

FAIRFIELD-SUISUN SEWER DISTRICT RATE & CAPACITY FEE STUDY

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TABLE OF CONTENTS

Executive Summary

Introduction	2
Rate Findings and Recommendations	2
Capacity Fee Findings and Recommendations	4

Rates

[Section 1](#)

Proposition 218.....	6
----------------------	---

[Section 2](#)

General Description of District Services	7
Current Rates	7
Historical Rate Increases.....	8

[Section 3](#)

Capital Improvement Program	11
-----------------------------------	----

[Section 4](#)

District Financial Plan.....	13
------------------------------	----

[Section 5](#)

Wastewater Flows and Loadings	19
-------------------------------------	----

[Section 6](#)

Cost Allocation	22
Proposed Rate Schedule	29

Capacity Fees

[Section 7](#)

Capacity Fee Introduction.....	30
Current Capacity Fee.....	31
Government Code.....	31
Facility Cost Valuation.....	32

[Section 8](#)

Capacity Fee Calculation	34
Proposed Capacity Fees	38
Capacity Fee Fund Financial Projections.....	39

Appendix	41
--------------------------------	----

EXECUTIVE SUMMARY

Introduction

The Fairfield-Suisun Sewer District (“District”) was established in 1951 and provides sewer collection treatment, and recycling services to more than 135,000 customers located within the City of Suisun City, and Fairfield, including Travis Air Force Base. The District customer base is largely residential, but also includes institutional, commercial, and major industrial users such as Anheuser-Busch Brewery, Ball Metal Beverage Division, and Jelly Belly Candy Company.

Bartle Wells Associates (BWA) entered into an agreement with the District in January 2016 to perform a Cost of Service and Rate Study for its sewer rates and capacity fees effective FY 2017/18. Major goals of the rate and fee study include:

- **Recover the cost of service:** The District’s facilities are dependent on sewer service charges and capacity fees to fund operating and capital expenses. The last sewer rate study was conducted in 2005. Several changes in customer demographics has occurred since, including industrial customers’ flow and loadings as brought about by several factors including changes in technology, regulations, drought, etc. Additionally, capacity fees have not been updated since 1993. This report develops rates and capacity fees to meet the District’s annual operating expenditures, address deferred maintenance, and ensure long-term financial stability.
- **Maintain the financial health of the District:** BWA’s rate recommendations meet the guidance of the Board of Directors including: (1) Maintaining operating cash reserves of at least three months of operating expenses to ensure smooth cash flow; (2) Maintaining minimum debt service coverage ratio as legally mandated; (3) Paying all debt service for system expansion from capacity fees; and (4) Building up major maintenance/replacement reserves to ensure a source of funds for major maintenance and repairs, upgrades and eventual replacement of the treatment plant and sewer system.

Rate Findings and Recommendations

BWA finds the District to be in good financial condition despite having some of the lowest rates in the region, as the District has implemented gradual rate increases over the past 10 years. BWA recommends that the District continue to implement gradual rate increases to meet rising operating costs and District financial targets over the next 5 years.

BWA developed an independent cost analysis and rate design consistent with industry standard practices. Cost were allocated to accounts and billing components based on estimated flows and loadings to the wastewater treatment plant. The updated cost allocation resulted in varying increases for each customer class over the next 5 years.

BWA proposes to maintain the District’s current rate structure consisting of fixed monthly charges for residential users, variable charges per hundred cubic foot (hcf) of water use for non-residential users, and charges based on actual flow and strength data for case-by-case users. **Chart 1** shows District current rates and BWA proposed rates and annual rate increase percentages.

**Chart 1
Fairfield-Suisun SD
Current & Proposed Sewer Rates**

Class	Units	Current	Proposed Rates					Annual % Increases
			FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	
Effective Date								
1. Residential	per dwelling unit per month	\$36.35	\$37.67	\$39.05	\$40.47	\$41.94	\$43.47	3.6%
2. Commercial								
Regular Strength	per HCF ¹ of water use	\$2.90	\$3.01	\$3.12	\$3.23	\$3.35	\$3.47	3.7%
Special Strength	per HCF ¹ of water use	\$4.88	\$5.02	\$5.17	\$5.32	\$5.48	\$5.64	2.9%
3. Industrial, Regular Strength	per HCF ¹ of water use	\$2.90	\$3.02	\$3.15	\$3.29	\$3.43	\$3.57	4.3%
4. Case-by-Case	per million gallons of flow	\$2,469.06	\$2,534.07	\$2,600.79	\$2,669.26	\$2,739.54	\$2,811.67	2.6%
Plus	per thousand pounds of BOD ²	\$351.05	\$375.82	\$402.34	\$430.73	\$461.12	\$493.66	7.1%
Plus	per thousand pounds of SS ³	\$183.48	\$188.46	\$193.57	\$198.82	\$204.21	\$209.75	2.7%
5. Large Industrial								
Anheuser-Busch	per million gallons of flow	\$2,624.84	\$2,534.07	\$2,600.79	\$2,669.26	\$2,739.54	\$2,811.67	1.4%
Plus	per thousand pounds of BOD ²	\$351.06	\$375.82	\$402.34	\$430.73	\$461.12	\$493.66	7.1%
Plus	per thousand pounds of SS ³	\$183.47	\$188.46	\$193.57	\$198.82	\$204.21	\$209.75	2.7%
6. Travis Air Force Base	per HCF ¹ of flow discharged	\$2.17	\$2.27	\$2.37	\$2.48	\$2.59	\$2.71	4.6%

1 - HCF = hundred cubic feet or approximately 748 gallons

2 - BOD = biochemical oxygen demand

3 - SS = suspended solids

Capacity Fee Findings and Recommendations

Sewer capacity fees are one-time fees charged to new or expanded connections to the District's sewer system designed to help recover the costs of infrastructure and assets benefiting new development.

BWA conducted an analysis of District existing assets and planned capital improvements and developed recommended capacity fees based on the **Buy-In + Expansion Cost Approach**. Under this approach, the capacity fee includes two components: a) a buy-in component to recover an equitable share of costs for existing facilities available to serve new development (in current dollars), plus b) an expansion component to recover the cost of capacity in future facilities needed to serve projected new development through buildout.

The District currently charges a flat fee for all residential units. Commercial customers are charged based on parcel size in acres, while case-by-case customers are charged based on number of connection units, with one connection unit equivalent to a single family residential connection.

BWA recommends the District charge all customers a flat rate based on dwelling units. Current and proposed sewer capacity fees are shown in **Chart 2**.

Chart 2
Fairfield-Suisun SD
Current & Proposed Capacity Fees

<u>Class</u>	<u>Current</u>	<u>Proposed</u> ¹
Residential		
First Unit in Each Building	\$5,943	
Each Additional Unit in the Same Building	\$3,566	
Per Equivalent Dwelling Unit*		\$6,281
Hotel, Auto Court, Motel, Rooming House, Trailer Court		
First Unit	\$5,943	
Additional Unit	\$2,971	
Per Equivalent Dwelling Unit*		\$6,281
Non Residential		
Commercial, Regular Strength (first 1/4 acre)	\$5,943	
Each additional 1/4 acre or portion thereof	\$1,486	
Commercial, Special Strength (first 1/4 acre)	\$13,372	
Each additional 1/4 acre or portion thereof	\$3,342	
Per Equivalent Dwelling Unit*		\$6,281
Case-by-Case		
Per Connection Unit	\$5,943	
Per Equivalent Dwelling Unit*		\$6,281

*Based on flow of 230 gallons per day and strength of 260 BOD (mg/l) and 220 SS (mg/l)
1 - Fees are recommended to be increased annually by the ENR CCI

SECTION 1

Proposition 218

Proposition 218, the “Right to Vote on Taxes Act”, was approved by California voters in November 1996 and is codified as Articles XIIC and XIID of the California Constitution. Proposition 218 establishes requirements for imposing any new or increasing any existing property-related fees and charges.

The District must follow the procedural requirements of Proposition 218 for all sewer rate increases. These requirements include:

1. **Noticing Requirement:** The District must mail a notice of the proposed rate increases to all affected property owners. The notice must specify the amount of the fee, the basis upon which it was calculated, the reason for the fee, and the date/time/location of a public rate hearing at which the proposed rates will be considered/adopted.
2. **Public Hearing:** The District must hold a public hearing prior to adopting the proposed rate increases. The hearing must be held not less than 45 days after the required notices are mailed.
3. **Rate Increases Subject to Majority Protest:** At the public hearing, the proposed rate increases are subject to majority protest. If more than 50% of affected property owners submit written protests against the proposed rate increases, the increases cannot be adopted.

Proposition 218 also established a number of substantive requirements that apply to sewer rates and charges, including:

1. **Cost of Service** - Revenues derived from the fee or charge cannot exceed the funds required to provide the service. In essence, fees cannot exceed the “cost of service.”
2. **Intended Purpose** - Revenues derived from the fee or charge can only be used for the purpose for which the fee was imposed.
3. **Proportional Cost Recovery** - The amount of the fee or charge levied on any customer shall not exceed the proportional cost of service attributable to that customer.
4. **Availability of Service** - No fee or charge may be imposed for a service unless that service is used by, or immediately available to, the owner of the property.
5. **General Government Services** - No fee or charge may be imposed for general governmental services where the service is available to the public at large.

Charges for water, sewer, and refuse collection are exempt from additional voting requirements of Proposition 218, provided the charges do not exceed the cost of providing service and are adopted pursuant to procedural requirements of Proposition 218.

SECTION 2

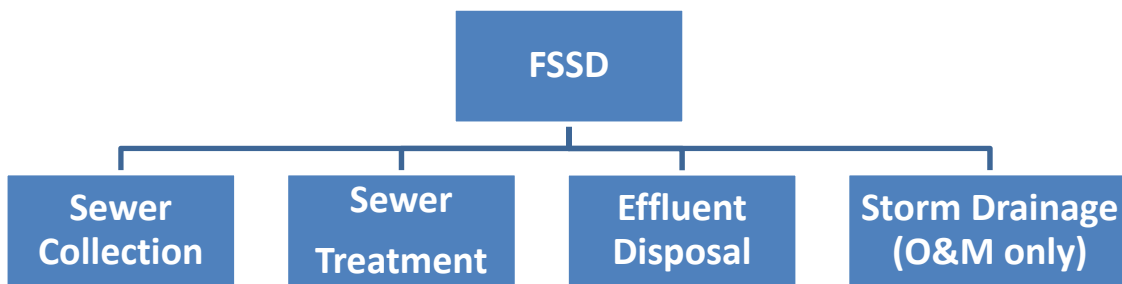
General Description of District Services

The District’s service area encompasses 48 square miles, and its facilities include 70 miles of 12-inch to 48-inch diameter sewers, 13 pumping stations and the regional wastewater treatment plant. The District owns all 12-inch and larger sewers in the service area, while the 10-inch and smaller sewers are owned by the Cities.

The treatment facilities replaced three older plants in 1976 and have been expanded to a total design capacity of 23.7 million gallons per day (mgd). Current average dry weather flow to the plant ranges from 10 to 15 mgd.

The District also maintains some storm drain assets in conjunction with the City of Fairfield and Suisun City, however the storm drain enterprise is not analyzed in this study. **Figure 1** summarizes the services the District provides.

Figure 1 – Fairfield-Suisun Sewer District Services Provided



Current Rates

Table 1 shows the District’s sewer rate structure for the current fiscal year and two previous fiscal years. Residential customers are billed a flat rate per month per equivalent dwelling unit (EDU), while commercial customers are billed based on water usage, per hundred cubic feet (hcf). Large industrial customers are billed on a case-by-case basis, with rates based on million gallons of flow and thousand pounds of loadings (biochemical oxygen demand [BOD] and suspended solids [SS]).

**Table 1
Fairfield-Suisun SD
Effective Sewer Rates**

Effective Date	FY 2014/15	FY 2015/16	FY 2016/17	
Class	Monthly Rate	Monthly Rate	Monthly Rate	Units
1. Residential	\$32.71	\$34.56	\$36.35	per dwelling unit
2. Commercial/Industrial				
Regular Strength	\$2.56	\$2.73	\$2.90	per HCF
Special Strength	\$4.52	\$4.70	\$4.88	per HCF
3. Case-by-Case	\$2,126.49	\$2,299.07	\$2,469.06	per million gallons of flow
Plus	\$329.40	\$340.41	\$351.05	per thousand pounds of BOD
Plus	\$171.85	\$177.76	\$183.48	per thousand pounds of SS
4. Large Industrial				
Anheuser-Busch	\$2,188.26	\$2,419.72	\$2,624.84	per million gallons of flow
Plus	\$329.40	\$340.42	\$351.06	per thousand pounds of BOD
Plus	\$171.85	\$177.75	\$183.47	per thousand pounds of SS discharged
Travis Airforce Base	\$2.01	\$2.09	\$2.17	per HCF of flow discharged

Historical Rate Increases

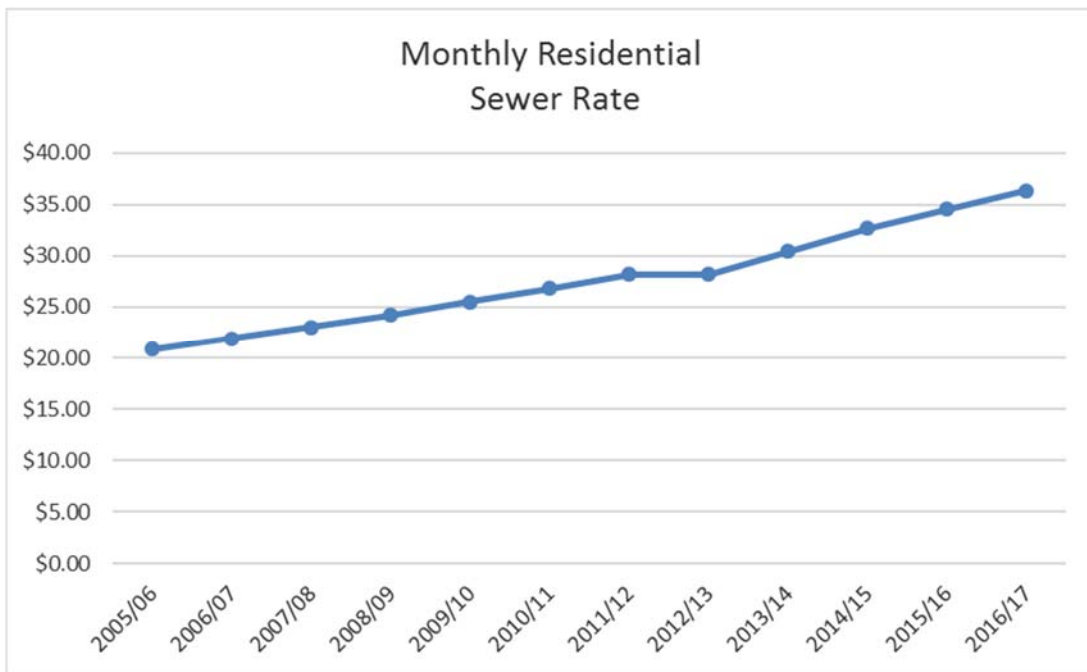
As shown in **Table 2** and **Figure 2**, the District has a consistent record of annual rate adjustments, with rate increases implemented in nine out of ten past years.

The District has implemented a final increase for FY 2016/17 under the District’s existing Proposition 218 Notice. BWA’s proposed rates are recommended to be implemented beginning in FY 2017/18.

Table 2
Fairfield-Suisun SD
Historical Residential Sewer Rates

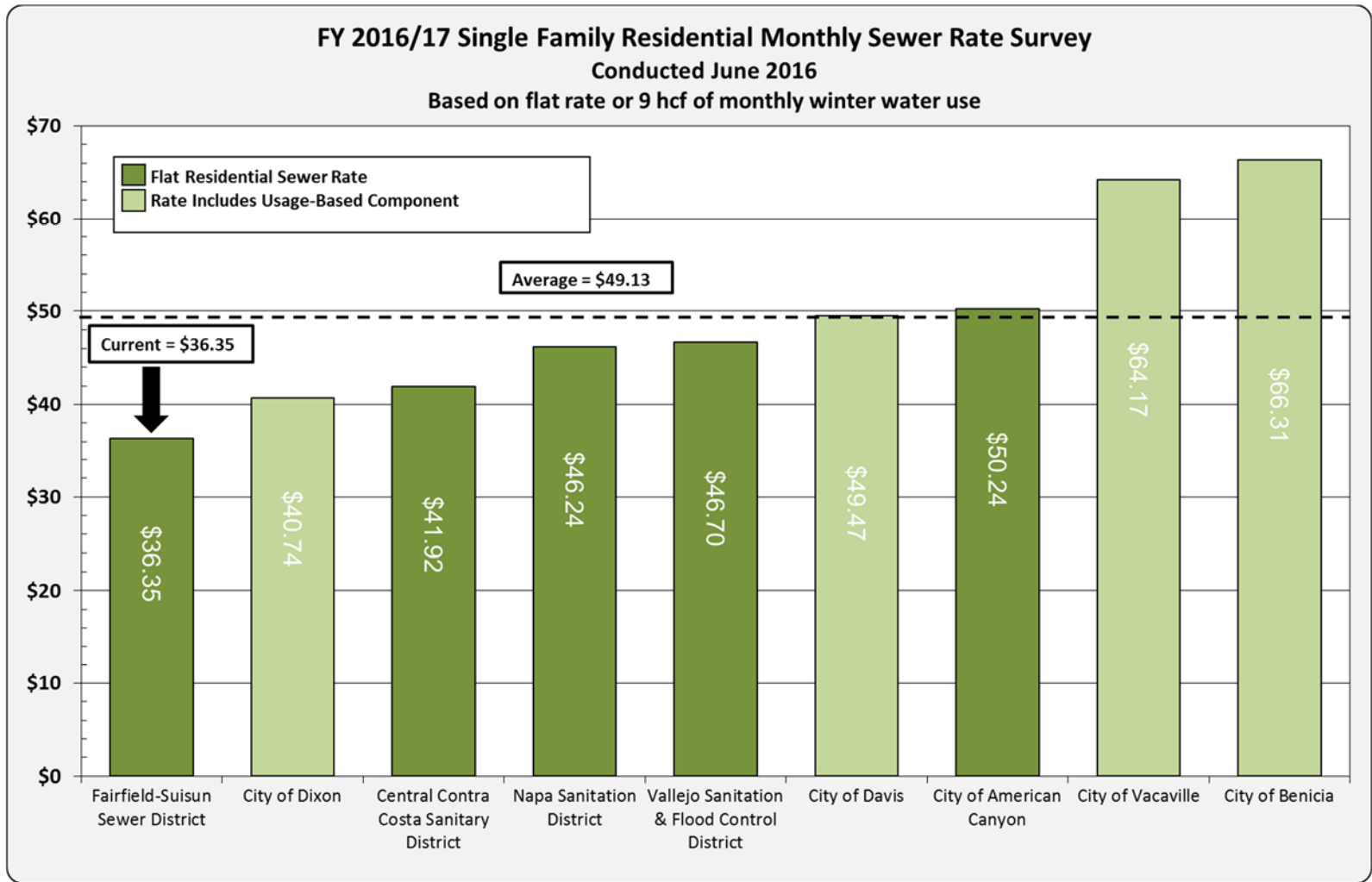
<u>Fiscal Year</u>	<u>Actual Monthly Residential Sewer Rate</u>	<u>% Effective Increase</u>	<u>Max Approved % Increase</u>	<u>Max Approved Rates</u>	<u>Units</u>
2005/06	\$20.81				per dwelling unit
2006/07	\$21.89	5.2%	5.2%	\$21.89	per dwelling unit
2007/08	\$23.03	5.2%	5.2%	\$23.03	per dwelling unit
2008/09	\$24.23	5.2%	5.2%	\$24.23	per dwelling unit
2009/10	\$25.49	5.2%	5.2%	\$25.49	per dwelling unit
2010/11	\$26.82	5.2%	5.2%	\$26.82	per dwelling unit
2011/12	\$28.21	5.2%	5.2%	\$28.21	per dwelling unit
2012/13	\$28.21	0.0%	5.2%	\$29.68	per dwelling unit
2013/14	\$30.46	8.0%	5.2%	\$31.23	per dwelling unit
2014/15	\$32.71	7.4%	5.2%	\$32.85	per dwelling unit
2015/16	\$34.56	5.6%	5.2%	\$34.56	per dwelling unit
2016/17	\$36.35	5.2%	5.2%	\$36.35	per dwelling unit

Figure 2: Monthly Residential Sewer Rate



Despite steady increases since FY 2005/06, residential sewer rates remain low compared to surrounding sewer agencies. A regional rate survey for single family residential users based on 9 hcf of monthly winter water use is shown in **Figure 3**. The District’s monthly rate of \$36.35 is approximately 74% of the surveyed average of \$49.13, and is the lowest rate in the survey

Figure 3: Single Family Residential Monthly Sewer Rate Survey



SECTION 3

Capital Improvement Program

The District's capital improvement program is shown in **Table 3** and **Figure 4**. Capital improvement projects are divided into two categories: capacity fee funded capital and rate funded capital. Capacity fee funded capital improvements include projects that solely benefit growth. Rate funded capital improvements include major maintenance, repair, and replacement activities for existing District assets.

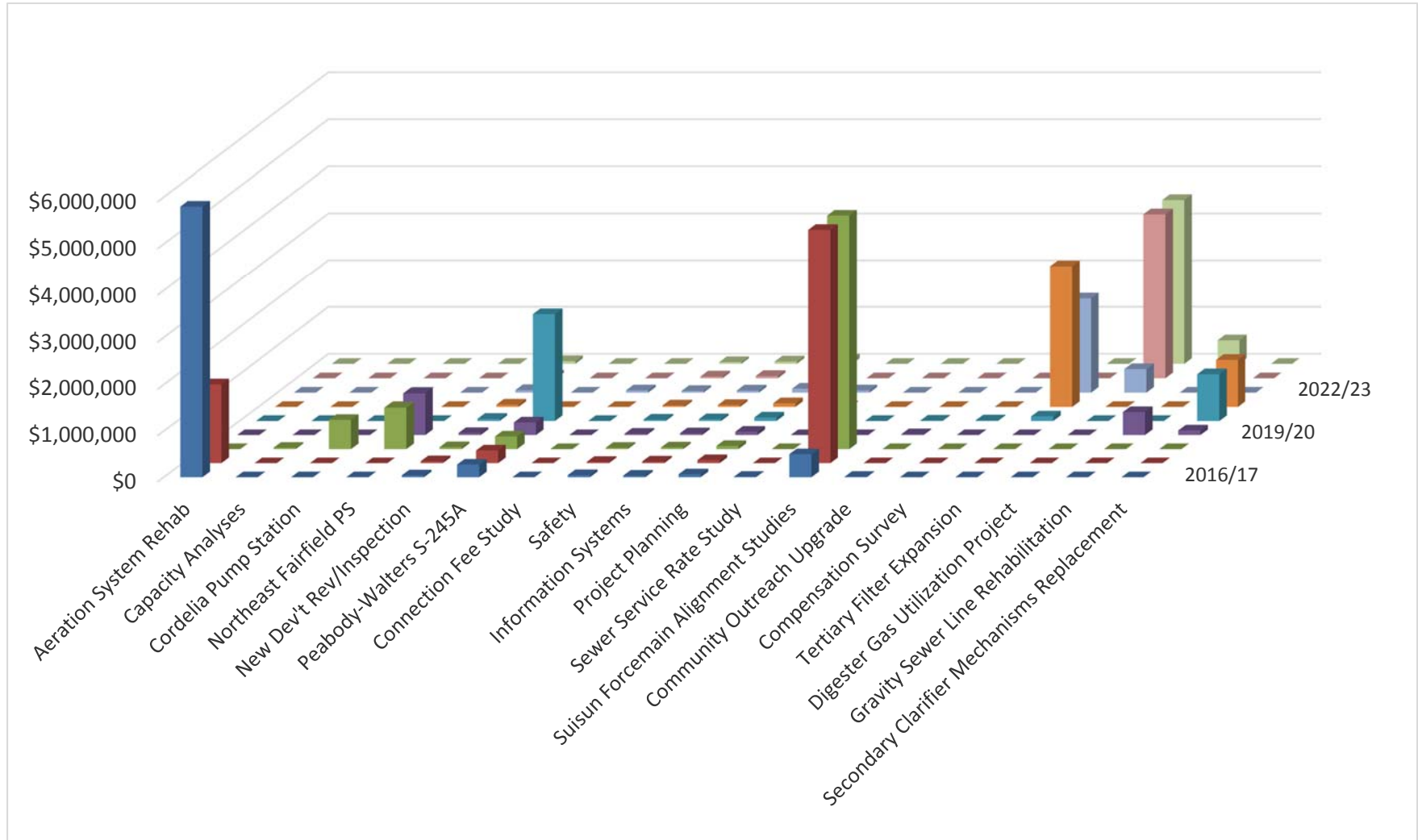
Table 3
Fairfield-Suisun SD
Sewer Capital Projects By Funding Source

	Budget	Projected						Extended Projection			Total
	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	
Capacity Fee Funded CIP											
Cordelia Pump Station	\$0	\$0	\$0	\$635,000	\$0	\$0	\$0	\$0	\$0	\$0	
Northeast Fairfield P.S.	0	0	0	900,000	900,000	0	0	0	0	0	
Peabody Walters S-245A	82,000	275,000	275,000	275,000	275,000	2,275,000	0	0	0	0	
Aeration System Rehab (25%)	125,000	1,450,000	425,000	0	0	0	0	0	0	0	
Capacity Analyses	0	0	0	30,000	0	0	0	0	0	0	
New Dev't Rev/Inspection	37,972	39,871	41,864	43,958	46,155	48,463	50,886	53,431	56,102	58,907	
Connection Fee Study	45,000	0	0	0	0	0	0	50,000	0	0	
Safety	24,900	46,145	27,452	28,825	30,266	31,779	33,368	35,037	36,789	38,628	
Information Systems	32,423	34,044	35,747	37,534	39,411	41,381	43,450	45,623	47,904	50,299	
Tertiary Filter Expansion	0	0	0	0	0	100,000	3,000,000	2,000,000	0	0	
Digester Gas Utilization Project (25%)	0	0	0	0	0	0	0	125,000	875,000	875,000	
<u>Project Planning</u>	<u>59,976</u>	<u>62,975</u>	<u>66,124</u>	<u>69,430</u>	<u>72,901</u>	<u>76,546</u>	<u>80,374</u>	<u>84,392</u>	<u>88,612</u>	<u>93,042</u>	
Total Capacity Fee Funded CIP	\$407,271	\$1,908,035	\$871,187	\$2,019,747	\$1,363,733	\$2,573,169	\$3,208,078	\$2,393,483	\$1,104,407	\$1,115,876	\$16,964,986
Rate Funded CIP¹											
Aeration System Rehab (75%)	\$375,000	\$4,350,000	\$1,275,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Sewer Service Rate Study	55,000	10,000	0	0	0	0	10,000	50,000	0	0	
Suisun Forcemain Alignment Studies	200,000	500,000	5,000,000	5,000,000	0	0	0	0	0	0	
Community Outreach Upgrade	20,000	10,000	0	0	20,000	10,000	0	0	0	0	
Digester Gas Utilization Project (75%)	0	0	0	0	0	0	0	375,000	2,625,000	2,625,000	
Gravity Sewer Line Rehabilitation	0	0	0	0	500,000	0	0	0	0	500,000	
Secondary Clarifier Mechanisms Replacement	0	0	0	0	100,000	1,000,000	1,000,000	0	0	0	
<u>Compensation Survey</u>	<u>15,000</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>15,000</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	
Total Rate Funded CIP	\$665,000	\$4,870,000	\$6,275,000	\$5,000,000	\$620,000	\$1,025,000	\$1,010,000	\$425,000	\$2,625,000	\$3,125,000	\$25,640,000
Total CIP	\$1,072,271	\$6,778,035	\$7,146,187	\$7,019,747	\$1,983,733	\$3,598,169	\$4,218,078	\$2,818,483	\$3,729,407	\$4,240,876	\$42,604,986

1 - Rate funded capital projects estimated to be 53.5% treatment related, 45.6% collection related, and 0.8% general

Source: District "Revised CIP Project List 2016-04-11"

Figure 4: Capital Improvement Program



SECTION 4

District Financial Plan

As shown in **Table 4**, The District is in stable financial condition, with total reserves of \$11.8 million. Total unrestricted reserves amount to \$3.4 million. The District reserve fund policies include the following: (1) transfer a minimum of 1% of the wastewater treatment plant replacement cost each year to the Major Maintenance Fund, and (2) maintain at least 90 days of operating and maintenance costs in the Operating Reserve Fund.

BWA affirms the appropriateness of the fund reserve targets for ensuring District financial stability.

Table 4
Fairfield-Suisun SD
Reserve Fund Balances

	June 30, 2015	Target
Reserve Funds		
Capital Reserve	\$1,077,681	N/A
Major Maint. Reserve	5,316,969	Transfer >1% of WTPP replacement cost each year
Operating Reserve	3,325,060	90 days O&M
Debt Service	<u>2,097,000</u>	N/A
Total Funds	\$11,816,710	
Unrestricted Funds (Excluding DM)	\$3,421,089	

Source: District FY 2015/16 Budget - Schedule 1B

District historical and projected operating expenses are shown in **Table 5** and **Figure 5**. The District's largest expense is the operation and routine maintenance of the wastewater treatment plant and collection system (excluding chemicals and electricity). This expense amounts to \$5.8 million annually. Additional line items in the budget include Electricity and Chemicals, City Sewer Line Maintenance, Admin, Legal & Board, Utility Billing Fees, Financial and Personnel Services, Regulatory Programs, and Major Maintenance and Upgrade.

Overall, the District estimates an annual increase in total sewer enterprise operating expenses of 4.5% per year for the next six years – from FY 2016/17 to FY 2021/22.

Table 5
Fairfield-Suisun SD
Sewer Operating Expenses

	Historical		Budget	Annual Escalation	Projected					
	2013/14	2014/15	2015/16	%	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Treatment Plant O&M										
O&M net of chemicals & electricity	\$5,627,191	\$5,281,532	\$5,545,609	5.0%	\$5,823,000	\$6,114,000	\$6,420,000	\$6,741,000	\$7,078,000	\$7,432,000
85% of Information Systems	307,200	247,034	259,385	5.0%	272,000	286,000	300,000	315,000	331,000	348,000
85% of Safety	184,593	201,571	211,649	5.0%	222,000	233,000	245,000	257,000	270,000	284,000
Total Treatment Plant O&M	\$6,118,984	\$5,730,136	\$6,016,643		\$6,317,000	\$6,633,000	\$6,965,000	\$7,313,000	\$7,679,000	\$8,064,000
Percent Change		-6.4%	5.0%		5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Electricity and Chemicals										
Electricity	\$1,133,695	\$1,417,886	\$1,460,423	3.0%	\$1,504,000	\$1,549,000	\$1,595,000	\$1,643,000	\$1,692,000	\$1,743,000
Chemicals	242,017	98,604	103,534	5.0%	109,000	114,000	120,000	126,000	132,000	139,000
Total Electricity and Chemicals	\$1,375,712	\$1,516,490	\$1,563,957		\$1,613,000	\$1,663,000	\$1,715,000	\$1,769,000	\$1,824,000	\$1,882,000
Percent Change		10.2%	3.1%		3.1%	3.1%	3.1%	3.1%	3.1%	3.2%
City Sewer Line Maintenance										
Contract amount 0136	\$1,949,020	\$1,987,114	\$2,066,599	4.0%	\$2,149,000	\$2,235,000	\$2,324,000	\$2,417,000	\$2,514,000	\$2,615,000
TV inspection of City lines 0135	130,203	157,386	165,255	5.0%	174,000	183,000	192,000	202,000	212,000	223,000
Total City Sewer Line Maintenance	\$2,079,223	\$2,144,500	\$2,231,854		\$2,323,000	\$2,418,000	\$2,516,000	\$2,619,000	\$2,726,000	\$2,838,000
Percent Change		3.1%	4.1%		4.1%	4.1%	4.1%	4.1%	4.1%	4.1%
Admin, Legal, Board										
Annualized (net of int exp & depr)	\$1,010,207	\$814,500	\$855,225	5.0%	\$898,000	\$943,000	\$990,000	\$1,040,000	\$1,092,000	\$1,147,000
OPEB expense/ARC	1,200,000	408,000	420,000	3.0%	433,000	446,000	459,000	473,000	487,000	502,000
Total Admin, Legal, Board	\$2,210,207	\$1,222,500	\$1,275,225		\$1,331,000	\$1,389,000	\$1,449,000	\$1,513,000	\$1,579,000	\$1,649,000
Percent Change		-44.7%	4.3%		4.4%	4.4%	4.3%	4.4%	4.4%	4.4%
Utility Billing Fees										
Utility Billing Fees - Fairfield	\$394,096	\$401,156	\$405,820	3.2%	\$419,000	\$433,000	\$447,000	\$461,000	\$476,000	\$491,000
Utility Billing Fees - Suisun	116,805	119,048	121,513	3.6%	126,000	131,000	136,000	141,000	146,000	151,000
Total Utility Billing Fees	\$510,901	\$520,204	\$527,333		\$545,000	\$564,000	\$583,000	\$602,000	\$622,000	\$642,000
Percent Change		1.8%	1.4%		3.4%	3.5%	3.4%	3.3%	3.3%	3.2%
Financial & Personnel Services										
Annualized	\$613,360	\$649,976	\$682,475	5.0%	\$717,000	\$753,000	\$791,000	\$831,000	\$873,000	\$917,000
Total Financial & Personnel Services	\$613,360	\$649,976	\$682,475		\$717,000	\$753,000	\$791,000	\$831,000	\$873,000	\$917,000
Percent Change		6.0%	5.0%		5.1%	5.0%	5.0%	5.1%	5.1%	5.0%
Regulatory Programs										
Regulatory	\$772,686	\$793,827	\$833,518	5.0%	\$875,000	\$919,000	\$965,000	\$1,013,000	\$1,064,000	\$1,117,000
Laboratory - annualized	675,760	663,602	696,782	5.0%	732,000	769,000	807,000	847,000	889,000	933,000
Community Outreach - 50%	0	59,005	52,973	3.0%	55,000	57,000	59,000	61,000	63,000	65,000
Total Regulatory Programs	\$1,448,446	\$1,516,434	\$1,583,273		\$1,662,000	\$1,745,000	\$1,831,000	\$1,921,000	\$2,016,000	\$2,115,000
Percent Change		4.7%	4.4%		5.0%	5.0%	4.9%	4.9%	4.9%	4.9%
Total Operating Expenses	\$14,356,833	\$13,300,240	\$13,880,760		\$14,508,000	\$15,165,000	\$15,850,000	\$16,568,000	\$17,319,000	\$18,107,000
Percent Change		-7.4%	4.4%		4.5%	4.5%	4.5%	4.5%	4.5%	4.5%

Source: District FY 2015/16 Budget - Schedule 2

Figure 5: Sewer Operating Expenses

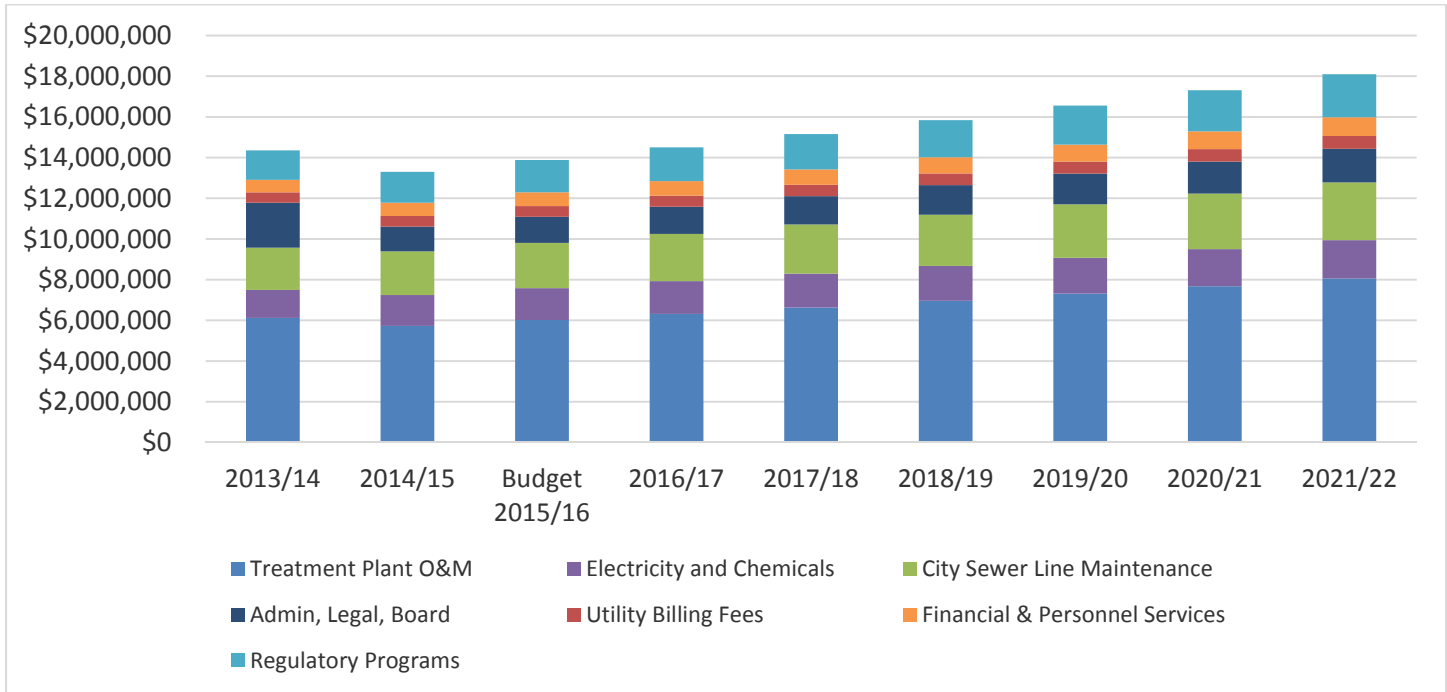


Table 6 summarizes the District’s outstanding and project debt issues. The District’s outstanding 2010 Series A Refunding Bonds were paid off fiscal year FY 2015/16. The District has one State Revolving Fund (SRF) Loan outstanding and is expected to obtain a second \$8 million SRF loan for the Aeration Project between FY 2016/17 and FY 2017/18.

Table 6
Fairfield-Suisun SD
Sewer Outstanding & Projected Debt

	Budget	Projected					
	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
2010 Series A Refunding Bonds	\$2,423,000	\$0	\$0	\$0	\$0	\$0	\$0
SRF Loan UV Project (20-Year Repayment)	737,000	737,000	737,000	737,000	737,000	737,000	737,000
SRF Aeration Project (10-Year Repayment) ¹	0	0	216,123	1,512,858	864,490	864,490	864,490
Total Debt Service	\$3,160,000	\$737,000	\$953,123	\$2,249,858	\$1,601,490	\$1,601,490	\$1,601,490
Percent Change		-76.7%	29.3%	136.1%	-28.8%	0.0%	0.0%

1 - \$8 million issue amount

Table 7 shows the District’s estimated treatment plant and sewers replacement cost. The Board’s policy is to transfer at least 1% of the treatment plant and sewers replacement cost to the Major Maintenance Fund each year.

Table 7
Fairfield-Suisun SD
Treatment Plant and Sewers Replacement Cost

Total Replacement Cost Treatment Plant and Sewers	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Beginning Replacement Cost	\$591,618,710	\$610,439,542	\$635,530,764	\$661,742,874	\$688,614,907	\$711,257,087	\$736,192,969
Inflationary Increase ¹	17,748,561	18,313,186	19,065,923	19,852,286	20,658,447	21,337,713	22,085,789
Plant/Sewer Additions	<u>1,072,271</u>	<u>6,778,035</u>	<u>7,146,187</u>	<u>7,019,747</u>	<u>1,983,733</u>	<u>3,598,169</u>	<u>4,218,078</u>
Ending Replacement Cost	\$610,439,542	\$635,530,764	\$661,742,874	\$688,614,907	\$711,257,087	\$736,192,969	\$762,496,836

Source: District FY 2015/16 Budget - Schedule 5

1 - Assumes an inflation rate of 3%

Table 8 and **Figure 6** show financial projections for the District’s Operating Fund and Major Maintenance Fund.

Capital & Debt Service: The District is projected to receive state revolving loan funds of \$8 million between FY 2016/17 and FY 2017/18. These funds would recover costs associated with the District’s Aeration System Rehabilitation project. 75% of the loan proceeds (\$6 million) and 75% of the SRF debt service is projected to benefit existing users, and is attributed to the Major Maintenance Fund. The remaining 25% of the loan proceeds and debt service is attributed to the Capital Fund.

Fund Reserve Targets: The District maintains 90 days of operating and maintenance expenses in the operating fund in keeping with Board policy. Additional funds above the required 90 days are projected to be transferred to the Major Maintenance Fund.

Growth & Interest Rates: Projections anticipate a customer growth rate of 0.7% in FY 2016/17 and FY 2017/18 and 1% thereafter. Interest rates are estimated to range from 0.5% to 3%.

Table 8
Fairfield-Suisun SD
Cash Flow Projection - Operating & Major Maintenance Funds

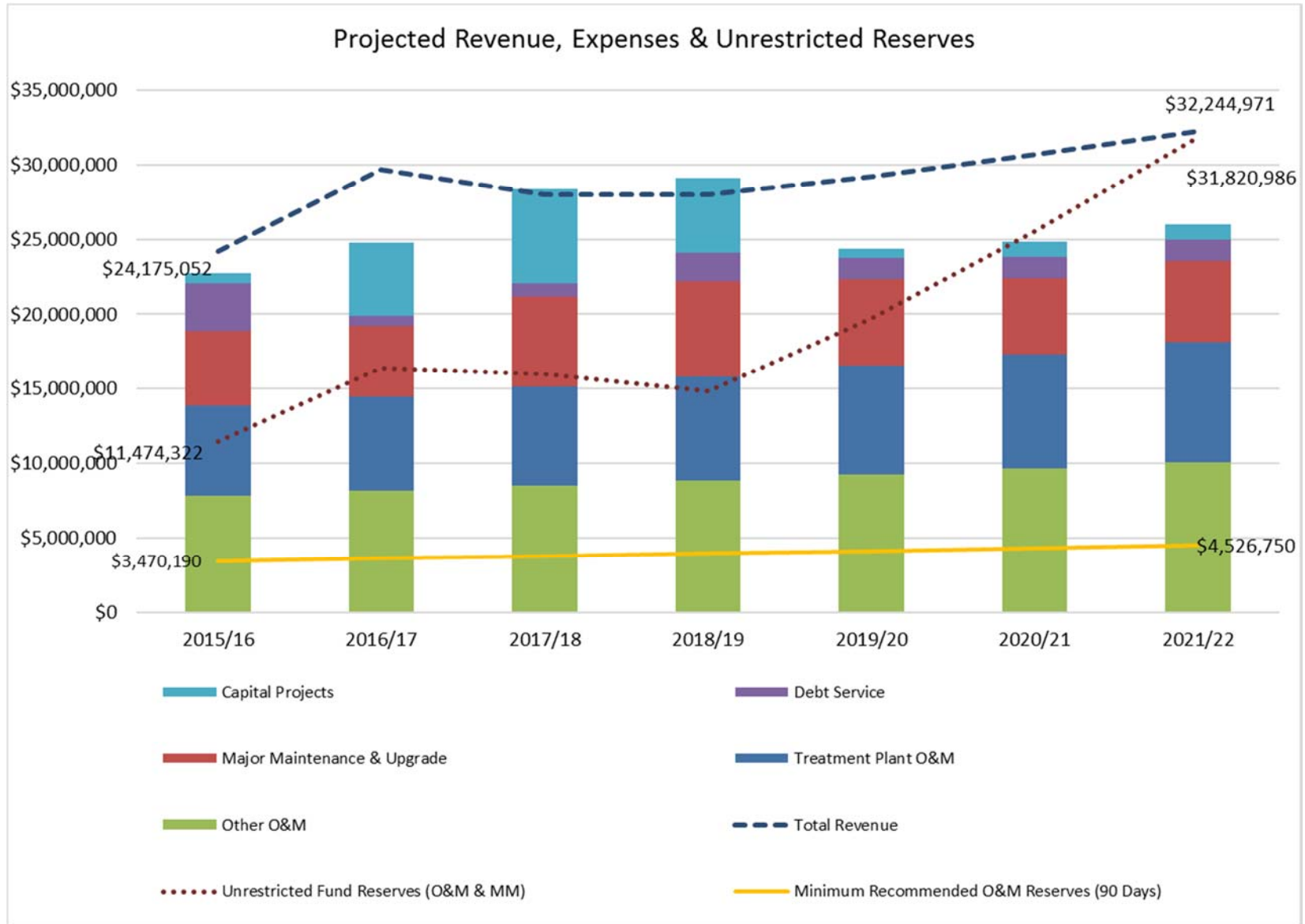
	Budget	Projected						Extended Projection		
	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Beginning Fund Balances										
Operating Fund	\$3,325,060	\$3,640,080	\$3,800,844	\$3,959,484	\$4,146,825	\$4,336,892	\$4,539,364	\$4,741,222	\$4,953,043	\$5,153,350
Major Maintenance Fund	5,316,969	7,834,242	12,572,593	12,006,330	10,712,491	15,363,836	20,993,018	27,079,764	34,491,205	36,525,858
Total Reserves	\$8,642,029	\$11,474,322	\$16,373,437	\$15,965,814	\$14,859,316	\$19,700,728	\$25,532,382	\$31,820,986	\$39,444,248	\$41,679,208
% Sewer User Fee Revenue Increase, effective July 1		5.97%	4.7%	4.6%	4.3%	4.6%	4.7%	1.0%	1.0%	1.0%
Est. Customer Growth %		0.70%	0.70%	1.00%	1.00%	1.00%	1.00%	1.0%	1.0%	1.0%
% Required Overall Rate Increase		5.2%	3.9%	3.6%	3.3%	3.6%	3.6%	0.0%	0.0%	0.0%
REVENUES										
Operating Fund Revenues										
Sewer User Fees	\$23,681,842	\$25,095,000	\$26,266,000	\$27,479,000	\$28,666,000	\$29,987,000	\$31,392,000	\$31,706,000	\$32,023,000	\$32,343,000
Other Income	75,000	77,000	79,000	81,000	83,000	85,000	87,000	89,000	91,000	93,000
Interest Income (0.5-3% of Beg. Fund Balance)	16,625	54,601	76,017	98,987	124,405	130,107	136,181	142,237	148,591	154,601
Total Operating Revenue	\$23,773,468	\$25,226,601	\$26,421,017	\$27,658,987	\$28,873,405	\$30,202,107	\$31,615,181	\$31,937,237	\$32,262,591	\$32,590,601
Major Maintenance Fund Revenues										
SRF Loan Proceeds - Aeration (\$6 million)	\$375,000	\$4,350,000	\$1,275,000							
Interest Income (0.5-3% of Beg. Fund Balance)	26,585	117,514	251,452	300,158	321,375	460,915	629,791	812,393	1,034,736	1,095,776
Total Major Maintenance Revenues	\$401,585	\$4,467,514	\$1,526,452	\$300,158	\$321,375	\$460,915	\$629,791	\$812,393	\$1,034,736	\$1,095,776
Major Maintenance Fund Transfer Ins										
Transfer From Operating Fund¹	\$9,577,688	\$10,557,837	\$11,097,377	\$11,621,646	\$12,115,338	\$12,680,634	\$13,306,323	\$12,796,416	\$12,272,284	\$11,660,449
Transfer From Debt Service Reserve²	1,360,000	0	0	0	0	0	0	0	0	0
Total Transfers	\$10,937,688	\$10,557,837	\$11,097,377	\$11,621,646	\$12,115,338	\$12,680,634	\$13,306,323	\$12,796,416	\$12,272,284	\$11,660,449
TOTAL REVENUES	\$24,175,052	\$29,694,115	\$27,947,469	\$27,959,145	\$29,194,779	\$30,663,022	\$32,244,971	\$32,749,630	\$33,297,327	\$33,686,376
EXPENSES										
Operating Fund Expenses										
Treatment Plant O&M	\$6,016,643	\$6,317,000	\$6,633,000	\$6,965,000	\$7,313,000	\$7,679,000	\$8,064,000	\$8,467,000	\$8,890,000	\$9,335,000
Electricity and Chemicals	1,563,957	1,613,000	1,663,000	1,715,000	1,769,000	1,824,000	1,882,000	1,941,000	2,002,000	2,065,000
City Sewer Line Maintenance	2,231,854	2,323,000	2,418,000	2,516,000	2,619,000	2,726,000	2,838,000	2,954,000	3,075,000	3,200,000
Admin, Legal, Board	1,275,225	1,331,000	1,389,000	1,449,000	1,513,000	1,579,000	1,649,000	1,721,000	1,797,000	1,876,000
Utility Billing Fees	527,333	545,000	564,000	583,000	602,000	622,000	642,000	663,000	685,000	708,000
Financial & Personnel Services	682,475	717,000	753,000	791,000	831,000	873,000	917,000	963,000	1,011,000	1,062,000
Regulatory Programs	1,583,273	1,662,000	1,745,000	1,831,000	1,921,000	2,016,000	2,115,000	2,220,000	2,330,000	2,445,000
Total Operating Expenses	\$13,880,760	\$14,508,000	\$15,165,000	\$15,850,000	\$16,568,000	\$17,319,000	\$18,107,000	\$18,929,000	\$19,790,000	\$20,691,000
Operating Fund Transfer Outs										
Transfer to Major Maintenance Fund	\$9,577,688	\$10,557,837	\$11,097,377	\$11,621,646	\$12,115,338	\$12,680,634	\$13,306,323	\$12,796,416	\$12,272,284	\$11,660,449
Total Transfers	\$9,577,688	\$10,557,837	\$11,097,377	\$11,621,646	\$12,115,338	\$12,680,634	\$13,306,323	\$12,796,416	\$12,272,284	\$11,660,449
Major Maintenance Fund Expenses										
Major Maintenance & Upgrade	\$4,997,000	\$4,680,000	\$6,016,000	\$6,344,000	\$5,780,000	\$5,102,000	\$5,454,000	\$4,387,000	\$7,262,000	\$5,186,000
SRF Debt Service (Funded by Rates)	3,160,000	737,000	899,092	1,871,643	1,385,368	1,385,368	1,385,368	1,385,368	1,385,368	1,385,368
Capital Projects (Funded by Rates)	665,000	4,870,000	6,275,000	5,000,000	620,000	1,025,000	1,010,000	425,000	2,625,000	3,125,000
Total Major Maintenance Expenses	\$8,822,000	\$10,287,000	\$13,190,092	\$13,215,643	\$7,785,368	\$7,512,368	\$7,849,368	\$6,197,368	\$11,272,368	\$9,696,368
TOTAL EXPENSES	\$22,702,760	\$24,795,000	\$28,355,092	\$29,065,643	\$24,353,368	\$24,831,368	\$25,956,368	\$25,126,368	\$31,062,368	\$30,387,368
Net Revenues After Transfers - Operating Fund	\$315,020	\$160,764	\$158,640	\$187,341	\$190,067	\$202,473	\$201,858	\$211,821	\$200,307	\$239,152
Net Revenues After Transfers - MM Fund	2,517,273	4,738,351	(566,263)	(1,293,839)	4,651,345	5,629,182	6,086,746	7,411,441	2,034,652	3,059,857
NET REVENUES	\$2,832,293	\$4,899,115	(\$407,623)	(\$1,106,498)	\$4,841,412	\$5,831,654	\$6,288,604	\$7,623,262	\$2,234,960	\$3,299,009
Ending Fund Balances										
Operating Fund	\$3,640,080	\$3,800,844	\$3,959,484	\$4,146,825	\$4,336,892	\$4,539,364	\$4,741,222	\$4,953,043	\$5,153,350	\$5,392,502
Major Maintenance Fund	7,834,242	12,572,593	12,006,330	10,712,491	15,363,836	20,993,018	27,079,764	34,491,205	36,525,858	39,585,715
Total Reserves	\$11,474,322	\$16,373,437	\$15,965,814	\$14,859,316	\$19,700,728	\$25,532,382	\$31,820,986	\$39,444,248	\$41,679,208	\$44,978,216
# Days O&M in Operating Reserves	90	90	90	90	90	90	90	90	90	90
Target Met (>=90 days)	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Replacement Cost of WWTP and Sewers	\$610 M	\$636 M	\$662 M	\$689 M	\$711 M	\$736 M	\$762 M	\$788 M	\$816 M	\$844 M
% Transfers to MM Fund of Replacement Cost ³	0.8%	0.9%	0.8%	0.8%	0.9%	1.0%	1.0%	1.1%	0.6%	0.8%
Major Maintenance Policy Met? (>=1%)	No	No	No	No	No	Yes	Yes	Yes	No	No
Debt Service Coverage (Min. 1.15x)	n/a	20.6	14.2	6.5	9.1	9.6	10.2	10.0	9.7	9.4
Target Met	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes

1 - Additional funds are transferred from the operating fund to major maintenance fund based on the minimum operating fund target of 90 days of annual O&M

2 - Transferred from the 2010 Series A Refunding Bond reserve

3 - Level of transfers to Major Maintenance Fund target at least 1% of Treatment Plant & Sewers Replacement Cost

Figure 6: Cash Flow Projection



SECTION 5

Wastewater Flows and Loadings

Table 9 and **Table 10** show the summary of wastewater flows and loadings for the District. The District is comprised of three main regions: the City of Fairfield, Travis Air Force Base, and Suisun City. The total number of residential dwelling units served is 47,420, with 36,666 located in the City of Fairfield and 9,449 located in Suisun City.

Residential, institutional, and regular commercial wastewater strength estimates are 260 milligrams per liter (mg/l) of BOD and 220 mg/l of SS, determined based on historical influent to the treatment plant. Special strength commercial wastewater strength is estimated to be 650 mg/l of BOD and 1000 mg/l of SS. Case-by-case customers are shown separately, with strength and flow estimates from District staff.

The City of Fairfield is estimated to contribute approximately 77% of flow and 81% of BOD and 82% of SS to the treatment plant, while Suisun City is estimated to contribute 17% of flow, 16% of BOD, and 15% of SS. Anheuser-Busch Brewery (accounted for as part of the City of Fairfield) is a major component of treatment plant flows and loadings, and contributes an estimated 3% of flow, 8% of BOD, and 14% of SS. Travis Air Force Base is estimated to contribute 6% of flows to the wastewater treatment plant, while contributing only 3.3% of BOD and 2.6% of SS.

Table 9
Fairfield-Suisun SD
Flows and Loadings Estimate - FY 2017/18

	# of Sewer EDUs / Accounts	Est. Mo Flow (hcf) Per EDU	Projected Wastewater Flow			Strength (mg/l)		Loadings (lbs)	
			hcf	mg	gpd	BOD	SS	BOD	SS
City of Fairfield									
Residential									
Single Family	27,793	9.35	3,119,064	2,333.22	6,392,390	260	220	5,063,502	4,284,502
Multi Family	8,060	9.35	904,511	676.62	1,853,756	260	220	1,468,386	1,242,481
Mobile Homes	813	9.35	<u>91,241</u>	<u>68.25</u>	<u>186,995</u>	260	220	<u>148,121</u>	<u>125,333</u>
Total Residential	36,666		4,114,816	3,078.10	8,433,141			6,680,010	5,652,316
Commercial (Regular Strength)	952	Varies	523,958	391.95	1,073,830	260	220	850,596	719,735
Commercial (Special Strength)	124	Varies	89,077	66.63	182,560	650	1000	361,520	556,185
Industrial									
Indus - Abbot Lab	1	Varies	1,311	0.98	2,686	5,220	192	42,721	1,568
Indus - Anheuser Busch	1	Varies	211,750	158.40	433,973	750	1099	991,000	1,452,800
Indus - Ball	1	Varies	64,193	48.02	131,561	200	150	80,163	60,122
Indus - Clorox	1	Varies	8,980	6.72	18,405	9	100	490	5,625
Indus - Engelhart 1	1	Varies	11,336	8.48	23,233	2,923	887	206,889	62,801
Indus - Engelhart 2	1	Varies	1,203	0.90	2,466	260	220	1,953	1,653
Indus - FSUD/Tolenas	1	Varies	466	0.35	954	260	220	756	640
Indus - JellyBelly	0	Varies							
Indus - Nippon	1	Varies	1,822	1.36	3,733	650	1,000	7,393	11,374
Indus - Paradise Valley	1	Varies	49,453	36.99	101,353	260	220	80,283	67,932
Indus - Rexam	1	Varies	25,667	19.20	52,603	59	56	9,399	8,936
Indus - Superstore	1	Varies	41,360	30.94	84,766	951	94	245,588	24,293
Indus - Other Industrial	<u>59</u>	Varies	<u>103,010</u>	<u>77.06</u>	<u>211,115</u>	350	300	<u>225,113</u>	<u>192,954</u>
Total Industrial	70		520,551	389.40	1,066,847			1,891,748	1,890,696
Total, City of Fairfield			5,248,402	3,926.08	10,756,377			9,783,873	8,818,932
Travis Air Force Base	1	Varies	411,800	308.05	843,967	155	110	398,539	282,834
Suisun City									
Residential									
Single Family	8,117	9.35	910,922	681.42	1,866,895	260	220	1,478,794	1,251,287
Multi Family	<u>1,332</u>	9.35	<u>149,512</u>	<u>111.84</u>	<u>306,418</u>	260	220	<u>242,718</u>	<u>205,377</u>
Total Residential	9,449		1,060,433	793.26	2,173,313			1,721,512	1,456,664
Commercial (Regular Strength)	137	Varies	87,906	65.76	180,160	260	220	142,707	120,752
Commercial (Special Strength)	21	Varies	7,762	5.81	15,907	650	1000	31,500	48,462
Total, Suisun City			1,156,101	864.82	2,369,379			1,895,719	1,625,878
Total, Fairfield-Suisun Sewer District	47,420		6,816,303	5,098.95	13,969,723			12,078,131	10,727,644

Table 10
Fairfield-Suisun SD
Flows and Loadings Summary

	Projected Wastewater Flow		Loadings (lbs)			
	gpd	% of Total	BOD	% of Total	SS	% of Total
City of Fairfield						
Residential						
Single Family	6,392,390	45.8%	5,063,502	41.9%	4,284,502	39.9%
Multi Family	1,853,756	13.3%	1,468,386	12.2%	1,242,481	11.6%
Mobile Homes	186,995	1.3%	148,121	1.2%	125,333	1.2%
Total Residential	8,433,141	60.4%	6,680,010	55.3%	5,652,316	52.7%
Commercial (Regular Strength)	1,073,830	7.7%	850,596	7.0%	719,735	6.7%
Commercial (Special Strength)	182,560	1.3%	361,520	3.0%	556,185	5.2%
Industrial						
Indus - Abbot Lab	2,686	0.0%	42,721	0.4%	1,568	0.0%
Indus - Anheuser Busch	433,973	3.1%	991,000	8.2%	1,452,800	13.5%
Indus - Ball	131,561	0.9%	80,163	0.7%	60,122	0.6%
Indus - Clorox	18,405	0.1%	490	0.0%	5,625	0.1%
Indus - Engelhart 1	23,233	0.2%	206,889	1.7%	62,801	0.6%
Indus - Engelhart 2	2,466	0.0%	1,953	0.0%	1,653	0.0%
Indus - FSUD/Tolenas	954	0.0%	756	0.0%	640	0.0%
Indus - JellyBelly		0.0%		0.0%		0.0%
Indus - Nippon	3,733	0.0%	7,393	0.1%	11,374	0.1%
Indus - Paradise Valley	101,353	0.7%	80,283	0.7%	67,932	0.6%
Indus - Rexam	52,603	0.4%	9,399	0.1%	8,936	0.1%
Indus - Superstore	84,766	0.6%	245,588	2.0%	24,293	0.2%
Indus - Other Industrial	211,115	1.5%	225,113	1.9%	192,954	1.8%
Total Industrial	1,066,847	7.6%	1,891,748	15.7%	1,890,696	17.6%
Total, City of Fairfield	10,756,377	77.0%	9,783,873	81.0%	8,818,932	82.2%
Travis Air Force Base	843,967	6.0%	398,539	3.3%	282,834	2.6%
Suisun City						
Residential						
Single Family	1,866,895	13.4%	1,478,794	12.2%	1,251,287	11.7%
Multi Family	306,418	2.2%	242,718	2.0%	205,377	1.9%
Total Residential	2,173,313	15.6%	1,721,512	14.3%	1,456,664	13.6%
Commercial (Regular Strength)	180,160	1.3%	142,707	1.2%	120,752	1.1%
Commercial (Special Strength)	15,907	0.1%	31,500	0.3%	48,462	0.5%
Total, Suisun City	2,369,379	17.0%	1,895,719	15.7%	1,625,878	15.2%
Total, Fairfield-Suisun Sewer District	13,969,723	100.0%	12,078,131	100.0%	10,727,644	100.0%

SECTION 6

Cost Allocation

As determined in the cash flow projection in **Table 8**, BWA estimates the District rate revenue requirement to be \$25,226,000 in FY 2017/18. BWA divided these revenue requirements into two categories: costs allocated to all customers (**Table 11A**), and costs allocated to specific customer classes (**Table 11B**). Costs allocated to all customers are allocated based on projected flows and loadings to the wastewater treatment plant, while costs allocated to specific customer classes are allocated based on each customer class's percentage of combined sewer units (for residential) and accounts (for non-residential).

In **Table 11A**, operating costs are allocated 54% to Flow, 32% BOD and 14% SS. These percentages are consistent with those used in the District 2005 "Cost of Service and Rate Study," and are based on the relative operations and maintenance labor required to operate each process in each pump station and the treatment plant. Capital costs are allocated based on the District 2002 "Capital and Operating Cost Update," which assessed the relative contributions to flow, BOD, and SS from every existing FSSD facility. The cost allocation percentages are affirmed to be representative by District staff.

The cost analysis in **Table 11A** yields a rate for all users of \$1.81 per hcf, \$0.43 per pound of BOD and \$0.18 per pound of SS.

Table 11A
Fairfield-Suisun SD
Rate Revenue Requirements

Costs Allocated to All Customers	2017/18	Allocation % ¹			Allocation \$			Projected Loadings (lbs)		
		Flow	BOD	SS	Flow	BOD	SS	Flow (hcf)	BOD	SS
								6,816,303	12,078,131	10,727,644
Cost Component										
Treatment Plant O&M	\$6,633,000	54%	32%	14%	\$3,581,820	\$2,122,560	\$928,620	\$0.53	\$0.18	\$0.09
Electricity and Chemicals	1,663,000	54%	32%	14%	898,020	532,160	232,820	0.13	0.04	0.02
Admin, Legal, Board	1,389,000	54%	32%	14%	750,060	444,480	194,460	0.11	0.04	0.02
Financial & Personnel Services	753,000	54%	32%	14%	406,620	240,960	105,420	0.06	0.02	0.01
Regulatory Programs	1,745,000	54%	32%	14%	942,300	558,400	244,300	0.14	0.05	0.02
Treatment Capital (Rate Funded)	3,358,985	74%	21%	6%	2,479,267	689,264	190,454	0.36	0.06	0.02
Major Maintenance & Upgrade	6,016,000	74%	21%	6%	4,440,410	1,234,483	341,107	0.65	0.10	0.03
Total Expenses	\$21,557,985				\$13,498,496	\$5,822,307	\$2,237,182	\$1.98	\$0.48	\$0.21
Net Revenues for the Operating & MM Fund	(\$1,682,623)	54%	32%	14%	(\$908,617)	(\$538,439)	(\$235,567)	(\$0.13)	(\$0.04)	(\$0.02)
Less: Non-Rate Operating Revenue	(406,469)	54%	32%	14%	(219,493)	(130,070)	(56,906)	(\$0.0322)	(\$0.0108)	(\$0.0053)
Revenue Requirement	\$19,468,893	64%	26%	10%	\$12,370,387	\$5,153,798	\$1,944,709	\$1.81	\$0.43	\$0.18

1 - Operating cost allocation from District 2005 "Cost of Service and Rate Study" Table 4.1. Capital Cost allocation from District 2002 Capital and Operating Cost Update.

In **Table 11B**, costs including Utility Billing Fees, Debt Service (Rate Funded), Collection & General Capital (Rate Funded) and City Sewer Line maintenance are allocated based on each class's percentage of combined sewer units (for residential) and accounts (for non-residential). These costs were determined to be driven by number of users rather than flow and loadings into the wastewater treatment plant.

The costs are further allocated to each flow and loading component based on operating costs: 54% to flow, 32% to BOD, and 14% to SS. Unit rates are determined for each class of customer.

Table 11B
Fairfield-Suisun SD
Rate Revenue Requirements (Continued)

Costs Allocated to Specific Classes ¹	2017/18	Customer Classes										Total
		% Allocation	Residential	% Allocation	Commercial (RS)	% Allocation	Commercial (HS)	% Allocation	Industrial	% Allocation	Travis AFB	
Estimated Loadings												
Flow (HCF)			5,175,249		611,864		96,839		520,551		411,800	6,816,303
BOD (lbs)			8,401,521		993,303		393,020		1,891,748		398,539	12,078,131
SS (lbs)			7,108,980		840,487		604,646		1,890,696		282,834	10,727,644
Cost Component												
Utility Billing Fees	\$564,000	97.2%	\$548,479	2.30%	\$12,952	0.31%	\$1,725	0.15%	\$833	0%	\$12	\$564,000
Debt Service (Rate Funded)	899,092	97.2%	874,349	2.30%	20,648	0.31%	2,749	0.15%	1,327	0%	19	899,092
Collection & General Capital (Rate Funded)	2,916,015	97.2%	2,835,766	2.30%	66,966	0.31%	8,917	0.15%	4,305	0%	61	2,916,015
City Sewer Line Maintenance	2,418,000	97.2%	2,351,457	2.30%	55,529	0.31%	7,394	0.15%	3,569	0%	51	2,418,000
Total Expenses	\$6,797,107		\$6,610,050		\$156,095		\$20,784		\$10,034		\$143	\$6,797,107
Flow (\$)		54%	\$3,569,427	54%	\$84,292	54%	\$11,223	54%	\$5,418	54%	\$77	\$3,670,438
BOD (\$)		32%	2,115,216	32%	49,951	32%	6,651	32%	3,211	32%	46	\$2,175,074
SS (\$)		14%	925,407	14%	21,853	14%	2,910	14%	1,405	14%	20	\$951,595
			\$6,610,050		\$156,095		\$20,784		\$10,034		\$143	\$6,797,107
Flow (\$/Unit)			\$0.69		\$0.14		\$0.12		\$0.01		\$0.00	
BOD (\$/Unit)			\$0.25		\$0.05		\$0.02		\$0.00		\$0.00	
SS (\$/Unit)			\$0.13		\$0.03		\$0.00		\$0.00		\$0.00	

1 - Costs allocated to each class based on % of total dwelling units / accounts.

Table 12 shows a summary of the units and accounts, flows and loadings, unit rates, and monthly rates for each class of customer. The unit rates from **Table 11A** and **Table 11B** are added together to determine the unit rate for each customer class. Unit rates are multiplied by projected wastewater flow to determine the FY 2016/17 cost recovery by hcf, pound of BOD, and pound of SS. The total cost recovery for each class is divided by the number of billable units (EDU's for the residential classes and projected total water use in hcf for non-residential classes) to determine unit rates per EDU and hcf. The rates per EDU are shown per month.

Table 12
Fairfield-Suisun SD
Flows and Loadings Summary

	# of Sewer EDUs / Accounts	% of Total Units	Projected Water Use	Projected Wastewater Flow			Loadings (lbs)		FY 2017/18 Unit Rate Per Class			FY 2017/18 Cost Recovery			FY 2017/18 Monthly Rates (per EDU/HCF) ³
				hcf	mg	gpd	BOD	SS	\$/hcf	\$/lb BOD	\$/lb SS	\$/hcf	\$/lb BOD	\$/lb SS	
Combined FSSD Customers															
Single Family	35,910	97.2%	N/A	4,029,986	3,014.64	8,259,285	6,542,296	5,535,789	\$2.50	\$0.68	\$0.31	\$10,093,240	\$4,438,756	\$1,724,147	\$37.72
Multiple Family / Mobile Home	10,205		N/A	1,145,263	856.72	2,347,168	1,859,225	1,573,191	\$2.50	\$0.68	\$0.31	2,868,352	1,261,430	489,977	\$37.72
Commercial, Regular Strength	1,089	2.3%	611,864	611,864	457.71	1,253,989	993,303	840,487	\$1.95	\$0.48	\$0.21	1,194,717	473,798	174,217	\$3.01
Commercial, Special Strength	145	0.3%	96,839	96,839	72.44	198,466	393,020	604,646	\$1.93	\$0.44	\$0.19	186,968	174,354	112,520	\$4.89
Industrial, Regular Strength			103,010	103,010	77.06	211,115	225,113	192,954	\$1.825	\$0.428	\$0.182	188,017	96,439	35,122	\$3.10
Industrial, Case By Case	70	0.1%	N/A	417,541	312.34	855,733	1,666,635	1,697,742	\$1.825	\$0.428	\$0.182	762,109	713,990	309,028	N/A
Travis Air Force Base	1	0.0%	411,800	411,800	308.05	843,967	398,539	282,834	\$1.815	\$0.427	\$0.181	747,422	170,105	51,292	\$2.35
Total	47,420	100.0%		6,816,303	5,098.95	13,969,723	12,078,131	10,727,644				\$16,040,825	\$7,328,872	\$2,896,304	\$26,266,000

Table 13 and **Figure 7** show a comparison between current FY 2016/17 District approved rates and FY 2017/18 calculated rates. An immediate rate structure change would mean an increase of approximately 4% for residential, a 4% increase for regular strength commercial, a 0% increase for special strength commercial, a 7% increase for regular strength industrial, and a 9% increase for Travis Air Force Base from approved FY 2016/17 rates. Thereafter, rates are projected to increase by 3.64% overall for the five-year rate study period (FY 2017/18 to FY 2021/22).

BWA does not recommend an immediate structure change strategy, as shown in **Table 13**, as it would cause a large swing in the District’s rates for many customers. In **Table 14** and **Figure 8**, BWA calculated the annualized percentage increase for each customer class required to phase in the rate structure change during the five-year rate study period (from FY 2017/18 to FY 2021/22.)

The proposed phased-rate methodology would mean annualized increases of 3.6% for residential, 3.7% for regular strength commercial, 2.9% for special strength commercial, 4.3% for regular strength industrial, and 4.6% for Travis Air Force Base. Overall revenue collected from case-by-case customers is projected to increase by 4.0% per year.

Table 13
Fairfield-Suisun SD
Immediate Rate Structure Change

	FY 2016/17 Rates (per HCF)	FY 2017/18 Rate Structure Change	% Increase (Decrease)
Combined FSSD Customers			
<i>% Projected Growth</i>		0.70%	
<i>% Smoothened Rate Increase</i>		4.04%	
Total % Rate Revenue Increase		4.77%	
Residential Rate	\$36.35	\$37.72	4%
Commercial, Regular Strength	\$2.90	\$3.01	4%
Commercial, Special Strength	\$4.88	\$4.89	0%
Industrial, Regular Strength	\$2.90	\$3.10	7%
Travis Airforce Base	\$2.17	\$2.35	9%
Case-by-Case (per Million Gallons of Flow)	\$2,469.06	\$2,439.98	-1%
Plus (per Thousand lbs of BOD)	\$351.05	\$428.40	22%
Plus (per Thousand lbs of SS)	\$183.48	\$182.02	-1%
Projected Revenue by Class			
Single Family	\$15,663,914	\$16,256,143	4%
Multiple Family / Mobile Home	4,451,456	4,619,759	4%
Commercial, Regular Strength	1,774,406	1,842,731	4%
Commercial, Special Strength	472,572	473,843	0%
Industrial, Regular Strength	298,729	319,578	7%
Industrial, Case by Case	1,692,442	1,785,128	5%
Travis Air Force Base	<u>891,771</u>	<u>968,819</u>	9%
Total Projected Revenue (FY 2017/18 EDUs)	\$25,245,289	\$26,266,000	
Total Projected Revenue (With Growth)	\$25,069,801	\$26,266,000	
Cash Flow Revenue	\$25,095,000	\$26,266,000	

Figure 7: Cost Recovery by Class – Current versus Proposed

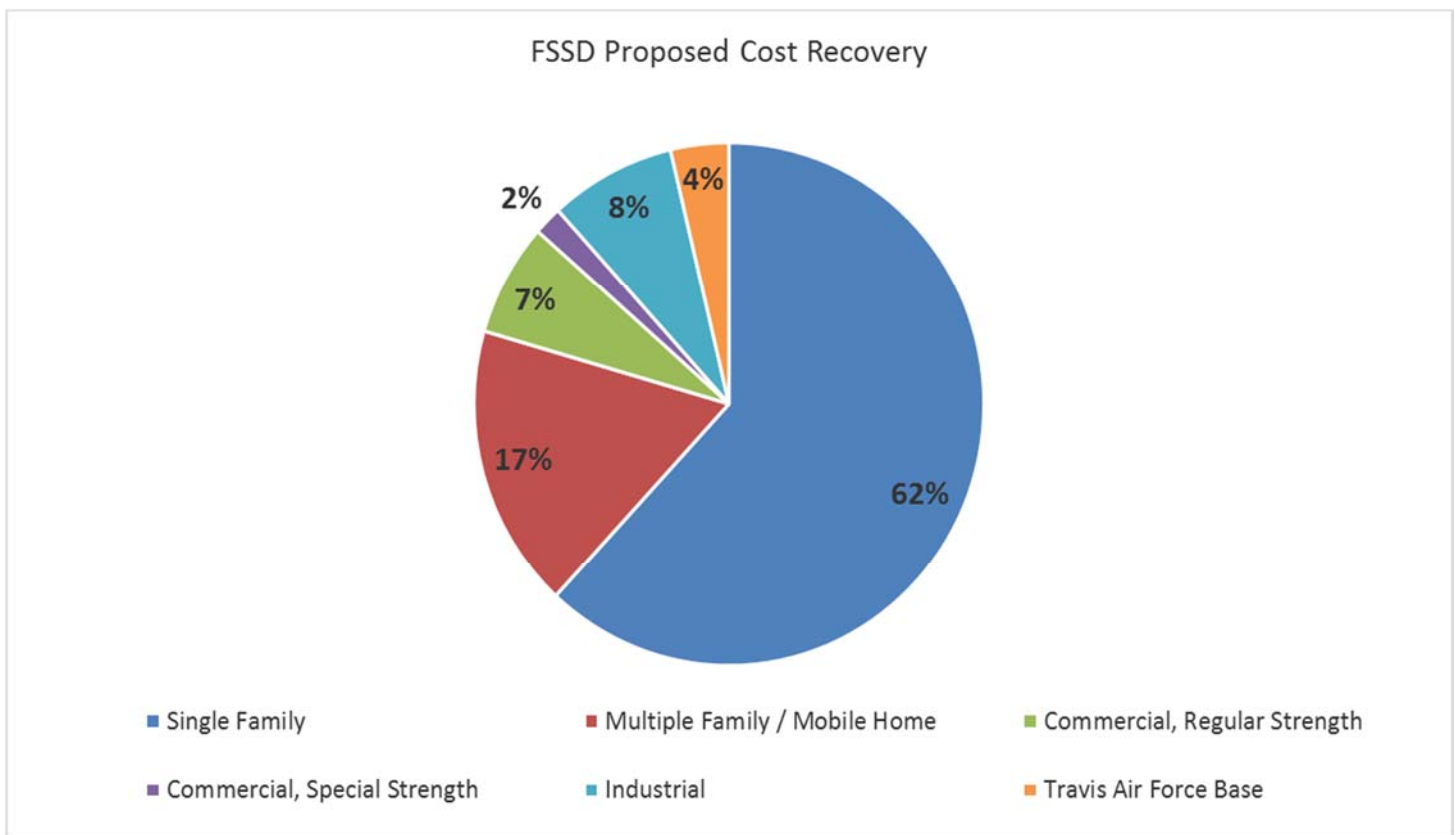
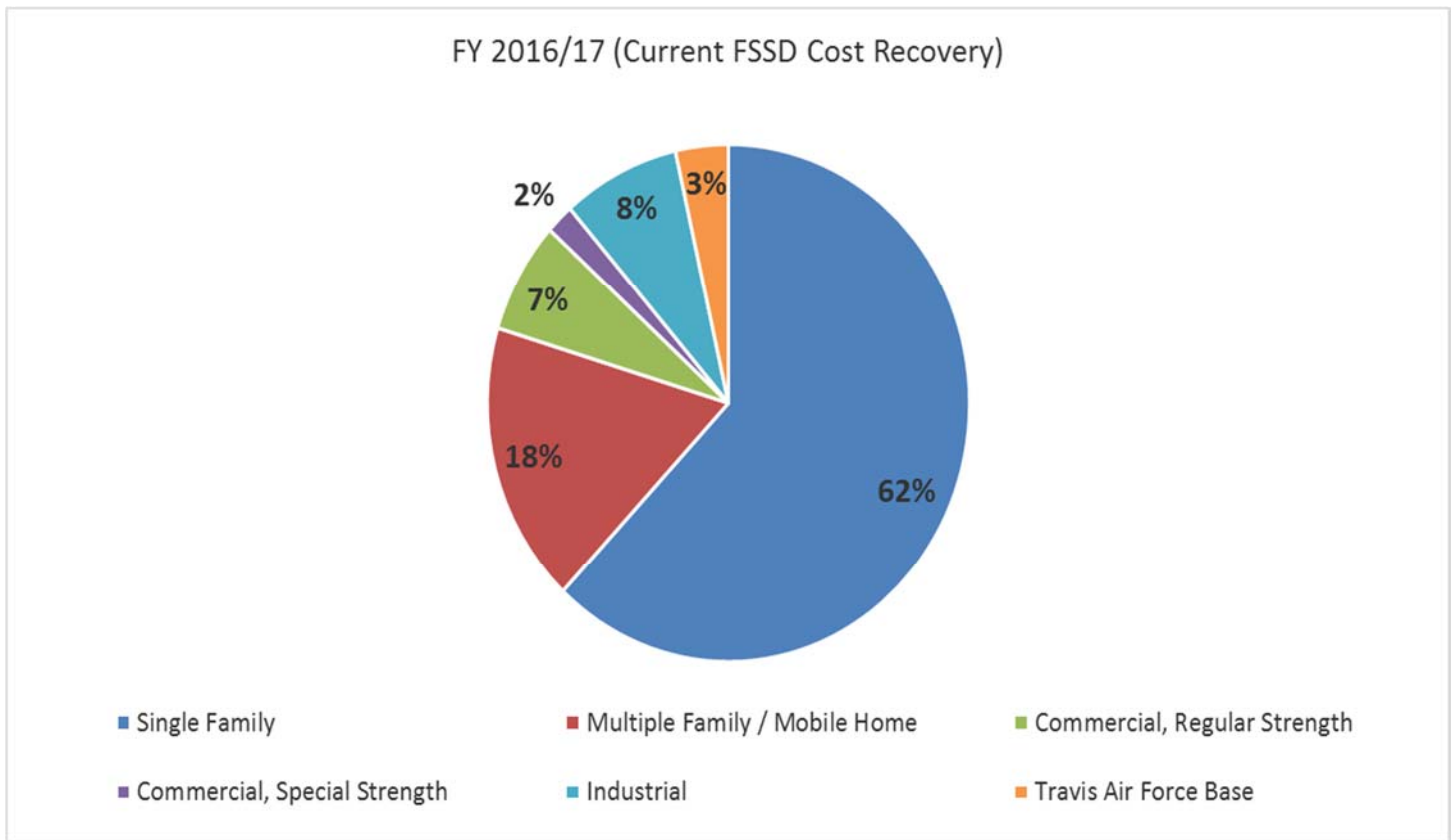
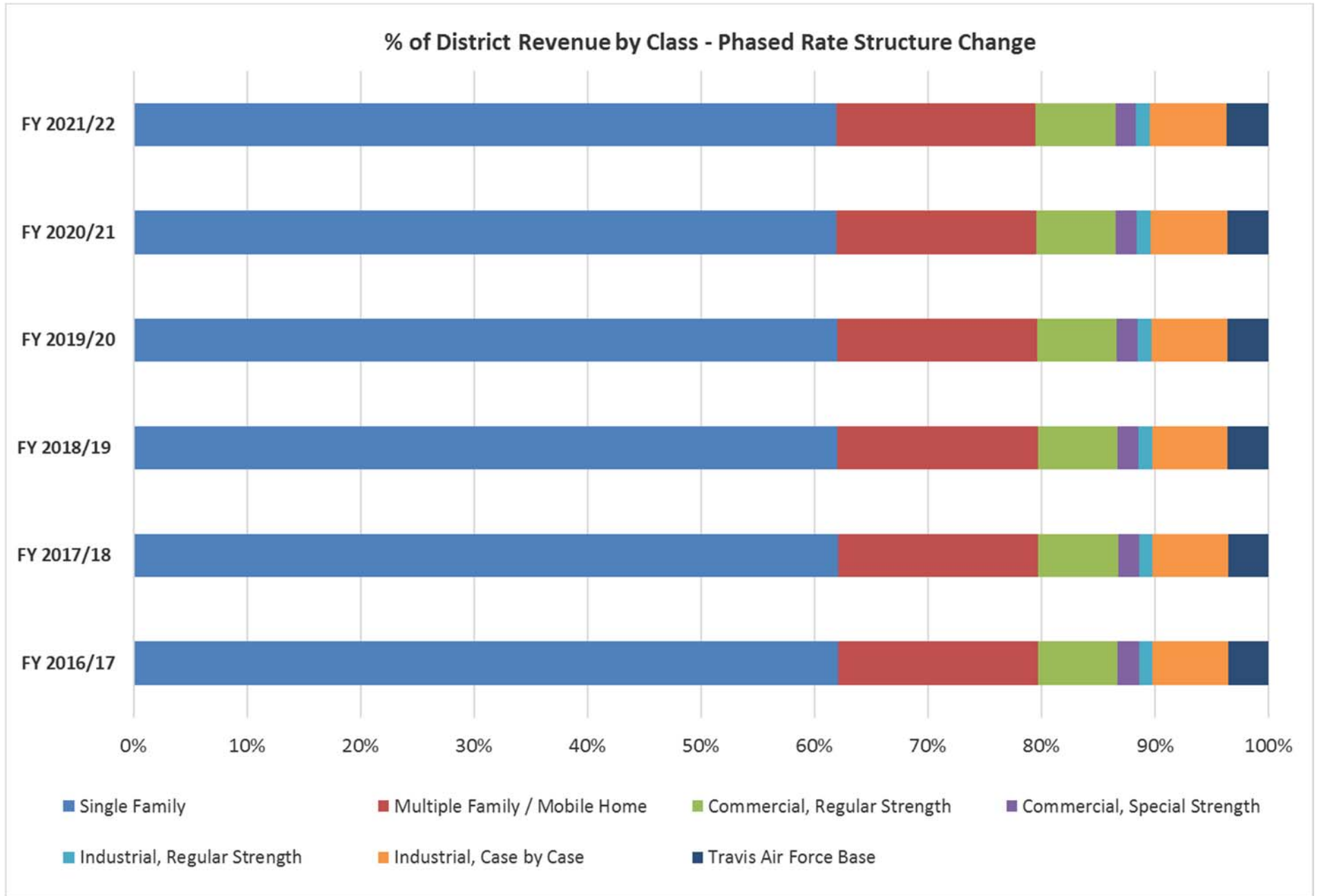


Table 14
Fairfield-Suisun SD
Rate Smoothing - Phased Rate Structure Change

	Proposed Rates (Phased Rate Structure Change)						FY 2017/18 - FY 2021/22 Annualized % Increase by Class
	FY 2016/17 Rates (per HCF)	FY 2017/18 Rates (per HCF)	FY 2018/19 Rates (per HCF)	FY 2019/20 Rates (per HCF)	FY 2020/21 Rates (per HCF)	FY 2021/22 Rates (per HCF)	
Combined FSSD Customers							
<i>% Projected Growth</i>		0.70%	1.00%	1.00%	1.00%	1.00%	
<i>% Overall Rate Increase</i>		3.61%	3.71%	3.72%	3.72%	3.72%	
Total % Rate Revenue Increase		4.33%	4.75%	4.75%	4.76%	4.76%	
Residential Rate	\$36.35	\$37.67	\$39.05	\$40.47	\$41.94	\$43.47	3.6%
Commercial, Regular Strength	\$2.90	\$3.01	\$3.12	\$3.23	\$3.35	\$3.47	3.7%
Commercial, Special Strength	\$4.88	\$5.02	\$5.17	\$5.32	\$5.48	\$5.64	2.9%
Industrial, Regular Strength	\$2.90	\$3.02	\$3.15	\$3.29	\$3.43	\$3.57	4.3%
Travis Airforce Base	\$2.17	\$2.27	\$2.37	\$2.48	\$2.59	\$2.71	4.6%
Case-by-Case (per Million Gallons of Flow)	\$2,469.06	\$2,534.07	\$2,600.79	\$2,669.26	\$2,739.54	\$2,811.67	2.6%
Plus (per Thousand lbs of BOD)	\$351.05	\$375.82	\$402.34	\$430.73	\$461.12	\$493.66	7.1%
Plus (per Thousand lbs of SS)	\$183.48	\$188.46	\$193.57	\$198.82	\$204.21	\$209.75	2.7%
Projected Revenue by Class							
	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	
Single Family	\$15,663,914	\$16,234,512	\$16,825,895	\$17,438,821	\$18,074,074	\$18,732,468	
Multiple Family / Mobile Home	4,451,456	4,613,612	4,781,674	4,955,859	5,136,388	5,323,494	
Commercial, Regular Strength	1,774,406	1,839,290	1,906,547	1,976,264	2,048,529	2,123,438	
Commercial, Special Strength	472,572	486,426	500,686	515,364	530,473	546,024	
Industrial, Regular Strength	298,729	311,496	324,809	338,691	353,166	368,260	
Industrial, Case by Case	1,692,442	1,737,804	1,811,519	1,889,136	1,970,897	2,057,059	4.0%
Travis Air Force Base	891,771	932,753	975,618	1,020,454	1,067,349	1,116,400	
Total Projected Revenue (FY 2017/18 EDUs)	\$25,245,289	\$26,155,892	\$27,126,748	\$28,134,588	\$29,180,877	\$30,267,143	
Total Projected Revenue (With Growth)	\$25,069,801	\$26,155,892	\$27,398,016	\$28,700,093	\$30,065,087	\$31,496,111	
Cash Flow Revenue	\$25,095,000	\$26,266,000	\$27,479,000	\$28,666,000	\$29,987,000	\$31,392,000	
Difference from Cash Flow	(\$25,199)	(\$110,108)	(\$80,984)	\$34,093	\$78,087	\$104,111	\$0

Figure 8: Phased Rate Structure Change - % of Revenue by Class



Proposed Rate Schedule

Table 15 shows a summary of the District’s approved rates (from FY 2014/15 to FY 2016/17) and BWA’s proposed rates (from FY 2017/18 to FY 2021/22). BWA recommends that the District no longer include Anheuser-Busch as a separate “Large Industrial” customer and instead charge Anheuser-Busch the case-by-case rate.

Table 15
Fairfield-Suisun SD
Effective & Proposed Sewer Rates

Class	Effective Rates			Proposed (Phased Rate Structure Change)					Units	
	Effective Date	FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21		FY 2021/22
1. Residential		\$32.71	\$34.56	\$36.35	\$37.67	\$39.05	\$40.47	\$41.94	\$43.47	per dwelling unit per month
2. Commercial										
Regular Strength		\$2.56	\$2.73	\$2.90	\$3.01	\$3.12	\$3.23	\$3.35	\$3.47	per HCF
Special Strength		\$4.52	\$4.70	\$4.88	\$5.02	\$5.17	\$5.32	\$5.48	\$5.64	per HCF
3. Industrial, Regular Strength		\$2.56	\$2.73	\$2.90	\$3.02	\$3.15	\$3.29	\$3.43	\$3.57	per HCF
4. Case-by-Case		\$2,126.49	\$2,299.07	\$2,469.06	\$2,534.07	\$2,600.79	\$2,669.26	\$2,739.54	\$2,811.67	per million gallons of flow
Plus		\$329.40	\$340.41	\$351.05	\$375.82	\$402.34	\$430.73	\$461.12	\$493.66	per thousand pounds of BOD
Plus		\$171.85	\$177.76	\$183.48	\$188.46	\$193.57	\$198.82	\$204.21	\$209.75	per thousand pounds of SS
5. Large Industrial										
Anheuser-Busch		\$2,188.26	\$2,419.72	\$2,624.84	\$2,534.07	\$2,600.79	\$2,669.26	\$2,739.54	\$2,811.67	per million gallons of flow
Plus		\$329.40	\$340.42	\$351.06	\$375.82	\$402.34	\$430.73	\$461.12	\$493.66	per thousand pounds of BOD
Plus		\$171.85	\$177.75	\$183.47	\$188.46	\$193.57	\$198.82	\$204.21	\$209.75	per thousand pounds of SS discharged
6. Travis Air Force Base		\$2.01	\$2.09	\$2.17	\$2.27	\$2.37	\$2.48	\$2.59	\$2.71	per HCF of flow discharged

SECTION 7

Capacity Fee Introduction

Bartle Wells Associates (BWA) was retained to update the District's sewer capacity charges. Sewer capacity charges are one-time fees charged to new or expanded connections to the District's sewer system designed to help recover the costs of infrastructure and assets benefiting new development.

A key recommendation of the report is to transition to a flexible capacity fee which can be applied to all future development within the District service area, regardless of where the development occurs. Key objectives of the study include:

- Provide independent review of the District's current system of sewer capacity fees;
- Identify and evaluate alternative approaches and fee methodologies;
- Develop updated capacity fees that:
 - Recover the costs of infrastructure and assets that benefit new development;
 - Equitably recover costs from new connections to the District's sewer system;
 - Are consistent with industry-standard practices and methodologies;
 - Comply with government code.

This report presents key findings and recommendations as well as final capacity fee alternatives for District consideration. The recommendations and alternatives presented in this report incorporate input from District staff. A flowchart showing the capacity fee analysis is shown in **Figure 9**.

Current Capacity Fee

Table 16 shows the District’s current capacity fees. The District currently charges a flat fee for all residential units. Commercial customers are charged based on parcel size in acres, while case-by-case customers are charged based on number of connection units, with one connection unit equivalent to a single family residential connection.

A potential issue with charging commercial customers based on parcel size is that certain customers could be charged for portions of their property, such as parking lots, that do not generate sewer flows. Parcel size calculations also are challenging to calculate fees for mixed-use buildings.

Table 16
Fairfield-Suisun SD
Current Capacity Fees

Single Family Dwelling	\$5,943	All units
Multi Family Dwelling Unit	\$5,943	First unit
	\$3,566	Each additional unit in the same building
Hotel, Auto Court, Motel, Rooming House, Trailer Court	\$5,943	First unit
	\$2,971	Each additional unit or trailer space
Commercial, Regular Strength	\$5,943	First 1/4 Acre
	\$1,486	Each additional 1/4 acre or portion thereof
Commercial, Special Strength	\$13,372	First 1/4 Acre
	\$3,342	Each additional 1/4 acre or portion thereof
Mixed Usage		Based on prorata proportion of building square footage
Case-by-Case Industrial	\$5,943	Multiplied by the number of connection units

Government Code

Development impact fees are governed by California Government Code Section 66000 et. seq. commonly known as AB1600. The Code refers to water and sewer impact fees as capacity charges since their purpose is to recover an equitable share of costs for capacity in infrastructure.

Section 66013 of the Code specifically governs water and sewer capacity charges and states that the fee “*shall not exceed the estimated reasonable cost of providing the service for which the fee or charge is imposed,*” unless approved by a two-thirds vote.

The Code also states that “*Capacity charge means a charge for public facilities in existence at the time a charge is imposed or charges for new public facilities to be acquired or constructed in the future that are of proportional benefit to the person or property being charged.*” The Code does not detail any specific method for determining an appropriate fee.

Section 66013 also identifies various accounting requirements for capacity fee revenues, notably that such revenues cannot be co-mingled with other District revenues and must be used solely for the purpose for which the fee was imposed. Section 66016 of the Code identifies the procedural requirements for adopting or increasing a water or sewer capacity charge.

This report calculates new sewer capacity fees under the fee approach summarized below:

Buy-In + Expansion Cost Approach: Under this approach, the capacity fee includes two components: a) a buy-in component to recover an equitable share of costs for existing facilities available to serve new development (in current dollars), plus b) an expansion component to recover the cost of capacity in future facilities needed to serve projected new development through 2030.

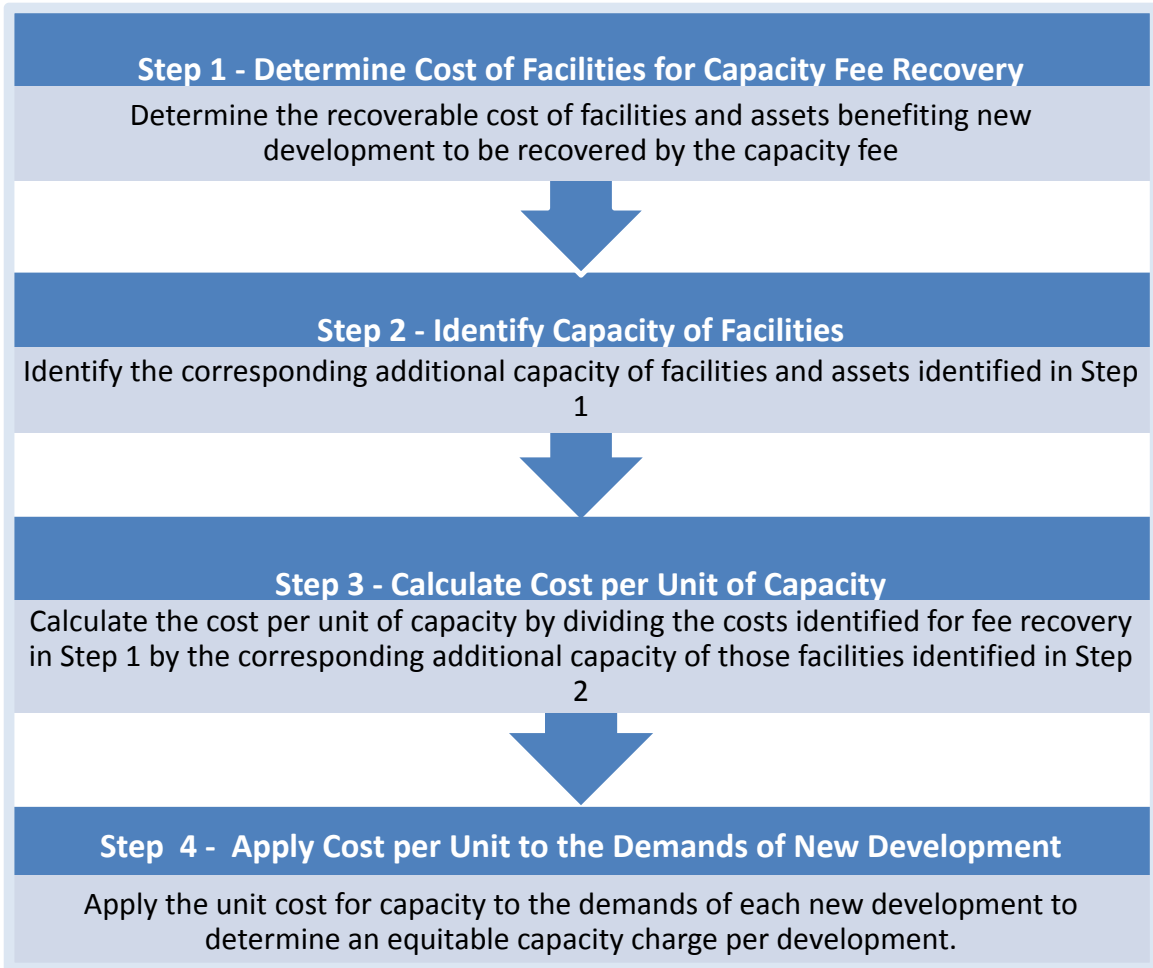
The Buy-In + Expansion Cost Approach complies with the Government Code and recovers costs for both existing and future facilities and assets that will benefit new development, and is designed to equitably recover costs from growth.

Facility Cost Valuation

There are a number of acceptable methods for valuing infrastructure and assets for determining the amount of facility costs that will be recovered by updated capacity fees. BWA's fee calculation uses the following method:

Estimated Replacement Cost: Under this approach, the current (or replacement) value of existing facilities is estimated based on an inventory of existing assets (e.g. sewers by linear footage) and the current estimated costs of constructing those facilities based on escalating original construction costs to current dollar values.

Figure 9: Capacity Fee General Approach



SECTION 8

Capacity Fee Calculation

Table 17 shows the District’s estimated existing asset replacement cost. The facilities are allocated to flow, BOD, and SS based on the District’s 2002 “Capital and Operating Cost Allocation Update,” which allocates costs based on the treatment intent of each constructed facility at FSSD. The total replacement cost of the sewer system is estimated at \$646.5 million in FY 2016/17.

Table 17
Fairfield-Suisun SD
Capacity Fee - Existing Assets

<u>Existing Assets</u>	<u>System Cost</u>	<u>Flow</u> <u>(% Allocation)</u>	<u>BOD</u> <u>(% Allocation)</u>	<u>SS</u> <u>(% Allocation)</u>	<u>Flow</u> <u>(\$ Allocation)</u>	<u>BOD</u> <u>(\$ Allocation)</u>	<u>SS</u> <u>(\$ Allocation)</u>
Treatment Plant & Sewers (FY 2017 Replacement Cost) ¹	\$635,530,764	73.8%	20.5%	5.7%	\$469,085,257	\$130,410,913	\$36,034,594
Vehicle, Equipment & Furniture	3,887,002	73.8%	20.5%	5.7%	2,868,996	797,613	220,393
Land	<u>7,152,402</u>	73.8%	20.5%	5.7%	<u>5,279,188</u>	<u>1,467,673</u>	<u>405,541</u>
Total Existing Assets Value	\$646,570,168				\$477,233,441	\$132,676,198	\$36,660,529

1 - Treatment Plant & Sewers (FY 2017 Replacement Cost) cost from Table 7

Table 18 shows expansion capital costs and are allocated to flow, BOD, and SS based on District engineering estimates. Total expansion capital costs are estimated at approximately \$17 million and are intended to allow the District to reach buildout in 2030.

Table 18
Fairfield-Suisun SD
Capacity Fee - Expansion Capital

<u>Expansion Capital</u>	<u>Cost</u>	<u>Flow</u> <u>(% Allocation)</u>	<u>BOD</u> <u>(% Allocation)</u>	<u>SS</u> <u>(% Allocation)</u>	<u>Flow</u> <u>(\$ Allocation)</u>	<u>BOD</u> <u>(\$ Allocation)</u>	<u>SS</u> <u>(\$ Allocation)</u>	<u>Total</u>
Cordelia Pump Station	\$635,000	100.0%			\$635,000	\$0	\$0	
Northeast Fairfield Pump Station	1,800,000	100.0%			1,800,000	0	0	
Peabody-Walters S-245A	3,457,000	100.0%			3,457,000	0	0	
2nd Generation Aeration System (25%)	2,000,000		100.0%		0	2,000,000	0	
Capacity Analysis	30,000	73.8%	20.5%	5.7%	22,140	6,150	1,710	
New Dev Review/Ins	477,609	73.8%	20.5%	5.7%	352,475	97,910	27,224	
Connection Fee Study	95,000	73.8%	20.5%	5.7%	70,110	19,475	5,415	
Safety	333,189	73.8%	20.5%	5.7%	245,893	68,304	18,992	
Information Systems	407,816	73.8%	20.5%	5.7%	300,968	83,602	23,246	
Tertiary Filter Expansion	5,100,000	100.0%			5,100,000	0	0	
Digester Gas Utilization (25%)	1,875,000			100.0%	0	0	1,875,000	
Project Planning	<u>754,372</u>	<u>73.8%</u>	<u>20.5%</u>	<u>5.7%</u>	<u>556,727</u>	<u>154,646</u>	<u>42,999</u>	
Total Expansion Capital	\$16,964,986				\$12,540,314	\$2,430,087	\$1,994,585	\$16,964,986

Table 19 shows BWA’s estimated District flow and strength in gallons, pounds of BOD, and pounds of SS per day. BWA used these estimates to determine an estimated overall strength per gallon. BWA estimates that the District will require a plant capacity of 23.70 mgd average dry weather flow (ADWF) at buildout, and will handle approximately 56,000 pounds of BOD per day and 50,000 pounds of SS per day.

**Table 19
Fairfield-Suisun SD
Capacity Fee - Flows and Loadings**

FSSD Est. System Flow & Loadings	Flow (GPD)	BOD per Day (lbs)	SS per Day (lbs)
	13,969,723	33,091	29,391
Est. System Pounds per Gallon (BOD)	0.0024		
Est. System Pounds per Gallon (SS)	0.0021		
	Required Plant Capacity (GPD at Buildout)¹	Est. BOD per Day (lbs)	Est. SS per Day (lbs)
FSSD Flow & Loadings Buildout Capacity	23,700,000	56,139	49,862

1 - Source: Average estimated ADWF flow into plant at buildout, Master Plan Environmental Impact Report SCH # 2004032046 September 2005, page ES-2. Final EIR approved March 2006

Table 20 provides a calculation of unit rates for the District’s existing and expansion assets in terms of a rate per gallon per day, pound of BOD per day, and pound of SS per day. The cost of existing assets allocated to flow, BOD, and SS are divided by the estimated buildout plant capacity (GPD), pounds of BOD per day at buildout, and pounds of SS per day at buildout to determine unit rates for existing assets. The same calculation is repeated for the cost of expansion assets to determine a unit rate for the District’s capital expansion program. The unit rates are summed to determine a total rate per GPD, pound of BOD, and pound of SS.

**Table 20
Fairfield-Suisun SD
Capacity Fee - Unit Rates**

FSSD Flow & Loadings Buildout Capacity	Required Plant Capacity (GPD at Buildout)	Est. BOD per Day (lbs)	Est. SS per Day (lbs)	Totals
	23,700,000	56,139	49,862	
Existing Assets	\$477,233,441	\$132,676,198	\$36,660,529	\$646,570,168
Unit Rate	\$20.14	\$2,363.34	\$735.24	
Expansion Assets	\$12,540,314	\$2,430,087	\$1,994,585	\$16,964,986
Unit Rate	\$0.53	\$43.29	\$40.00	
Total Unit Rates	\$20.67	\$2,406.62	\$775.24	

Table 21 applies the unit rate for GPD, pound per day of BOD, and pound per day of SS to the estimated flows and loadings of each customer class to determine total capacity fees.

Table 21
Fairfield-Suisun SD
Capacity Fee - Rate Per Equivalent Dwelling Unit

	<u>\$/GPD</u>	<u>\$/lb of BOD</u>	<u>\$/lb of SS</u>	
Total Unit Rates	\$20.67	\$2,406.62	\$775.24	
	<u>Flow (GPD)</u>	<u>BOD per Day (lbs)</u>	<u>SS per Day (lbs)</u>	<u>Total Fee</u>
Equivalent Dwelling Unit (EDU)¹	230	0.50	0.42	
	\$4,753	\$1,201	\$327	\$6,281

1 - Based on flow strength of 260 BOD (mg/l) and 220 SS (mg/l)

Proposed Capacity Fees

Table 22 summarizes the recommended capacity fee. BWA recommends the District adopt an equivalent dwelling unit equal to 230 GPD, 260 mg/l BOD, and 220 SS/mg/l. The recommend fee per EDU is \$6,281.

To maintain District purchasing power, the fee is recommended to be increased annually based on the Engineering News-Record – Construction Cost Index 20 City Average (ENR CCI). The 20 city average index is recommended rather than a regional index because prices are more susceptible to price spikes in regional indices. Historical ENR CCI increases are shown in **Appendix 1**.

Table 22
Fairfield-Suisun SD
Proposed Capacity Fee

<u>All Classes</u>	<u>GPD</u>	<u>BOD/mg/l</u>	<u>SS/mg/l</u>	<u>Fee¹</u>
Per Equivalent Dwelling Unit	230	260	220	\$6,281

1 - Fees are recommended to be increased annually by the ENR CCI

Capacity Fee Fund Financial Projections

In **Table 23**, BWA estimates the District's capacity fee revenue. Growth is estimated to be 0.7% in FY 2017/18 and 1% per year thereafter.

Table 23
Fairfield-Suisun SD
Capacity Fee Revenue Estimate

	Projected					Extended Projection				Total
	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	
Projected Flows and Loadings										
Growth %	0.70%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	
Projected Flows & Loadings										
Flow (GPD)	13,969,723	14,109,421	14,250,515	14,393,020	14,536,950	14,682,320	14,829,143	14,977,434	15,127,209	
BOD (lbs per day)	33,091	33,422	33,756	34,093	34,434	34,779	35,127	35,478	35,833	
TSS (lbs per day)	29,391	29,685	29,982	30,281	30,584	30,890	31,199	31,511	31,826	
Customer Capacity Fee Charges¹										
Flow (GPD)	\$20.67	\$20.67	\$20.67	\$20.67	\$20.67	\$20.67	\$20.67	\$20.67	\$20.67	\$20.67
BOD (lbs per day)	\$2,407	\$2,407	\$2,407	\$2,407	\$2,407	\$2,407	\$2,407	\$2,407	\$2,407	\$2,407
TSS (lbs per day)	\$775	\$775	\$775	\$775	\$775	\$775	\$775	\$775	\$775	\$775
Customer Capacity Fee Revenue										
Flow	\$2,006,797	\$2,886,921	\$2,915,791	\$2,944,949	\$2,974,398	\$3,004,142	\$3,034,183	\$3,064,525	\$3,095,171	
BOD	553,584	796,370	804,334	812,377	820,501	828,706	836,993	845,363	853,817	
TSS	<u>158,385</u>	<u>227,849</u>	<u>230,127</u>	<u>232,428</u>	<u>234,753</u>	<u>237,100</u>	<u>239,471</u>	<u>241,866</u>	<u>244,285</u>	
Total	\$2,718,767	\$3,911,140	\$3,950,252	\$3,989,754	\$4,029,652	\$4,069,948	\$4,110,648	\$4,151,754	\$4,193,272	\$35,125,187

1 - Does not include potential ENR CCI increases

Table 24 shows a projection of revenues and expenses for the District’s Capital Fund based on proposed capacity fees. The capacity fund pays for expansion-related capital and is expected to receive 25% of SRF loan proceeds and pay 25% of the debt service.

Table 24
Fairfield-Suisun SD
Cash Flow Projection - Capital Fund

	Budget	Projected						Extended Projection		
	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Beginning Fund Balance										
Capital Fund	\$275,123	\$1,961,361	\$3,521,274	\$5,810,248	\$7,468,684	\$10,063,140	\$11,565,497	\$12,517,913	\$14,353,793	\$17,574,526
Interest Earnings %	0.5%	1.5%	2.0%	2.5%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
REVENUES										
Capital Fund Revenues										
SRF Loan Proceeds - Aeration (\$2 million)	\$125,000	\$1,450,000	\$425,000							
Projected Capacity Fees	1,967,133	1,988,528	2,718,767	3,911,140	3,950,252	3,989,754	4,029,652	4,069,948	4,110,648	4,151,754
Interest Income (0.5-3% of Beg. Fund Balance)	1,376	29,420	70,425	145,256	224,061	301,894	346,965	375,537	430,614	527,236
Total Sewer Capital Revenue	\$2,093,509	\$3,467,948	\$3,214,192	\$4,056,397	\$4,174,312	\$4,291,648	\$4,376,617	\$4,445,486	\$4,541,262	\$4,678,990
EXPENSES										
Capital Fund Expenses										
SRF Debt Service (Funded by Capacity Fees)	\$0	\$0	\$54,031	\$378,214	\$216,123	\$216,123	\$216,123	\$216,123	\$216,123	\$216,123
Capital Projects (Funded by Capacity Fees)	407,271	1,908,035	871,187	2,019,747	1,363,733	2,573,169	3,208,078	2,393,483	1,104,407	1,115,876
Total Capital Expenses	\$407,271	\$1,908,035	\$925,218	\$2,397,961	\$1,579,856	\$2,789,292	\$3,424,201	\$2,609,606	\$1,320,530	\$1,331,999
Net Revenues After Transfers - Capital Fund	\$1,686,238	\$1,559,913	\$2,288,975	\$1,658,435	\$2,594,457	\$1,502,357	\$952,416	\$1,835,880	\$3,220,732	\$3,346,991
Ending Fund Balance										
Capital Fund	\$1,961,361	\$3,521,274	\$5,810,248	\$7,468,684	\$10,063,140	\$11,565,497	\$12,517,913	\$14,353,793	\$17,574,526	\$20,921,517

Appendix

Appendix 1 Fairfield-Suisun SD ENR 20 City CCI

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Average	% Increase from prior year
1990	4680	4685	4691	4693	4707	4732	4734	4752	4774	4771	4787	4777	4732	
1991	4777	4773	4772	4766	4801	4818	4854	4892	4891	4892	4896	4889	4835	2.18%
1992	4888	4884	4927	4946	4965	4973	4992	5032	5042	5052	5058	5059	4985	3.10%
1993	5071	5070	5106	5167	5262	5260	5252	5230	5255	5264	5278	5310	5210	4.53%
1994	5336	5371	5381	5405	5405	5408	5409	5424	5437	5437	5439	5439	5408	3.78%
1995	5443	5444	5435	5432	5433	5432	5484	5506	5491	5511	5519	5524	5471	1.18%
1996	5523	5532	5537	5550	5572	5597	5617	5652	5683	5719	5740	5744	5622	2.76%
1997	5765	5769	5759	5799	5837	5860	5863	5854	5851	5848	5838	5858	5825	3.61%
1998	5852	5874	5875	5883	5881	5895	5921	5929	5963	5986	5995	5991	5920	1.64%
1999	6000	5992	5986	6008	6006	6039	6076	6091	6128	6134	6127	6127	6060	2.35%
2000	6130	6160	6202	6201	6233	6238	6225	6233	6224	6259	6266	6283	6221	2.67%
2001	6281	6272	6279	6286	6288	6318	6404	6389	6391	6397	6410	6390	6342	1.94%
2002	6462	6462	6502	6480	6512	6532	6605	6592	6589	6579	6578	6563	6538	3.09%
2003	6581	6640	6627	6635	6642	6694	6695	6733	6741	6771	6794	6782	6695	2.39%
2004	6825	6862	6957	7017	7065	7109	7126	7188	7298	7314	7312	7308	7115	6.28%
2005	7297	7298	7309	7355	7398	7415	7422	7479	7540	7563	7630	7647	7446	4.65%
2006	7660	7689	7692	7695	7691	7700	7721	7722	7763	7883	7911	7888	7751	4.10%
2007	7880	7880	7856	7865	7942	7939	7959	8007	8050	8045	8092	8089	7967	2.78%
2008	8090	8094	8109	8112	8141	8185	8293	8362	8557	8623	8602	8551	8310	4.30%
2009	8549	8533	8534	8528	8574	8578	8566	8564	8586	8596	8592	8641	8570	3.13%
2010	8660	8672	8671	8677	8761	8805	8844	8837	8836	8921	8951	8952	8799	2.67%
2011	8938	8998	9011	9027	9035	9053	9080	9088	9116	9147	9173	9172	9070	3.08%
2012	9176	9198	9268	9273	9290	9291	9324	9351	9341	9376	9398	9412	9308	2.63%
2013	9437	9453	9456	9484	9516	9542	9552	9545	9552	9689	9666	9668	9547	2.56%
2014	9664	9681	9702	9750	9796	9800	9835	9846	9870	9886	9912	9936	9807	2.72%
2015	9972	9962	9972	9992	9979	10039	10037	10039	10065	10128	10092	10135	10034	2.32%
2016	10133	10182	10242	10280	10315	10337	10379						10267	2.32%

Source: ENR 20 City CCI