. NEXT STEPS

Annually Review Rates and Revenue – Any time an Agency adopts new utility rates, those new rates should be closely monitored over the next several years to ensure the revenue generated is sufficient to meet the annual revenue requirements. Changing economic and drought-related water consumption patterns underscore the need for this review, as well as potential and unseen changing revenue requirements, particularly those related to environmental regulations that can significantly affect capital improvements and repair and replacement costs.

Note: The attached Technical Appendix provide more detailed information on the analysis of the revenue requirements, cost of service and rate design analyses that have been summarized in this report.

C. FUTURE CONSIDERATIONS

- **Using winter water consumption to bill residential customers** – As noted earlier in this report, many agencies use both fixed charges and volumetric-based rate components. Current District customers are billed using either 100% fixed charge or a 100% consumption based charge. For residential customers, currently bills are fixed. As part of this analysis, NBS and staff discussed adding a volumetric component to residential customer bills based upon winter water consumption. After consideration, this change was not implemented due to the difficulties of obtaining the required information from water service providers within the District, and the associated staff time that would be required to edit and adjust the raw data into a format useful for billing. In the future, if these water agencies improve their accounting/billing systems and are able to provide the necessary information to the District in an acceptable format, the District should re-evaluate making this adjustment.

- Adding a fixed portion to the commercial and industrial bills** – Adding a fixed portion to commercial and industrial bills could improve revenue stability and more accurately match the types of fixed and variable expenses the District incurs. Currently the District uses a minimum EDU charge to minimize downside revenue risk from commercial and industrial customers; a more direct fixed charge could be considered. This is especially true if residential bills are changed to include a water-consumption-based component to help maintain stable revenue.
- Updating strength factor values** – Customer classifications for commercial customers are based upon specific strength factors (i.e., assumed BOD and TSS values) and are used for billing. These values come from the State Water Resources Control Board Revenue Program Guidelines (Appendix G). The District should verify the accuracy of existing strength factors that the related EDU calculations. **Figure 5** shows the existing strength factors by commercial customer class.

Figure 5. Current and Proposed Commercial Customers Strength Factor Allocation

Commercial Class	Strength Factor
Automobile Sales & Service	1
Bakeries/Candy/Ice Cream Manufacturing	2.7
Banks/Business Offices	1
Bars/Nightclubs	1
Bed and Breakfast Inns	1
Car Wash	0.7
Carpet & Rug Cleaners	1.4
Churches	1
Convalescent/Care Homes/Hospitals	1
Daycare Facilities	0.8
Delicatessen (No Cooking)	1.4
Delicatessen (Cooking)	2
Dry Type Industries	1
Funeral Homes	2.6
Hotels/Motels (Without Restaurants)	1
Hotels/Motels (With Restaurants)	2
Laundries - Commercial	1.4
Laundries - Self Service	0.9
Markets (With Disposals)	2.6
Markets (Without Disposals)	1.4
Membership Organizations (With Kitchens)	2.7
Membership Organizations (Without Kitchens)	1
Merchandising/Department/Retail Stores	1
Mixed Use (1 Water Meter)	1.6
Physicians/Medical/Dental Offices	1
Printers/Newspapers	1
Repair Shops/Service Stations	1
Restaurants and Caterers	2.7
Service Related Enterprises	1
Theaters	1

- For industrial customers billed based on measured (metered) effluent, the District should consider using an average in the event that in a given month BOD and TSS values aren't measured.

D. PRINCIPAL ASSUMPTIONS AND CONSIDERATIONS

In preparing this report and the recommendations included herein, NBS has relied on a number of principal assumptions and considerations with regard to financial matters, number of customer accounts, conditions and events that may occur in the future. This information and assumptions, including the District's budgets and customer account information from District staff, were provided by sources we believe to be reliable, although NBS has not independently verified this data.

While we believe NBS' use of such information and assumptions is reasonable for the purpose of this report and its recommendations, some assumptions will invariably not materialize as stated herein or may vary significantly due to unanticipated events and circumstances. Therefore, the actual results can be expected to vary from those projected to the extent that actual future conditions differ from those assumed by us or provided to us by others.

APPENDIX A – SEWER RATE ANALYSIS

TABLE 1
FINANCIAL PLAN AND SUMMARY OF REVENUE REQUIREMENTS

RATE REVENUE REQUIREMENTS SUMMARY	Budget	Projected									
	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	
Sources of Wastewater Funds											
Rate Revenue Under Prevailing Rates (1)	\$ 19,534,000	\$ 19,577,523	\$ 19,739,524	\$ 20,027,258	\$ 20,312,575	\$ 20,501,173	\$ 20,641,413	\$ 20,781,654	\$ 20,921,894	\$ 21,062,134	
Recycled Water Sales	507,000	1,085,000	1,157,000	1,250,000	1,303,000	1,356,000	1,417,000	1,477,000	1,538,000	1,606,000	
Other Operating Revenue	1,190,000	602,681	616,607	630,694	644,846	660,164	675,548	691,101	706,825	723,620	
Interest Earnings (in Operating & Capital Reserves) (2)	77,000	32,442	60,136	90,144	108,434	150,428	260,215	292,169	401,666	467,767	
Total Sources of Funds	\$ 21,308,000	\$ 21,297,646	\$ 21,573,267	\$ 21,998,096	\$ 22,368,855	\$ 22,667,765	\$ 22,994,177	\$ 23,241,924	\$ 23,568,384	\$ 23,859,521	
Uses of Wastewater Funds											
Operating Expenses (3):											
Division 7800000 Board of Directors	\$ 314,350	\$ 320,899	\$ 327,602	\$ 334,489	\$ 341,504	\$ 348,697	\$ 356,021	\$ 363,525	\$ 371,210	\$ 379,064	
Division 7800001 General Manager's Office	685,670	705,836	726,828	749,330	772,702	797,018	822,411	848,841	876,356	904,992	
Division 7800002 Administration	1,689,860	1,739,981	1,792,151	1,848,469	1,906,923	1,967,673	2,031,020	2,096,881	2,165,369	2,236,575	
Division 7800003 Safety, Training & Fleet Maint.	229,310	235,360	242,446	250,063	257,982	266,224	274,839	283,810	293,155	302,887	
Division 7800004 Pollution Prevention	229,360	236,677	244,318	252,507	261,051	269,977	279,360	289,166	299,418	310,135	
Division 7800005 Non-Departmental	246,750	251,674	256,724	261,859	267,078	272,422	277,852	283,407	289,088	294,884	
Division 7803000 Plant Operations	3,911,310	4,023,566	4,147,642	4,279,407	4,415,995	4,557,785	4,705,171	4,858,205	5,017,118	5,182,084	
Division 7803001 Plant Maintenance	1,726,900	1,771,535	1,822,691	1,877,668	1,934,660	1,993,843	2,055,460	2,119,468	2,185,970	2,255,041	
Division 7803002 Plant Laboratory	855,050	877,789	904,811	934,386	965,082	996,955	1,030,157	1,064,645	1,100,475	1,137,700	
Division 7804000 Engineering	1,586,890	1,635,890	1,687,033	1,742,837	1,800,802	1,861,042	1,923,877	1,989,207	2,057,142	2,127,787	
Division 7805000 Collection System Maintenance	2,522,720	2,889,080	2,981,574	3,082,667	3,187,826	3,297,242	3,411,591	3,530,624	3,654,559	3,783,609	
Division 7806000 Water & Biosolids Reclamation	832,480	853,438	877,634	903,929	931,146	959,224	988,327	1,018,515	1,049,833	1,082,316	
Subtotal: Operating Expenses	\$ 14,830,650	\$ 15,541,725	\$ 16,011,454	\$ 16,517,613	\$ 17,042,751	\$ 17,588,100	\$ 18,156,085	\$ 18,746,293	\$ 19,359,693	\$ 19,997,073	
Other Expenditures:											
Existing Debt Service	\$ 4,772,256	\$ 4,768,781	\$ 4,768,831	\$ 4,760,356	\$ 4,757,566	\$ 4,763,920	\$ 4,753,873	\$ 4,757,483	\$ 4,699,090	\$ 4,698,687	
New Debt Service	-	1,305,425	1,305,425	1,305,425	1,305,425	1,305,425	3,452,507	3,452,507	3,452,507	3,452,507	
Rate-Funded Capital Expenses	7,738,050	6,613,399	10,537,748	11,709,593	10,515,480	8,182,697	12,521,680	10,412,158	12,022,142	14,727,731	
Subtotal: Other Expenditures	\$ 12,510,306	\$ 12,687,605	\$ 16,612,005	\$ 17,775,374	\$ 16,578,472	\$ 14,252,042	\$ 20,728,060	\$ 18,622,147	\$ 20,173,738	\$ 22,878,924	
Total Uses of Wastewater Funds	\$ 27,340,957	\$ 28,229,331	\$ 32,623,458	\$ 34,292,987	\$ 33,621,222	\$ 31,840,142	\$ 38,884,145	\$ 37,368,440	\$ 39,533,431	\$ 42,875,997	
<i>plus:</i> Revenue from Rate Increases (5)	-	2,936,628	6,365,997	8,047,954	9,586,367	10,882,437	12,378,802	13,958,911	15,626,984	17,387,456	
Increase/(Decrease) to Reserves	\$ (6,032,957)	\$ (3,995,056)	\$ (4,684,195)	\$ (4,246,937)	\$ (1,666,000)	\$ 1,710,059	\$ (3,511,166)	\$ (167,606)	\$ (338,062)	\$ (1,629,019)	
Net Revenue Reqt. (Total Uses less Non-Rate Revenue)	\$ 25,566,957	\$ 26,509,208	\$ 30,739,716	\$ 32,322,149	\$ 31,564,942	\$ 29,673,551	\$ 36,531,382	\$ 34,908,170	\$ 36,886,940	\$ 40,078,609	
Total Rate Revenue After Rate Increases	\$ 19,534,000	\$ 22,514,151	\$ 26,105,521	\$ 28,075,212	\$ 29,898,942	\$ 31,383,610	\$ 33,020,216	\$ 34,740,564	\$ 36,548,878	\$ 38,449,590	
Projected Annual Rate Revenue Increase	0.00%	15.00%	15.00%	6.00%	5.00%	4.00%	4.50%	4.50%	4.50%	4.50%	
Cumulative Increase from Annual Revenue Increases	0.00%	15.00%	32.25%	40.19%	47.19%	53.08%	59.97%	67.17%	74.69%	82.55%	
Debt Coverage After Rate Increase	1.36	1.43	1.96	2.23	2.46	2.63	2.10	2.25	2.43	2.61	
Debt Coverage After Rate Increase (includes Capacity fee revenue)	1.99	2.34	2.89	2.87	2.95	3.14	2.49	2.65	2.85	3.04	

1. Revenues for proposed FY 2015/16 are from the District's Fiscal Year 2015-16 Operating and Capital Budget (files: 1 - FY 15-16 Operating and Capital Budget.pdf and 2 - FY 1516 Revenue.xlsx).

2. Interest earnings are per the District's budget in FY 2015/16, and calculated in the Financial Plan for all future years.

3. Expenses for FY 2015/16 are from the District's Fiscal Year 2015-16 O&M Budget Summary (file: 1 - NSD O&M Budget Summary FY 1516.xls).

Inflationary factors are applied to these expenses to project costs in 2015/16 and beyond.

4. The FY 2015/16 operating expenses are from the District's Proposed Budget. Inflationary factors are applied to these expenses to project costs in 2016/17 and beyond.

5. Rate increases are anticipated to be effective 07/01/2016.

TABLE 2
RESERVE FUND SUMMARY

SUMMARY OF CASH ACTIVITY	Budget	Projected									
	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 Beginning Cash (1)	\$ 9,472,332										
Cash Flow Reserve											
Beginning Reserve Balance (2)	\$ 9,472,332	\$ 6,488,319	\$ 7,771,000	\$ 8,006,000	\$ 8,259,000	\$ 8,521,000	\$ 8,794,000	\$ 9,078,000	\$ 9,373,000	\$ 9,680,000	
Plus: Net Cash Flow (After Rate Increases)	(6,032,957)	(3,995,056)	(4,684,195)	(4,246,937)	(1,666,000)	1,710,059	(3,511,166)	(167,606)	(338,062)	(1,629,019)	
Plus: Transfer of Bond Debt Reserve Surplus	50,943	12,831	24,477	37,312	41,773	48,869	60,161	108,978	121,521	121,521	
Plus: Transfer of SRF Loan Debt Reserve Surplus	-	-	-	-	-	-	-	-	-	-	
Plus: Transfer of Allowed Capacity Fee Revenue	2,998,000	5,512,000	5,656,000	3,870,000	2,978,000	3,082,000	3,190,000	3,302,000	3,418,000	3,537,000	
Net: Transfer to Capital Replacement Reserve	-	(247,094)	(761,282)	592,625	(1,091,773)	(4,567,929)	545,005	(2,948,372)	(2,894,459)	(1,710,502)	
Ending Operating Reserve Balance	\$ 6,488,319	\$ 7,771,000	\$ 8,006,000	\$ 8,259,000	\$ 8,521,000	\$ 8,794,000	\$ 9,078,000	\$ 9,373,000	\$ 9,680,000	\$ 9,999,000	
Target Ending Balance (180-days of O&M)	\$ 7,415,000	\$ 7,771,000	\$ 8,006,000	\$ 8,259,000	\$ 8,521,000	\$ 8,794,000	\$ 9,078,000	\$ 9,373,000	\$ 9,680,000	\$ 9,999,000	
Operating and Maintenance Reserve											
Beginning Reserve Balance (3)	-	\$ -	\$ 247,094	\$ 1,008,376	\$ 415,751	\$ 1,507,524	\$ 6,075,452	\$ 5,530,447	\$ 8,478,819	\$ 11,109,659	
Plus: Grant Proceeds	21,382,400	586,333	-	-	-	-	-	-	-	-	
Net: Transfer of Operating Reserve	-	247,094	761,282	(592,625)	1,091,773	4,567,929	(545,005)	2,948,372	2,894,459	1,710,502	
Less: Use of Reserves for Capital Projects	(21,382,400)	(586,333)	-	-	-	-	-	-	(263,619)	(2,968,059)	
Ending Capital Improvement & Depreciation Reserve Balance	\$ -	\$ 247,094	\$ 1,008,376	\$ 415,751	\$ 1,507,524	\$ 6,075,452	\$ 5,530,447	\$ 8,478,819	\$ 11,109,659	\$ 9,852,102	
Target Ending Balance (3% of Assets) (4)	\$ 6,684,400	\$ 6,795,700	\$ 7,136,100	\$ 7,326,200	\$ 7,357,100	\$ 7,346,000	\$ 7,515,600	\$ 8,157,700	\$ 8,215,200	\$ 8,141,600	
Ending Balance - Excludes Restricted Reserves	\$ 6,488,319	\$ 8,018,094	\$ 9,014,376	\$ 8,674,751	\$ 10,028,524	\$ 14,869,452	\$ 14,608,447	\$ 17,851,819	\$ 20,789,659	\$ 19,851,102	
Minimum Target Ending Balance - Excludes Restricted Reserves	\$ 14,099,400	\$ 14,566,700	\$ 15,142,100	\$ 15,585,200	\$ 15,878,100	\$ 16,140,000	\$ 16,593,600	\$ 17,530,700	\$ 17,895,200	\$ 18,140,600	
Ending Surplus/(Deficit) Compared to Reserve Targets	\$ (7,611,081)	\$ (6,548,606)	\$ (6,127,724)	\$ (6,910,449)	\$ (5,849,576)	\$ (1,270,548)	\$ (1,985,153)	\$ 321,119	\$ 2,894,459	\$ 1,710,502	
Days Cash on Hand	121	136	149	141	159	230	203	242	276	258	
Restricted Reserves:											
Bond Project Fund											
Beginning Reserve Balance	\$ -	\$ 13,861,000	\$ 10,343,005	\$ 2,178,108	\$ -	\$ -	\$ 24,078,250	\$ 21,299,472	\$ -	\$ -	
Plus: New SRF Loan Proceeds	-	-	-	-	-	-	-	-	-	-	
Plus: New Bond Proceeds	15,200,000	-	-	-	-	-	25,000,000	-	-	-	
Less: Use of Bond & Loan Funds for Capital Projects	(1,339,000)	(3,517,995)	(8,164,897)	(2,178,108)	-	(921,750)	(2,778,778)	(21,299,472)	-	-	
Ending Bond Project Fund Balance	\$ 13,861,000	\$ 10,343,005	\$ 2,178,108	\$ -	\$ -	\$ 24,078,250	\$ 21,299,472	\$ -	\$ -	\$ -	
Target Ending Balance	\$ -	\$ -	\$ -	\$ -							
Bond Debt Reserve											
Beginning Reserve Balance (5)	\$ 2,002,186	\$ 1,961,254	\$ 3,263,654	\$ 3,263,654	\$ 3,258,979	\$ 3,257,943	\$ 3,257,943	\$ 5,401,878	\$ 5,401,878	\$ 5,400,938	\$ 5,400,938
Plus: Reserve Funding from New Debt Obligations	-	1,305,425	-	-	-	-	2,147,081	-	-	-	
Plus: Interest Earnings	10,011	9,806	24,477	32,637	40,737	48,869	57,014	108,038	121,521	121,521	
Less: Transfer of Surplus to Operating Reserve	(50,943)	(12,831)	(24,477)	(37,312)	(41,773)	(48,869)	(60,161)	(108,978)	(121,521)	(121,521)	
Ending Debt Reserve Balance	\$ 1,961,254	\$ 3,263,654	\$ 3,263,654	\$ 3,258,979	\$ 3,257,943	\$ 3,257,943	\$ 5,401,878	\$ 5,400,938	\$ 5,400,938	\$ 5,400,938	
Target Ending Balance	\$ 1,961,254	\$ 3,263,654	\$ 3,263,654	\$ 3,258,979	\$ 3,257,943	\$ 3,257,943	\$ 5,401,878	\$ 5,400,938	\$ 5,400,938	\$ 5,400,938	
Capacity Fee Reserve											
Beginning Reserve Balance (7)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Plus: Interest Earnings	-	-	-	-	-	-	-	-	-	-	
Plus: Capacity Fee Revenue	2,998,000	5,512,000	5,656,000	3,870,000	2,978,000	3,082,000	3,190,000	3,302,000	3,418,000	3,537,000	
Plus: Other Capacity Fee Fund Revenue	-	-	-	-	-	-	-	-	-	-	
Less: Use of Reserves for Capital Projects	-	-	-	-	-	-	-	-	-	-	
Less: Transfer to Unrestricted Reserves	(2,998,000)	(5,512,000)	(5,656,000)	(3,870,000)	(2,978,000)	(3,082,000)	(3,190,000)	(3,302,000)	(3,418,000)	(3,537,000)	
Ending Capacity Fee Fund Balance	\$ -	\$ -	\$ -	\$ -							
Annual Interest Earnings Rate (8)	0.50%	0.50%	0.75%	1.00%	1.25%	1.50%	1.75%	2.00%	2.25%	2.25%	

1. Beginning cash balance is from the Trial Balance from the General Ledger report provided by client; resource file: 6 - End of FY 14-15 Trial Balance (for Cash Balance).pdf

2. The total beginning cash balance is assumed to be held in the Operating fund.

3. Napa Sanitation District does not maintain a separate capital fund, however, funds in excess of minimum recommended operating reserve are segmented within the model.

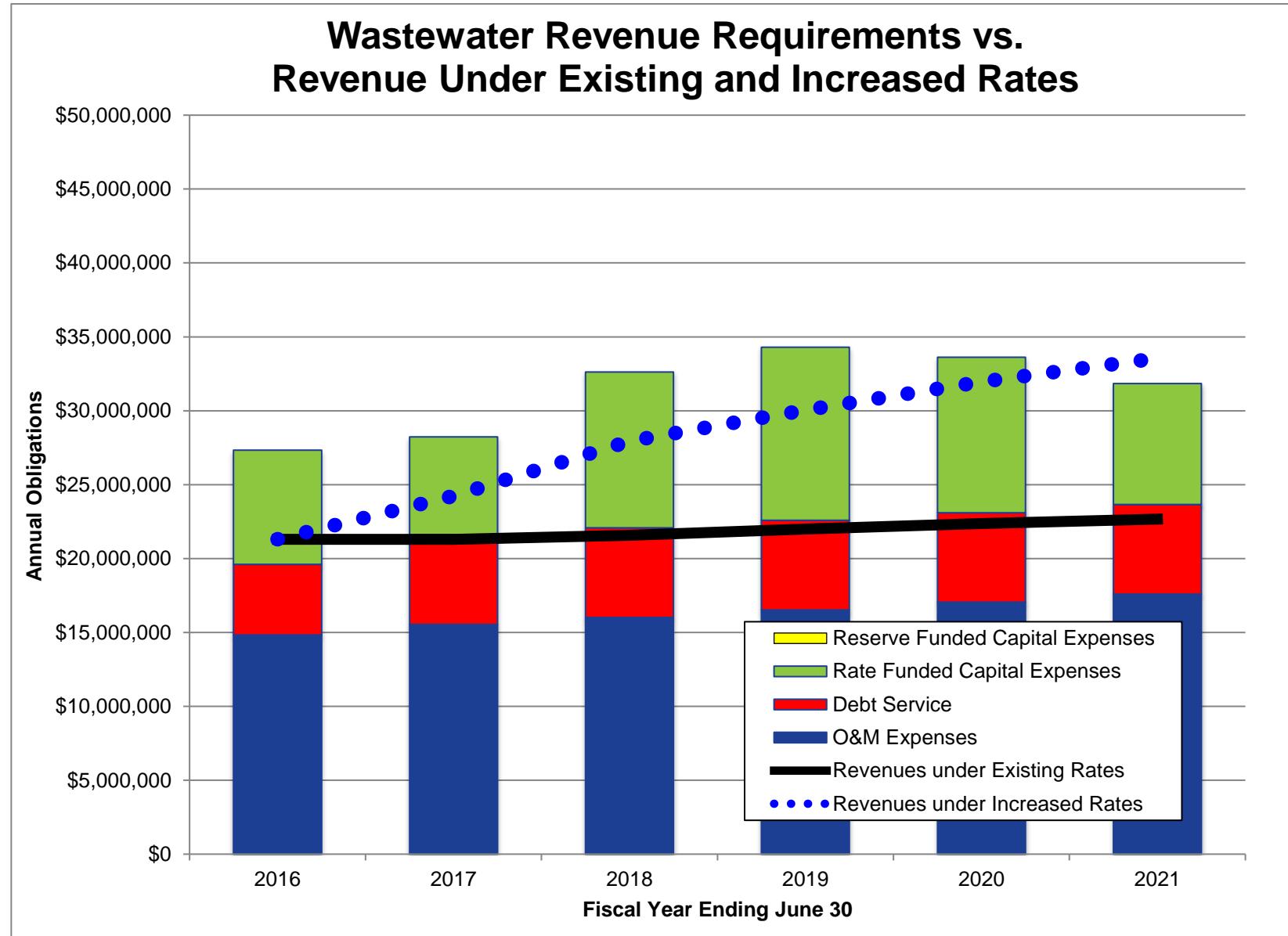
4. The Capital Rehabilitation & Replacement reserve target is set to 3% of net assets.

5. Beginning cash in the Bond Debt Reserve is the balance held with the fiscal agent; resource file: 6 - End of FY 14-15 Trial Balance (for Cash Balance).pdf.

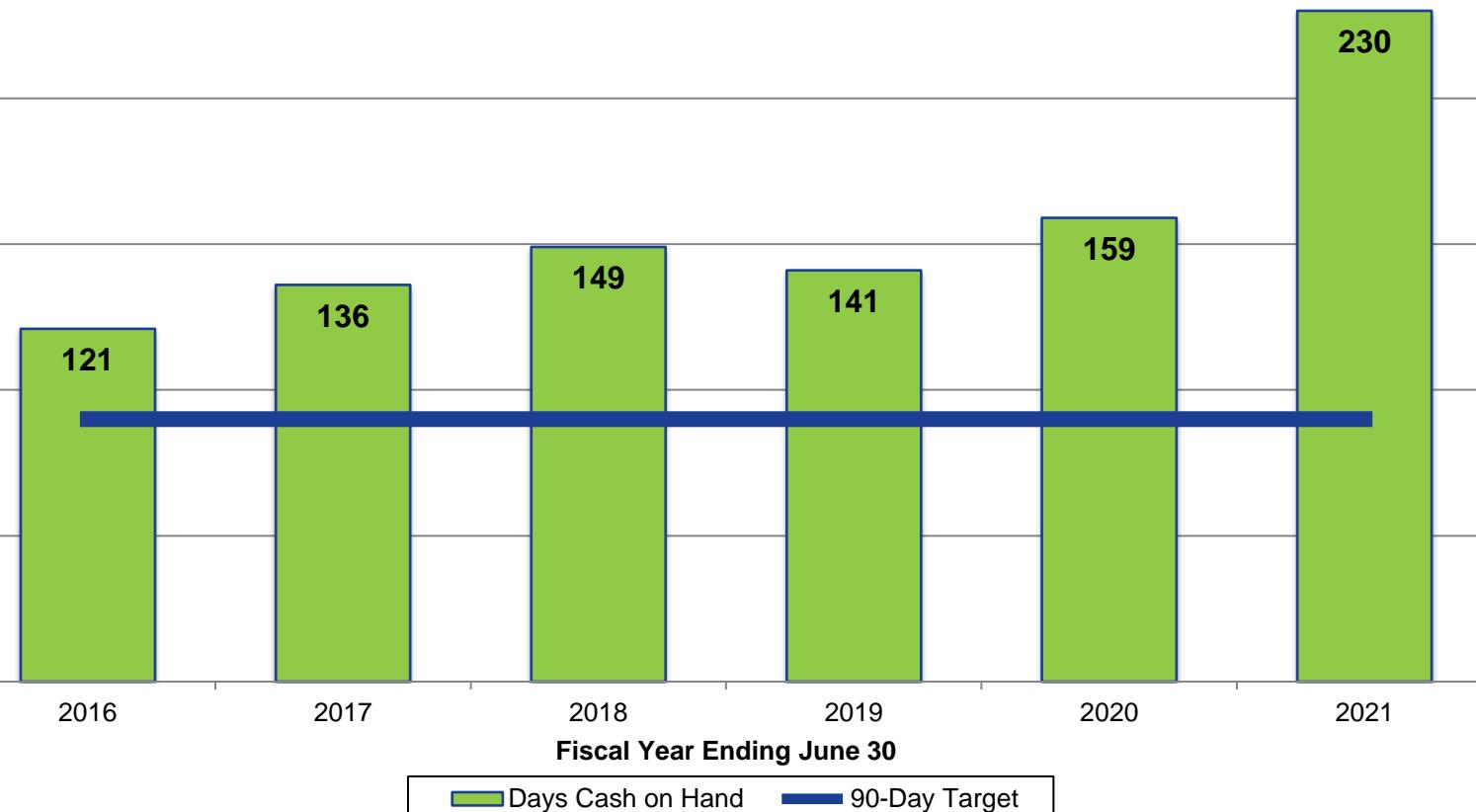
6. There is no SRF Reserve Fund because there are no reserve requirements according to the official website of the State Water Resources Control Board.

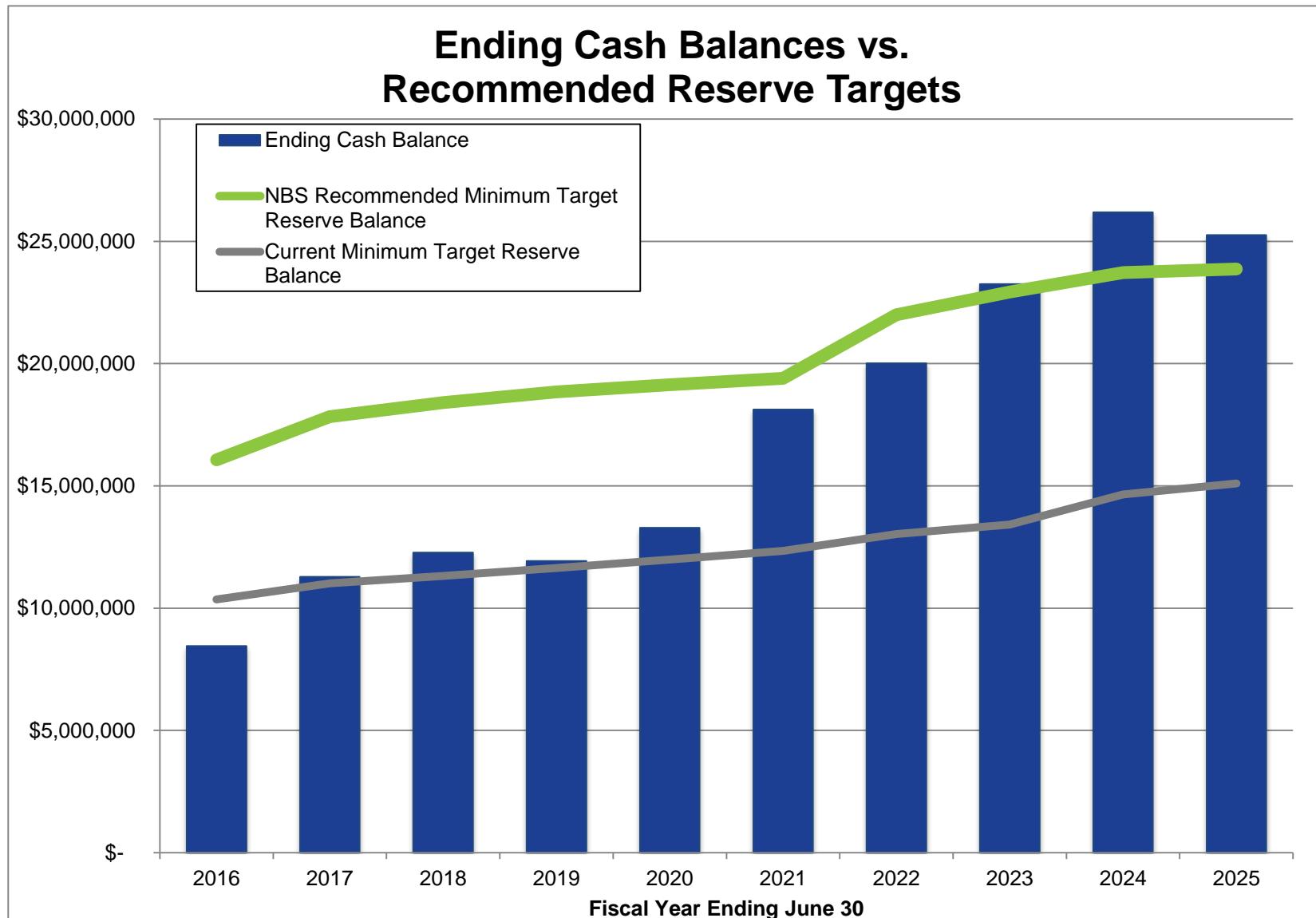
7. There is no beginning cash in the Capacity Fee Reserve as it is assumed the operating fund holds all cash.

8. Historical interest earning rates were referenced on the California Treasurer's Office website for funds invested in LAIF plus 25 basis points due to active management. interest earnings rate.

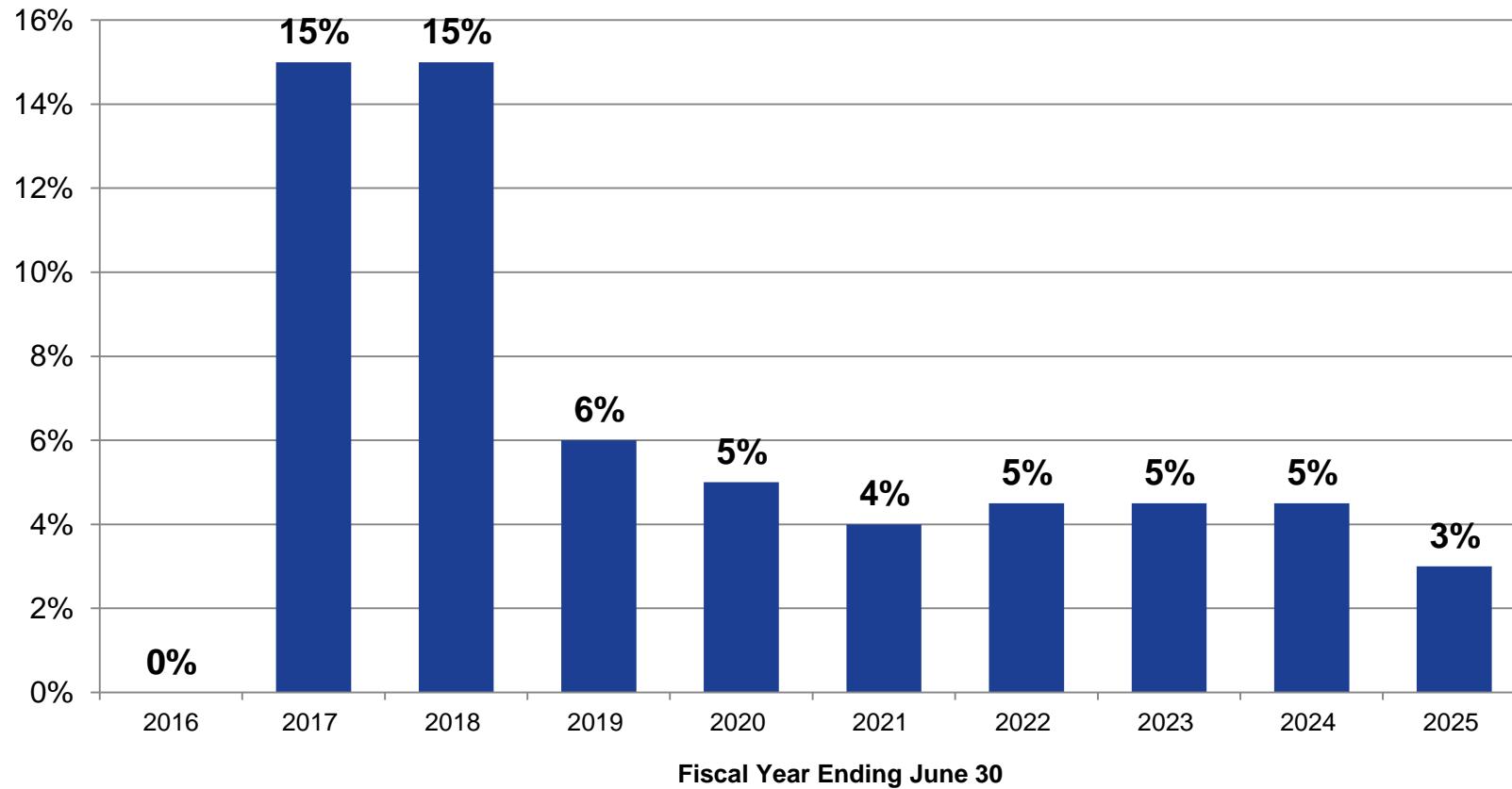


Days Cash on Hand

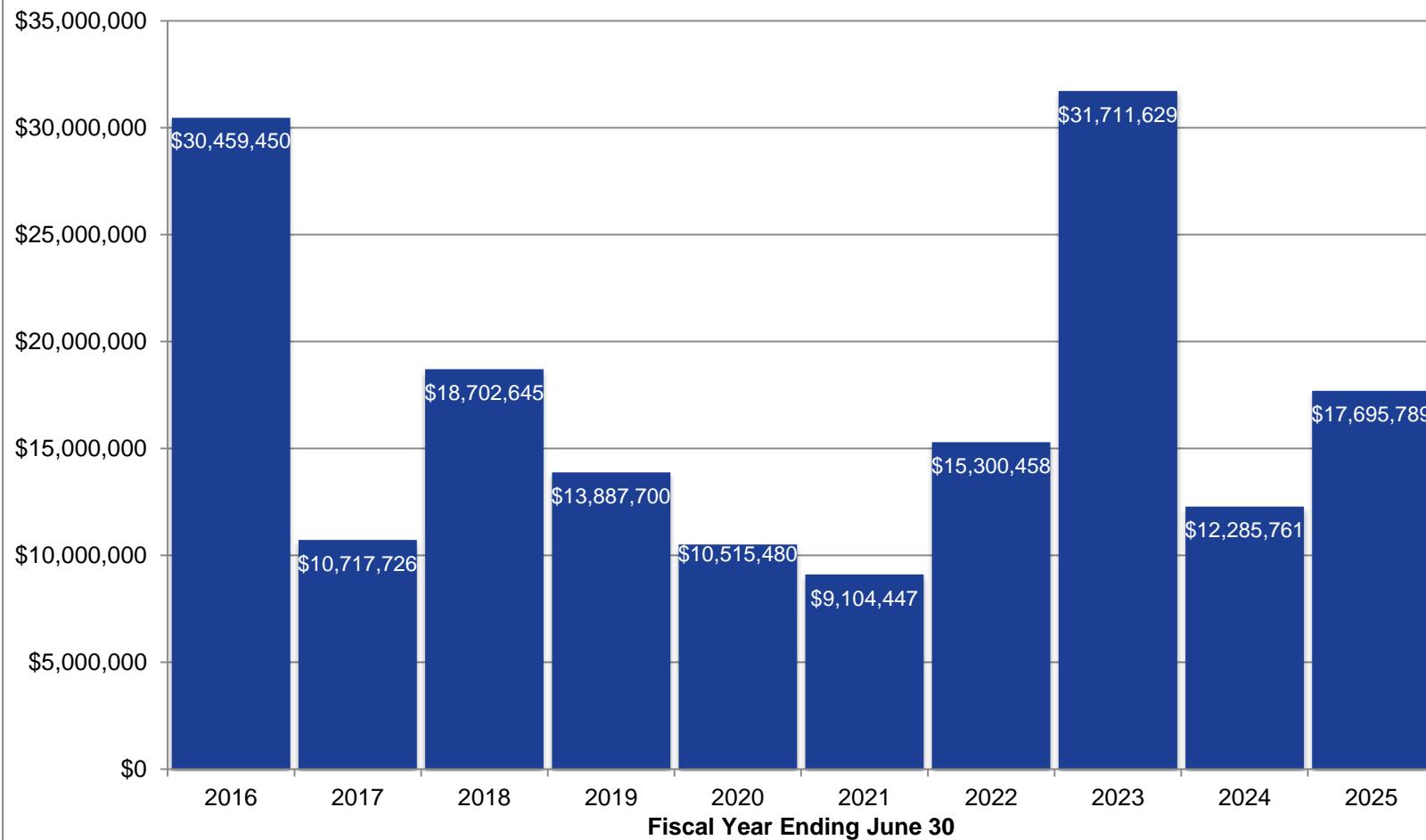




Projected Increases to Rate Revenue



Annual Capital Improvement Program Expenditures



REVENUE FORECAST (1)

SOURCES OF REVENUE		Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Sewer Fund												
780 - Operations												
45100 Interest: Invested Funds	see FP	\$ 50,000										
45300 Rent - Building/Land	1	\$ 716,000	\$ 118,481	\$ 121,207	\$ 123,994	\$ 126,846	\$ 129,764	\$ 132,748	\$ 135,801	\$ 138,925	\$ 142,120	
46210 Construction/Bldg Permit Review Svcs	1	\$ 95,000	\$ 97,200	\$ 99,400	\$ 101,700	\$ 104,000	\$ 106,400	\$ 108,800	\$ 111,300	\$ 113,900	\$ 116,500	
46260 Hauler Fees	1	\$ 236,000	\$ 241,000	\$ 247,000	\$ 253,000	\$ 259,000	\$ 265,000	\$ 271,000	\$ 277,000	\$ 283,000	\$ 290,000	
46615 Sewer Usage Fees	1	\$ 19,534,000	\$ 19,577,523	\$ 19,739,524	\$ 20,027,258	\$ 20,312,575	\$ 20,501,173	\$ 20,641,413	\$ 20,781,654	\$ 20,921,894	\$ 21,062,134	
44400 Penalties on Delinquent Sewer Fees	1	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	
47110 Recycled Water Sales	1	\$ 507,000	\$ 1,085,000	\$ 1,157,000	\$ 1,250,000	\$ 1,303,000	\$ 1,356,000	\$ 1,417,000	\$ 1,477,000	\$ 1,538,000	\$ 1,606,000	
44300 Forfeitures and Penalties	1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
47900 Miscellaneous	1	\$ 118,000	\$ 121,000	\$ 124,000	\$ 127,000	\$ 130,000	\$ 134,000	\$ 138,000	\$ 142,000	\$ 146,000	\$ 150,000	
781 - Capital Improvement Projects												
45100 Interest: Invested Funds	see FP	\$ 27,000										
782 - Expansion												
45100 Interest: Invested Funds	see FP	\$ -										
46610 Capacity Charges	1	\$ 2,998,000	\$ 5,512,000	\$ 5,656,000	\$ 3,870,000	\$ 2,978,000	\$ 3,082,000	\$ 3,190,000	\$ 3,302,000	\$ 3,418,000	\$ 3,537,000	
TOTAL: REVENUE		\$ 24,306,000	\$ 26,777,204	\$ 27,169,131	\$ 25,777,953	\$ 25,238,421	\$ 25,599,337	\$ 25,923,962	\$ 26,251,755	\$ 26,584,719	\$ 26,928,754	

REVENUE SUMMARY		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Fund 780 - Sewer Fund											
Interest Earnings	see FP	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Wastewater Rate Revenue		\$ 19,534,000	\$ 19,577,523	\$ 19,739,524	\$ 20,027,258	\$ 20,312,575	\$ 20,501,173	\$ 20,641,413	\$ 20,781,654	\$ 20,921,894	\$ 21,062,134
Recycled Water Sales		\$ 507,000	\$ 1,085,000	\$ 1,157,000	\$ 1,250,000	\$ 1,303,000	\$ 1,356,000	\$ 1,417,000	\$ 1,477,000	\$ 1,538,000	\$ 1,606,000
Other Operating Revenue		\$ 1,190,000	\$ 602,681	\$ 616,607	\$ 630,694	\$ 644,846	\$ 660,164	\$ 675,548	\$ 691,101	\$ 706,825	\$ 723,620
Fund 781 - Capital Improvement Projects											
Interest Earnings	see FP	\$ 27,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fund 782 - Expansion											
Interest: Invested Funds	see FP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capacity Charges		\$ 2,998,000	\$ 5,512,000	\$ 5,656,000	\$ 3,870,000	\$ 2,978,000	\$ 3,082,000	\$ 3,190,000	\$ 3,302,000	\$ 3,418,000	\$ 3,537,000
TOTAL: REVENUE		\$ 24,306,000	\$ 26,777,204	\$ 27,169,131	\$ 25,777,953	\$ 25,238,421	\$ 25,599,337	\$ 25,923,962	\$ 26,251,755	\$ 26,584,719	\$ 26,928,754

OPERATING EXPENSE FORECAST (2):

Sewer Fund Salaries & Benefits	Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
51100 Salaries and Wages											
7800001 General Manager's Office	3	\$ 198,770	\$ 204,737	\$ 210,879	\$ 217,733	\$ 224,809	\$ 232,115	\$ 239,659	\$ 247,448	\$ 255,490	\$ 263,794
7800002 Administration	3	\$ 588,230	\$ 605,889	\$ 624,065	\$ 644,347	\$ 665,289	\$ 686,911	\$ 709,235	\$ 732,285	\$ 756,085	\$ 780,657
7800003 Safety, Training & Fleet Maint.	3	\$ 88,380	\$ 91,033	\$ 93,764	\$ 96,812	\$ 99,958	\$ 103,206	\$ 106,561	\$ 110,024	\$ 113,600	\$ 117,292
7800004 Pollution Prevention	3	\$ 79,870	\$ 82,268	\$ 84,736	\$ 87,490	\$ 90,333	\$ 93,269	\$ 96,300	\$ 99,430	\$ 102,661	\$ 105,998
7803000 Plant Operations	3	\$ 847,290	\$ 872,726	\$ 898,907	\$ 928,122	\$ 958,286	\$ 989,430	\$ 1,021,587	\$ 1,054,788	\$ 1,089,069	\$ 1,124,464
7803001 Plant Maintenance	3	\$ 538,960	\$ 555,140	\$ 571,794	\$ 590,377	\$ 609,564	\$ 629,375	\$ 649,830	\$ 670,949	\$ 692,755	\$ 715,270
7803002 Plant Laboratory	3	\$ 378,560	\$ 389,924	\$ 401,622	\$ 414,675	\$ 428,152	\$ 442,067	\$ 456,434	\$ 471,268	\$ 486,584	\$ 502,398
7804000 Engineering	3	\$ 790,130	\$ 813,850	\$ 838,265	\$ 865,509	\$ 893,638	\$ 922,681	\$ 952,668	\$ 983,630	\$ 1,015,598	\$ 1,048,605
7805000 Collection System Maintenance	3	\$ 1,084,100	\$ 1,116,645	\$ 1,150,144	\$ 1,187,524	\$ 1,226,118	\$ 1,265,967	\$ 1,307,111	\$ 1,349,592	\$ 1,393,454	\$ 1,438,741
7806000 Water & Biosolids Reclamation	3	\$ 257,790	\$ 265,529	\$ 273,495	\$ 282,383	\$ 291,561	\$ 301,036	\$ 310,820	\$ 320,922	\$ 331,352	\$ 342,121
51115 Overtime											
7800002 Administration	3	\$ 600	\$ 618	\$ 637	\$ 657	\$ 679	\$ 701	\$ 723	\$ 747	\$ 771	\$ 796
7800003 Safety, Training & Fleet Maint.	3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7803000 Plant Operations	3	\$ 63,550	\$ 65,458	\$ 67,422	\$ 69,613	\$ 71,875	\$ 74,211	\$ 76,623	\$ 79,113	\$ 81,684	\$ 84,339
7803001 Plant Maintenance	3	\$ 9,750	\$ 10,043	\$ 10,344	\$ 10,680	\$ 11,027	\$ 11,386	\$ 11,756	\$ 12,138	\$ 12,532	\$ 12,940
7803002 Plant Laboratory	3	\$ 9,000	\$ 9,270	\$ 9,548	\$ 9,859	\$ 10,179	\$ 10,510	\$ 10,851	\$ 11,204	\$ 11,568	\$ 11,944
7804000 Engineering	3	\$ 13,600	\$ 14,008	\$ 14,429	\$ 14,897	\$ 15,382	\$ 15,882	\$ 16,398	\$ 16,931	\$ 17,481	\$ 18,049
7805000 Collection System Maintenance	3	\$ 90,450	\$ 93,165	\$ 95,960	\$ 99,079	\$ 102,299	\$ 105,624	\$ 109,057	\$ 112,601	\$ 116,260	\$ 120,039
7806000 Water & Biosolids Reclamation	3	\$ 25,600	\$ 26,369	\$ 27,160	\$ 28,042	\$ 28,954	\$ 29,895	\$ 30,866	\$ 31,869	\$ 32,905	\$ 33,975
51120 Holiday Pay											
7803000 Plant Operations	3	\$ 3,600	\$ 3,708	\$ 3,819	\$ 3,943	\$ 4,072	\$ 4,204	\$ 4,341	\$ 4,482	\$ 4,627	\$ 4,778
7803001 Plant Maintenance	3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7803002 Plant Laboratory	3	\$ 2,750	\$ 2,833	\$ 2,918	\$ 3,012	\$ 3,110	\$ 3,211	\$ 3,316	\$ 3,423	\$ 3,535	\$ 3,650
7804000 Engineering	3	\$ 500	\$ 515	\$ 530	\$ 548	\$ 566	\$ 584	\$ 603	\$ 622	\$ 643	\$ 664
7805000 Collection System Maintenance	3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7806000 Water & Biosolids Reclamation	3	\$ 2,200	\$ 2,266	\$ 2,334	\$ 2,410	\$ 2,488	\$ 2,569	\$ 2,653	\$ 2,739	\$ 2,828	\$ 2,920
51130 Vacation Pay-out											
7800002 Administration	3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7803000 Plant Operations	3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7804000 Engineering	3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7805000 Collection System Maintenance	3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
51200 457B Employer Contribution											
7800001 General Manager's Office	5	\$ 3,000	\$ 3,098	\$ 3,167	\$ 3,238	\$ 3,311	\$ 3,386	\$ 3,462	\$ 3,540	\$ 3,620	\$ 3,701
7800002 Administration	5	\$ 12,600	\$ 13,010	\$ 13,302	\$ 13,602	\$ 13,908	\$ 14,220	\$ 14,540	\$ 14,868	\$ 15,202	\$ 15,544
7800003 Safety, Training & Fleet Maint.	5	\$ 1,200	\$ 1,239	\$ 1,267	\$ 1,295	\$ 1,325	\$ 1,354	\$ 1,385	\$ 1,416	\$ 1,448	\$ 1,480
7800004 Pollution Prevention	5	\$ 1,200	\$ 1,239	\$ 1,267	\$ 1,295	\$ 1,325	\$ 1,354	\$ 1,385	\$ 1,416	\$ 1,448	\$ 1,480
7803000 Plant Operations	5	\$ 12,600	\$ 13,010	\$ 13,302	\$ 13,602	\$ 13,908	\$ 14,220	\$ 14,540	\$ 14,868	\$ 15,202	\$ 15,544
7803001 Plant Maintenance	5	\$ 7,200	\$ 7,434	\$ 7,601	\$ 7,772	\$ 7,947	\$ 8,126	\$ 8,309	\$ 8,496	\$ 8,687	\$ 8,882
7803002 Plant Laboratory	5	\$ 4,800	\$ 4,956	\$ 5,068	\$ 5,182	\$ 5,298	\$ 5,417	\$ 5,539	\$ 5,664	\$ 5,791	\$ 5,922
7804000 Engineering	5	\$ 15,600	\$ 16,107	\$ 16,469	\$ 16,840	\$ 17,219	\$ 17,606	\$ 18,002	\$ 18,407	\$ 18,822	\$ 19,245
7805000 Collection System Maintenance	5	\$ 17,400	\$ 17,966	\$ 18,370	\$ 18,783	\$ 19,206	\$ 19,638	\$ 20,080	\$ 20,531	\$ 20,993	\$ 21,466
7806000 Water & Biosolids Reclamation	5	\$ 5,400	\$ 5,576	\$ 5,701	\$ 5,829	\$ 5,960	\$ 6,094	\$ 6,232	\$ 6,372	\$ 6,515	\$ 6,662
Subtotal: Sewer Fund Salaries & Benefits		\$ 5,154,680	\$ 5,309,624	\$ 5,468,286	\$ 5,645,150	\$ 5,827,743	\$ 6,016,250	\$ 6,210,865	\$ 6,411,783	\$ 6,619,210	\$ 6,833,358

NAPA SANITATION DISTRICT
WASTEWATER RATE STUDY
Operating Revenue and Expenses
Draft

EXHIBIT 1

Sewer Fund Salaries & Benefits		Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
51205 Cell Phone Allowance												
7800000	Board of Directors	9	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7800001	General Manager's Office	9	\$ 720	\$ 720	\$ 720	\$ 720	\$ 720	\$ 720	\$ 720	\$ 720	\$ 720	\$ 720
7800002	Administration	9	\$ 2,200	\$ 2,200	\$ 2,200	\$ 2,200	\$ 2,200	\$ 2,200	\$ 2,200	\$ 2,200	\$ 2,200	\$ 2,200
7803000	Plant Operations	9	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750
7804000	Engineering	9	\$ 2,920	\$ 2,920	\$ 2,920	\$ 2,920	\$ 2,920	\$ 2,920	\$ 2,920	\$ 2,920	\$ 2,920	\$ 2,920
7805000	Collection System Maintenance	9	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750	\$ 750
7806000	Water & Biosolids Reclamation	9	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
51210 Director Pay												
7800000	Board of Directors	3	\$ 23,200	\$ 23,896	\$ 24,613	\$ 25,413	\$ 26,239	\$ 27,092	\$ 27,972	\$ 28,882	\$ 29,820	\$ 30,789
51300 Medicare												
7800000	Board of Directors	5	\$ 400	\$ 413	\$ 422	\$ 432	\$ 442	\$ 451	\$ 462	\$ 472	\$ 483	\$ 493
7800001	General Manager's Office	5	\$ 2,840	\$ 2,932	\$ 2,998	\$ 3,066	\$ 3,135	\$ 3,205	\$ 3,277	\$ 3,351	\$ 3,427	\$ 3,504
7800002	Administration	5	\$ 8,500	\$ 8,776	\$ 8,974	\$ 9,176	\$ 9,382	\$ 9,593	\$ 9,809	\$ 10,030	\$ 10,255	\$ 10,486
7800003	Safety, Training & Fleet Maint.	5	\$ 1,300	\$ 1,342	\$ 1,372	\$ 1,403	\$ 1,435	\$ 1,467	\$ 1,500	\$ 1,534	\$ 1,568	\$ 1,604
7800004	Pollution Prevention	5	\$ 1,170	\$ 1,208	\$ 1,235	\$ 1,263	\$ 1,291	\$ 1,320	\$ 1,350	\$ 1,381	\$ 1,412	\$ 1,443
7803000	Plant Operations	5	\$ 12,360	\$ 12,762	\$ 13,049	\$ 13,342	\$ 13,643	\$ 13,950	\$ 14,263	\$ 14,584	\$ 14,913	\$ 15,248
7803001	Plant Maintenance	5	\$ 7,830	\$ 8,084	\$ 8,266	\$ 8,452	\$ 8,643	\$ 8,837	\$ 9,036	\$ 9,239	\$ 9,447	\$ 9,660
7803002	Plant Laboratory	5	\$ 5,490	\$ 5,668	\$ 5,796	\$ 5,926	\$ 6,060	\$ 6,196	\$ 6,335	\$ 6,478	\$ 6,624	\$ 6,773
7804000	Engineering	5	\$ 11,420	\$ 11,791	\$ 12,056	\$ 12,328	\$ 12,605	\$ 12,889	\$ 13,179	\$ 13,475	\$ 13,778	\$ 14,088
7805000	Collection System Maintenance	5	\$ 15,650	\$ 16,159	\$ 16,522	\$ 16,894	\$ 17,274	\$ 17,663	\$ 18,060	\$ 18,466	\$ 18,882	\$ 19,307
7806000	Water & Biosolids Reclamation	5	\$ 3,750	\$ 3,872	\$ 3,959	\$ 4,048	\$ 4,139	\$ 4,232	\$ 4,328	\$ 4,425	\$ 4,524	\$ 4,626
51305 F.I.C.A. / Social Security												
7800000	Board of Directors	5	\$ 1,400	\$ 1,446	\$ 1,478	\$ 1,511	\$ 1,545	\$ 1,580	\$ 1,616	\$ 1,652	\$ 1,689	\$ 1,727
51400 Employee Insurance - Premiums												
7800000	Board of Directors	4	\$ 500	\$ 530	\$ 562	\$ 596	\$ 632	\$ 671	\$ 713	\$ 758	\$ 806	\$ 858
7800001	General Manager's Office	4	\$ 88,880	\$ 94,259	\$ 99,925	\$ 105,926	\$ 112,360	\$ 119,240	\$ 126,737	\$ 134,750	\$ 143,314	\$ 152,468
7800002	Administration	4	\$ 187,590	\$ 198,942	\$ 210,901	\$ 223,568	\$ 237,148	\$ 251,667	\$ 267,491	\$ 284,403	\$ 302,478	\$ 321,799
7800003	Safety, Training & Fleet Maint.	4	\$ 30,820	\$ 32,685	\$ 34,650	\$ 36,731	\$ 38,963	\$ 41,348	\$ 43,948	\$ 46,726	\$ 49,696	\$ 52,870
7800004	Pollution Prevention	4	\$ 44,670	\$ 47,373	\$ 50,221	\$ 53,237	\$ 56,471	\$ 59,928	\$ 63,696	\$ 67,724	\$ 72,028	\$ 76,629
7803000	Plant Operations	4	\$ 260,870	\$ 276,657	\$ 293,287	\$ 310,903	\$ 329,787	\$ 349,978	\$ 371,983	\$ 395,501	\$ 420,638	\$ 447,506
7803001	Plant Maintenance	4	\$ 170,380	\$ 180,691	\$ 191,552	\$ 203,057	\$ 215,391	\$ 228,578	\$ 242,950	\$ 258,311	\$ 274,728	\$ 292,276
7803002	Plant Laboratory	4	\$ 77,560	\$ 82,254	\$ 87,198	\$ 92,435	\$ 98,050	\$ 104,053	\$ 110,595	\$ 117,588	\$ 125,061	\$ 133,049
7804000	Engineering	4	\$ 169,270	\$ 179,514	\$ 190,304	\$ 201,735	\$ 213,988	\$ 227,089	\$ 241,368	\$ 256,628	\$ 272,938	\$ 290,372
7805000	Collection System Maintenance	4	\$ 343,780	\$ 364,584	\$ 386,499	\$ 409,714	\$ 434,600	\$ 461,209	\$ 490,207	\$ 521,200	\$ 554,326	\$ 589,733
7806000	Water & Biosolids Reclamation	4	\$ 64,260	\$ 68,149	\$ 72,245	\$ 76,585	\$ 81,236	\$ 86,210	\$ 91,630	\$ 97,424	\$ 103,616	\$ 110,234
51405 Workers Compensation												
7800001	General Manager's Office	8	\$ 760	\$ 579	\$ 579	\$ 579	\$ 579	\$ 579	\$ 579	\$ 579	\$ 579	\$ 579
7800002	Administration	8	\$ 2,290	\$ 1,746	\$ 1,746	\$ 1,746	\$ 1,746	\$ 1,746	\$ 1,746	\$ 1,746	\$ 1,746	\$ 1,746
7800003	Safety, Training & Fleet Maint.	8	\$ 3,460	\$ 2,638	\$ 2,638	\$ 2,638	\$ 2,638	\$ 2,638	\$ 2,638	\$ 2,638	\$ 2,638	\$ 2,638
7800004	Pollution Prevention	8	\$ 310	\$ 236	\$ 236	\$ 236	\$ 236	\$ 236	\$ 236	\$ 236	\$ 236	\$ 236
7803000	Plant Operations	8	\$ 33,140	\$ 25,269	\$ 25,269	\$ 25,269	\$ 25,269	\$ 25,269	\$ 25,269	\$ 25,269	\$ 25,269	\$ 25,269
7803001	Plant Maintenance	8	\$ 21,090	\$ 16,081	\$ 16,081	\$ 16,081	\$ 16,081	\$ 16,081	\$ 16,081	\$ 16,081	\$ 16,081	\$ 16,081
7803002	Plant Laboratory	8	\$ 14,800	\$ 11,285	\$ 11,285	\$ 11,285	\$ 11,285	\$ 11,285	\$ 11,285	\$ 11,285	\$ 11,285	\$ 11,285
7804000	Engineering	8	\$ 3,100	\$ 2,364	\$ 2,364	\$ 2,364	\$ 2,364	\$ 2,364	\$ 2,364	\$ 2,364	\$ 2,364	\$ 2,364
7805000	Collection System Maintenance	8	\$ 42,110	\$ 32,108	\$ 32,108	\$ 32,108	\$ 32,108	\$ 32,108	\$ 32,108	\$ 32,108	\$ 32,108	\$ 32,108
7806000	Water & Biosolids Reclamation	8	\$ 10,090	\$ 7,693	\$ 7,693	\$ 7,693	\$ 7,693	\$ 7,693	\$ 7,693	\$ 7,693	\$ 7,693	\$ 7,693
Subtotal: Sewer Fund Salaries & Benefits			\$ 1,672,380	\$ 1,731,328	\$ 1,825,426	\$ 1,925,083	\$ 2,031,799	\$ 2,145,787	\$ 2,269,847	\$ 2,402,321	\$ 2,543,792	\$ 2,694,885

NAPA SANITATION DISTRICT
WASTEWATER RATE STUDY
Operating Revenue and Expenses
Draft

EXHIBIT 1

Sewer Fund Salaries & Benefits		Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
51600	Retirement											
7800000	Board of Directors	3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7800001	General Manager's Office	3	\$ 89,050	\$ 91,723	\$ 94,475	\$ 97,545	\$ 100,716	\$ 103,989	\$ 107,369	\$ 110,858	\$ 114,461	\$ 118,181
7800002	Administration	3	\$ 266,390	\$ 274,387	\$ 282,619	\$ 291,804	\$ 301,287	\$ 311,079	\$ 321,189	\$ 331,628	\$ 342,406	\$ 353,534
7800003	Safety, Training & Fleet Maint.	3	\$ 13,900	\$ 14,317	\$ 14,747	\$ 15,226	\$ 15,721	\$ 16,232	\$ 16,759	\$ 17,304	\$ 17,866	\$ 18,447
7800004	Pollution Prevention	3	\$ 12,510	\$ 12,886	\$ 13,272	\$ 13,703	\$ 14,149	\$ 14,609	\$ 15,083	\$ 15,574	\$ 16,080	\$ 16,602
7803000	Plant Operations	3	\$ 319,750	\$ 329,349	\$ 339,229	\$ 350,254	\$ 361,638	\$ 373,391	\$ 385,526	\$ 398,056	\$ 410,992	\$ 424,350
7803001	Plant Maintenance	3	\$ 219,390	\$ 225,976	\$ 232,755	\$ 240,320	\$ 248,130	\$ 256,195	\$ 264,521	\$ 273,118	\$ 281,994	\$ 291,159
7803002	Plant Laboratory	3	\$ 172,170	\$ 177,339	\$ 182,659	\$ 188,595	\$ 194,724	\$ 201,053	\$ 207,587	\$ 214,334	\$ 221,300	\$ 228,492
7804000	Engineering	3	\$ 210,360	\$ 216,675	\$ 223,175	\$ 230,428	\$ 237,917	\$ 245,650	\$ 253,633	\$ 261,876	\$ 270,387	\$ 279,175
7805000	Collection System Maintenance	3	\$ 414,840	\$ 427,293	\$ 440,112	\$ 454,416	\$ 469,184	\$ 484,433	\$ 500,177	\$ 516,433	\$ 533,217	\$ 550,546
7806000	Water & Biosolids Reclamation	3	\$ 117,290	\$ 120,811	\$ 124,435	\$ 128,480	\$ 132,655	\$ 136,966	\$ 141,418	\$ 146,014	\$ 150,759	\$ 155,659
51605	Other Post Employment Benefits											
7800001	General Manager's Office	3	\$ 11,750	\$ 12,103	\$ 12,466	\$ 12,871	\$ 13,289	\$ 13,721	\$ 14,167	\$ 14,628	\$ 15,103	\$ 15,594
7800002	Administration	3	\$ 35,130	\$ 36,185	\$ 37,270	\$ 38,481	\$ 39,732	\$ 41,023	\$ 42,357	\$ 43,733	\$ 45,155	\$ 46,622
7800003	Safety, Training & Fleet Maint.	3	\$ 5,300	\$ 5,459	\$ 5,623	\$ 5,806	\$ 5,994	\$ 6,189	\$ 6,390	\$ 6,598	\$ 6,812	\$ 7,034
7800004	Pollution Prevention	3	\$ 4,780	\$ 4,923	\$ 5,071	\$ 5,236	\$ 5,406	\$ 5,582	\$ 5,763	\$ 5,951	\$ 6,144	\$ 6,344
7803000	Plant Operations	3	\$ 50,840	\$ 52,366	\$ 53,937	\$ 55,690	\$ 57,500	\$ 59,369	\$ 61,298	\$ 63,291	\$ 65,347	\$ 67,471
7803001	Plant Maintenance	3	\$ 32,370	\$ 33,342	\$ 34,342	\$ 35,458	\$ 36,611	\$ 37,800	\$ 39,029	\$ 40,297	\$ 41,607	\$ 42,959
7803002	Plant Laboratory	3	\$ 22,670	\$ 23,351	\$ 24,051	\$ 24,833	\$ 25,640	\$ 26,473	\$ 27,333	\$ 28,222	\$ 29,139	\$ 30,086
7804000	Engineering	3	\$ 47,430	\$ 48,854	\$ 50,319	\$ 51,955	\$ 53,643	\$ 55,387	\$ 57,187	\$ 59,045	\$ 60,964	\$ 62,946
7805000	Collection System Maintenance	3	\$ 64,680	\$ 66,622	\$ 68,620	\$ 70,851	\$ 73,153	\$ 75,531	\$ 77,985	\$ 80,520	\$ 83,137	\$ 85,839
7806000	Water & Biosolids Reclamation	3	\$ 15,500	\$ 15,965	\$ 16,444	\$ 16,979	\$ 17,531	\$ 18,100	\$ 18,689	\$ 19,296	\$ 19,923	\$ 20,571
51990	Other Employee Benefits											
7800002	Administration	3	\$ 10,080	\$ 10,383	\$ 10,694	\$ 11,042	\$ 11,400	\$ 11,771	\$ 12,154	\$ 12,549	\$ 12,956	\$ 13,377
7800003	Safety, Training & Fleet Maint.	3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7803000	Plant Operations	3	\$ 20,760	\$ 21,383	\$ 22,025	\$ 22,741	\$ 23,480	\$ 24,243	\$ 25,031	\$ 25,844	\$ 26,684	\$ 27,551
7803001	Plant Maintenance	3	\$ 10,080	\$ 10,383	\$ 10,694	\$ 11,042	\$ 11,400	\$ 11,771	\$ 12,154	\$ 12,549	\$ 12,956	\$ 13,377
7803002	Plant Laboratory	3	\$ 12,000	\$ 12,360	\$ 12,731	\$ 13,145	\$ 13,572	\$ 14,013	\$ 14,469	\$ 14,939	\$ 15,424	\$ 15,926
7804000	Engineering	3	\$ 9,360	\$ 9,641	\$ 9,930	\$ 10,253	\$ 10,586	\$ 10,930	\$ 11,285	\$ 11,652	\$ 12,031	\$ 12,422
7805000	Collection System Maintenance	3	\$ 32,760	\$ 33,743	\$ 34,756	\$ 35,885	\$ 37,052	\$ 38,256	\$ 39,499	\$ 40,783	\$ 42,108	\$ 43,477
7806000	Water & Biosolids Reclamation	3	\$ 6,000	\$ 6,180	\$ 6,366	\$ 6,572	\$ 6,786	\$ 7,007	\$ 7,234	\$ 7,469	\$ 7,712	\$ 7,963
Potential Future Employee Cost												
7805000	Two Collection System Worker I's	3	\$ -	\$ 295,242	\$ 304,099	\$ 313,983	\$ 324,187	\$ 334,723	\$ 345,602	\$ 356,834	\$ 368,431	\$ 380,405
Subtotal: Sewer Fund Salaries & Benefits			\$ 2,227,140	\$ 2,589,241	\$ 2,666,918	\$ 2,753,593	\$ 2,843,084	\$ 2,935,485	\$ 3,030,888	\$ 3,129,392	\$ 3,231,097	\$ 3,336,108
Total: Sewer Fund Salaries & Benefits			\$ 9,054,200	\$ 9,630,193	\$ 9,960,630	\$ 10,323,827	\$ 10,702,626	\$ 11,097,522	\$ 11,511,600	\$ 11,943,495	\$ 12,394,099	\$ 12,864,351

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EXHIBIT 1

Sewer Fund Operations		Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
52115	Property Tax/Assessment Admin											
7800002	Administration	2	\$ 12,500	\$ 12,749	\$ 13,005	\$ 13,265	\$ 13,530	\$ 13,801	\$ 14,076	\$ 14,357	\$ 14,645	\$ 14,938
7800005	Non-Departmental	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
52125	Accounting/Auditing Services											
7800000	Board of Directors	2	\$ 30,000	\$ 30,599	\$ 31,213	\$ 31,837	\$ 32,471	\$ 33,121	\$ 33,781	\$ 34,457	\$ 35,148	\$ 35,852
7800002	Administration	2	\$ 40,000	\$ 40,798	\$ 41,617	\$ 42,449	\$ 43,295	\$ 44,162	\$ 45,042	\$ 45,942	\$ 46,863	\$ 47,803
52130	Information Technology Services											
7800002	Administration	2	\$ 342,100	\$ 348,927	\$ 355,929	\$ 363,047	\$ 370,283	\$ 377,693	\$ 385,220	\$ 392,922	\$ 400,799	\$ 408,834
52140	Legal Services											
7800000	Board of Directors	2	\$ 207,500	\$ 211,641	\$ 215,888	\$ 220,206	\$ 224,594	\$ 229,089	\$ 233,654	\$ 238,326	\$ 243,104	\$ 247,977
52145	Engineer Services											
7804000	Engineering	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
52150	Temporary/Contract Help											
7803000	Plant Operations	3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7803002	Plant Laboratory	3	\$ 20,000	\$ 20,600	\$ 21,218	\$ 21,908	\$ 22,620	\$ 23,355	\$ 24,114	\$ 24,898	\$ 25,707	\$ 26,543
7804000	Engineering	3	\$ 20,000	\$ 20,600	\$ 21,218	\$ 21,908	\$ 22,620	\$ 23,355	\$ 24,114	\$ 24,898	\$ 25,707	\$ 26,543
7805000	Collection System Maintenance	3	\$ 22,100	\$ 22,763	\$ 23,446	\$ 24,208	\$ 24,995	\$ 25,807	\$ 26,646	\$ 27,512	\$ 28,406	\$ 29,330
7806000	Water & Biosolids Reclamation	3	\$ 8,600	\$ 8,858	\$ 9,124	\$ 9,420	\$ 9,727	\$ 10,043	\$ 10,369	\$ 10,706	\$ 11,054	\$ 11,413
52205	Actuarial Services											
7800002	Administration	2	\$ 8,000	\$ 8,160	\$ 8,323	\$ 8,490	\$ 8,659	\$ 8,832	\$ 9,008	\$ 9,188	\$ 9,373	\$ 9,561
52220	Medical/Laboratory Services											
7800002	Administration	2	\$ 6,050	\$ 6,171	\$ 6,295	\$ 6,420	\$ 6,548	\$ 6,679	\$ 6,813	\$ 6,949	\$ 7,088	\$ 7,230
7800004	Pollution Prevention	2	\$ 500	\$ 510	\$ 520	\$ 531	\$ 541	\$ 552	\$ 563	\$ 574	\$ 586	\$ 598
7803002	Plant Laboratory	2	\$ 32,300	\$ 32,945	\$ 33,606	\$ 34,278	\$ 34,961	\$ 35,661	\$ 36,371	\$ 37,098	\$ 37,842	\$ 38,601
52305	Training Services											
7800003	Safety, Training & Fleet Maint.	2	\$ 19,500	\$ 19,889	\$ 20,288	\$ 20,694	\$ 21,106	\$ 21,529	\$ 21,958	\$ 22,397	\$ 22,846	\$ 23,304
52310	Consulting Services											
7800000	Board of Directors	2	\$ 37,200	\$ 37,942	\$ 38,704	\$ 39,478	\$ 40,265	\$ 41,070	\$ 41,889	\$ 42,726	\$ 43,583	\$ 44,457
7800001	General Manager's Office	2	\$ 275,000	\$ 280,488	\$ 286,116	\$ 291,839	\$ 297,655	\$ 303,612	\$ 309,662	\$ 315,854	\$ 322,186	\$ 328,645
7800002	Administration	2	\$ 10,000	\$ 10,200	\$ 10,404	\$ 10,612	\$ 10,824	\$ 11,040	\$ 11,260	\$ 11,486	\$ 11,716	\$ 11,951
7800004	Pollution Prevention	2	\$ 7,000	\$ 7,140	\$ 7,283	\$ 7,429	\$ 7,577	\$ 7,728	\$ 7,882	\$ 8,040	\$ 8,201	\$ 8,366
7803000	Plant Operations	2	\$ 25,000	\$ 25,499	\$ 26,011	\$ 26,531	\$ 27,060	\$ 27,601	\$ 28,151	\$ 28,714	\$ 29,290	\$ 29,877
7804000	Engineering	2	\$ 257,000	\$ 262,129	\$ 267,389	\$ 272,736	\$ 278,172	\$ 283,739	\$ 289,393	\$ 295,180	\$ 301,097	\$ 307,133
52325	Waste Disposal Services											
7800002	Administration	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7803000	Plant Operations	2	\$ 32,400	\$ 33,047	\$ 33,710	\$ 34,384	\$ 35,069	\$ 35,771	\$ 36,484	\$ 37,213	\$ 37,959	\$ 38,720
7803001	Plant Maintenance	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7805000	Collection System Maintenance	2	\$ 13,150	\$ 13,412	\$ 13,682	\$ 13,955	\$ 14,233	\$ 14,518	\$ 14,807	\$ 15,104	\$ 15,406	\$ 15,715
7806000	Water & Biosolids Reclamation	2	\$ 1,200	\$ 1,224	\$ 1,249	\$ 1,273	\$ 1,299	\$ 1,325	\$ 1,351	\$ 1,378	\$ 1,406	\$ 1,434
52330	Hazardous Waste Disposal Services											
7803001	Plant Maintenance	2	\$ 5,000	\$ 5,100	\$ 5,202	\$ 5,306	\$ 5,412	\$ 5,520	\$ 5,630	\$ 5,743	\$ 5,858	\$ 5,975
52335	Security Services											
7800002	Administration	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7800003	Safety, Training & Fleet Maint.	2	\$ 12,100	\$ 12,341	\$ 12,589	\$ 12,841	\$ 13,097	\$ 13,359	\$ 13,625	\$ 13,898	\$ 14,176	\$ 14,460
7804000	Engineering	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7805000	Collection System Maintenance	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7806000	Water & Biosolids Reclamation	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal: Sewer Fund Operations			\$ 1,444,200	\$ 1,473,732	\$ 1,504,028	\$ 1,535,046	\$ 1,566,612	\$ 1,598,963	\$ 1,631,866	\$ 1,665,560	\$ 1,700,046	\$ 1,735,259

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EXHIBIT 1

Sewer Fund Operations	Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
52340 Landscaping Services											
7800002 Administration	2 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7803001 Plant Maintenance	2 \$ 19,200	\$ 19,583	\$ 19,976	\$ 20,376	\$ 20,782	\$ 21,198	\$ 21,620	\$ 22,052	\$ 22,494	\$ 22,945	
52345 Janitorial Services											
7800002 Administration	2 \$ 19,700	\$ 20,093	\$ 20,496	\$ 20,906	\$ 21,323	\$ 21,750	\$ 22,183	\$ 22,627	\$ 23,080	\$ 23,543	
7803001 Plant Maintenance	2 \$ 29,800	\$ 30,395	\$ 31,005	\$ 31,625	\$ 32,255	\$ 32,900	\$ 33,556	\$ 34,227	\$ 34,913	\$ 35,613	
7804000 Engineering	2 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
7805000 Collection System Maintenance	2 \$ 10,150	\$ 10,353	\$ 10,560	\$ 10,771	\$ 10,986	\$ 11,206	\$ 11,429	\$ 11,658	\$ 11,892	\$ 12,130	
52490 Other Professional Services											
7800002 Administration	2 \$ 18,600	\$ 18,971	\$ 19,352	\$ 19,739	\$ 20,132	\$ 20,535	\$ 20,944	\$ 21,363	\$ 21,791	\$ 22,228	
7800003 Safety, Training & Fleet Maint.	2 \$ 5,000	\$ 5,100	\$ 5,202	\$ 5,306	\$ 5,412	\$ 5,520	\$ 5,630	\$ 5,743	\$ 5,858	\$ 5,975	
7800004 Pollution Prevention	2 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
7800005 Non-Departmental	2 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
7803000 Plant Operations	2 \$ 112,550	\$ 114,796	\$ 117,100	\$ 119,442	\$ 121,822	\$ 124,260	\$ 126,736	\$ 129,270	\$ 131,862	\$ 134,505	
7803001 Plant Maintenance	2 \$ 44,500	\$ 45,388	\$ 46,299	\$ 47,225	\$ 48,166	\$ 49,130	\$ 50,109	\$ 51,111	\$ 52,136	\$ 53,181	
7803002 Plant Laboratory	2 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
7805000 Collection System Maintenance	2 \$ 77,000	\$ 78,537	\$ 80,113	\$ 81,715	\$ 83,343	\$ 85,011	\$ 86,705	\$ 88,439	\$ 90,212	\$ 92,021	
7806000 Water & Biosolids Reclamation	2 \$ 133,200	\$ 135,858	\$ 138,584	\$ 141,356	\$ 144,173	\$ 147,058	\$ 149,989	\$ 152,988	\$ 156,055	\$ 159,184	
52500 Maintenance - Equipment											
7803000 Plant Operations	2 \$ 34,000	\$ 34,678	\$ 35,374	\$ 36,082	\$ 36,801	\$ 37,537	\$ 38,286	\$ 39,051	\$ 39,834	\$ 40,632	
7803001 Plant Maintenance	2 \$ 98,850	\$ 100,823	\$ 102,846	\$ 104,903	\$ 106,993	\$ 109,135	\$ 111,310	\$ 113,535	\$ 115,811	\$ 118,133	
7803002 Plant Laboratory	2 \$ 4,000	\$ 4,080	\$ 4,162	\$ 4,245	\$ 4,330	\$ 4,416	\$ 4,504	\$ 4,594	\$ 4,686	\$ 4,780	
7804000 Engineering	2 \$ 2,950	\$ 3,009	\$ 3,069	\$ 3,131	\$ 3,193	\$ 3,257	\$ 3,322	\$ 3,388	\$ 3,456	\$ 3,525	
7805000 Collection System Maintenance	2 \$ 10,000	\$ 10,200	\$ 10,404	\$ 10,612	\$ 10,824	\$ 11,040	\$ 11,260	\$ 11,486	\$ 11,716	\$ 11,951	
7806000 Water & Biosolids Reclamation	2 \$ 25,000	\$ 25,499	\$ 26,011	\$ 26,531	\$ 27,060	\$ 27,601	\$ 28,151	\$ 28,714	\$ 29,290	\$ 29,877	
52505 Maintenance - Bldgs/Imprvmnts											
7800002 Administration	2 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
7803001 Plant Maintenance	2 \$ 73,900	\$ 75,375	\$ 76,887	\$ 78,425	\$ 79,988	\$ 81,589	\$ 83,215	\$ 84,878	\$ 86,580	\$ 88,316	
7805000 Collection System Maintenance	2 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
7806000 Water & Biosolids Reclamation	2 \$ 16,000	\$ 16,319	\$ 16,647	\$ 16,980	\$ 17,318	\$ 17,665	\$ 18,017	\$ 18,377	\$ 18,745	\$ 19,121	
52515 Maintenance - Software											
7800004 Pollution Prevention	2 \$ 3,700	\$ 3,774	\$ 3,850	\$ 3,927	\$ 4,005	\$ 4,085	\$ 4,166	\$ 4,250	\$ 4,335	\$ 4,422	
7803000 Plant Operations	2 \$ 31,100	\$ 31,721	\$ 32,357	\$ 33,004	\$ 33,662	\$ 34,336	\$ 35,020	\$ 35,720	\$ 36,436	\$ 37,167	
7803001 Plant Maintenance	2 \$ 4,500	\$ 4,590	\$ 4,682	\$ 4,776	\$ 4,871	\$ 4,968	\$ 5,067	\$ 5,169	\$ 5,272	\$ 5,378	
7803002 Plant Laboratory	2 \$ 3,750	\$ 3,825	\$ 3,902	\$ 3,980	\$ 4,059	\$ 4,140	\$ 4,223	\$ 4,307	\$ 4,393	\$ 4,482	
7804000 Engineering	2 \$ 8,300	\$ 8,466	\$ 8,636	\$ 8,808	\$ 8,984	\$ 9,164	\$ 9,346	\$ 9,533	\$ 9,724	\$ 9,919	
7805000 Collection System Maintenance	2 \$ 7,000	\$ 7,140	\$ 7,283	\$ 7,429	\$ 7,577	\$ 7,728	\$ 7,882	\$ 8,040	\$ 8,201	\$ 8,366	
52520 Maintenance - Vehicles											
7800002 Administration	2 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
7800003 Safety, Training & Fleet Maint.	2 \$ 1,400	\$ 1,428	\$ 1,457	\$ 1,486	\$ 1,515	\$ 1,546	\$ 1,576	\$ 1,608	\$ 1,640	\$ 1,673	
7803000 Plant Operations	2 \$ 4,500	\$ 4,590	\$ 4,682	\$ 4,776	\$ 4,871	\$ 4,968	\$ 5,067	\$ 5,169	\$ 5,272	\$ 5,378	
7803001 Plant Maintenance	2 \$ 6,000	\$ 6,120	\$ 6,243	\$ 6,367	\$ 6,494	\$ 6,624	\$ 6,756	\$ 6,891	\$ 7,030	\$ 7,170	
7803002 Plant Laboratory	2 \$ 500	\$ 510	\$ 520	\$ 531	\$ 541	\$ 552	\$ 563	\$ 574	\$ 586	\$ 598	
7804000 Engineering	2 \$ 1,000	\$ 1,020	\$ 1,040	\$ 1,061	\$ 1,082	\$ 1,104	\$ 1,126	\$ 1,149	\$ 1,172	\$ 1,195	
7805000 Collection System Maintenance	2 \$ 55,000	\$ 56,098	\$ 57,223	\$ 58,368	\$ 59,531	\$ 60,722	\$ 61,932	\$ 63,171	\$ 64,437	\$ 65,729	
7806000 Water & Biosolids Reclamation	2 \$ 14,000	\$ 14,279	\$ 14,566	\$ 14,857	\$ 15,153	\$ 15,457	\$ 15,765	\$ 16,080	\$ 16,402	\$ 16,731	
Subtotal: Sewer Fund Operations		\$ 875,150	\$ 892,614	\$ 910,526	\$ 928,737	\$ 947,246	\$ 966,203	\$ 985,458	\$ 1,005,161	\$ 1,025,312	\$ 1,045,867

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EXHIBIT 1

Sewer Fund Operations	Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
52600 Rents and Leases - Equipment											
7800002 Administration	2	\$ 14,000	\$ 14,279	\$ 14,566	\$ 14,857	\$ 15,153	\$ 15,457	\$ 15,765	\$ 16,080	\$ 16,402	\$ 16,731
7800003 Safety, Training & Fleet Maint.	2	\$ 20,100	\$ 20,501	\$ 20,913	\$ 21,331	\$ 21,756	\$ 22,191	\$ 22,633	\$ 23,086	\$ 23,549	\$ 24,021
7803000 Plant Operations	2	\$ 7,000	\$ 7,140	\$ 7,283	\$ 7,429	\$ 7,577	\$ 7,728	\$ 7,882	\$ 8,040	\$ 8,201	\$ 8,366
7803001 Plant Maintenance	2	\$ 10,250	\$ 10,455	\$ 10,664	\$ 10,878	\$ 11,094	\$ 11,316	\$ 11,542	\$ 11,773	\$ 12,009	\$ 12,249
7803002 Plant Laboratory	2	\$ 2,350	\$ 2,397	\$ 2,445	\$ 2,494	\$ 2,544	\$ 2,594	\$ 2,646	\$ 2,699	\$ 2,753	\$ 2,808
7804000 Engineering	2	\$ 4,000	\$ 4,080	\$ 4,162	\$ 4,245	\$ 4,330	\$ 4,416	\$ 4,504	\$ 4,594	\$ 4,686	\$ 4,780
7805000 Collection System Maintenance	2	\$ 3,300	\$ 3,366	\$ 3,433	\$ 3,502	\$ 3,572	\$ 3,643	\$ 3,716	\$ 3,790	\$ 3,866	\$ 3,944
7806000 Water & Biosolids Reclamation	2	\$ 4,000	\$ 4,080	\$ 4,162	\$ 4,245	\$ 4,330	\$ 4,416	\$ 4,504	\$ 4,594	\$ 4,686	\$ 4,780
52605 Rents and Leases - Buildings/Land											
7803000 Plant Operations	2	\$ 1,400	\$ 1,428	\$ 1,457	\$ 1,486	\$ 1,515	\$ 1,546	\$ 1,576	\$ 1,608	\$ 1,640	\$ 1,673
7804000 Engineering	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7805000 Collection System Maintenance	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
52705 Insurance - Premiums											
7800000 Board of Directors	3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7800005 Non-Departmental	2	\$ 177,050	\$ 180,583	\$ 184,207	\$ 187,891	\$ 191,636	\$ 195,471	\$ 199,366	\$ 203,352	\$ 207,429	\$ 211,587
52710 Insurance - Claims											
7800005 Non-Departmental	2	\$ 15,000	\$ 15,299	\$ 15,606	\$ 15,918	\$ 16,236	\$ 16,561	\$ 16,891	\$ 17,228	\$ 17,574	\$ 17,926
52800 Communications/Telephone											
7800000 Board of Directors	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7800001 General Manager's Office	2	\$ 100	\$ 102	\$ 104	\$ 106	\$ 108	\$ 110	\$ 113	\$ 115	\$ 117	\$ 120
7800002 Administration	2	\$ 16,300	\$ 16,625	\$ 16,959	\$ 17,298	\$ 17,643	\$ 17,996	\$ 18,355	\$ 18,722	\$ 19,097	\$ 19,480
7800003 Safety, Training & Fleet Maint.	2	\$ 350	\$ 357	\$ 364	\$ 371	\$ 379	\$ 386	\$ 394	\$ 402	\$ 410	\$ 418
7800004 Pollution Prevention	2	\$ 100	\$ 102	\$ 104	\$ 106	\$ 108	\$ 110	\$ 113	\$ 115	\$ 117	\$ 120
7803000 Plant Operations	2	\$ 4,400	\$ 4,488	\$ 4,578	\$ 4,669	\$ 4,762	\$ 4,858	\$ 4,955	\$ 5,054	\$ 5,155	\$ 5,258
7803001 Plant Maintenance	2	\$ 550	\$ 561	\$ 572	\$ 584	\$ 595	\$ 607	\$ 619	\$ 632	\$ 644	\$ 657
7803002 Plant Laboratory	2	\$ 150	\$ 153	\$ 156	\$ 159	\$ 162	\$ 166	\$ 169	\$ 172	\$ 176	\$ 179
7804000 Engineering	2	\$ 2,200	\$ 2,244	\$ 2,289	\$ 2,335	\$ 2,381	\$ 2,429	\$ 2,477	\$ 2,527	\$ 2,577	\$ 2,629
7805000 Collection System Maintenance	2	\$ 11,150	\$ 11,373	\$ 11,601	\$ 11,833	\$ 12,069	\$ 12,310	\$ 12,555	\$ 12,806	\$ 13,063	\$ 13,325
7806000 Water & Biosolids Reclamation	2	\$ 1,500	\$ 1,530	\$ 1,561	\$ 1,592	\$ 1,624	\$ 1,656	\$ 1,689	\$ 1,723	\$ 1,757	\$ 1,793
52810 Advertising/Marketing											
7800002 Administration	2	\$ 1,450	\$ 1,479	\$ 1,509	\$ 1,539	\$ 1,569	\$ 1,601	\$ 1,633	\$ 1,665	\$ 1,699	\$ 1,733
7800004 Pollution Prevention	2	\$ 37,000	\$ 37,738	\$ 38,496	\$ 39,266	\$ 40,048	\$ 40,850	\$ 41,664	\$ 42,497	\$ 43,349	\$ 44,218
7800005 Non-Departmental	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
52820 Printing and Binding											
7800002 Administration	2	\$ 6,000	\$ 6,120	\$ 6,243	\$ 6,367	\$ 6,494	\$ 6,624	\$ 6,756	\$ 6,891	\$ 7,030	\$ 7,170
52825 Bank Charges											
7800002 Administration	2	\$ 1,200	\$ 1,224	\$ 1,249	\$ 1,273	\$ 1,299	\$ 1,325	\$ 1,351	\$ 1,378	\$ 1,406	\$ 1,434
52830 Publications/Legal Notices											
7800001 General Manager's Office	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7800002 Administration	2	\$ 7,200	\$ 7,344	\$ 7,491	\$ 7,641	\$ 7,793	\$ 7,949	\$ 8,108	\$ 8,270	\$ 8,435	\$ 8,605
52840 Permits/License Fees											
7803000 Plant Operations	2	\$ 124,000	\$ 126,475	\$ 129,012	\$ 131,593	\$ 134,215	\$ 136,901	\$ 139,630	\$ 142,421	\$ 145,276	\$ 148,189
7803002 Plant Laboratory	2	\$ 2,850	\$ 2,907	\$ 2,965	\$ 3,025	\$ 3,085	\$ 3,147	\$ 3,209	\$ 3,273	\$ 3,339	\$ 3,406
7804000 Engineering	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7805000 Collection System Maintenance	2	\$ 12,500	\$ 12,749	\$ 13,005	\$ 13,265	\$ 13,530	\$ 13,801	\$ 14,076	\$ 14,357	\$ 14,645	\$ 14,938
7806000 Water & Biosolids Reclamation	2	\$ 1,900	\$ 1,938	\$ 1,977	\$ 2,016	\$ 2,057	\$ 2,098	\$ 2,139	\$ 2,182	\$ 2,226	\$ 2,271
Subtotal: Sewer Fund Operations		\$ 489,350	\$ 499,115	\$ 509,131	\$ 519,314	\$ 529,663	\$ 540,263	\$ 551,030	\$ 562,047	\$ 573,315	\$ 584,808

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Sewer Fund Operations		Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
52900	Training/Conference Expenses											
7800000	Board of Directors	2	\$ 14,000	\$ 14,279	\$ 14,566	\$ 14,857	\$ 15,153	\$ 15,457	\$ 15,765	\$ 16,080	\$ 16,402	\$ 16,731
7800001	General Manager's Office	2	\$ 12,800	\$ 13,055	\$ 13,317	\$ 13,584	\$ 13,854	\$ 14,132	\$ 14,413	\$ 14,702	\$ 14,996	\$ 15,297
7800002	Administration	2	\$ 15,400	\$ 15,707	\$ 16,023	\$ 16,343	\$ 16,669	\$ 17,002	\$ 17,341	\$ 17,688	\$ 18,042	\$ 18,404
7800003	Safety, Training & Fleet Maint.	2	\$ 6,150	\$ 6,273	\$ 6,399	\$ 6,527	\$ 6,657	\$ 6,790	\$ 6,925	\$ 7,064	\$ 7,205	\$ 7,350
7800004	Pollution Prevention	2	\$ 3,700	\$ 3,774	\$ 3,850	\$ 3,927	\$ 4,005	\$ 4,085	\$ 4,166	\$ 4,250	\$ 4,335	\$ 4,422
7803000	Plant Operations	2	\$ 13,000	\$ 13,259	\$ 13,525	\$ 13,796	\$ 14,071	\$ 14,353	\$ 14,639	\$ 14,931	\$ 15,231	\$ 15,536
7803001	Plant Maintenance	2	\$ 7,450	\$ 7,599	\$ 7,751	\$ 7,906	\$ 8,064	\$ 8,225	\$ 8,389	\$ 8,557	\$ 8,728	\$ 8,903
7803002	Plant Laboratory	2	\$ 4,300	\$ 4,386	\$ 4,474	\$ 4,563	\$ 4,654	\$ 4,747	\$ 4,842	\$ 4,939	\$ 5,038	\$ 5,139
7804000	Engineering	2	\$ 8,500	\$ 8,670	\$ 8,844	\$ 9,020	\$ 9,200	\$ 9,384	\$ 9,571	\$ 9,763	\$ 9,958	\$ 10,158
7805000	Collection System Maintenance	2	\$ 8,100	\$ 8,262	\$ 8,427	\$ 8,596	\$ 8,767	\$ 8,943	\$ 9,121	\$ 9,303	\$ 9,490	\$ 9,680
7806000	Water & Biosolids Reclamation	2	\$ 4,050	\$ 4,131	\$ 4,214	\$ 4,298	\$ 4,384	\$ 4,471	\$ 4,560	\$ 4,652	\$ 4,745	\$ 4,840
52905	Business Travel/Mileage (Meetings)											
7800001	General Manager's Office	2	\$ 100	\$ 102	\$ 104	\$ 106	\$ 108	\$ 110	\$ 113	\$ 115	\$ 117	\$ 120
7800002	Administration	2	\$ 100	\$ 102	\$ 104	\$ 106	\$ 108	\$ 110	\$ 113	\$ 115	\$ 117	\$ 120
7800003	Safety, Training & Fleet Maint.	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7800004	Pollution Prevention	2	\$ 250	\$ 255	\$ 260	\$ 265	\$ 271	\$ 276	\$ 282	\$ 287	\$ 293	\$ 299
7803000	Plant Operations	2	\$ 250	\$ 255	\$ 260	\$ 265	\$ 271	\$ 276	\$ 282	\$ 287	\$ 293	\$ 299
7803001	Plant Maintenance	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7803002	Plant Laboratory	2	\$ 800	\$ 816	\$ 832	\$ 849	\$ 866	\$ 883	\$ 901	\$ 919	\$ 937	\$ 956
7804000	Engineering	2	\$ 50	\$ 51	\$ 52	\$ 53	\$ 54	\$ 55	\$ 56	\$ 57	\$ 59	\$ 60
53100	Office Supplies											
7800002	Administration	2	\$ 16,000	\$ 16,319	\$ 16,647	\$ 16,980	\$ 17,318	\$ 17,665	\$ 18,017	\$ 18,377	\$ 18,745	\$ 19,121
7800003	Safety, Training & Fleet Maint.	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7800005	Non-Departmental	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7803000	Plant Operations	2	\$ 500	\$ 510	\$ 520	\$ 531	\$ 541	\$ 552	\$ 563	\$ 574	\$ 586	\$ 598
7803001	Plant Maintenance	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7803002	Plant Laboratory	2	\$ 250	\$ 255	\$ 260	\$ 265	\$ 271	\$ 276	\$ 282	\$ 287	\$ 293	\$ 299
7804000	Engineering	2	\$ 300	\$ 306	\$ 312	\$ 318	\$ 325	\$ 331	\$ 338	\$ 345	\$ 351	\$ 359
7805000	Collection System Maintenance	2	\$ 500	\$ 510	\$ 520	\$ 531	\$ 541	\$ 552	\$ 563	\$ 574	\$ 586	\$ 598
7806000	Water & Biosolids Reclamation	2	\$ 100	\$ 102	\$ 104	\$ 106	\$ 108	\$ 110	\$ 113	\$ 115	\$ 117	\$ 120
53105	Office Supplies - Furniture/Fixtures											
7800002	Administration	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7800005	Non-Departmental	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7803001	Plant Maintenance	2	\$ 300	\$ 306	\$ 312	\$ 318	\$ 325	\$ 331	\$ 338	\$ 345	\$ 351	\$ 359
53110	Freight/Postage											
7800002	Administration	2	\$ 16,500	\$ 16,829	\$ 17,167	\$ 17,510	\$ 17,859	\$ 18,217	\$ 18,580	\$ 18,951	\$ 19,331	\$ 19,719
7803000	Plant Operations	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7805000	Collection System Maintenance	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
53115	Books/Media/Subscriptions											
7800001	General Manager's Office	2	\$ 300	\$ 306	\$ 312	\$ 318	\$ 325	\$ 331	\$ 338	\$ 345	\$ 351	\$ 359
7800002	Administration	2	\$ 1,350	\$ 1,377	\$ 1,405	\$ 1,433	\$ 1,461	\$ 1,490	\$ 1,520	\$ 1,551	\$ 1,582	\$ 1,613
7800003	Safety, Training & Fleet Maint.	2	\$ 450	\$ 459	\$ 468	\$ 478	\$ 487	\$ 497	\$ 507	\$ 517	\$ 527	\$ 538
7803002	Plant Laboratory	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7804000	Engineering	2	\$ 100	\$ 102	\$ 104	\$ 106	\$ 108	\$ 110	\$ 113	\$ 115	\$ 117	\$ 120
7805000	Collection System Maintenance	2	\$ 500	\$ 510	\$ 520	\$ 531	\$ 541	\$ 552	\$ 563	\$ 574	\$ 586	\$ 598
7806000	Water & Biosolids Reclamation	2	\$ 50	\$ 51	\$ 52	\$ 53	\$ 54	\$ 55	\$ 56	\$ 57	\$ 59	\$ 60
Subtotal: Sewer Fund Operations			\$ 136,200	\$ 138,918	\$ 141,706	\$ 144,540	\$ 147,420	\$ 150,371	\$ 153,367	\$ 156,434	\$ 159,570	\$ 162,769

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EXHIBIT 1

Sewer Fund Operations		Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
53120 Memberships/Certifications												
7800001	General Manager's Office	2	\$ 1,000	\$ 1,020	\$ 1,040	\$ 1,061	\$ 1,082	\$ 1,104	\$ 1,126	\$ 1,149	\$ 1,172	\$ 1,195
7800002	Administration	2	\$ 2,600	\$ 2,652	\$ 2,705	\$ 2,759	\$ 2,814	\$ 2,871	\$ 2,928	\$ 2,986	\$ 3,046	\$ 3,107
7800003	Safety, Training & Fleet Maint.	2	\$ 450	\$ 459	\$ 468	\$ 478	\$ 487	\$ 497	\$ 507	\$ 517	\$ 527	\$ 538
7800004	Pollution Prevention	2	\$ 1,900	\$ 1,938	\$ 1,977	\$ 2,016	\$ 2,057	\$ 2,098	\$ 2,139	\$ 2,182	\$ 2,226	\$ 2,271
7800005	Non-Departmental	2	\$ 54,700	\$ 55,792	\$ 56,911	\$ 58,049	\$ 59,206	\$ 60,391	\$ 61,595	\$ 62,826	\$ 64,086	\$ 65,370
7803000	Plant Operations	2	\$ 3,350	\$ 3,417	\$ 3,485	\$ 3,555	\$ 3,626	\$ 3,699	\$ 3,772	\$ 3,848	\$ 3,925	\$ 4,003
7803001	Plant Maintenance	2	\$ 1,250	\$ 1,275	\$ 1,301	\$ 1,327	\$ 1,353	\$ 1,380	\$ 1,408	\$ 1,436	\$ 1,464	\$ 1,494
7803002	Plant Laboratory	2	\$ 1,050	\$ 1,071	\$ 1,092	\$ 1,114	\$ 1,137	\$ 1,159	\$ 1,182	\$ 1,206	\$ 1,230	\$ 1,255
7804000	Engineering	2	\$ 2,000	\$ 2,040	\$ 2,081	\$ 2,122	\$ 2,165	\$ 2,208	\$ 2,252	\$ 2,297	\$ 2,343	\$ 2,390
7805000	Collection System Maintenance	2	\$ 3,650	\$ 3,723	\$ 3,798	\$ 3,873	\$ 3,951	\$ 4,030	\$ 4,110	\$ 4,192	\$ 4,276	\$ 4,362
7806000	Water & Biosolids Reclamation	2	\$ 1,300	\$ 1,326	\$ 1,353	\$ 1,380	\$ 1,407	\$ 1,435	\$ 1,464	\$ 1,493	\$ 1,523	\$ 1,554
53200 Utilities - Gas												
7803000	Plant Operations	2	\$ 26,900	\$ 27,437	\$ 27,987	\$ 28,547	\$ 29,116	\$ 29,699	\$ 30,291	\$ 30,896	\$ 31,516	\$ 32,147
53205 Utilities - Electric												
7800002	Administration	7	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7803000	Plant Operations	7	\$ 933,850	\$ 971,204	\$ 1,010,052	\$ 1,050,454	\$ 1,092,472	\$ 1,136,171	\$ 1,181,618	\$ 1,228,883	\$ 1,278,038	\$ 1,329,160
7806000	Water & Biosolids Reclamation	7	\$ 18,000	\$ 18,720	\$ 19,469	\$ 20,248	\$ 21,057	\$ 21,900	\$ 22,776	\$ 23,687	\$ 24,634	\$ 25,620
53215 Utilities - Fire Suppression Systems												
7803001	Plant Maintenance	2	\$ 2,300	\$ 2,346	\$ 2,393	\$ 2,441	\$ 2,489	\$ 2,539	\$ 2,590	\$ 2,642	\$ 2,695	\$ 2,749
53220 Utilities - Water												
7803000	Plant Operations	2	\$ 3,600	\$ 3,672	\$ 3,746	\$ 3,820	\$ 3,897	\$ 3,975	\$ 4,054	\$ 4,135	\$ 4,218	\$ 4,302
7806000	Water & Biosolids Reclamation	2	\$ 1,050	\$ 1,071	\$ 1,092	\$ 1,114	\$ 1,137	\$ 1,159	\$ 1,182	\$ 1,206	\$ 1,230	\$ 1,255
53250 Fuel												
7800002	Administration	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7800003	Safety, Training & Fleet Maint.	2	\$ 1,200	\$ 1,224	\$ 1,249	\$ 1,273	\$ 1,299	\$ 1,325	\$ 1,351	\$ 1,378	\$ 1,406	\$ 1,434
7803000	Plant Operations	2	\$ 18,300	\$ 18,665	\$ 19,040	\$ 19,421	\$ 19,808	\$ 20,204	\$ 20,607	\$ 21,019	\$ 21,440	\$ 21,870
7803001	Plant Maintenance	2	\$ 21,900	\$ 22,337	\$ 22,785	\$ 23,241	\$ 23,704	\$ 24,179	\$ 24,660	\$ 25,153	\$ 25,658	\$ 26,172
7803002	Plant Laboratory	2	\$ 200	\$ 204	\$ 208	\$ 212	\$ 216	\$ 221	\$ 225	\$ 230	\$ 234	\$ 239
7804000	Engineering	2	\$ 4,300	\$ 4,386	\$ 4,474	\$ 4,563	\$ 4,654	\$ 4,747	\$ 4,842	\$ 4,939	\$ 5,038	\$ 5,139
7805000	Collection System Maintenance	2	\$ 55,000	\$ 56,098	\$ 57,223	\$ 58,368	\$ 59,531	\$ 60,722	\$ 61,932	\$ 63,171	\$ 64,437	\$ 65,729
7806000	Water & Biosolids Reclamation	2	\$ 23,300	\$ 23,765	\$ 24,242	\$ 24,727	\$ 25,219	\$ 25,724	\$ 26,237	\$ 26,761	\$ 27,298	\$ 27,845
53300 Clothing and Personal Supplies												
7800002	Administration	2	\$ 1,500	\$ 1,530	\$ 1,561	\$ 1,592	\$ 1,624	\$ 1,656	\$ 1,689	\$ 1,723	\$ 1,757	\$ 1,793
7800003	Safety, Training & Fleet Maint.	2	\$ 1,050	\$ 1,071	\$ 1,092	\$ 1,114	\$ 1,137	\$ 1,159	\$ 1,182	\$ 1,206	\$ 1,230	\$ 1,255
7800004	Pollution Prevention	2	\$ 500	\$ 510	\$ 520	\$ 531	\$ 541	\$ 552	\$ 563	\$ 574	\$ 586	\$ 598
7803000	Plant Operations	2	\$ 5,850	\$ 5,967	\$ 6,086	\$ 6,208	\$ 6,332	\$ 6,459	\$ 6,587	\$ 6,719	\$ 6,854	\$ 6,991
7803001	Plant Maintenance	2	\$ 4,000	\$ 4,080	\$ 4,162	\$ 4,245	\$ 4,330	\$ 4,416	\$ 4,504	\$ 4,594	\$ 4,686	\$ 4,780
7803002	Plant Laboratory	2	\$ 3,050	\$ 3,111	\$ 3,173	\$ 3,237	\$ 3,301	\$ 3,367	\$ 3,434	\$ 3,503	\$ 3,573	\$ 3,645
7804000	Engineering	2	\$ 1,200	\$ 1,224	\$ 1,249	\$ 1,273	\$ 1,299	\$ 1,325	\$ 1,351	\$ 1,378	\$ 1,406	\$ 1,434
7805000	Collection System Maintenance	2	\$ 19,150	\$ 19,532	\$ 19,924	\$ 20,323	\$ 20,728	\$ 21,142	\$ 21,564	\$ 21,995	\$ 22,436	\$ 22,886
7806000	Water & Biosolids Reclamation	2	\$ 2,700	\$ 2,754	\$ 2,809	\$ 2,865	\$ 2,922	\$ 2,981	\$ 3,040	\$ 3,101	\$ 3,163	\$ 3,227
53315 Medical/Laboratory Supplies												
7803001	Plant Maintenance	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7803002	Plant Laboratory	2	\$ 71,750	\$ 73,182	\$ 74,650	\$ 76,143	\$ 77,661	\$ 79,215	\$ 80,794	\$ 82,409	\$ 84,061	\$ 85,746
Subtotal: Sewer Fund Operations			\$ 1,293,900	\$ 1,338,800	\$ 1,385,398	\$ 1,433,696	\$ 1,483,758	\$ 1,535,709	\$ 1,589,557	\$ 1,645,434	\$ 1,703,413	\$ 1,763,554

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EXHIBIT 1

Sewer Fund Operations	Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
53320 Safety Supplies											
7800002 Administration	2 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7800003 Safety, Training & Fleet Maint.	2 \$ 12,500	\$ 12,749	\$ 13,005	\$ 13,265	\$ 13,530	\$ 13,801	\$ 14,076	\$ 14,357	\$ 14,645	\$ 14,938	
7803000 Plant Operations	2 \$ 4,000	\$ 4,080	\$ 4,162	\$ 4,245	\$ 4,330	\$ 4,416	\$ 4,504	\$ 4,594	\$ 4,686	\$ 4,780	
7803001 Plant Maintenance	2 \$ 2,500	\$ 2,550	\$ 2,601	\$ 2,653	\$ 2,706	\$ 2,760	\$ 2,815	\$ 2,871	\$ 2,929	\$ 2,988	
7803002 Plant Laboratory	2 \$ 2,600	\$ 2,652	\$ 2,705	\$ 2,759	\$ 2,814	\$ 2,871	\$ 2,928	\$ 2,986	\$ 3,046	\$ 3,107	
7805000 Collection System Maintenance	2 \$ 5,100	\$ 5,202	\$ 5,306	\$ 5,412	\$ 5,520	\$ 5,631	\$ 5,743	\$ 5,858	\$ 5,975	\$ 6,095	
7806000 Water & Biosolids Reclamation	2 \$ 1,600	\$ 1,632	\$ 1,665	\$ 1,698	\$ 1,732	\$ 1,766	\$ 1,802	\$ 1,838	\$ 1,875	\$ 1,912	
53330 Janitorial Supplies											
7800002 Administration	6 \$ 3,250	\$ 3,413	\$ 3,583	\$ 3,762	\$ 3,950	\$ 4,148	\$ 4,355	\$ 4,573	\$ 4,802	\$ 5,042	
7803001 Plant Maintenance	6 \$ 11,550	\$ 12,128	\$ 12,734	\$ 13,371	\$ 14,039	\$ 14,741	\$ 15,478	\$ 16,252	\$ 17,065	\$ 17,918	
7805000 Collection System Maintenance	6 \$ 2,500	\$ 2,625	\$ 2,756	\$ 2,894	\$ 3,039	\$ 3,191	\$ 3,350	\$ 3,518	\$ 3,694	\$ 3,878	
53340 Chemicals											
7803000 Plant Operations	2 \$ 877,500	\$ 895,011	\$ 912,971	\$ 931,231	\$ 949,789	\$ 968,797	\$ 988,104	\$ 1,007,860	\$ 1,028,065	\$ 1,048,676	
7803002 Plant Laboratory	2 \$ 4,000	\$ 4,080	\$ 4,162	\$ 4,245	\$ 4,330	\$ 4,416	\$ 4,504	\$ 4,594	\$ 4,686	\$ 4,780	
7805000 Collection System Maintenance	2 \$ 50,000	\$ 50,998	\$ 52,021	\$ 53,062	\$ 54,119	\$ 55,202	\$ 56,302	\$ 57,428	\$ 58,579	\$ 59,754	
7806000 Water & Biosolids Reclamation	2 \$ 8,500	\$ 8,670	\$ 8,844	\$ 9,020	\$ 9,200	\$ 9,384	\$ 9,571	\$ 9,763	\$ 9,958	\$ 10,158	
53350 Maintenance Supplies											
7800002 Administration	2 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
7803000 Plant Operations	2 \$ 7,500	\$ 7,650	\$ 7,803	\$ 7,959	\$ 8,118	\$ 8,280	\$ 8,445	\$ 8,614	\$ 8,787	\$ 8,963	
7803001 Plant Maintenance	2 \$ 353,200	\$ 360,248	\$ 367,477	\$ 374,827	\$ 382,297	\$ 389,948	\$ 397,719	\$ 405,671	\$ 413,804	\$ 422,099	
7803002 Plant Laboratory	2 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
7805000 Collection System Maintenance	2 \$ 31,000	\$ 31,619	\$ 32,253	\$ 32,898	\$ 33,554	\$ 34,225	\$ 34,907	\$ 35,605	\$ 36,319	\$ 37,047	
7806000 Water & Biosolids Reclamation	2 \$ 20,950	\$ 21,368	\$ 21,797	\$ 22,233	\$ 22,676	\$ 23,130	\$ 23,591	\$ 24,062	\$ 24,545	\$ 25,037	
53360 Infrastructure Repair Supplies											
7803001 Plant Maintenance	2 \$ 1,000	\$ 1,020	\$ 1,040	\$ 1,061	\$ 1,082	\$ 1,104	\$ 1,126	\$ 1,149	\$ 1,172	\$ 1,195	
7805000 Collection System Maintenance	2 \$ 6,550	\$ 6,681	\$ 6,815	\$ 6,951	\$ 7,090	\$ 7,231	\$ 7,376	\$ 7,523	\$ 7,674	\$ 7,828	
7806000 Water & Biosolids Reclamation	2 \$ 4,800	\$ 4,896	\$ 4,994	\$ 5,094	\$ 5,195	\$ 5,299	\$ 5,405	\$ 5,513	\$ 5,624	\$ 5,736	
53400 Minor Equipment/Small Tools											
7800003 Safety, Training & Fleet Maint.	2 \$ 2,700	\$ 2,754	\$ 2,809	\$ 2,865	\$ 2,922	\$ 2,981	\$ 3,040	\$ 3,101	\$ 3,163	\$ 3,227	
7800004 Pollution Prevention	2 \$ 300	\$ 306	\$ 312	\$ 318	\$ 325	\$ 331	\$ 338	\$ 345	\$ 351	\$ 359	
7803000 Plant Operations	2 \$ 13,000	\$ 13,259	\$ 13,525	\$ 13,796	\$ 14,071	\$ 14,353	\$ 14,639	\$ 14,931	\$ 15,231	\$ 15,536	
7803001 Plant Maintenance	2 \$ 11,000	\$ 11,220	\$ 11,445	\$ 11,674	\$ 11,906	\$ 12,144	\$ 12,386	\$ 12,634	\$ 12,887	\$ 13,146	
7804000 Engineering	2 \$ 300	\$ 306	\$ 312	\$ 318	\$ 325	\$ 331	\$ 338	\$ 345	\$ 351	\$ 359	
7805000 Collection System Maintenance	2 \$ 11,000	\$ 11,220	\$ 11,445	\$ 11,674	\$ 11,906	\$ 12,144	\$ 12,386	\$ 12,634	\$ 12,887	\$ 13,146	
7806000 Water & Biosolids Reclamation	2 \$ 4,800	\$ 4,896	\$ 4,994	\$ 5,094	\$ 5,195	\$ 5,299	\$ 5,405	\$ 5,513	\$ 5,624	\$ 5,736	
53410 Computer Equipment/Accessories											
7800002 Administration	2 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
7800005 Non-Departmental	2 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
7803001 Plant Maintenance	2 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
7804000 Engineering	2 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
7805000 Collection System Maintenance	2 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
7806000 Water & Biosolids Reclamation	2 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
53415 Computer Software/Licensing Fees											
7800002 Administration	2 \$ 800	\$ 816	\$ 832	\$ 849	\$ 866	\$ 883	\$ 901	\$ 919	\$ 937	\$ 956	
7804000 Engineering	2 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Subtotal: Sewer Fund Operations		\$ 1,454,500	\$ 1,484,045	\$ 1,514,369	\$ 1,545,229	\$ 1,576,626	\$ 1,608,809	\$ 1,641,535	\$ 1,675,051	\$ 1,709,361	\$ 1,744,395

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Sewer Fund Operations	Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
53600 Special Department Expense											
7800003 Safety, Training & Fleet Maint.	2	\$ 1,200	\$ 1,224	\$ 1,249	\$ 1,273	\$ 1,299	\$ 1,325	\$ 1,351	\$ 1,378	\$ 1,406	\$ 1,434
7800004 Pollution Prevention	2	\$ 29,900	\$ 30,497	\$ 31,109	\$ 31,731	\$ 32,363	\$ 33,011	\$ 33,669	\$ 34,342	\$ 35,030	\$ 35,733
53635 Service Awards											
7800002 Administration	2	\$ 12,300	\$ 12,545	\$ 12,797	\$ 13,053	\$ 13,313	\$ 13,580	\$ 13,850	\$ 14,127	\$ 14,410	\$ 14,699
53650 Business Related Meals/Supplies											
7800000 Board of Directors	2	\$ 150	\$ 153	\$ 156	\$ 159	\$ 162	\$ 166	\$ 169	\$ 172	\$ 176	\$ 179
7800001 General Manager's Office	2	\$ 600	\$ 612	\$ 624	\$ 637	\$ 649	\$ 662	\$ 676	\$ 689	\$ 703	\$ 717
7800002 Administration	2	\$ 400	\$ 408	\$ 416	\$ 424	\$ 433	\$ 442	\$ 450	\$ 459	\$ 469	\$ 478
7803002 Plant Laboratory	2	\$ 150	\$ 153	\$ 156	\$ 159	\$ 162	\$ 166	\$ 169	\$ 172	\$ 176	\$ 179
7805000 Collection System Maintenance	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
53665 Wellness Reimbursement											
7800002 Administration	2	\$ 2,900	\$ 2,958	\$ 3,017	\$ 3,078	\$ 3,139	\$ 3,202	\$ 3,266	\$ 3,331	\$ 3,398	\$ 3,466
7800003 Safety, Training & Fleet Maint.	2	\$ 800	\$ 816	\$ 832	\$ 849	\$ 866	\$ 883	\$ 901	\$ 919	\$ 937	\$ 956
7803000 Plant Operations	2	\$ 1,650	\$ 1,683	\$ 1,717	\$ 1,751	\$ 1,786	\$ 1,822	\$ 1,858	\$ 1,895	\$ 1,933	\$ 1,972
7803001 Plant Maintenance	2	\$ 850	\$ 867	\$ 884	\$ 902	\$ 920	\$ 938	\$ 957	\$ 976	\$ 996	\$ 1,016
7803002 Plant Laboratory	2	\$ 1,200	\$ 1,224	\$ 1,249	\$ 1,273	\$ 1,299	\$ 1,325	\$ 1,351	\$ 1,378	\$ 1,406	\$ 1,434
7804000 Engineering	2	\$ 1,000	\$ 1,020	\$ 1,040	\$ 1,061	\$ 1,082	\$ 1,104	\$ 1,126	\$ 1,149	\$ 1,172	\$ 1,195
7805000 Collection System Maintenance	2	\$ 1,800	\$ 1,836	\$ 1,873	\$ 1,910	\$ 1,948	\$ 1,987	\$ 2,027	\$ 2,067	\$ 2,109	\$ 2,151
53670 Education Reimbursement											
7803000 Plant Operations	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54100 Principal on Bonds/COPs											
7800005 Non-Departmental	See Ex 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54310 Interest on Bonds/COPs											
7800005 Non-Departmental	See Ex 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54320 Administration on Bonds/COPs											
7800005 Non-Departmental	See Ex 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
54500 Taxes and Assessments											
7800002 Administration	1	\$ 50	\$ 50	\$ 51	\$ 51	\$ 52	\$ 52	\$ 53	\$ 53	\$ 54	\$ 54
7803000 Plant Operations	1	\$ 200	\$ 200	\$ 202	\$ 205	\$ 208	\$ 210	\$ 211	\$ 213	\$ 214	\$ 216
7806000 Water & Biosolids Reclamation	1	\$ 28,000	\$ 28,062	\$ 28,295	\$ 28,707	\$ 29,116	\$ 29,386	\$ 29,587	\$ 29,788	\$ 29,989	\$ 30,190
Subtotal: Sewer Fund Operations		\$ 83,150	\$ 84,309	\$ 85,666	\$ 87,225	\$ 88,799	\$ 90,261	\$ 91,671	\$ 93,110	\$ 94,577	\$ 96,069
Total: Sewer Fund Operations		\$ 5,776,450	\$ 5,911,533	\$ 6,050,824	\$ 6,193,786	\$ 6,340,125	\$ 6,490,578	\$ 6,644,485	\$ 6,802,798	\$ 6,965,594	\$ 7,132,722
Grand Total: Sewer Fund		\$ 14,830,650	\$ 15,541,725	\$ 16,011,454	\$ 16,517,613	\$ 17,042,751	\$ 17,588,100	\$ 18,156,085	\$ 18,746,293	\$ 19,359,693	\$ 19,997,073

Non-Cash Items, Show for Reference Purposes:

Annual Depreciation Expense (4)		Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Sewer Collection Depreciation	2	\$ 1,043,944	\$ 1,127,876	\$ 1,150,509	\$ 1,173,519	\$ 1,196,906	\$ 1,220,859	\$ 1,245,190	\$ 1,270,086	\$ 1,295,548	\$ 1,321,521	
Sewer Treatment Plant Depreciation	2	\$ 1,949,024	\$ 1,919,649	\$ 1,958,170	\$ 1,997,334	\$ 2,037,139	\$ 2,077,907	\$ 2,119,318	\$ 2,161,691	\$ 2,205,028	\$ 2,249,233	
Wastewater Pretreatment Depreciation	2	\$ 2,200	\$ 2,200	\$ 2,245	\$ 2,290	\$ 2,335	\$ 2,382	\$ 2,429	\$ 2,478	\$ 2,528	\$ 2,578	
Treatment Plant Lab Depreciation	2	\$ 49,373	\$ 57,642	\$ 58,799	\$ 59,975	\$ 61,170	\$ 62,394	\$ 63,638	\$ 64,910	\$ 66,211	\$ 67,539	
Total: Annual Depreciation Expense		\$ 3,044,542	\$ 3,107,367	\$ 3,169,722	\$ 3,233,116	\$ 3,297,550	\$ 3,363,543	\$ 3,430,575	\$ 3,499,165	\$ 3,569,315	\$ 3,640,871	
Intrafund Transfers (4)		Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
7800005 Non-Dept. - Operating Transfers to Capital Projects	8	\$ 7,900,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Expansion Transfer to Capital Projects	8	\$ 2,998,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Debt Proceeds Transfer to Capital Projects	8	\$ 1,350,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total: Sewer Fund Operations - Operating Transfers		\$ 12,248,000	\$ -	\$ -								

FORECASTING ASSUMPTIONS:

ECONOMIC VARIABLES (5)		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
1 Customer Growth	--	0.22%	0.83%	1.46%	1.42%	0.93%	0.68%	0.68%	0.67%	0.67%	
2 General Cost Inflation	--	2.00%	2.01%	2.00%	1.99%	2.00%	1.99%	2.00%	2.00%	2.00%	
3 Labor Cost Inflation	--	3.00%	3.00%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%	
4 Health Benefits Cost Inflation	--	6.05%	6.01%	6.01%	6.07%	6.12%	6.29%	6.32%	6.36%	6.39%	
5 Retirement Benefits Cost Inflation	--	3.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	
6 Chemicals	--	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	
7 Energy	--	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	
8 Worker's Compensation	--	-23.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
9 No Escalation	--	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

1. Revenues for first 10 years are from the City's Fiscal Year 2015-16 Operating and Capital Budget & 10 Year Forecast

(files: 1 - FY 15-16 Operating and Capital Budget.pdf, 2 - FY 1516 10-Year Forecast.xlsx and 2 - FY 1516 Revenue.xlsx).

2. Expenses for FY 2015/16 are from the City's Fiscal Year 2015-16 O&M Budget Summary (file: 1 - NSD O&M Budget Summary FY 1516.xls).

Inflationary factors are applied to these expenses to project costs in 2015/16 and beyond.

3. Cost of two potential collection system workers provided from staff from CS Worker Cost.xls

4. The City's budgeted summary (Pg 12 of file: 1 - FY 15-16 Operating and Capital Budget.pdf)

and Capital Improvement Program funding is handled in Exhibit 2 (CIP). Operating Transfers were also excluded from this analysis as they do not represent actual cash expenditures.

All Operating Transfer amounts are set to zero for future years as they vary annually, with the exception of Debt Service Operating Transfers, which are equal to Debt Service payments that are to be satisfied with Wastewater Rates, excluding the Wastewater Solar Project payments (see Exhibit 3 (Debt) for detail).

5. The City's expected inflation factors from 10 year forecast. (file: 2 - FY1516 - 10-Year Forecast.xlsx, 1-Assumptions tab)

CAPITAL FUNDING SUMMARY

Funding Sources:	Projected										
	Budget	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
Use of Grants (1)	\$ 21,382,400	\$ 586,333	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Use of Capacity Fee Reserves	-	-	-	-	-	-	-	-	-	-	-
Use of SRF Loan Funding	-	-	-	-	-	-	-	-	-	-	-
Use of Revenue Bond Proceeds (2)	1,339,000	3,517,995	8,164,897	2,178,108	-	-	921,750	2,778,778	21,299,472	-	-
Use of Capital Rehabilitation and Replacement Reserve	-	-	-	-	-	-	-	-	-	263,619	2,968,059
Rate Revenue	7,738,050	6,613,399	10,537,748	11,709,593	10,515,480	8,182,697	12,521,680	10,412,158	12,022,142	14,727,731	-
Total Sources of Capital Funds	\$ 30,459,450	\$ 10,717,726	\$ 18,702,645	\$ 13,887,700	\$ 10,515,480	\$ 9,104,447	\$ 15,300,458	\$ 31,711,629	\$ 12,285,761	\$ 17,695,789	-
Uses of Capital Funds:											
Total Project Costs	\$ 30,459,450	\$ 10,717,726	\$ 18,702,645	\$ 13,887,700	\$ 10,515,480	\$ 9,104,447	\$ 15,300,458	\$ 31,711,629	\$ 12,285,761	\$ 17,695,789	-
Capital Funding Surplus (Deficiency)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
New SRF Loan Funding	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
New Revenue Bond Proceeds (3)	\$ 15,200,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 25,000,000	\$ -	\$ -	\$ -	\$ -

1. Grants are compiled from 43840-Federal Grants - USBR and 43950-Other Government Agencies in the Proposed FY 15/16 - 781 - Capital Improvement Projects - Other Government Agencies/Federal Grants - USBR;

Source: 2 - FY1516 Revenue.xlsx, tab FY14 - Rev All funds Budget Doc.- Caltrans reimbursement for capital costs associated with relocating a pipe. Confirmed by staff via email 10.05.15.

2. Debt funded projects from file: 1 - FY 15-16 Operating and Capital Budget.pdf, pgs 90-92

3. Proceeds from Sale of Bonds. Source Document File: 1 - FY 15-16 Operating and Capital Budget.pdf, pgs 90-92

NAPA SANITATION DISTRICT
WASTEWATER RATE STUDY
Capital Improvement Plan Expenditures
Draft

EXHIBIT 2

CAPITAL IMPROVEMENT PROGRAM

Capital Improvement Program Costs (in Current-Year Dollars) (1):

Project Description	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
COLLECTION SYSTEM										
13701 Mainline Sewer Rehab	\$ 84,900	\$ 84,854	\$ 84,834	\$ 84,834	\$ 84,851	\$ 84,881	\$ 84,837	\$ 84,887	\$ 84,861	\$ 84,842
13702 Manhole Raising / Rehab	\$ 185,500	\$ 185,534	\$ 185,503	\$ 185,499	\$ 185,516	\$ 185,461	\$ 185,503	\$ 185,466	\$ 185,511	\$ 185,473
13703 Lateral Replacement / Rehab	\$ 69,200	\$ 69,223	\$ 69,187	\$ 69,185	\$ 69,213	\$ 69,181	\$ 69,176	\$ 69,194	\$ 69,231	\$ 69,207
13704 Cleanout Installation / Rehab	\$ 76,400	\$ 76,408	\$ 76,445	\$ 76,414	\$ 76,410	\$ 76,427	\$ 76,462	\$ 76,431	\$ 76,415	\$ 76,412
13705 I&I Reduction Program	\$ 130,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13706 Basin L - I&I Reduction Project 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13707 Basin L - I&I Reduction Project 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14701 Basin L - I&I Reduction Project 4	\$ 3,600,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16701 Basin L - I&I Reduction Project 5	\$ 800,000	\$ 1,553,398	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16702 Collection System Master Plan Amendment	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Collection System Master Plan	\$ -	\$ -	\$ -	\$ -	\$ 772,471	\$ -	\$ -	\$ -	\$ -	\$ -
Collection System Asset Management Software	\$ -	\$ 97,087	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14702 North Napa 18" ACP & Soscol Ave 14" ACP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15721 ACP CIPP Lining Project #1	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
ACP CIPP Lining Project #2	\$ -	\$ 48,544	\$ 895,466	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14735 Silverado Trail Sliplining Rehab	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15701 Upper Lateral Rehab - Basin L (Pilot)	\$ 175,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16703 Cleanout Replacement - Basin L (Pilot)	\$ 10,000	\$ 19,417	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16704 Manhole Rehab - Basin L (Pilot)	\$ 10,000	\$ 48,544	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15702 Post St / Evans (from Silverado Tr to Juarez) Soscol Ave (8th to Oil Company Rd)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15719 North Napa PS Force Main Abandonment	\$ -	\$ -	\$ -	\$ 190,027	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15703 Sarco Creek Pipeline Replacement - Caltrans	\$ 82,400	\$ 566,505	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14703 Browns Valley Trunk	\$ 1,339,000	\$ 3,399,029	\$ 7,622,019	\$ 2,059,984	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Napa Pipe Collection System Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15704 Siphon Rehabilitation #1 - Atlas Peak	\$ 5,000	\$ 72,136	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16705 Siphon Rehabilitation #2 - S. Terrace	\$ 5,000	\$ 154,466	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siphon Rehabilitation #3 - Milliken Creek	\$ -	\$ 4,854	\$ 108,116	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siphon Rehabilitation #4 - Solano Ave	\$ -	\$ 4,854	\$ 108,116	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sewer Main Rehab/Replacement	\$ -	\$ -	\$ 1,750,024	\$ 3,500,051	\$ 3,499,928	\$ 3,499,949	\$ 3,500,014	\$ 3,295,053	\$ 3,294,994	\$ 3,295,055
COLLECTION SYSTEM - EQUIPMENT										
CCTV Transporter Replacement	\$ -	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lateral Jetter Replacement	\$ -	\$ -	\$ -	\$ 9,426	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16706 Locatable Mini-Camera #1 Replacement	\$ 10,300	\$ -	\$ 10,274	\$ -	\$ 10,306	\$ -	\$ 10,301	\$ -	\$ 10,262	\$ -
Eel Replacement #1	\$ -	\$ 5,146	\$ -	\$ -	\$ 5,153	\$ -	\$ -	\$ 5,122	\$ -	\$ -
Vehicle A Replacements	\$ -	\$ 44,563	\$ 841,455	\$ 36,880	\$ 224,343	\$ 120,938	\$ 1,071,226	\$ 54,233	\$ 320,974	\$ 92,047
LIFT STATIONS										
13733 West Napa Odor Control	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16707 West Napa PS - Long Term Planning Study	\$ 75,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14705 Main - West Napa Channel Gate Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Main - Stonecrest Pump Rebuild	\$ -	\$ -	\$ -	\$ 41,181	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Main - West Napa Pump Rebuild	\$ -	\$ -	\$ -	\$ 128,120	\$ -	\$ 60,383	\$ -	\$ -	\$ -	\$ -
Lift Station Equipment Renewal & Replacement	\$ -	\$ -	\$ -	\$ -	\$ 35,539	\$ 35,539	\$ 35,509	\$ 35,532	\$ 35,523	\$ 35,562
Subtotal: Capital Improvement Program Costs (Current-Year \$)	\$ 7,907,700	\$ 7,449,903	\$ 13,267,886	\$ 6,964,045	\$ 4,191,260	\$ 4,132,759	\$ 5,033,029	\$ 3,805,919	\$ 4,077,772	\$ 3,838,598

Capital Improvement Program Costs (in Current-Year Dollars) (1):

Project Description	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
TREATMENT										
13713 WWTP MP - Pond Aeration	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pond Aerators - Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pond Aeration MCC - Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13714 WWTP MP - RW Expansion - Phase 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
WWTP MP - RW Expansion - Phase 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Wine Waste Receiving Station	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13745 Pond 1 Dredge	\$ -	\$ -	\$ 556,207	\$ 2,700,034	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16708 Algae to Digester with Thermal Study	\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16709 Carbon/Energy Efficiency Improvements	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
WWTP Master Plan	\$ -	\$ -	\$ -	\$ -	\$ 1,544,990	\$ -	\$ -	\$ -	\$ -	\$ -
TREATMENT - EQUIPMENT										
13715 WWTP MP - Spare Digester Mixer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13717 Digester Recirc Pumps	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13719 Ops - Area Drain & Pond 1 Isolation Valves	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13721 Spare Chemical Pump	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13735 Dual Fuel Boiler Burner	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13741 Secondary PS Pump Rebuild (3)	\$ -	\$ 36,019	\$ 36,007	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Secondary PS VFD Replacement (3)	\$ -	\$ 51,456	\$ 51,466	\$ 51,522	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13743 Residual Analyzers (Deox) Replacements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 61,839	\$ -	\$ -	\$ -	\$ -
13716 WWTP MP - Activated Sludge Diffuser Replacement	\$ -	\$ 485,437	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15707 DAFT Overflow Pumps (2) Cornell	\$ -	\$ 10,291	\$ 10,274	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3W Pipeline - Soscol PS to Plant - Rehab	\$ -	\$ 30,874	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3W Strainer	\$ -	\$ 77,282	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
WWTP MP - 3W System Improvements	\$ -	\$ 58,252	\$ 347,818	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14707 WWTP MP - Solids Handling Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15708 Turbidimeters (7) Tertiary Replacements	\$ -	\$ 11,359	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14708 Gas Compressor Cooler	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14709 Wash Pumps (2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15709 Effluent Overflow Meter	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MLE Recirculation Pumps (2) - Nutrient Opt	\$ -	\$ -	\$ 205,957	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Portable Pumps 10" (2)	\$ -	\$ 154,466	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sodium Bisulfite Tank #2	\$ -	\$ 61,845	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Ops - SBS Flash Mixers	\$ -	\$ 77,670	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Ops - RAS System Flow Meter	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Ops - Emergency Generator DPFs	\$ -	\$ 48,544	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lab - Upgrade Project	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14712 Lab - Sampler 3740 Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14713 Lab - Sampler 3710FR Replacement	\$ 6,300	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,782	\$ 12,473
Lab - Lab Grade Dishwasher Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,427
Lab - Refrigerator/Freezer Replacement	\$ -	\$ -	\$ -	\$ -	\$ 5,033	\$ -	\$ -	\$ -	\$ -	\$ -
15710 Lab - Amperometric Titrator Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lab - Bioassay System Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lab - Microscope Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,996	\$ -	\$ -	\$ -	\$ -
14731 Lab - Balance Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lab - Autoclave Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,944	\$ -
Lab - UV Spectrophotometer Replacement	\$ -	\$ -	\$ 9,426	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lab - BOD Incubator Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,022	\$ -	\$ -	\$ -
Lab - Sampler 4700 Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,782	\$ 12,473	\$ -
Lab - Centrifuge Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,098	\$ -
Lab - ICP OES	\$ -	\$ -	\$ 103,026	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16711 Lab - Waterbath	\$ 5,200	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,427
Subtotal: Capital Improvement Program Costs (Current-Year \$)	\$ 171,500	\$ 1,103,495	\$ 1,320,181	\$ 2,756,590	\$ 1,624,510	\$ 8,022	\$ 386,248	\$ 1,819,617	\$ 24,945	\$ 9,427

Capital Improvement Program Costs (in Current-Year Dollars) (1):

Project Description	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Lab - FIA IC Unit	\$ -	\$ -	\$ -	\$ -	\$ 92,669	\$ -	\$ -	\$ -	\$ -	\$ -
Lab - Chlorophyll A Analyzer - Pond Water	\$ -	\$ 5,146	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14718 Main - Stationary Gas Detector Replacement	\$ 50,000	\$ -	\$ 84,854	\$ 84,834	\$ 84,834	\$ -	\$ 84,881	\$ -	\$ 84,887	\$ 84,842
14718 Main - Rotork Actuator Replacement	\$ -	\$ 84,854	\$ 84,834	\$ 84,834	\$ -	\$ 84,881	\$ -	\$ 84,887	\$ -	\$ 84,842
15712 Main - Rehab Pond 1 Storage Structure	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14720 Main - Belt Press Polymer Skid Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Main - Septage Pump & Motor Replacement	\$ -	\$ -	\$ 24,979	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Main - Septage Card Reader Replacement	\$ -	\$ -	\$ 19,983	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16712 Main - Primary Clarifier Mech/Struct Rehabilitation	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 150,957	\$ 146,560	\$ -	\$ -	\$ -
Main - Secondary Clarifier Mech/Struct Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 150,957	\$ 146,560	\$ -	\$ -	\$ -
Main - Floc Clarifier Recoating	\$ -	\$ -	\$ 103,026	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Main - Digester Sludge Feed Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14732 Main - TWAS Pump Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15713 Main - Aeration Basin Instrumentation and Control	\$ -	\$ 48,544	\$ 47,130	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Main - Polymer Tanks (3) replacement	\$ -	\$ -	\$ 141,389	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16713 Main - Buried Metalic Piping (eval/rehab)	\$ 10,000	\$ 97,087	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Main - 12kV Redundant Line (to RW sta)	\$ -	\$ 48,544	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16714 Main - High Voltage System Repairs	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16715 Main - Cogen Bottom End Overhaul	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Vehicle B Replacement	\$ -	\$ -	\$ 146,197	\$ 36,880	\$ 48,600	\$ -	\$ 154,265	\$ 289,054	\$ -	\$ 32,803
TREATMENT - STRUCTURES										
13724 WWTP MP - IPS Expansion	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14736 36" Primary & Headworks Manholes Rehab	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
WWTP MP - Headworks Improvements	\$ -	\$ 71,650	\$ 208,691	\$ 1,080,508	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
WWTP MP - Primary Treatment Improvements	\$ -	\$ 17,961	\$ 62,588	\$ 270,150	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
WWTP MP - Second Digester	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 567,165	\$ 1,651,938	\$ 10,692,316	\$ -	\$ -
WWTP MP - Aeration Basin Expansion	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 208,924	\$ 608,600	\$ 3,939,266	\$ -	\$ -
Building HVAC and Lab Ventilation	\$ -	\$ -	\$ 356,113	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
WWTP Site Paving	\$ -	\$ -	\$ 4,854	\$ 249,976	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15714 WWTP MP - Pond Imp - Ph 2 - Trans Struct 2 to 4	\$ -	\$ -	\$ 9,709	\$ 194,175	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SCADA										
13737 SCADA MP Phase 4	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SCADA MP Phase 5	\$ -	\$ -	\$ -	\$ 188,519	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SCADA MP Project #1	\$ -	\$ -	\$ -	\$ -	\$ 183,028	\$ -	\$ -	\$ -	\$ -	\$ -
SCADA MP Project #2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 177,697	\$ -	\$ -	\$ -	\$ -
SCADA MP Project #3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 172,522	\$ -	\$ -	\$ -	\$ -
SCADA Backup System	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 110,297	\$ -	\$ -	\$ -
SCADA Network Security Study	\$ -	\$ -	\$ 48,544	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13725 SCADA Server Replacement	\$ -	\$ -	\$ 23,565	\$ -	\$ 14,216	\$ -	\$ 20,937	\$ -	\$ 12,631	\$ -
Subtotal: Capital Improvement Program Costs (Current-Year \$)	\$ 280,000	\$ 436,893	\$ 1,851,164	\$ 1,655,400	\$ 333,183	\$ 1,335,405	\$ 2,839,155	\$ 15,005,523	\$ 12,631	\$ 117,645

Capital Improvement Program Costs (in Current-Year Dollars) (1):

Project Description	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
RECYCLING - DISTRICT										
16716 WWTP MP - Line Recycled Water Reservoir	\$ 45,000	\$ 184,466	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Recycled Water Reservoir - Sump Pump Replacement	\$ -	\$ -	\$ 82,383	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Recycled Water Reservoir - Cover Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15717 Isolation Valve on Kirkland Line (Devlin Road)	\$ -	\$ 47,767	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Third Recycled Water Reservoir	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 308,975	\$ 3,089,985	\$ -
Kirkland Recycled Water Pipeline Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ 618,032	\$ -	\$ -	\$ -	\$ -	\$ -
Jameson Solids Pad Rehabilitation	\$ -	\$ -	\$ 30,917	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Jameson PS VFD	\$ -	\$ 61,845	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Jameson Sprinkler Replacement - Field A	\$ -	\$ -	\$ 75,408	\$ 73,211	\$ 71,079	\$ 69,009	\$ 66,999	\$ -	\$ -	\$ -
Equipment/Rehabs	\$ -	\$ -	\$ 164,954	\$ -	\$ 177,697	\$ -	\$ 188,434	\$ -	\$ 197,352	\$ -
Soscol RW Pump Replacement	\$ -	\$ -	\$ -	\$ 137,271	\$ -	\$ 129,391	\$ -	\$ 121,964	\$ -	\$ -
Pull Flail Chopper Replacement	\$ -	\$ 30,971	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Vehicle C Replacement	\$ -	\$ 309,903	\$ 282,590	\$ 59,393	\$ 93,913	\$ 41,233	\$ 41,037	\$ -	\$ 78,467	\$ 57,098
RECYCLING - EXPANSION										
13727 North Bay Water Reuse Project	\$ 524,550	\$ 509,272	\$ 141,389	\$ 137,271	\$ 133,273	\$ 129,391	\$ 125,623	\$ 121,964	\$ 118,411	\$ 114,963
13738 MST RW Pipeline Planning & Engineering	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14726 MST RW Pipeline Construction	\$ 4,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14733 LCWD RW Pipeline Planning & Engineering	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15718 LCWD RW Pipeline Construction	\$ 15,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14727 Split N/S Lines, surge protection	\$ 2,300,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
RW Pump Station Upgrade	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,999,961	\$ -	\$ -
OTHER										
13729 Development Technical Support	\$ 220,700	\$ 220,777	\$ 220,756	\$ 220,732	\$ 220,700	\$ 220,742	\$ 220,761	\$ 220,754	\$ 220,719	\$ 220,728
13730 Office/Corp Yard Relocation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16717 Admin/Engineering Bldg - Acoustic Improvements	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Solar Purchase Buy Out	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,999,996	\$ -	\$ -	\$ -
Generator / Micro Fuel Cell	\$ -	\$ -	\$ -	\$ 500,033	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Vehicle D Replacement	\$ -	\$ -	\$ 21,491	\$ 21,963	\$ 44,247	\$ -	\$ -	\$ 26,995	\$ 66,784	\$ -
Subtotal: Capital Improvement Program Costs (Current-Year \$)	\$ 22,100,250	\$ 1,365,000	\$ 1,019,889	\$ 1,149,875	\$ 1,358,941	\$ 589,766	\$ 2,642,849	\$ 2,800,612	\$ 3,771,718	\$ 392,789
I&I & R&R - Add'l \$1.9 mil per year above current CIP (3)	\$ -	\$ -	\$ -	\$ -	\$ 1,655,740	\$ 1,599,749	\$ 1,545,651	\$ 1,493,383	\$ 1,442,882	\$ 1,394,089
Future Unplanned CIP Projects (4)										\$ 7,231,401
Grand Total: Capital Improvement Program Costs (Current-Year)	\$ 30,459,450	\$ 10,355,291	\$ 17,459,120	\$ 12,525,910	\$ 9,163,633	\$ 7,665,700	\$ 12,446,933	\$ 24,925,054	\$ 9,329,949	\$ 12,983,949

Capital Improvement Program Costs (in Future-Year \$'s) (2):

Project Description	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
COLLECTION SYSTEM										
13701 Mainline Sewer Rehab	\$ 84,900	\$ 87,824	\$ 90,876	\$ 94,057	\$ 97,368	\$ 100,812	\$ 104,287	\$ 108,000	\$ 111,746	\$ 115,631
13702 Manhole Raising / Rehab	\$ 185,500	\$ 192,028	\$ 198,715	\$ 205,666	\$ 212,884	\$ 220,269	\$ 228,030	\$ 235,965	\$ 244,283	\$ 252,780
13703 Lateral Replacement / Rehab	\$ 69,200	\$ 71,646	\$ 74,114	\$ 76,706	\$ 79,424	\$ 82,166	\$ 85,035	\$ 88,034	\$ 91,164	\$ 94,323
13704 Cleanout Installation / Rehab	\$ 76,400	\$ 79,082	\$ 81,889	\$ 84,722	\$ 87,682	\$ 90,771	\$ 93,992	\$ 97,241	\$ 100,624	\$ 104,141
13705 I&I Reduction Program	\$ 130,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13706 Basin L - I&I Reduction Project 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13707 Basin L - I&I Reduction Project 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14701 Basin L - I&I Reduction Project 4	\$ 3,600,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16701 Basin L - I&I Reduction Project 5	\$ 800,000	\$ 1,607,767	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16702 Collection System Master Plan Amendment	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Collection System Master Plan	\$ -	\$ -	\$ -	\$ 856,452	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Collection System Asset Management Software	\$ -	\$ 100,485	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14702 North Napa 18" ACP & Soscol Ave 14" ACP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15721 ACP CIPP Lining Project #1	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
ACP CIPP Lining Project #2	\$ -	\$ 50,243	\$ 959,246	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14735 Silverado Trail Sliplining Rehab	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15701 Upper Lateral Rehab - Basin L (Pilot)	\$ 175,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16703 Cleanout Replacement - Basin L (Pilot)	\$ 10,000	\$ 20,097	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16704 Manhole Rehab - Basin L (Pilot)	\$ 10,000	\$ 50,243	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15702 Post St / Evans (from Silverado Tr to Juarez)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Soscol Ave (8th to Oil Company Rd)	\$ -	\$ 1,030,177	\$ 1,420,895	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15719 North Napa PS Force Main Abandonment	\$ -	\$ -	\$ 203,562	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15703 Sarcos Creek Pipeline Replacement - Caltrans	\$ 82,400	\$ 586,333	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14703 Browns Valley Trunk	\$ 1,339,000	\$ 3,517,995	\$ 8,164,897	\$ 2,283,941	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Napa Pipe Collection System Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15704 Siphon Rehabilitation #1 - Atlas Peak	\$ 5,000	\$ 74,661	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16705 Siphon Rehabilitation #2 - S. Terrace	\$ 5,000	\$ 159,872	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siphon Rehabilitation #3 - Milliken Creek	\$ -	\$ 5,024	\$ 115,816	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siphon Rehabilitation #4 - Solano Ave	\$ -	\$ 5,024	\$ 115,816	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sewer Main Rehab/Replacement Rollup	\$ -	\$ -	\$ 1,874,669	\$ 3,880,569	\$ 4,016,248	\$ 4,156,841	\$ 4,302,411	\$ 4,192,228	\$ 4,338,878	\$ 4,490,822
COLLECTION SYSTEM - EQUIPMENT										
CCTV Transporter Replacement	\$ -	\$ 20,700	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lateral Jetter Replacement	\$ -	\$ -	\$ -	\$ 10,451	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16706 Locatable Mini-Camera #1 Replacement Rollup	\$ 10,300	\$ -	\$ 11,006	\$ -	\$ 11,827	\$ -	\$ 12,663	\$ -	\$ 13,514	\$ -
Eel Replacement #1 Rollup	\$ -	\$ 5,326	\$ -	\$ -	\$ 5,913	\$ -	\$ -	\$ 6,517	\$ -	\$ -
13711 Vehicle Rollup	\$ -	\$ 46,123	\$ 901,388	\$ 40,890	\$ 257,439	\$ 143,636	\$ 1,316,810	\$ 69,000	\$ 422,661	\$ 125,450
LIFT STATIONS										
13733 West Napa Odor Control	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16707 West Napa PS - Long Term Planning Study	\$ 75,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14705 Main - West Napa Channel Gate Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Main - Stonecrest Pump Rebuild	\$ -	\$ -	\$ -	\$ 45,659	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Main - West Napa Pump Rebuild	\$ -	\$ -	\$ -	\$ 142,049	\$ -	\$ 71,716	\$ -	\$ -	\$ -	\$ -
Lift Station Equipment Renewal & Replacement Rollup	\$ -	\$ -	\$ -	\$ -	\$ 40,782	\$ 42,210	\$ 43,650	\$ 45,207	\$ 46,778	\$ 48,467
Subtotal: Capital Improvement Program Costs (Future-Year \$'S)	\$ 7,907,700	\$ 7,710,650	\$ 14,212,891	\$ 7,721,161	\$ 4,809,567	\$ 4,908,421	\$ 6,186,878	\$ 4,842,191	\$ 5,369,647	\$ 5,231,615

NAPA SANITATION DISTRICT
 WASTEWATER RATE STUDY
 Capital Improvement Plan Expenditures
Draft

EXHIBIT 2

Capital Improvement Program Costs (*in Future-Year \$'s*) (2):

Project Description	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
TREATMENT										
13713 WWTP MP - Pond Aeration	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pond Aerators - Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pond Aeration MCC - Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13714 WWTP MP - RW Expansion - Phase 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
WWTP MP - RW Expansion - Phase 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Wine Waste Receiving Station	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13745 Pond 1 Dredge	\$ -	\$ -	\$ 595,823	\$ 2,993,576	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16708 Algae to Digester with Thermal Study	\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16709 Carbon/Energy Efficiency Improvements	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
WWTP Master Plan	\$ -	\$ -	\$ -	\$ -	\$ 1,772,912	\$ -	\$ -	\$ -	\$ -	\$ -
TREATMENT - EQUIPMENT										
13715 WWTP MP - Spare Digester Mixer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Digester Recirc Pumps	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13719 Ops - Area Drain & Pond 1 Isolation Valves	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13721 Spare Chemical Pump	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13735 Dual Fuel Boiler Burner	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13741 Secondary PS Pump Rebuild (3)	\$ -	\$ 37,280	\$ 38,572	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Secondary PS VFD Replacement (3)	\$ -	\$ 53,257	\$ 55,131	\$ 57,124	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13743 Residual Analyzers (Deox) Replacements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13716 WWTP MP - Activated Sludge Diffuser Replacement	\$ -	\$ 502,427	\$ -	\$ -	\$ -	\$ 70,961	\$ -	\$ -	\$ -	\$ -
15707 DAFT Overflow Pumps (2) Cornell	\$ -	\$ 10,651	\$ 11,006	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3W Pipeline - Soscol PS to Plant - Rehab	\$ -	\$ 31,954	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3W Strainer	\$ -	\$ 79,986	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
WWTP MP - 3W System Improvements	\$ -	\$ 60,291	\$ 372,591	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14707 WWTP MP - Solids Handling Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15708 Turbidimeters (7) Tertiary Replacements	\$ -	\$ 11,757	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14708 Gas Compressor Cooler	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14709 Wash Pumps (2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15709 Effluent Overflow Meter	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MLE Recirculation Pumps (2) - Nutrient Opt	\$ -	\$ -	\$ 220,627	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Portable Pumps 10" (2)	\$ -	\$ 159,872	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sodium Bisulfite Tank #2	\$ -	\$ 64,009	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Ops - SBS Flash Mixers	\$ -	\$ 80,388	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Ops - RAS System Flow Meter	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Ops - Emergency Generator DPFs	\$ -	\$ 50,243	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lab - Upgrade Project	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14712 Lab - Sampler 3740 Replacement	\$ 6,300	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14713 Lab - Sampler 3710FR Replacement Rollup	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 23,896	\$ 16,424
Lab - Lab Grade Dishwasher Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,848
Lab - Refrigerator/Freezer Replacement	\$ -	\$ -	\$ -	\$ -	\$ 5,580	\$ -	\$ -	\$ -	\$ -	\$ -
15710 Lab - Amperometric Titrator Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lab - Bioassay System Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14731 Lab - Microscope Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,176	\$ -	\$ -	\$ -	\$ -
Lab - Balance Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lab - Autoclave Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 11,379	\$ -
Lab - UV Spectrophotometer Replacement	\$ -	\$ -	\$ 10,097	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lab - BOD Incubator Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,528	\$ -	\$ 23,896	\$ 16,424
Lab - Sampler 4700 Replacement Rollup	\$ -	\$ -	\$ 110,364	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lab - Centrifuge Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,759	\$ -
Lab - ICP OES	\$ 5,200	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16711 Lab - Waterbath	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal: Capital Improvement Program Costs (Future-Year \$'S)	\$ 171,500	\$ 1,142,117	\$ 1,414,211	\$ 3,056,280	\$ 1,864,162	\$ 9,528	\$ 474,797	\$ 2,315,062	\$ 32,848	\$ 12,848

NAPA SANITATION DISTRICT
WASTEWATER RATE STUDY
Capital Improvement Plan Expenditures
Draft

EXHIBIT 2

Capital Improvement Program Costs (in Future-Year \$'s) (2):

Project Description	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Lab - FIA IC Unit	\$ -	\$ -	\$ -	\$ -	\$ 106,340	\$ -	\$ -	\$ -	\$ -	\$ -
Lab - Chlorophyll A Analyzer - Pond Water	\$ -	\$ 5,326	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14718 Main - Stationary Gas Detector Replacement	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 108,000	\$ -	\$ 115,631
14718 Main - Rotork Actuator Replacement Rollup	\$ -	\$ 87,824	\$ 90,876	\$ 94,057	\$ -	\$ 100,812	\$ -	\$ -	\$ -	\$ -
15712 Main - Rehab Pond 1 Storage Structure	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14720 Main - Belt Press Polymer Skid Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Main - Septage Pump & Motor Replacement	\$ -	\$ -	\$ 26,758	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Main - Septage Card Reader Replacement	\$ -	\$ -	\$ 21,406	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16712 Main - Primary Clarifier Mech/Struct Rehabilitation	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 179,289	\$ 180,159	\$ -	\$ -	\$ -
Main - Secondary Clarifier Mech/Struct Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 179,289	\$ 180,159	\$ -	\$ -	\$ -
Main - Flocc Clarifier Recoating	\$ -	\$ -	\$ 110,364	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Main - Digester Sludge Feed Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14732 Main - TWAS Pump Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15713 Main - Aeration Basin Instrumentation and Control	\$ -	\$ 50,243	\$ 50,487	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Main - Polymer Tanks (3) replacement	\$ -	\$ -	\$ 151,460	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16713 Main - Buried Metalic Piping (eval/rehab)	\$ 10,000	\$ 100,485	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Main - 12kV Redundant Line (to RW sta)	\$ -	\$ 50,243	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16714 Main - High Voltage System Repairs	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16715 Main - Cogen Bottom End Overhaul	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13722 Vehicle B Rollup	\$ -	\$ -	\$ 156,609	\$ 40,890	\$ 55,770	\$ -	\$ 189,631	\$ 367,757	\$ -	\$ 44,707
TREATMENT - STRUCTURES										
13724 WWTP MP - IPS Expansion	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14736 36" Primary & Headworks Manholes Rehab	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
WWTP MP - Headworks Improvements	\$ -	\$ -	\$ 74,158	\$ 223,555	\$ 1,197,978	\$ -	\$ -	\$ -	\$ -	\$ -
WWTP MP - Primary Treatment Improvements	\$ -	\$ -	\$ 18,590	\$ 67,046	\$ 299,520	\$ -	\$ -	\$ -	\$ -	\$ -
WWTP MP - Second Digester	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 673,614	\$ 2,030,653	\$ 13,603,612	\$ -
WWTP MP - Aeration Basin Expansion	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 248,136	\$ 748,125	\$ 5,011,846	\$ -
Building HVAC and Lab Ventilation	\$ -	\$ -	\$ -	\$ 381,477	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
WWTP Site Paving	\$ -	\$ -	\$ 5,024	\$ 267,781	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15714 WWTP MP - Pond Imp - Ph 2 - Trans Struct 2 to 4	\$ -	\$ -	\$ 10,049	\$ 208,005	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SCADA										
13737 SCADA MP Phase 4	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SCADA MP Phase 5	\$ -	\$ -	\$ -	\$ 201,946	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SCADA MP Project #1	\$ -	\$ -	\$ -	\$ -	\$ 202,927	\$ -	\$ -	\$ -	\$ -	\$ -
SCADA MP Project #2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 203,912	\$ -	\$ -	\$ -	\$ -
SCADA MP Project #3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 204,902	\$ -	\$ -	\$ -
SCADA Backup System	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 135,583	\$ -	\$ -
SCADA Network Security Study	\$ -	\$ -	\$ 50,243	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13725 SCADA Server Replacement Rollup	\$ -	\$ -	\$ -	\$ 25,243	\$ -	\$ 16,313	\$ -	\$ 25,737	\$ -	\$ 16,632
Subtotal: Capital Improvement Program Costs (Future-Year \$'S)	\$ 280,000	\$ 452,184	\$ 1,983,013	\$ 1,835,371	\$ 382,335	\$ 1,586,042	\$ 3,490,047	\$ 19,091,215	\$ 16,632	\$ 160,338

Capital Improvement Program Costs (in Future-Year \$'s) (2):

Project Description	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
RECYCLING PROJECTS FUNDED BY SEWER CUSTOMERS										
16716 WWTP MP - Line Recycled Water Reservoir	\$ 45,000	\$ 190,922	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Recycled Water Reservoir - Sump Pump Replacement	\$ -	\$ -	\$ 88,251	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Recycled Water Reservoir - Cover Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15717 Isolation Valve on Kirkland Line (Devlin Road)	\$ -	\$ 49,439	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 393,102	\$ 4,068,920
Third Recycled Water Reservoir	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Kirkland Recycled Water Pipeline Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ 709,205	\$ -	\$ -	\$ -	\$ -	\$ -
Jameson Solids Pad Rehabilitation	\$ -	\$ -	\$ 33,119	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Jameson PS VFD	\$ -	\$ 64,009	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Jameson Sprinkler Replacement - Field A Rollup	\$ -	\$ -	\$ 80,779	\$ 81,171	\$ 81,565	\$ 81,961	\$ 82,359	\$ -	\$ -	\$ -
Equipment/Rehabs Rollup	\$ -	\$ -	\$ 176,703	\$ -	\$ 203,912	\$ -	\$ 231,633	\$ -	\$ 259,875	\$ -
Soscol RW Pump Replacement Rollup	\$ -	\$ -	\$ -	\$ 152,195	\$ -	\$ 153,676	\$ -	\$ 155,172	\$ -	\$ -
Pull Flail Chopper Replacement	\$ -	\$ 32,055	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Vehicle C Rollup	\$ -	\$ 320,750	\$ 302,718	\$ 65,850	\$ 107,767	\$ 48,972	\$ 50,445	\$ -	\$ 103,326	\$ 77,819
RECYCLING - EXPANSION										
13727 North Bay Water Reuse Project	\$ 524,550	\$ 527,096	\$ 151,460	\$ 152,195	\$ 152,934	\$ 153,676	\$ 154,422	\$ 155,172	\$ 155,925	\$ 156,682
13738 MST RW Pipeline Planning & Engineering	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14726 MST RW Pipeline Construction	\$ 4,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14733 LCWD RW Pipeline Planning & Engineering	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15718 LCWD RW Pipeline Construction	\$ 15,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14727 Split N/S Lines, surge protection	\$ 2,300,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
RW Pump Station Upgrade	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,544,509	\$ -	\$ -
OTHER										
13729 Development Technical Support	\$ 220,700	\$ 228,504	\$ 236,479	\$ 244,730	\$ 253,259	\$ 262,172	\$ 271,371	\$ 280,861	\$ 290,645	\$ 300,830
13730 Office/Corp Yard Relocation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16717 Admin/Engineering Bldg - Acoustic Improvements	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Solar Purchase Buy Out	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,458,506	\$ -	\$ -	\$ -
Generator / Micro Fuel Cell	\$ -	\$ -	\$ -	\$ 554,396	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14728 Vehicle D Rollup	\$ -	\$ -	\$ 23,022	\$ 24,351	\$ 50,774	\$ -	\$ -	\$ 34,345	\$ 87,942	\$ -
Subtotal: Capital Improvement Program Costs (Future-Year \$'s)	\$ 22,100,250	\$ 1,412,775	\$ 1,092,530	\$ 1,274,888	\$ 1,559,416	\$ 700,457	\$ 3,248,736	\$ 3,563,161	\$ 4,966,633	\$ 535,331
I&I & R&R - Add'l \$1.9 mil per year above current CIP (3)	\$ -	\$ -	\$ -	\$ -	\$ 1,900,000	\$ 1,900,000	\$ 1,900,000	\$ 1,900,000	\$ 1,900,000	\$ 1,900,000
Future Unplanned CIP Projects (4)										\$ 9,855,658
Grand Total: Capital Improvement Program Costs (Future-Year \$)	\$ 30,459,450	\$ 10,717,726	\$ 18,702,645	\$ 13,887,700	\$ 10,515,480	\$ 9,104,447	\$ 15,300,458	\$ 31,711,629	\$ 12,285,761	\$ 17,695,789
<i>Inflation check</i>	0%	4%	7%	11%	15%	19%	23%	27%	32%	36%

FORECASTING ASSUMPTIONS:

Economic Variables	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Annual Construction Cost Inflation, Per Engineering News Record (2)	0.00%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Cumulative Construction Cost Multiplier from 2016	1.00	1.04	1.07	1.11	1.15	1.19	1.23	1.27	1.32	1.36

1. Capital project cost data was provided by District Staff; source file: 5 - FY1516 CIP.xlsx

2. Project costs are inflated by 3.5% per year, per client assumed estimates of construction cost inflation in source file: 2 - FY1516 - 10 - Year Forecast; tab - 1-Assumptions.xlsx

3. NBS has estimated future annual capital spending beyond FY 2024/25 to be \$12,983,949 (in present day dollars), matching the average of the FY2016/17 through FY2023/24.

4. I&I & R&R expenditures included at the recommendation of staff and the Board of Directors (approved at the 11/18/2015 board meeting).

EXISTING DEBT OBLIGATIONS		Budget	Projected								
Annual Repayment Schedules:		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
SRF SWRCB Revolving Fund Loan - 2003 - \$901,376 (1)											
Principal Payment	\$ 49,447	\$ 50,683	\$ 51,950	\$ 53,249	\$ 54,580	\$ 55,945	\$ 57,343	\$ 58,777	\$ -	\$ -	\$ -
Interest Payment	\$ 10,799	\$ 9,563	\$ 8,296	\$ 6,997	\$ 5,666	\$ 4,302	\$ 2,903	\$ 1,469	\$ -	\$ -	\$ -
Subtotal: Annual Debt Service	\$ 60,247	\$ -	\$ -	\$ -							
Coverage Requirement (\$-Amnt above annual payment) (2)	\$ 75,308	\$ 75,308	\$ 75,308	\$ 75,308	\$ 75,308	\$ 75,308	\$ 75,308	\$ 75,308	\$ -	\$ -	\$ -
Reserve Requirement (total fund balance) (3)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SRF SWRCB Revolving Fund Loan Phase I - 2008 - \$1,376,804 (1)											
Principal Payment	\$ 63,774	\$ 64,964	\$ 66,176	\$ 67,410	\$ 68,668	\$ 69,949	\$ 71,254	\$ 72,583	\$ 73,937	\$ 75,316	\$ -
Interest Payment	\$ 18,834	\$ 17,645	\$ 16,433	\$ 15,198	\$ 13,941	\$ 12,660	\$ 11,355	\$ 10,026	\$ 8,672	\$ 7,292	\$ -
Subtotal: Annual Debt Service	\$ 82,609										
Coverage Requirement (\$-Amnt above annual payment) (2)	\$ 103,261	\$ 103,261	\$ 103,261	\$ 103,261	\$ 103,261	\$ 103,261	\$ 103,261	\$ 103,261	\$ 103,261	\$ 103,261	\$ 103,261
Reserve Requirement (total fund balance) (3)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SRF SWRCB Revolving Fund Loan Phase II - 2008 - \$182,869 (1)											
Principal Payment	\$ 8,493	\$ 8,650	\$ 8,809	\$ 8,972	\$ 9,138	\$ 9,306	\$ 9,478	\$ 9,653	\$ 9,831	\$ 10,013	\$ -
Interest Payment	\$ 2,479	\$ 2,323	\$ 2,163	\$ 2,000	\$ 1,835	\$ 1,666	\$ 1,494	\$ 1,319	\$ 1,141	\$ 959	\$ -
Subtotal: Annual Debt Service	\$ 10,972										
Coverage Requirement (\$-Amnt above annual payment) (2)	\$ 13,715	\$ 13,715	\$ 13,715	\$ 13,715	\$ 13,715	\$ 13,715	\$ 13,715	\$ 13,715	\$ 13,715	\$ 13,715	\$ 13,715
Reserve Requirement (total fund balance) (3)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Refunding Revenue Certificates of Participation - Series 2009B - \$26,675,000 (1)											
Principal Payment	\$ 1,220,000	\$ 1,265,000	\$ 1,305,000	\$ 1,340,000	\$ 1,380,000	\$ 1,425,000	\$ 1,470,000	\$ 1,520,000	\$ 1,575,000	\$ 1,635,000	\$ -
Interest Payment	\$ 741,254	\$ 691,779	\$ 653,229	\$ 613,554	\$ 572,064	\$ 527,518	\$ 479,371	\$ 427,781	\$ 372,634	\$ 313,431	\$ -
Subtotal: Annual Debt Service	\$ 1,961,254	\$ 1,956,779	\$ 1,958,229	\$ 1,953,554	\$ 1,952,064	\$ 1,952,518	\$ 1,949,371	\$ 1,947,781	\$ 1,947,634	\$ 1,948,431	\$ -
Coverage Requirement (\$-Amnt above annual payment) (4)	\$ 2,451,568	\$ 2,447,786	\$ 2,447,786	\$ 2,441,943	\$ 2,440,648	\$ 2,440,648	\$ 2,436,714	\$ 2,435,539	\$ 2,435,539	\$ 2,435,539	\$ -
Reserve Requirement (total fund balance) (4)	\$ 1,961,254	\$ 1,958,229	\$ 1,958,229	\$ 1,953,554	\$ 1,952,518	\$ 1,952,518	\$ 1,949,371	\$ 1,948,431	\$ 1,948,431	\$ 1,948,431	\$ -
Revenue Certificates of Participation - Series 2012A - \$37,845,000 (1)											
Principal Payment	\$ 1,445,000	\$ 1,505,000	\$ 1,565,000	\$ 1,625,000	\$ 1,690,000	\$ 1,765,000	\$ 1,830,000	\$ 1,910,000	\$ 1,990,000	\$ 2,070,000	\$ -
Interest Payment	\$ 1,212,175	\$ 1,153,175	\$ 1,091,775	\$ 1,027,975	\$ 961,675	\$ 892,575	\$ 820,675	\$ 745,875	\$ 667,875	\$ 586,675	\$ -
Subtotal: Annual Debt Service	\$ 2,657,175	\$ 2,658,175	\$ 2,656,775	\$ 2,652,975	\$ 2,651,675	\$ 2,657,575	\$ 2,650,675	\$ 2,655,875	\$ 2,657,875	\$ 2,656,675	\$ -
Coverage Requirement (\$-Amnt above annual payment) (5)	\$ 3,322,719	\$ 3,322,719	\$ 3,322,344	\$ 3,322,344	\$ 3,322,344	\$ 3,322,344	\$ 3,322,344	\$ 3,322,344	\$ 3,322,344	\$ 3,322,344	\$ 3,322,344
Reserve Requirement (total fund balance) (5)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grand Total: Existing Annual Debt Service	\$ 4,772,256	\$ 4,768,781	\$ 4,768,831	\$ 4,760,356	\$ 4,757,566	\$ 4,763,920	\$ 4,753,873	\$ 4,757,483	\$ 4,699,090	\$ 4,698,687	\$ -
Grand Total: Existing Annual Coverage Requirement	\$ 5,966,570	\$ 5,962,789	\$ 5,962,414	\$ 5,956,570	\$ 5,955,275	\$ 5,955,275	\$ 5,951,342	\$ 5,950,167	\$ 5,874,858	\$ 5,874,858	\$ -
Grand Total: Existing Debt Reserve Target	\$ 1,961,254	\$ 1,958,229	\$ 1,958,229	\$ 1,953,554	\$ 1,952,518	\$ 1,952,518	\$ 1,949,371	\$ 1,948,431	\$ 1,948,431	\$ 1,948,431	\$ 1,948,431

1. The loans and bonds have summarized loan terms, and debt schedules in data source file: 1 - FY 15-16 Operating and Capital Budget.pdf, pgs. 98-104
2. The Net Revenue Requirement for the 2012 COP Bond is at least equal to 125% of Maximum Annual Debt Service, taking into account all Parity Debt. Source File: 8 - Series 2012A Official Statement.pdf, pg. 9.
3. The Reserve Requirement for the Bonds is \$0 according to the official website of the State Water Resources Control Board
4. The bond sets a reserve fund requirement with a minimum and maximum for this bond only. File: 8 - Series 2009B Official Statement.pdf, pg. 8, 9, A-4
5. The Net Revenue Requirement for the 2012A Bond is at least equal to 125% Parity Debt. File: 8 - Series 2012A Official Statement.pdf, pgs. 9, A-6.

NAPA SANITATION DISTRICT
WASTEWATER RATE STUDY
Projected Wastewater Rates Under Existing Rate Schedule
Draft

EXHIBIT 4

EXISTING WASTEWATER RATES (1)		Current Rates
		FY 2015/16
Residential (1)		Fixed
Per Equivalent Dwelling Unit		\$482.50
Commercial Class	Strength Factor	
Automobile Sales & Service	1	
Bakeries/Candy/Ice Cream Manufacturing	2.7	
Banks/Business Offices	1	
Bars/Nightclubs	1	
Bed and Breakfast Inns	1	
Car Wash	0.7	
Carpet & Rug Cleaners	1.4	
Churches	1	
Convalescent/Care Homes/Hospitals	1	
Daycare Facilities	0.8	
Delicatessen (No Cooking)	1.4	
Delicatessen (Cooking)	2	
Dry Type Industries	1	
Funeral Homes	2.6	
Hotels/Motels (Without Restaurants)	1	
Hotels/Motels (With Restaurants)	2	
Laundries - Commercial	1.4	
Laundries - Self Service	0.9	
Markets (With Disposals)	2.6	
Markets (Without Disposals)	1.4	
Membership Organizations (With Kitchens)	2.7	
Membership Organizations (Without Kitchens)	1	
Merchandising/Department/Retail Stores	1	
Mixed Use (1 Water Meter)	1.6	
Physicians/Medical/Dental Offices	1	
Printers/Newspapers	1	
Repair Shops/Service Stations	1	
Restaurants and Caterers	2.7	
Service Related Enterprises	1	
Theaters	1	

EXISTING WASTEWATER RATES (1)		Current Rates
		FY 2015/16
Unmetered Commercial, Public Utilities, and Public Agencies (3)		EDU per # of Students / Occupants / Employees
Elementary		48
Secondary		17
Other		10
2016 Recycled Water Rates (4)		
Peak - April through November (per 1,000 gallons)		\$1.57
Non-Peak January, February, December (per 1,000 gallons)		\$1.20
March (per 1,000 gallons)		\$1.05
Monthly Meter Charge May through October (per month)		\$31.13
Industrial (3)		SF Individually Tested
Step 1: Flow Factor Flow Factor = Average Daily Flow (in gallons)/210 gallons per day		
Step 2: Strength Factor Strength Factor = .5 + (BOD/175 mg/L x .25) + (TSS/200 mg/L x .25)		
Step 3: Calculate EDU EDU = Flow Factor x Strength Factor		

1. Rates are effective rates as of July 1, 2015, File: *Rates and Fees.pdf*, pg 1
2. Source Document File: *Strength Factors for SSC.pdf*, pg 1
3. Source Document File: *Strength Factors for SSC.pdf*, pg 2
4. Source Document File: *Rates and Fees.pdf*, pg. 5

NAPA SANITATION DISTRICT
WASTEWATER RATE STUDY
Wastewater Cost of Service Analysis
Draft

Summary of Revenue Requirements - FY 2016/17 vs. Current Rate Revenue				
Customer Class	Cost-of-Service FY 2016/17 Revenue Reqs.	Revenue from Current Rates (Current Billing Records)		
Residential				
Single Family Dwelling	10,687,935	47.5%	\$ 9,254,833	47.5%
Duplexes	885,414	3.9%	\$ 766,693	3.9%
Apartments	2,333,949	10.4%	\$ 2,021,000	10.4%
Condominiums / Townhouses	1,613,137	7.2%	\$ 1,396,838	7.2%
Mobile Home Spaces	493,135	2.2%	\$ 427,013	2.2%
Overnight Trailer Parking	33,433	0.1%	\$ 28,950	0.1%
Pool House/Rec Room	18,388	0.1%	\$ 15,923	0.1%
Apartments / S.R.O.	2,675	0.0%	\$ 2,316	0.0%
Commercial				
Commercial	6,240,501	27.7%	\$ 5,403,737	27.7%
Schools				
Elementary Schools	3,399	0.0%	\$ 2,943	0.0%
Secondary Schools	18,667	0.1%	\$ 16,164	0.1%
Industrial				
Wineries -- 11.25 SF (Strength Factor)	117,272	0.5%	\$ 101,547	0.5%
Wineries -- Measured SF	66,247	0.3%	\$ 57,364	0.3%
Total	\$ 22,514,151	100.00%	\$ 19,495,318	100.00%

NAPA SANITATION DISTRICT
 WASTEWATER RATE STUDY
 Wastewater Cost of Service Analysis/Rate Design
Draft

Current vs. Proposed Sewer Rates (Monthly)

Sewer Rate Schedule	Current Rates (1)	Recommended Sewer Rates				
		FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21
Projected Increase in Rate Revenue per Financial Plan:		15.00%	15.00%	6.00%	5.00%	4.00%
Fixed Annual Service Charge (per dwelling unit)						
Residential						
Single Family Dwelling	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Duplexes	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Apartments	\$289.50	\$332.93	\$382.86	\$405.84	\$426.13	\$443.17
Condominiums / Townhouses	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Mobile Home Spaces	\$289.50	\$332.93	\$382.86	\$405.84	\$426.13	\$443.17
Overnight Trailer Parking	\$196.94	\$226.48	\$260.45	\$276.08	\$289.88	\$301.48
Pool House/Rec Room	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Apartments / S.R.O.	\$289.50	\$332.93	\$382.86	\$405.84	\$426.13	\$443.17
Volumetric Charge (\$/76,650 gal) (2)						
Commercial						
Automobile Sales & Service	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Bakeries/Candy/Ice Cream Manufacturing	\$1,302.75	\$1,498.16	\$1,722.89	\$1,826.26	\$1,917.57	\$1,994.28
Banks/Business Offices	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Bars/Nightclubs	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Bed and Breakfast Inns	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Car Wash	\$337.75	\$388.41	\$446.67	\$473.47	\$497.15	\$517.03
Carpet & Rug Cleaners	\$675.50	\$776.83	\$893.35	\$946.95	\$994.30	\$1,034.07
Churches	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Convalescent/Care Homes/Hospitals	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Daycare Facilities	\$386.00	\$443.90	\$510.49	\$541.11	\$568.17	\$590.90
Delicatessen (No Cooking)	\$675.50	\$776.83	\$893.35	\$946.95	\$994.30	\$1,034.07
Delicatessen (Cooking)	\$965.00	\$1,109.75	\$1,276.21	\$1,352.79	\$1,420.42	\$1,477.24
Dry Type Industries	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Funeral Homes	\$1,254.50	\$1,442.68	\$1,659.08	\$1,758.62	\$1,846.55	\$1,920.41
Hotels/Motels (Without Restaurants)	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Hotels/Motels (With Restaurants)	\$965.00	\$1,109.75	\$1,276.21	\$1,352.79	\$1,420.42	\$1,477.24
Laundries - Commercial	\$675.50	\$776.83	\$893.35	\$946.95	\$994.30	\$1,034.07
Laundries - Self Service	\$434.25	\$499.39	\$574.30	\$608.75	\$639.19	\$664.76
Markets (With Disposals)	\$1,254.50	\$1,442.68	\$1,659.08	\$1,758.62	\$1,846.55	\$1,920.41
Markets (Without Disposals)	\$675.50	\$776.83	\$893.35	\$946.95	\$994.30	\$1,034.07
Membership Organizations (With Kitchens)	\$1,302.75	\$1,498.16	\$1,722.89	\$1,826.26	\$1,917.57	\$1,994.28
Membership Organizations (Without Kitchens)	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Merchandising/Department/Retail Stores	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Mixed Use (1 Water Meter)	\$772.00	\$887.80	\$1,020.97	\$1,082.23	\$1,136.34	\$1,181.79
Physicians/Medical/Dental Offices	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Printers/Newspapers	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Repair Shops/Service Stations	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Restaurants and Caterers	\$1,302.75	\$1,498.16	\$1,722.89	\$1,826.26	\$1,917.57	\$1,994.28
Service Related Enterprises	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Theaters	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Industrial						
Wineries -- 11.25 SF (Strength Factor)	\$5,428.13	\$6,242.34	\$7,178.70	\$7,609.42	\$7,989.89	\$8,309.48
Wineries -- Measured SF (3)	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62

1. Rates are as of July 1, 2015 (source: Rates and Fees.pdf)

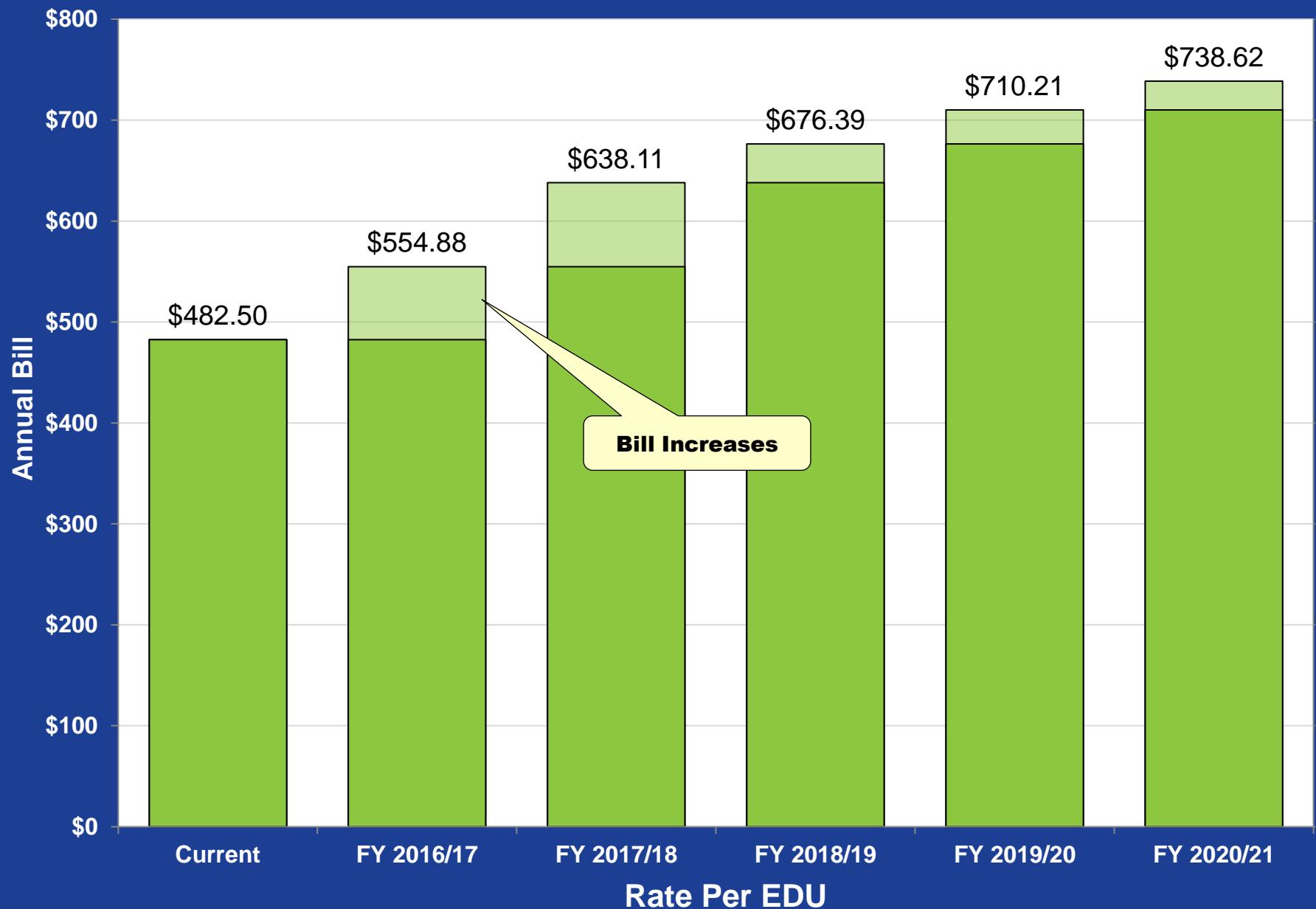
2. 76,650 gallons is the assumed indoor consumpiton for a single family home.

3. Wineries -- Measured SF, volumetric rate is modified by the monthly calculated strength factor

NAPA SANITATION DISTRICT
 WASTEWATER RATE STUDY
 Wastewater Cost of Service Analysis/Rate Design
Draft

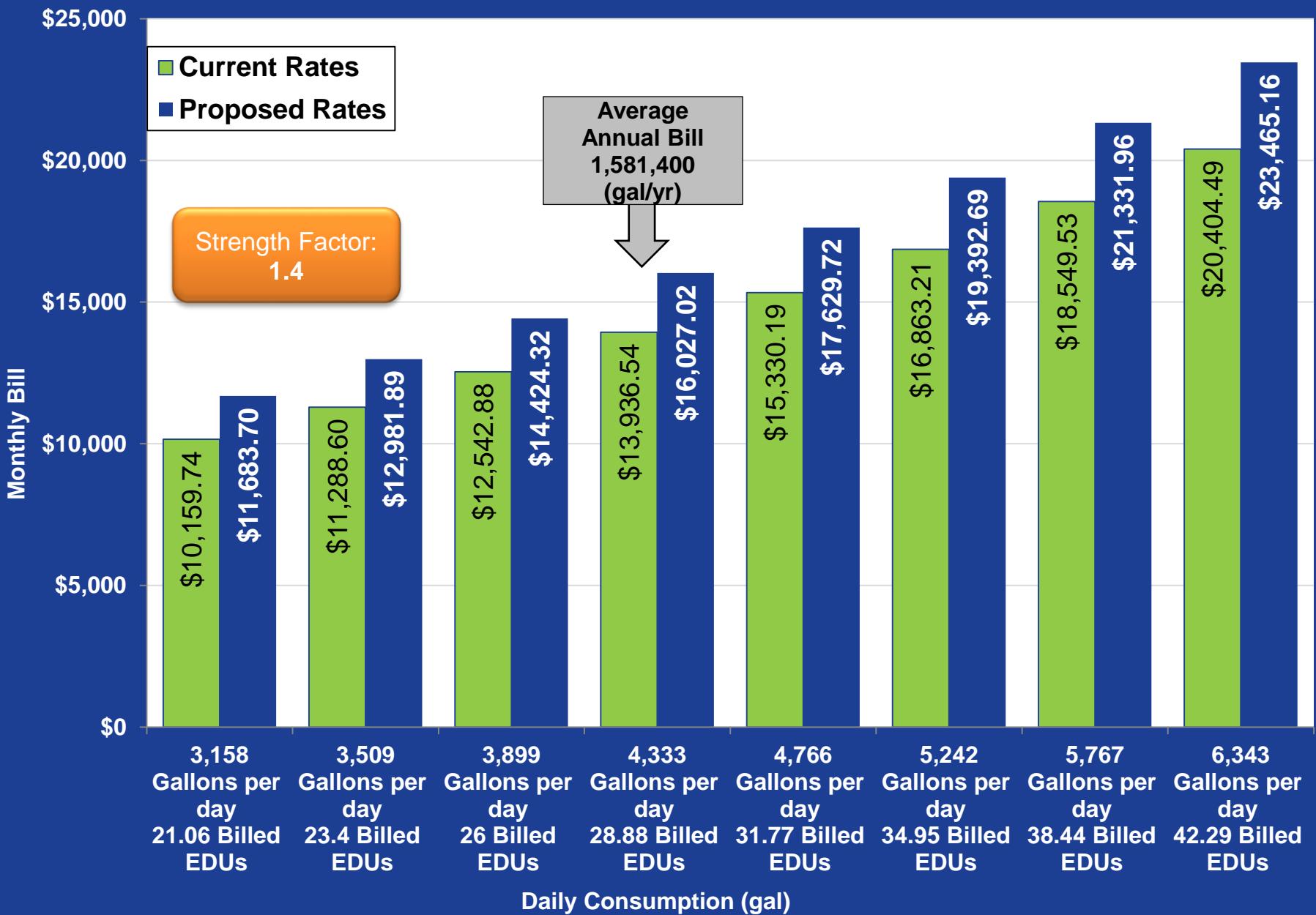
Sewer Rate Increases	Current Rates	Recommended Sewer Rates				
		FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21
<i>Projected Increase in Rate Revenue per Financial Plan:</i>		15.00%	15.00%	6.00%	5.00%	4.00%
Basic Charge (\$/EDU/Year)	\$482.50	\$554.88	\$638.11	\$676.39	\$710.21	\$738.62
Basic Charge (\$/EDU/Month)	\$40.21	\$46.24	\$53.18	\$56.37	\$59.18	\$61.55
Annual % Change	N.A.	15.0%	15.0%	6.0%	5.0%	4.0%
Cumulative % Change	N.A.	15.0%	32.3%	40.2%	47.2%	53.1%
		FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21
<i>Effective Inflation Rate</i>		2.8%	3.0%	3.2%	3.2%	3.2%
<i>Cumulative Effective Inflation Rate</i>		2.8%	5.9%	9.3%	12.7%	16.3%
<i>"Real" % Cumulative Rate Increase (less Inflation)</i>		12.2%	26.3%	30.9%	34.5%	36.7%

Residential Sewer Bill Comparison Current vs. Proposed



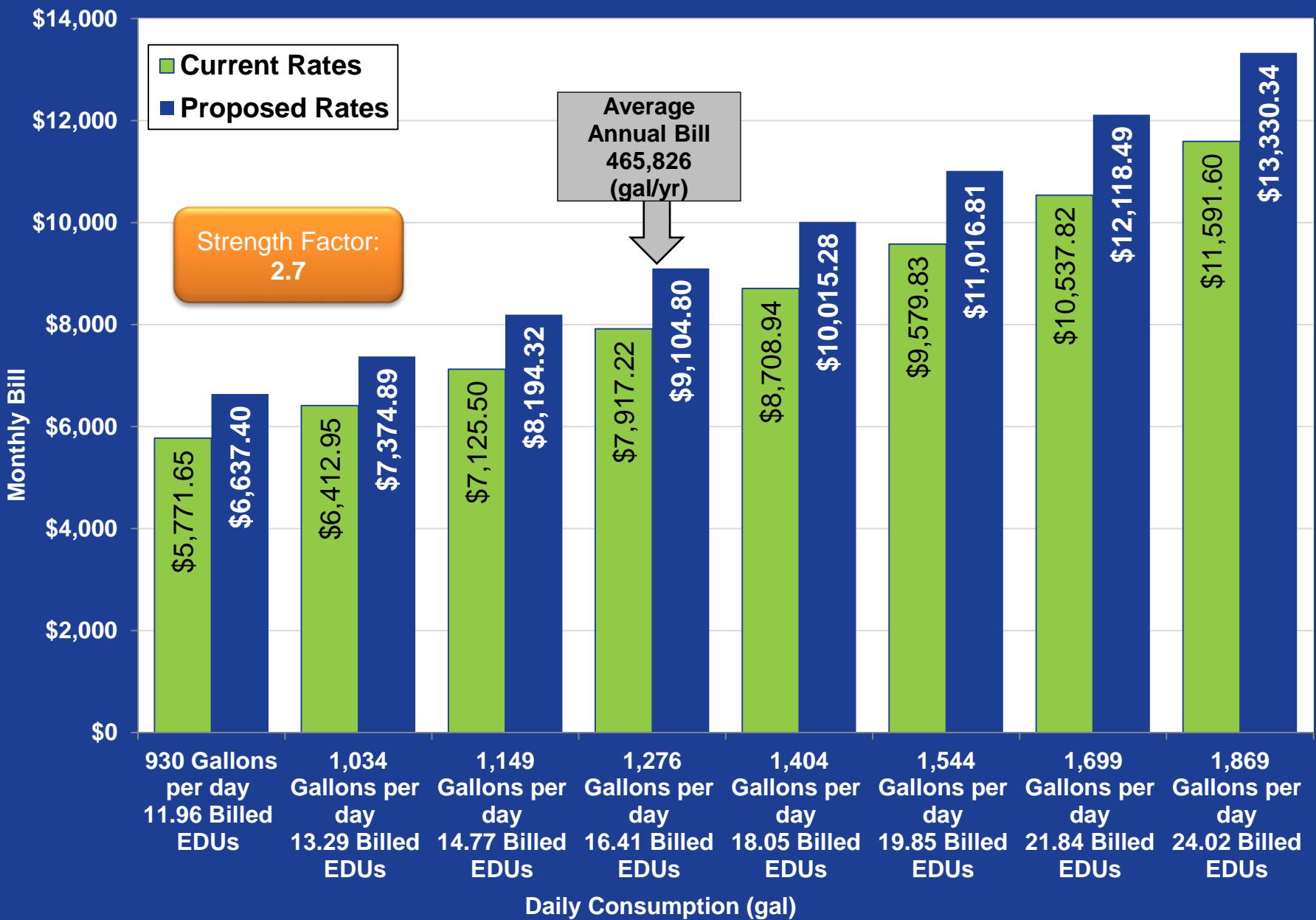
Commercial Water Bill Comparison

Current vs. Proposed 2016/17 Rates (Commercial Laundry)



Commercial Water Bill Comparison

Current vs. Proposed 2016/17 Rates (Restaurant)



Commercial Water Bill Comparison

Current vs. Proposed 2016/17 Rates (Daycare)

