

# Long Range Financial Plan

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Silicon Valley Clean Water

**Presented January 2019 by:**

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Alicia Aguirre	Member	West Bay Sanitary District
George Otte	Secretary	City of Redwood City
Mark Olbert	Member	City of San Carlos

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## SECTION 1 – EXECUTIVE SUMMARY AND INTRODUCTION

This Long Range Financial Plan (LRFP; or the Plan) describes the anticipated cash flows required by Silicon Valley Clean Water (SVCW; or the Authority) over the next decade to provide wastewater services and fund critical construction for the communities it serves. This includes funding for operations and maintenance of wastewater facilities, revenue-funded capital projects, as well as the Capital Improvement Program (CIP) program and its associated debt service payments. It also describes contributions to cash reserves to go towards future capital improvements. This Plan is meant to encourage discussion and support decision-making. It provides to-date financial information to Member Entities (as herein defined) as they measure the financial implications of decisions and communicate with internal and external stakeholders.

SVCW's Wastewater Treatment Plant (WWTP) was placed in operation November 1981 and connected to an influent conveyance system and effluent disposal system built in 1969. In 2006, engineering studies determined the majority of SVCW fixed assets were beyond their useful lives and needed replacement. SVCW therefore initiated its Capital Improvement Program (CIP) to replace and rehabilitate the wastewater conveyance and treatment system in a structured and prioritized manner. It has also anticipated more stringent treatment requirements will be necessary. Now in its eleventh year, the CIP has completed over 120 projects and spent \$290 million through October 2018. The CIP is the Authority's guiding document and a recent update in October 2018 estimates that, inclusive of spending to date, the program will cost \$849.6 million when completed.

This Plan incorporates the guidelines from the SVCW Joint Powers Agreement, the adopted 2018-19 Operating and Capital Budget, and relevant fiscal policies that influence cash flow requirements. It also recognizes the importance of growing the Authority's cash reserves dedicated to future projects.

The LRFP is updated each year to measure SVCW financial position relative to anticipated cash flows needed from SVCW's Member Entities. After incorporating CIP construction and expenditure schedules, the LRFP-recommended strategy ensures SVCW obligations can be met while members strengthen their credit ratings.

Compared to the January 2018 LRFP, this Plan incorporates three significant changes:

- CIP Update – In October 2018, SVCW updated its CIP document to incorporate changes in project cost estimates, add or delete projects, and apply inflationary impacts to bring project costs to mid-point of construction. It also included a cost reduction for the Nutrient Removal Program as new information garnered from the Regional Water Quality Control Board more fully defines nutrient-loading issues in the San Francisco Bay. Combined, these factors added \$15.9 million and bring total anticipated CIP expenditures (from inception to completion in 2026) to \$849.6 million.

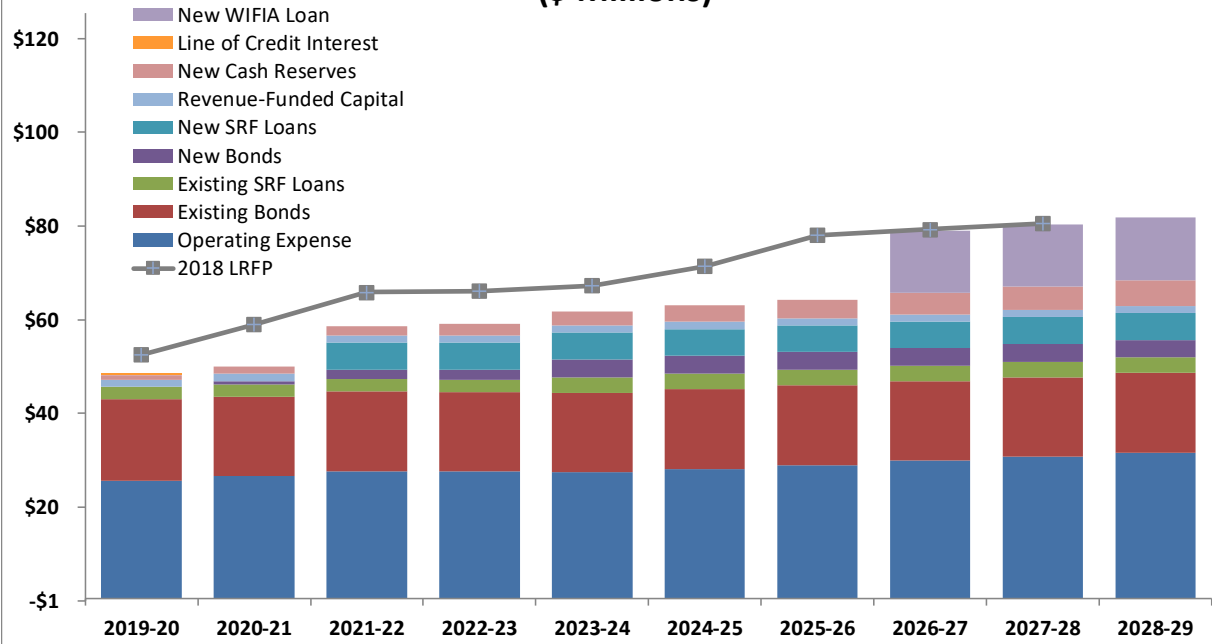
- Construction Timing – Design of SVCW conveyance projects progressed rapidly over the past year. Collectively known as RESCU, the Regional Environmental Sewer Conveyance Upgrade program is using a Progressive Design-Build (PDB) project delivery method. RESCU construction has commenced for the Gravity Pipeline and Front-of-Plant elements. Total remaining costs of RESCU are approximately \$440 million, 90% of which is anticipated be spent by the end of fiscal year 2020-21.
- Financing Sources – Whereas in last year’s LRFP SVCW assumed a modest amount of funding would come from Government Loans, this updated LRFP contains optimism in securing state and federal loans. In 2018 the California State Water Resource Control Board (the Water Board) included \$141 million for SVCW RESCU projects in its Intended Use Plan. Similarly, the United States Environmental Protection Agency (EPA) invited SVCW to participate in its Water Infrastructure Financing and Innovation Act (WIFIA) program, indicating up to a \$208 million loan amount may be available. This LRFP therefore adjusted the amounts of governmental loans assumed to be available and reduced the amount of bond-financing.

Like many other water treatment agencies, SVCW infrastructure was originally funded by the 1972 Clean Water Act. As assets aged, the absence of a sinking fund at SVCW created a reliance on debt to fund the current CIP. The Authority now strives to obtain the lowest-cost financing available through a combination of Wastewater Revenue Bonds, low-cost Governmental Loans at federal and state levels, and cash reserves when available.

When made aware in 2008 of the need to invest a significant amount into SVCW infrastructure, Member Entities developed strategies to increase their sewer rates. Regular updates to the CIP and this LRFP have kept Member Entities informed of the next decade of cash flow requirements and, as a result of their steady rate adjustments, only modest rate increases will be necessary.

SVCW annual cash flow requirements in FY 2019-20 are estimated at \$48 million. Cash flow requirements are thereafter projected to reach \$81.3 million by FY 2028-29 when projected new debt is fully in place. The largest increase in expenditures over the next decade is for debt service payments, which are estimated to peak at \$43.2 million annually once fully in place. Other non-debt related expenditures are less impactful; the average annual increase in Operating Expense is less than four percent. This LRFP describes the structure, timing, and amount of all expenditure increases to inform Member Entities as SVCW plans for the future.

## Projected Cash Flow Requirements - SVCW Aggregate (\$ Millions)



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## INTRODUCTION

### **Purpose of Long-Range Financial Planning**

Member Entities' sewer rates provide the underlying repayment security for all SVCW financing. As such, in 2008, SVCW developed a Five Year Financial Plan (the "Financial Plan") to provide a financial roadmap for funding the CIP and ongoing operating costs. The Financial Plan was frequently updated and presented to the SVCW Commission (as hereinafter defined) to incorporate CIP budget figures. It provides a roadmap that Member Entities follow when considering sewer rates.

A long-Range financial plan combines financial projections with strategy. The Government Finance Officers Association (GFOA) recommends that all governments regularly engage in long-Range financial planning as a collaborative process to consider future scenarios and help navigate challenges. By aligning financial capacity with long-Range service objectives, SVCW and its Member Entities gain insight as to financial resources needed to support strategies. With this information, Member Entities can balance objectives and financial challenges.

SVCW will manage its finances and meet critical funding needs while recognizing its Member Entities' need to maintain reasonable wastewater rates. This LRFP will be enacted as SVCW and its Members adopt annual budgets, monitor financial performance, and incorporate Commission-directed actions. The LRFP is based upon financial planning models that include long-Range forecasts of operating and capital expenditures. It includes reasonably conservative assumptions and attempts to account for uncertainties. It aims to generate adequate cash reserves for capital projects while maintaining good standing in the credit markets to provide ready access to cost-effective capital financing when needed. It evaluates the capital financing and debt service coverage policies to optimize cash funding of capital investments. Finally, it continues to evaluate cash reserve policies that must consider intergenerational equity with regards to funding capital projects and raising rates.

The LRFP includes a debt structure model to document recommended debt strategy, identify risks to that strategy, and offer mitigation steps available or alternative funding solutions. As part of the Plan a financial model (the Model) was created to assess financing alternatives for the CIP.

This LRFPP is meant to stimulate discussions for decision making by providing up-to-date financial information. Member Entities can incorporate this material to understand the financial impact of decisions, and to communicate those impacts to internal and external stakeholders. This long-Range financial plan includes the following elements:

- Time Horizon – The plan looks nine years beyond the current fiscal year.
- Scope – The plan considers all expenditures associated with the conveyance and treatment of wastewater received from Member Entities. Expenditures include all SVCW operating costs, capital improvements, debt service, and cash reserve requirements.
- Frequency – This long-range plan is updated annually to aid Member Entities with their own budget and rate-setting processes.
- Content – The plan includes an analysis of the financial environment, revenue and expenditure forecasts, debt position and affordability analysis, strategies for achieving and maintaining financial balance, and monitoring mechanisms such as a scorecard of key financial health indicators. Adherence with the financial plan and the ability to comply with the financial requirements of this Plan can be measured primarily through debt service coverage and the number of days cash on hand. SVCW can readily monitor these financial metrics through an annual review of the Member Entities' respective audited financial statements.
- Visibility – The plan will inform Member Entities about the long-Range financial prospects of SVCW. Each year going forward, actual results will be compared to the LRFPP by integrating it into future LRFPPs.

SVCW Member Entity staff was involved in the Plan preparation process to help identify necessary tables, discuss assumptions, and review results. Member Entities, via the Silicon Valley Clean Water governing commission (the Commission), can now integrate the information provided into their own respective financial plans.

## **Organizational and Business Structure**

SVCW was founded in 1975 as the successor to the Strategic Consolidation Sewerage Plan. SVCW took title to all property, capital and equipment of the Strategic Consolidation Sewerage Plan. SVCW maintains and operates sanitary sewerage pumping, transmission and outfall facilities that were originally constructed or otherwise owned by the Strategic Consolidation Sewerage Plan. SVCW provides wastewater transmission, treatment, and effluent disposal services for the surrounding communities including the Cities of Belmont, Redwood City, and San Carlos and for the West Bay Sanitary District (collectively, the Member Entities). SVCW provides recycled water to the City of Redwood City.

SVCW is a Joint Exercise of Powers Authority (JPA) that provides wastewater transmission, treatment, recycled water, and effluent disposal services to its Member Entities, all facilities of which (hereinafter referred to as Joint Facilities) are located in the northern part of Silicon Valley between the cities of San Francisco and San Jose. SVCW's wastewater treatment plant is located in the City of Redwood City. SVCW serves more than 200,000 people and businesses located predominantly in San Mateo County, California. SVCW operates in a strong Bay Area economy, with a customer base that includes large business customers such as Oracle Corporation, EA Sports, and Facebook.

SVCW owns and operates a regional wastewater treatment plant with an average dry weather flow permitted capacity of 29 million gallons per day, an approximately nine-mile influent force main pipeline that conveys wastewater from the Member Entities to SVCW's treatment plant, four wastewater pump stations, and a 1.25-mile effluent disposal pipeline that discharges treated effluent into the San Francisco Bay.

## **Governance & Management**

The JPA is governed by a four-member Commission consisting of one appointed person from each of the Member Entities' governing bodies. There is a total of 100 votes, allocated as follows:

- City of Redwood City                      42 votes
- West Bay Sanitary District              28 votes
- City of San Carlos                         19 votes
- City of Belmont                              11 votes

A vote of at least seventy five percent is required to adopt or amend bylaws, rules, and regulations; to adopt or modify any budget; to approve any capital costs, contracts, appropriations, or transfers of more than \$75,000; to employ the manager and certain consultants; to sell or dispose of property; and to approve other designated items. Other actions of the Commission must be approved by a simple majority of the votes. In addition, any amendment to the Joint Powers Agreement must be approved by a four-fifths vote by each of the Member Entities' governing bodies.

## Financial Oversight and Control

SVCW sets an annual budget according to goals established by the Commission that support operational priorities, the Capital Improvement Program and the Long Range Financial Plan. The Budget reflects a progressive approach to fund wastewater operations while controlling costs, minimizing unplanned expenditures, limiting risks, and investing in projects and programs that provide the long-Range resources needed for the community.

SVCW has no taxing power. SVCW receives nearly all funding, other than interest earnings and other miscellaneous revenues, from payments made by the Member Entities for operations, capital improvements, debt service, and cash reserves.

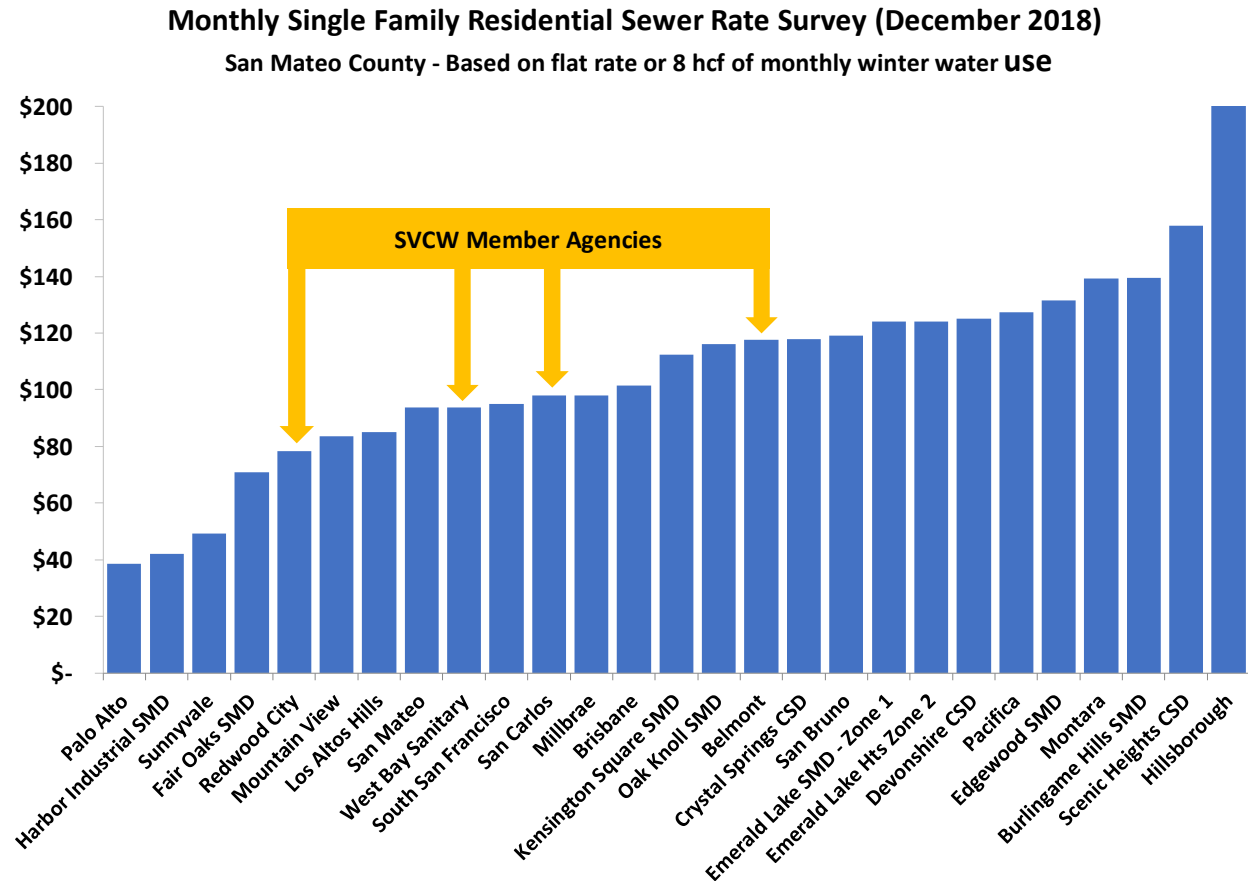
## Comparative Residential Sewer Charges

Based upon previous Financial Plans, Member Entities have already adopted significant rate increases since 2008 to generate their allocable share of the CIP and capital program costs. The following table shows the single family residential monthly sewer rates of each participating SVCW Member Entity over the past ten years.

Residential Sewer Rates by Member Agency Based on 8 HCF of flow										
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Belmont	\$48.06	\$51.34	\$72.13	\$77.33	\$82.77	\$88.13	\$88.13	\$99.47	\$105.35	\$117.74
City of Redwood City	\$44.70	\$48.72	\$53.10	\$57.88	\$63.09	\$68.77	\$74.95	\$75.11	\$76.68	\$78.24
City of San Carlos	\$43.76	\$46.82	\$50.10	\$53.10	\$67.29	\$80.75	\$88.82	\$88.82	\$93.26	\$97.93
West Bay SD	\$46.67	\$54.17	\$57.50	\$62.67	\$68.33	\$74.42	\$81.08	\$85.92	\$89.33	\$93.83



Despite these increases, Member Entities' rates remain among the middle tier of San Mateo County sewer rates.



### Regulations and Permits

The federal Clean Water Act requires that all municipal, industrial and commercial facilities that discharge wastewater or storm-water directly from a point source into a water of the United States (such as a lake, river, bay, or ocean) must obtain a National Pollutant Discharge Elimination System (“NPDES”) permit. All permits are written to ensure the receiving waters will achieve certain water quality standards.

The federal government delegates the NPDES Program to the State of California for implementation through the State Water Resources Control Board and its nine Regional Water Quality Control Boards, collectively Water Boards. It is the responsibility of the Water Boards to preserve and enhance the quality of the state's waters through the development of water quality control plans and the issuance of NPDES Permits.

SVCW currently operates under a five-year NPDES permit that is valid through September 2022. As an active member in the Bay Area Clean Water Agencies (“BACWA”), a consortium of publicly-owned treatment works agencies that operate within the nine-county San Francisco Bay Area, SVCW prepares for future NPDES permit requirements. BACWA is central since some requirements imposed may be efficiently fulfilled as a group. Through BACWA, SVCW meets provisions related to overall receiving water quality monitoring, Total Maximum Daily Load and Site Specific-Objective Support, Mercury Special Studies, Copper Action Plans, and Cyanide Action Plans.

Regulatory requirements of the NPDES program may increase in the future. Many California agencies have already been required to significantly increase treatment to remove nutrients (ammonia, nitrates and phosphates) and further reduce pathogenic organisms. Studies are also underway regarding Active Pharmaceutical Ingredients to monitor the cumulative effects of pharmaceuticals and personal products, including anti-psychotic and antihypertensive drugs.

Additionally, nutrients like nitrogen and phosphorus are found in municipal waste. When excessive, these nutrients are considered harmful water pollutants leading to such problems as algae blooms. Nutrient management is an important planning consideration for California wastewater treatment operators – both to remove and to recover these resources. This LRF includes estimated costs needed to address nutrients in SVCW’s wastewater. It should be noted, however, that SVCW has joined a cooperative to explore a joint response strategy regarding future Nutrient Removal requirements.

## **Financial Modeling**

The CIP estimates approximately \$559 million remains to be spent on capital expenditures over the next eight years. The Financial Plan documents the funding strategy, risks to this strategy, and anticipated mitigation and/or alternative funding solutions available. Prior to issuing debt SVCW updates a capital finance model to evaluate the impact of capital program spending, operations and maintenance costs, and debt service to its, and the Member Entities’, financial condition. To that end, SVCW’s Chief Financial Officer oversees ongoing maintenance of quantitative modeling that includes, but is not limited to, the following:

- Historic and projected cash flows;
- Historic and projected capital expenditures;
- Historic and projected operating costs;
- Historic and projected cash reserve balances, including the Operating Fund, the CIP Fund, Revenue-funded Capital Fund, and Debt Service Reserve Fund, if any;
- Historic and projected debt service coverage;

- The most efficient mix of funding sources (debt and cash);
- The most efficient form of debt (government-subsidized loans, capital market offerings, or private loans) and most efficient structures;
- Projected revenue requirements; and
- Revenue Sources, including miscellaneous revenues and grants.

The Plan incorporates these factors to develop an all-inclusive projection of future cash flow requirements. As part of the Plan, the Financial Model was created to generate and assess multiple debt-based financing alternatives for the CIP. Several scenarios were analyzed to reach the recommended plan, including the extent to which funds would be sourced from Wastewater Revenue Bonds versus Governmental Loans. Further analysis and results are described in Sections 2 and 3 of this Plan.

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## SECTION 2 – GUIDING DOCUMENTS AND PRINCIPLES

### Audited Financial Reports

SVCW financial statements are maintained in accordance with all state and federal laws, Generally Accepted Accounting Policy, and standards of the Government Accounting Standards Board. This means revenues and expenses are recognized on a full accrual basis, where revenues are recognized in the period when they are earned and expenses are recognized in the period incurred.

An annual audit is performed by an independent public accounting firm, with an unqualified opinion that SVCW financial statements are presented fairly in all material respects.

### Operating Budgets

Each year, the adopted budget establishes the funding requirements for Member Entities. It includes all operating costs, revenue-funded capital needs, debt service payments, and cash reserves requirements. A full overview of all expenditures facilitates discussion of anticipated changes. Subsequent to the fiscal year-end closing, annual payments made by each SVCW Member Entity are reconciled against the actual expenditures allocated to each SVCW Member Entity and any differences are applied toward funding reserves held by SVCW.

The Budget is constructed consistent with goals established by the Commission to support operational priorities and the Capital Improvement Program. The Budget reflects a progressive approach to controlling costs, minimizing unplanned expenditures, limiting risk, and investing in activities that provide the long-Range resources needed for the community.

Used as a baseline for this study, the 2018-19 Budget was \$47.1 million. This includes \$24.2 million in operating expenditures, \$1.5 million for revenue-funded capital projects, additional cash reserve contributions of \$1 million, and debt service payments estimated at \$20.4 million.

2018-19 Adopted Budget - Total Contributions by Member Agency						
Description	City of Belmont	Redwood City	City of San Carlos	West Bay San District	TOTAL	
Net Operating Expenditures	\$ 2,973,317	\$ 11,245,294	\$ 3,067,987	\$ 6,927,025	\$ 24,213,623	
Revenue-Funded Capital Expenditures	140,380	721,507	224,905	398,708	1,485,500	
Reserve Contributions	92,991	477,945	148,983	264,115	984,034	
Debt Service Payments	178,425	11,137,107	3,508,897	5,565,516	20,389,946	
Subtotal - Contributions to SVCW	\$ 3,385,113	\$ 23,581,854	\$ 6,950,772	\$ 13,155,364	\$ 47,073,103	

## Expenditure Allocation

SVCW annual operating and maintenance costs are allocated according to the Joint Powers Agreement. Specifically, administrative, safety, and conveyance operating costs are allocated based on each Member Agency's proportionate share of total flow contributed to the Joint Facilities. Pump Station maintenance and operation costs are tracked as actual costs charged to each pump station and borne by the Member Agency served by each particular pump station. However, the maintenance and operation costs of the booster station are allocated on a percentage basis to West Bay Sanitary District and Redwood City at 92% and 8%, respectively.

Treatment plant operation and maintenance costs are allocated according to each Member Agency's proportionate contribution of hydraulic flow ("Flow"), Biochemical Oxygen Demand ("BOD") and Suspended Solids ("SS") to the Joint Facilities. The total annual treatment plant maintenance and operation costs are allocated as 26.5% to flow, 33.5% to Biochemical Oxygen Demand and 40% to Suspended Solids. Using these allocations, the 2018-19 Operating Budget assigns costs using the following three-year flow and loading averages:

2018-19 Budget Revenue Allocation to Member Agencies - Adopted									
Description				Belmont	Redwood City	San Carlos	West Bay San District	TOTAL	
<b>Allocation Factors</b>									
Flow				12.43%	47.49%	13.89%	26.19%	100%	
Biochemical Oxygen Demand (BOD)				12.44%	44.63%	12.29%	30.64%	100%	
Suspended Solids (SS)				11.97%	46.74%	11.57%	29.72%	100%	
<b>Weightings</b>									
<b>Operating Expenditures</b>	<b>Flow</b>	<b>BOD</b>	<b>SS</b>						
Operations	26.5%	33.5%	40.0%	\$ 1,125,355	\$ 4,247,351	\$ 1,141,584	\$ 2,672,767	\$ 9,187,056	
Maintenance	26.5%	33.5%	40.0%	779,011	2,940,169	790,245	1,850,186	6,359,611	
Laboratory	26.5%	33.5%	40.0%	216,185	815,934	219,303	513,450	1,764,871	
Environmental Services	26.5%	33.5%	40.0%	143,750	542,546	145,823	341,413	1,173,532	
Engineering	26.5%	33.5%	40.0%	93,467	352,765	94,814	221,987	763,033	
Safety	100.0%	0.0%	0.0%	49,945	190,821	55,812	105,235	401,813	
Information Services	26.5%	33.5%	40.0%	206,749	780,317	209,730	491,037	1,687,833	
Administrative Services	100.0%	0.0%	0.0%	452,709	1,729,619	505,884	953,858	3,642,071	
Subtotal				\$ 3,067,171	\$ 11,599,522	\$ 3,163,195	\$ 7,149,933	\$ 24,979,821	
Subtract Miscellaneous Income	26.5%	33.5%	40.0%	\$ 93,854	\$ 354,228	\$ 95,208	\$ 222,908	\$ 766,198	
<b>2018-19 Net Operating Revenue Required</b>				<b>\$ 2,973,317</b>	<b>\$ 11,245,294</b>	<b>\$ 3,067,987</b>	<b>\$ 6,927,025</b>	<b>\$ 24,213,623</b>	

Capital costs are distributed based on each member entity's percentage of its capacity rights as defined in the Joint Powers Agreement:

<u>Belmont</u>	<u>San Carlos</u>	<u>Redwood City</u>	<u>West Bay</u>
9.45%	15.14%	48.57%	26.84%

Unrelated to the number of votes originally ascribed to Member Agencies in the Joint Powers Agreement, the above capital cost distributions are derived from each member entity's share of

maximum capacity rights of the originally-built facilities (“Stage 1” capacity) plus its share of expansion capacity (“Stage 2”), based on average dry weather flows.

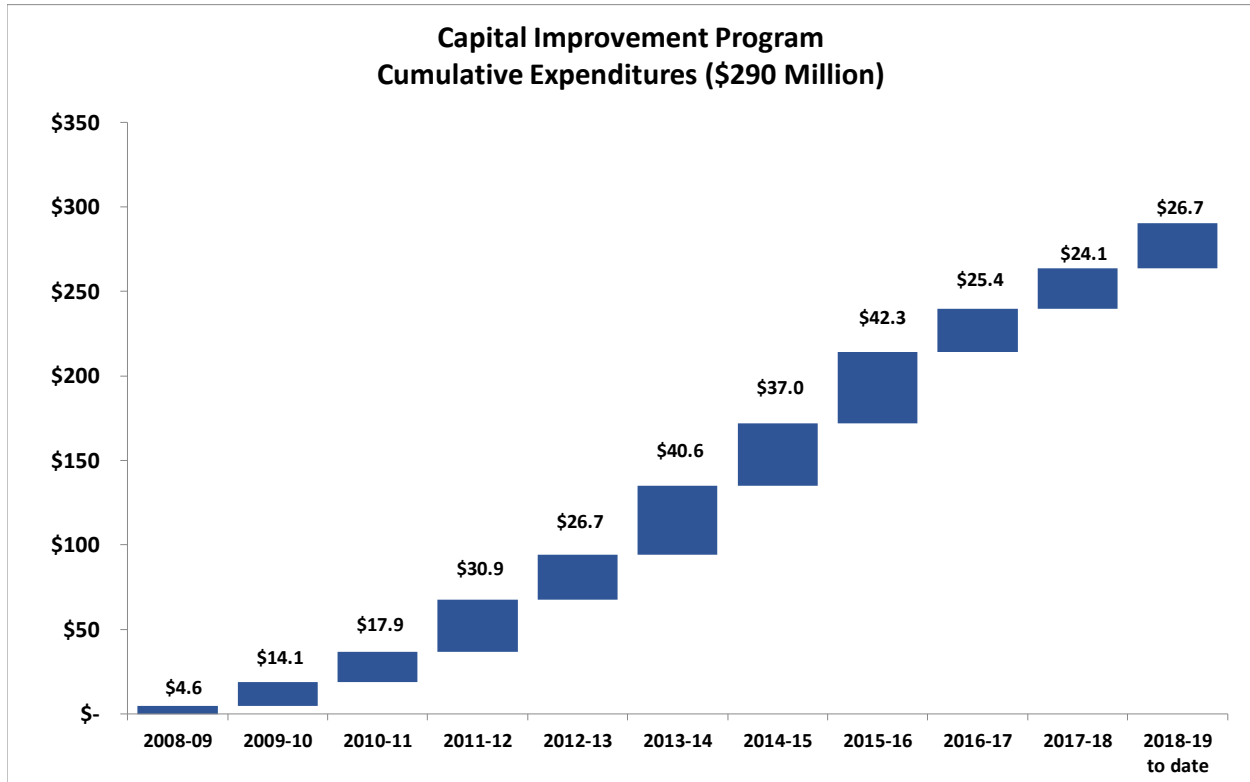
Capital costs associated with the Joint Facilities include improvements resulting from reconstruction, replacement, rehabilitation, remodeling or relocation. This includes all costs meeting the definition of a capital expense as defined in SVCW’s Capital Expense Policy.

2018-19 Capital and Reserve Allocation Calculations					
Description	City of Belmont	Redwood City	City of San Carlos	West Bay San District	TOTAL
Capital and Reserve Allocation Factors	9.45%	48.57%	15.14%	26.84%	100.00%
<b>CAPITAL IMPROVEMENT</b>					
Plant (cash-funded capital)	\$ 87,885	\$ 451,701	\$ 140,802	\$ 249,612	\$ 930,000
Pump Stations	-	-	-	-	-
Force Main	-	-	-	-	-
Equipment	52,495	269,806	84,103	149,096	555,500
Subtotal	\$ 140,380	\$ 721,507	\$ 224,905	\$ 398,708	\$ 1,485,500
<b>RESERVE CONTRIBUTIONS</b>					
Operating Reserve	\$ (1,509)	\$ (7,755)	\$ (2,417)	\$ (4,285)	\$ (15,966)
CIP Reserve	94,500	485,700	151,400	268,400	1,000,000
Subtotal	\$ 92,991	\$ 477,945	\$ 148,983	\$ 264,115	\$ 984,034

### Capital Improvement Program

SVCW is in the process of rebuilding, rehabilitating, and updating its wastewater conveyance and treatment facilities which are at or approaching the end of their useful operating lives. A CIP was developed in 2008 to proactively address near-Range and long-Range capital replacement needs. Engineering staff periodically updates the CIP to include projects that will address known Joint Facility deficiencies. This includes rehabilitation and replacement of aging infrastructure and equipment; improvements and additions to the treatment plant and conveyance system that substantially enhance reliability; technological upgrades, required regulatory treatment improvements and system-wide automation projects designed to improve operational efficiency and reliability (thereby reducing future operating and maintenance expenses); and additional energy management solutions.

The amounts charged to CIP include all capitalized components of projects such as planning, design, engineering, construction, and construction management. The costs also include interest incurred during construction, as well as certain administrative costs like insurance and internal labor directly related to the CIP work. Since the inception of the CIP, SVCW spent approximately \$290 million through September 2018.





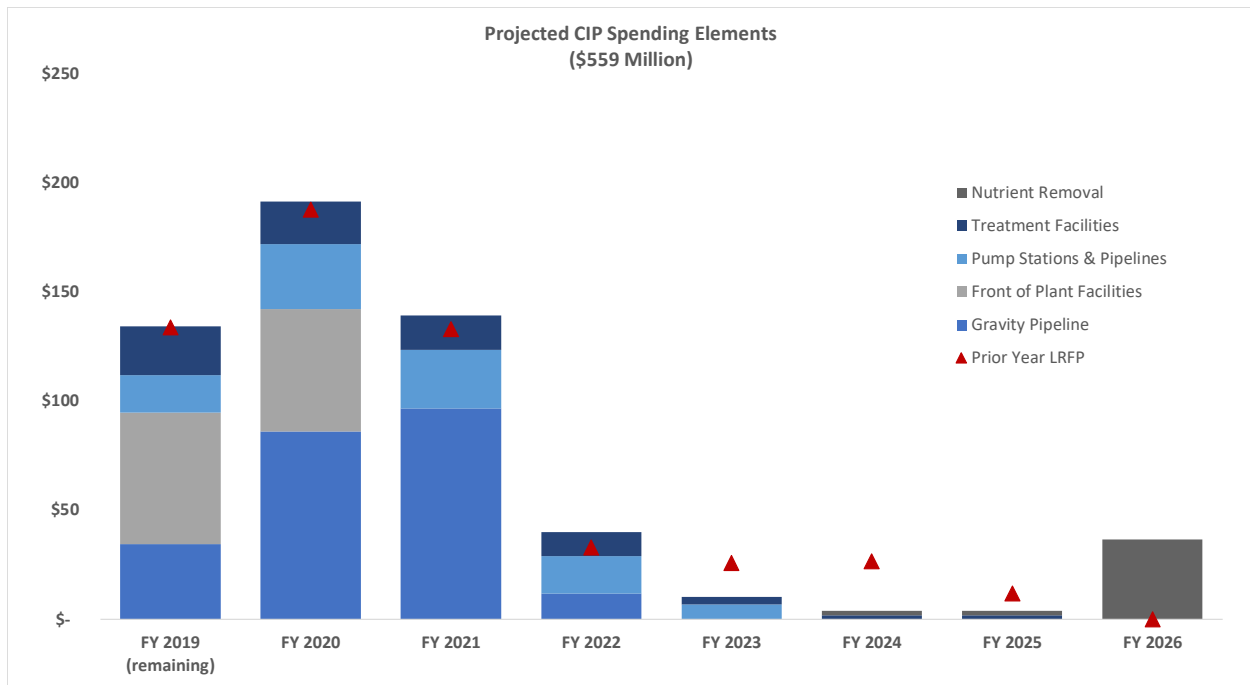
Since inception through September 2018, the majority of CIP spending has been to replace aging pipes, rehabilitate treatment facilities including energy reliability, deliver process automation, and improve solids handling processes.

CIP Expenditures (\$ Millions)					
Program	Spent to Date		Remaining		Total
Conveyance System	\$	115.8	\$	395.7	\$ 511.6
Energy and Automation		83.2		26.2	109.4
Plant Process		20.4		60.4	80.7
General Plant Facilities		35.2		7.6	42.8
Nutrient Removal		0.7		40.5	41.2
Solids Handling		20.4		19.3	39.7
Corrosion and Odor Control		14.1		9.4	23.5
CIP Support		0.5		0.2	0.7
<b>TOTAL</b>	<b>\$</b>	<b>290.3</b>	<b>\$</b>	<b>559.2</b>	<b>\$ 849.6</b>

#### Forecasted CIP Expenditures

The CIP was updated in October 2018 and is currently estimated to spend nearly \$850 million from inception to completion beyond 2026. Going forward, remaining expenditures are estimated at \$559 million. The below table illustrates how remaining capital expenditures are allocated amongst member entities.

SVCW Remaining Capital Expenditures - By Fiscal Year End and Member Allocation												
Member Entity		2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	Total		
Belmont	9.45%	\$ 12.7	\$ 18.1	\$ 13.2	\$ 3.8	\$ 1.0	\$ 0.4	\$ 0.4	\$ 3.4	\$ 52.8		
Redwood City	48.57%	65.2	92.9	67.7	19.4	5.0	1.9	1.9	17.7	271.6		
San Carlos	15.14%	20.3	29.0	21.1	6.1	1.6	0.6	0.6	5.5	84.7		
West Bay SD	26.84%	36.0	51.3	37.4	10.7	2.8	1.0	1.0	9.8	150.1		
<b>TOTAL</b>	<b>100.00%</b>	<b>\$ 134.2</b>	<b>\$ 191.3</b>	<b>\$ 139.3</b>	<b>\$ 40.0</b>	<b>\$ 10.3</b>	<b>\$ 3.8</b>	<b>\$ 3.8</b>	<b>\$ 36.5</b>	<b>\$ 559.2</b>		
<i>Prior LRFPA Assumption:</i>		\$ 30.1	\$ 133.7	\$ 187.5	\$ 132.8	\$ 33.0	\$ 25.9	\$ 26.5	\$ 11.7	\$ 581.2		



The majority of anticipated CIP costs can be attributed to replacement of the aging conveyance system infrastructure, namely, the RESCU program. RESCU is comprised of three significant elements with a combined remaining expenditures estimate of approximately \$443 million. These projects include:

1. Replacement of the influent force main with a gravity pipeline;
2. Construction of a receiving lift station, screening and grit removal, peak flow and storm water handling facilities, influent connector pipeline (collectively, “Front of Plant”), and;
3. Replacement / rehabilitation of the pump stations.

The environmental review for RESCU is complete for all elements. Construction has commenced for the gravity pipeline and Front of Plant elements, and the Authority anticipates entering into a Design-Build contract in early 2019 for the Pump Station Improvement Plan. Combined, these three elements require capital expenditures of \$112 to \$172 million per year for the next three years.

## **Cash Reserves Policy**

In 2013, the SVCW Commission adopted a cash reserves policy that protects its fiscal solvency and funds future long Range capital needs. The policy describes the goals and amounts intended to be held in reserves. Each year during the budget process, SVCW reviews reserve balances and adjusts as needed. SVCW debt reserves mitigate the negative impact of revenue shortfalls from economic fluctuations, to fund unforeseen expense requirements, to provide stable rates for member entities, and to help fund future long-Range capital needs.

- The Operating Reserve must be maintained at a minimum balance of 10% of the approved Operating and Pay-go Capital Budget, plus \$1 million. This fund allows for continued operation in times of local, regional state, or national crisis or for unbudgeted, unexpected operational, maintenance or capital expenses approved by the SVCW Commission. As of December 31, 2018 the amount held in this reserve was \$3.5 million.
- The Capital Improvement Program Reserve Fund goal is to accrue funds equal to the annual calculated depreciation of SVCW facilities to meet the long Range needs of replacing capital assets when their useful life has been met. This will ultimately allow most major expenses in the future to be paid for on a pay-as-you go basis and limit the need for borrowing. Per policy, a minimum of \$1 million is added to the Capital Improvement Program Reserve Fund each fiscal year through fiscal year 2020-21, after which it shall follow prescribed increases until the annual contribution equals annual depreciation. As of December 31, 2018 the CIP reserve was \$17.9 million.
- Stage 2 Capacity Reserve is utilized to pay for capital projects that increase the treatment capacity of SVCW facilities. This fund is a pay as you go fund that derives income from fees paid by new customers to buy capacity for the use of SVCW facilities. Projects that enhance capacity will be built when there are adequate cash reserves to fund the projects if needed to accommodate additional flow or loadings or at the discretion of the SVCW Commission. As of December 31, 2018 the amount held in this reserve was \$11.1 million.

## **Debt Policy**

SVCW adopted a debt policy in 2017 that considers intergenerational equity between residents, strives to achieve the lowest possible cost of capital, and mitigates market and credit risk. Appropriately structured, the debt policy attempts to assign capital costs between current ratepayers and future generations.

Significant capital acquisitions can be funded through traditional bonds or alternative financing mechanisms such as government loans (e.g. SRF and WIFIA) and/or public/private partnerships.

Long Range financings are structured to minimize transaction-specific risk and total debt portfolio risk to SVCW and its Member Entities.

SVCW debt must comply with all laws, legal agreements, contracts, best practices, and adopted policies related to debt issuance and management, including disseminating, in a timely manner, disclosure information concerning SVCW's and SVCW's Member Entities' financial condition. It must also follow sound procurement practices to avoid conflicts of interest.

SVCW debt promotes cooperation and coordination with all stakeholders in the financing and delivery of services by maintaining cost-effective access to capital markets through prudent debt management. This includes integrating debt policies with the operating and capital budgets, the multi-year CIP, the Long Range Financial Plan, and other financial goals. SVCW must also maintain good investor relationships through the timely dissemination of material financial information to maintain the highest practical credit rating and ensure efficient access to capital markets.

Long-Range debt financing is not used to fund operating costs or operating deficits of SVCW. The principal types of municipal debt instruments employed by SVCW to finance long-Range capital projects are SRF Loans and Wastewater Revenue Bonds. Such instruments may be refunded by the issuance of refunding obligations for economic savings and/or restructuring considerations.

Short-Range debt has Ranges to maturity of less than five years and may be issued to provide financing for the acquisition and/or construction of long-lived capital projects that could otherwise be funded by long-Range debt financing described above. This includes commercial paper notes that are issued to provide interim project financing, Bond Anticipation Notes which may have a final maturity of not more than five years and are issued in anticipation of the issuance of wastewater revenue bonds, and a short-Range line of credit not to exceed five years.

## **Investment Policy**

SVCW has adopted a policy to invest monies not required for immediate expenditure. The policy establishes a standard of care to ensure investments are made with the appropriate considerations of capital safety, liquidity, and yield. The investment portfolio is diversified such that losses, if any, on specific securities are offset by the revenue generated from other investments. The portfolio is also kept sufficiently liquid to meet the operating and capital needs of SVCW. Within these two constraints, as well as in accordance with California Government Code Section 53601 through 53686, the investment portfolio is designed to attain the market rate of return after consideration is given to safety and liquidity.

## SECTION 3 – MODELING ASSUMPTIONS

SVCW has developed a Debt Model (the Model) to project debt service costs associated with the Capital Improvement Plan. Currently there is approximately \$559 million of capital projects to be funded over the next eight years. The Model allows SVCW to produce multiple funding scenarios that compare debt service costs at aggregate and Member Entity levels. The Model also optimizes variables by considering the impact of using cash, longer repayment Ranges, caps on debt service levels, deferred repayment, and changes in interest rate assumptions.

For each change in assumption, the Model displays total aggregate debt service, maximum aggregate annual cost, average annual debt service cost, weighted average cost of capital and weighted average CIP repayment year, among a few other debt summary outputs. Additionally, the Model shows the height and length of the “plateau” of this plateau, a critical consideration for members’ sewer rates. Finally, the Model also compares efficiency versus affordability of financing the debt by determining the length of each repayment period and financing rates.

### **Debt Structure**

The Model generated and compared multiple debt financing scenarios to fund the total CIP by comparing interest rates and average costs per year. The flexibility of the Model allows for changing multiple assumptions, including interest rates, the timing and structure of government loan or bond repayments, and the mix of financing methods such as government loans or wastewater revenue bonds.

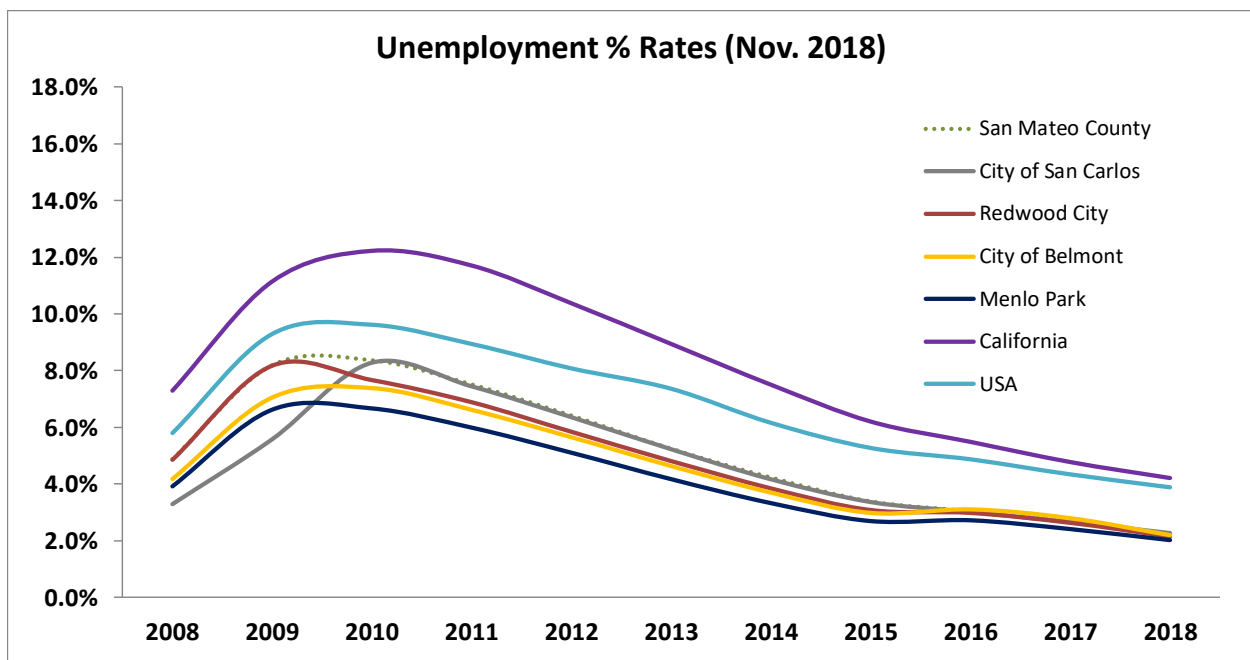
While the availability of government loan programs like SRF and WIFIA is uncertain, these loans are attractive for their low interest rates and traditional structures. Both have a similar structure as revenue bonds: thirty-year amortization and level debt service, but the SRF interest rate is set at half the California General Obligation Bonds rate while the WIFIA program is at the Treasury rate plus a few basis points. For example, tax-exempt interest rates in the current AAA bond market for a thirty-year maturity were approximately 3.03% as of January 11, 2019; or approximately 181 basis points higher than SVCW’s anticipated SRF loan at an effective rate of 1.22%. Including the additional execution costs of a publicly offered debt issue, SRF Loans are clearly the most cost-effective strategy as they become available.

## Economic Factors

Sewer revenues are somewhat influenced by the strength of the economy and other financial indicators. SVCW-estimated operating costs and the timing of CIP expenditures assume neither a significant downturn nor expansion in the San Francisco Bay Area economy. General economic conditions are comprised of many different factors; but sewer revenues are likely influenced by only a few factors. This report therefore focuses on six different broad factors that are good indicators of a strong economic environment: unemployment, assessed property valuation, taxable sales, income (measured by effective buying income and median household income), and interest rates.

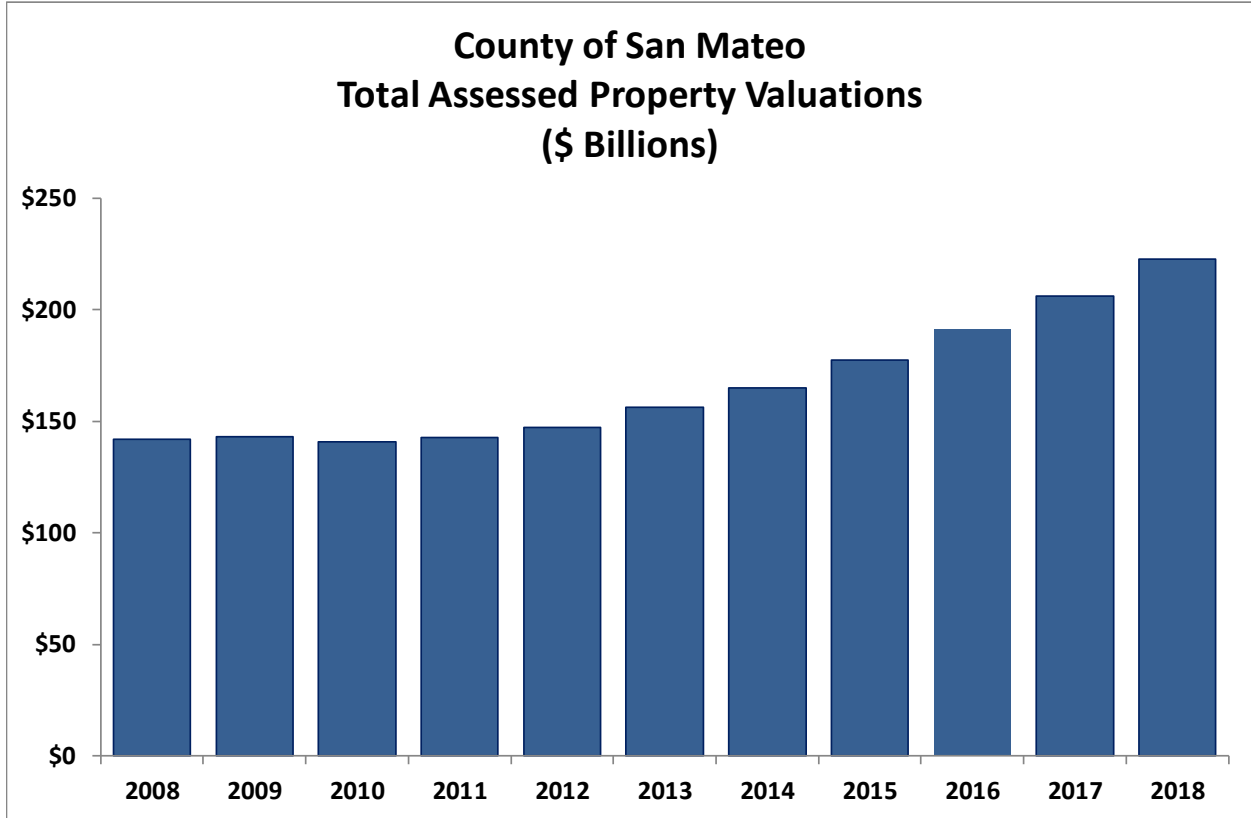
### *Unemployment*

Reflective of the Bay Area's strong economy, recent 2018 data from the United States Bureau of Labor Statistics shows unemployment rates for San Mateo County at 2.2%, well below California and National rates, respectively. The cities of San Carlos, Redwood City, Menlo Park and Belmont show similarly low rates.



*County Assessed Valuations*

San Mateo County has approximately \$223 billion in total assessed real property valuation, an increase of \$16.5 billion (or 8.0%) from the previous year.

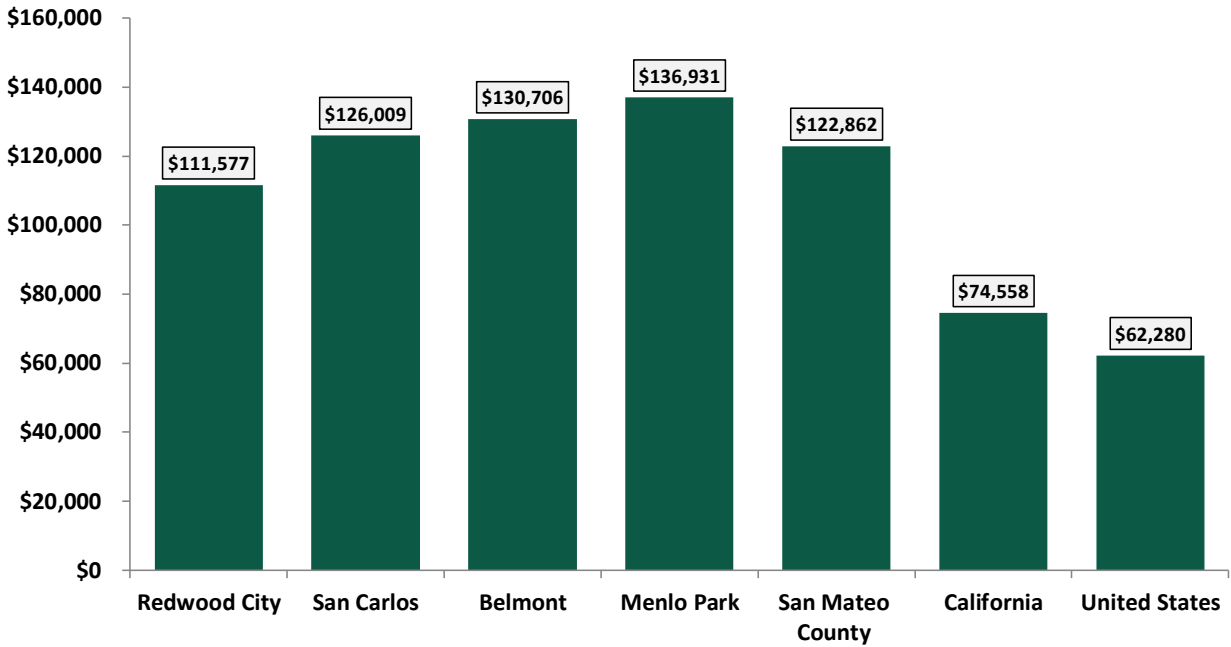




*Median Household Income*

The median household incomes and effective buying incomes are consistently above the State and National income rates for San Mateo County, City of Belmont, City of San Carlos, City of Menlo Park and Redwood City. Public 2018 economic data shows that the median household income of San Mateo County, at \$122.8 thousand, is 197 percent and 165 percent of the Nation’s and State’s median household income, respectively.

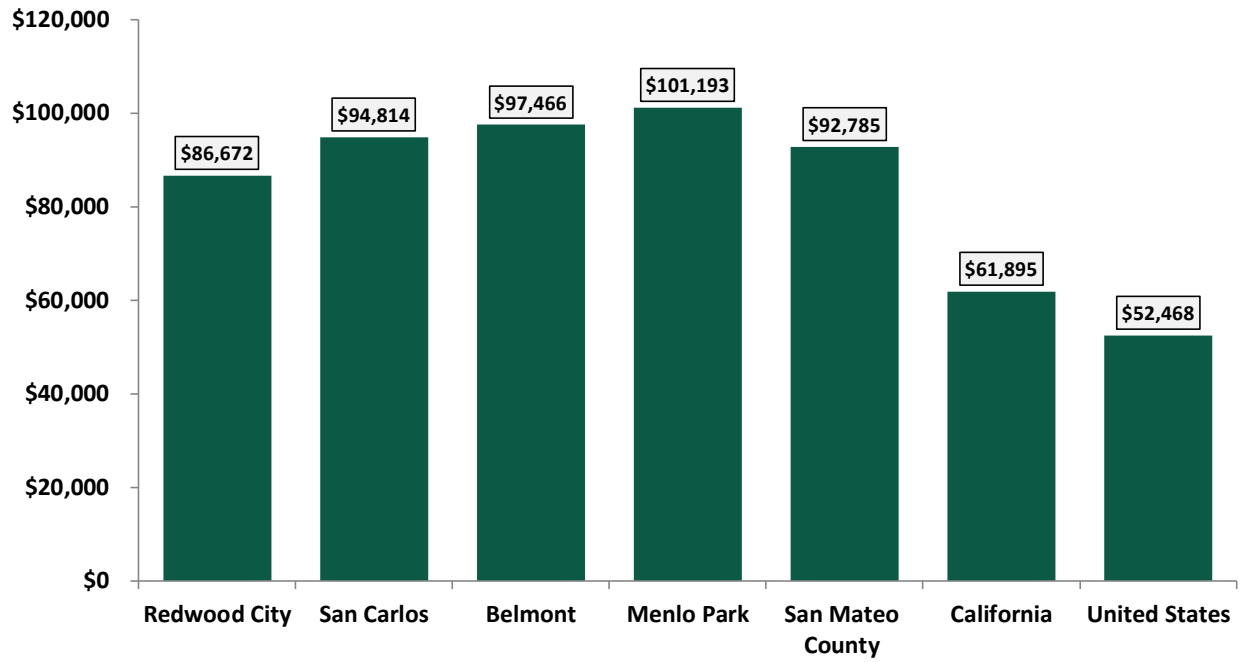
**2018 Median Household Income**



*Effective Buying Income*

The Communities served by SVCW show high effective buying income levels in comparison to National and State medians. The Effective Buying Income is the amount of a consumer’s disposable income; it reflects the money consumers have to spend after taxes. The following chart shows that SVCW communities have Effective Buying Incomes of \$86 thousand to \$101 thousand, which is 165 percent to 193 percent of the National levels, and 140 percent to 163 percent of California levels.

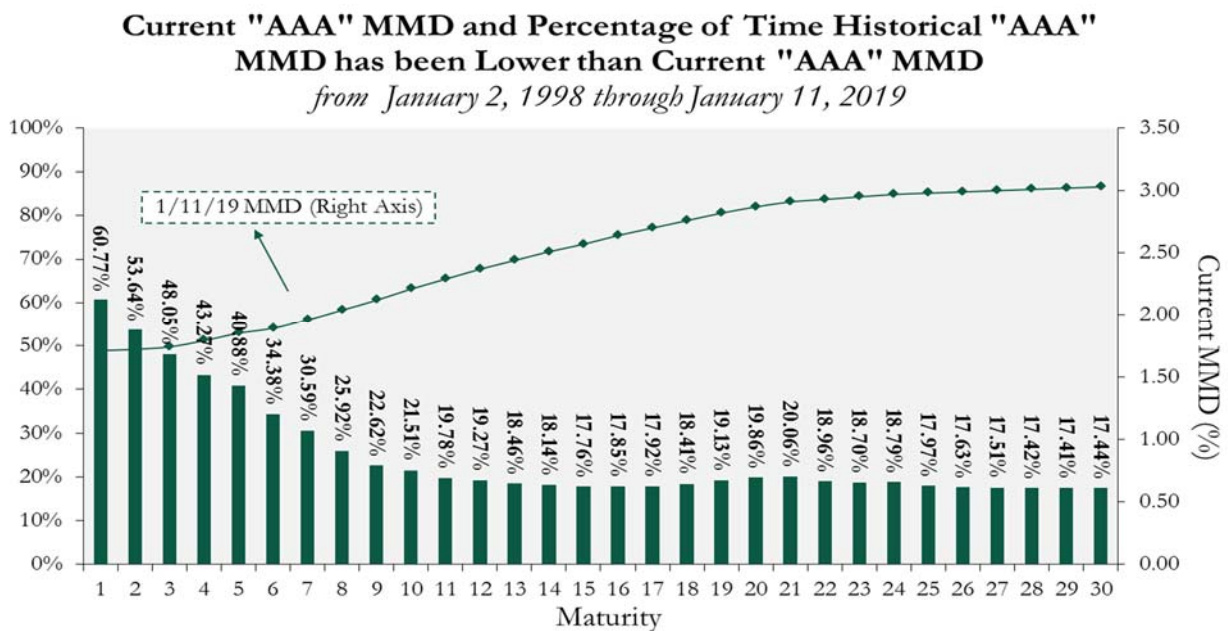
## 2018 Effective Buying Income



### Interest Rates

Based upon market conditions, every financing tool has projected interest rates depending on the type of the debt whether it is fixed or variable. For example, the anticipated SRF loan rate for the RESCU program, based on discussions with the State, is 1.22%. WIFIA loan rate is tied to the treasury rate and is forecasted at 3.45%. As fixed rate bonds are subsequently used, SVCW anticipates a projected interest rate of 4.25% for bonds issued in 2021. Short-Range Note Obligations are assumed to be at a rate of 2.25%. Finally, the Model uses a total projected variable rate of 3.40% inclusive of annual liquidity fees. At present, tax-exempt rates have remained above the near-historical lows of July 2016.

The table below provides tax-exempt interest rates for the Municipal Market Index as of January 4, 2019 and compares current rates to historical rates by Range. The data demonstrates that interest rates, while near historical lows throughout the yield curve, were lower historically in the shorter maturities than in the later years, i.e., years 20 through 30.

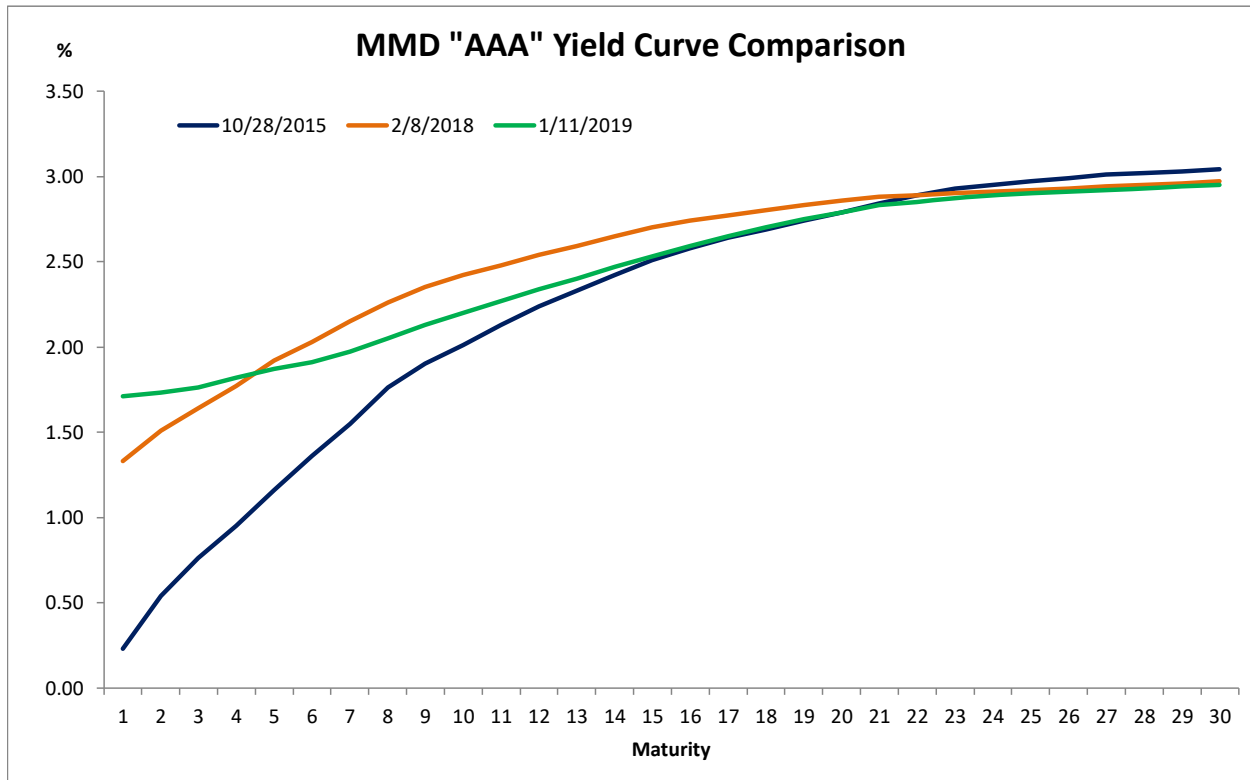


Source: Thomson Municipal Market Monitor

The two yield curves shown below represents the interest rates for the maturity years 1 - 30 for October 28, 2015 (the sale date of SVCW's last Bond issuance) and February 8, 2018 (sale date of SVCW's 2018 Bond issuance) in comparison to January 4, 2019. The most notable change is the rising of rates along the short end of the yield curve since 2015, as 2019 short-Range rates in 1 to 10-year maturities have risen sharply while longer maturities have decreased from 2015 levels.

Until 2016, slow national economic recovery prompted central banks to keep interest rates low to spur economic recovery. The Federal Reserve has continued to increase the Fed Funds rate by

¼ percent seven times since and is expected to raise rates three additional times during 2019. However, with interest rates still near historical lows it remains an advantageous time to finance projects as recommended by the Plan.



Source: Thomson Municipal Market Monitor

*Interest earnings on Project Funds and Reserves:*

It is estimated that funds held by SVCW related to the CIP, including reserve funds required by the SRF Loan program, will receive investment earnings of 1.5% annually over the long Range.

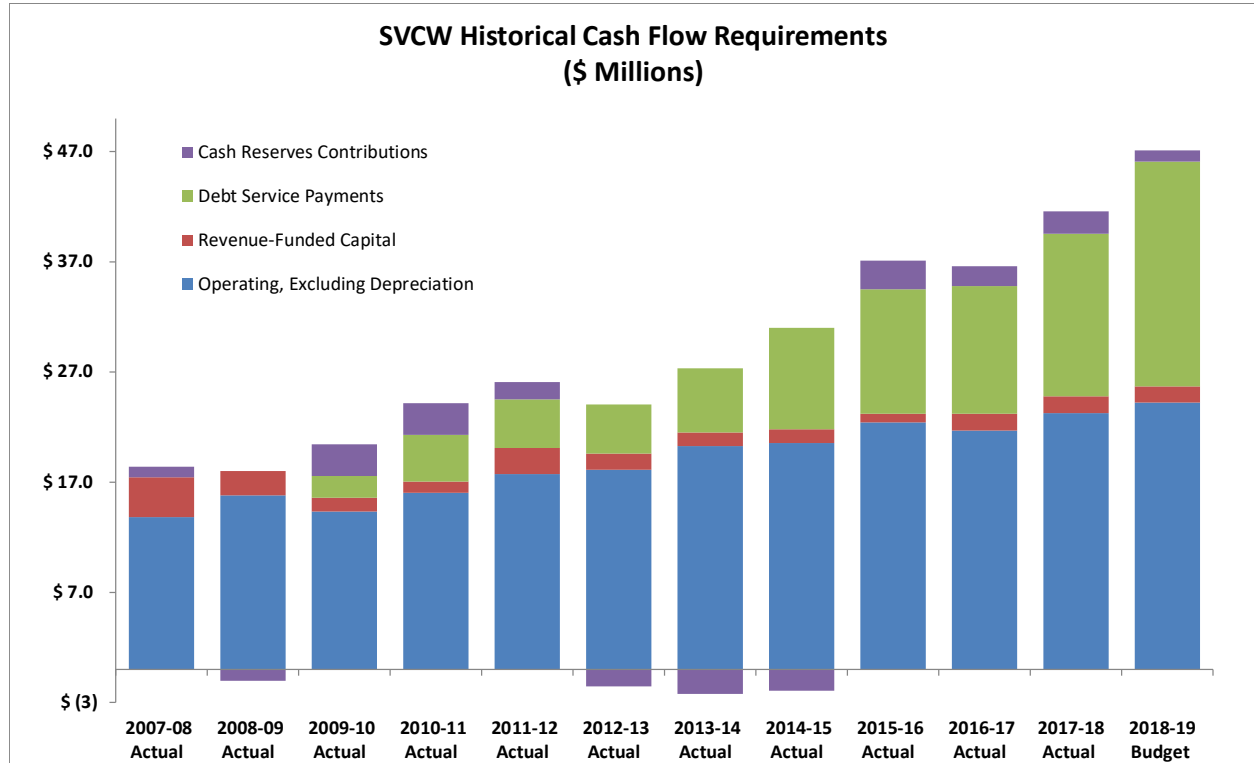
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## SECTION 4 – HISTORICAL FINANCIALS

### Historical Cash Flow Requirements

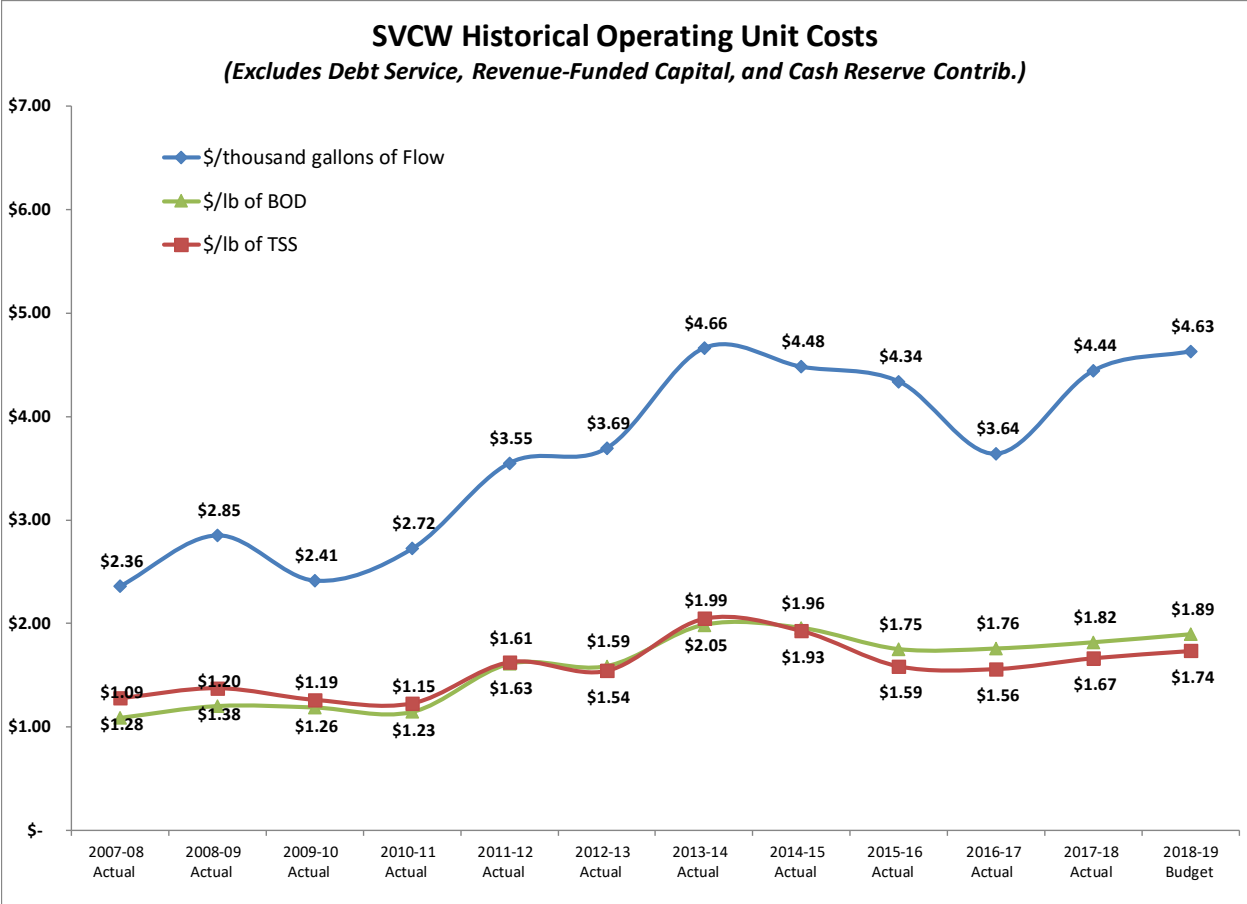
#### *Total Cash Flow Requirements*

SVCW annual cash flow requirements from Members have more than doubled over the past decade, mostly due to higher debt service payments needed to finance its CIP.



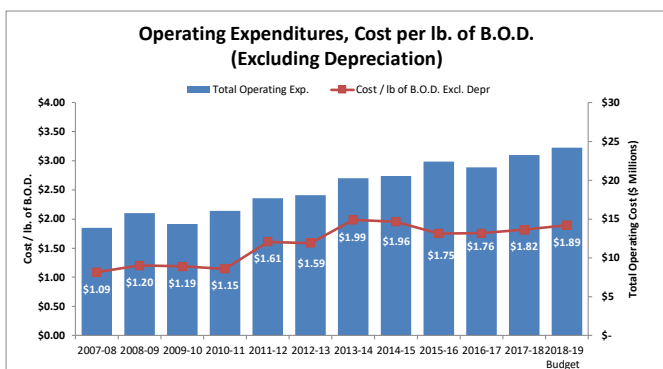
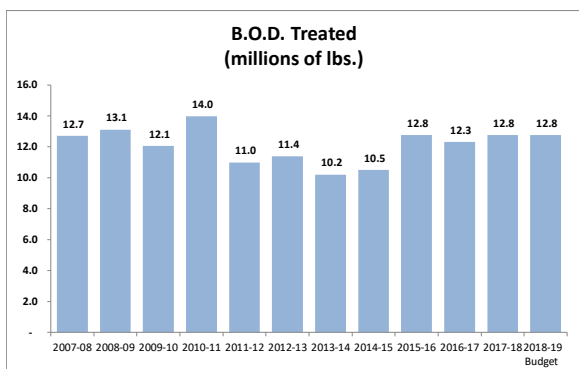
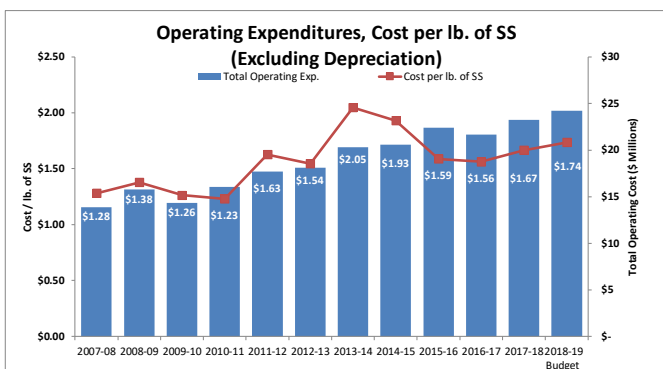
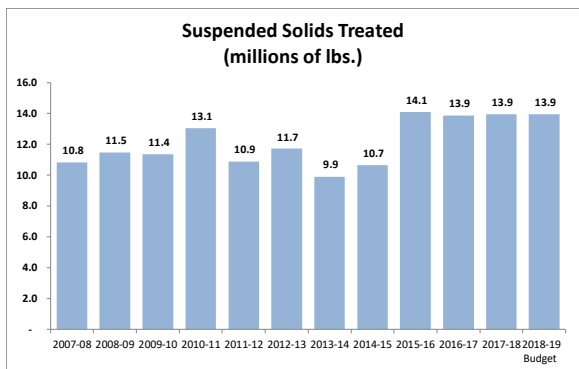
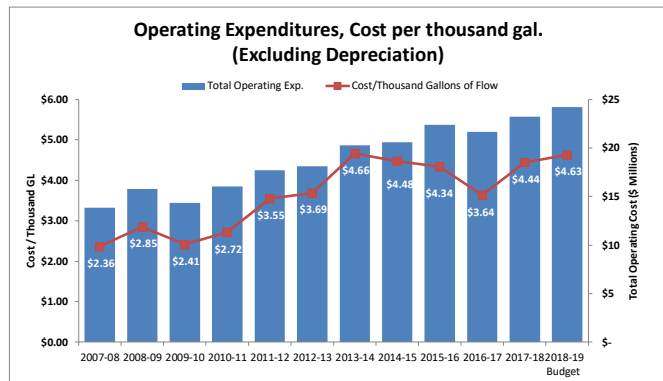
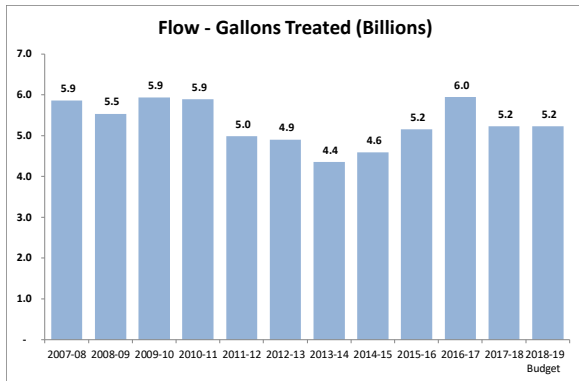
#### *Historical Unit Costs*

When isolated to only Operating Expenditures (excluding Depreciation), SVCW historical operating unit costs have increased 75% since the pivotal year 2007-08 eleven years ago. Since then SVCW has experienced ordinary inflationary pressures, increased Maintenance staff to better service SVCW assets, and established an Engineering Division to develop and manage the CIP.



In addition to the change in wastewater flows caused by droughts, the characteristics of the wastewater stream have also changed as local communities added housing and commercial developments. Low-flush toilets have introduced higher concentrations in wastewater, and both Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS) have been at all-time highs beginning 2016-17. The following charts provide a side-by-side comparison of operating volumes and unit cost trends.

Another influencing factor on unit costs is volatility of operating volumes (Flow, Biological Oxygen Demand, and Total Suspended Solids). Drought conditions from 2011 to 2016 contributed to a rise in Unit Costs, then afterwards returned to “normal” levels in 2017. These Unit Costs are defined as Operating Cost per thousands of gallons treated, Operating Costs per pound of TSS, and Operating Costs per pound of BOD.



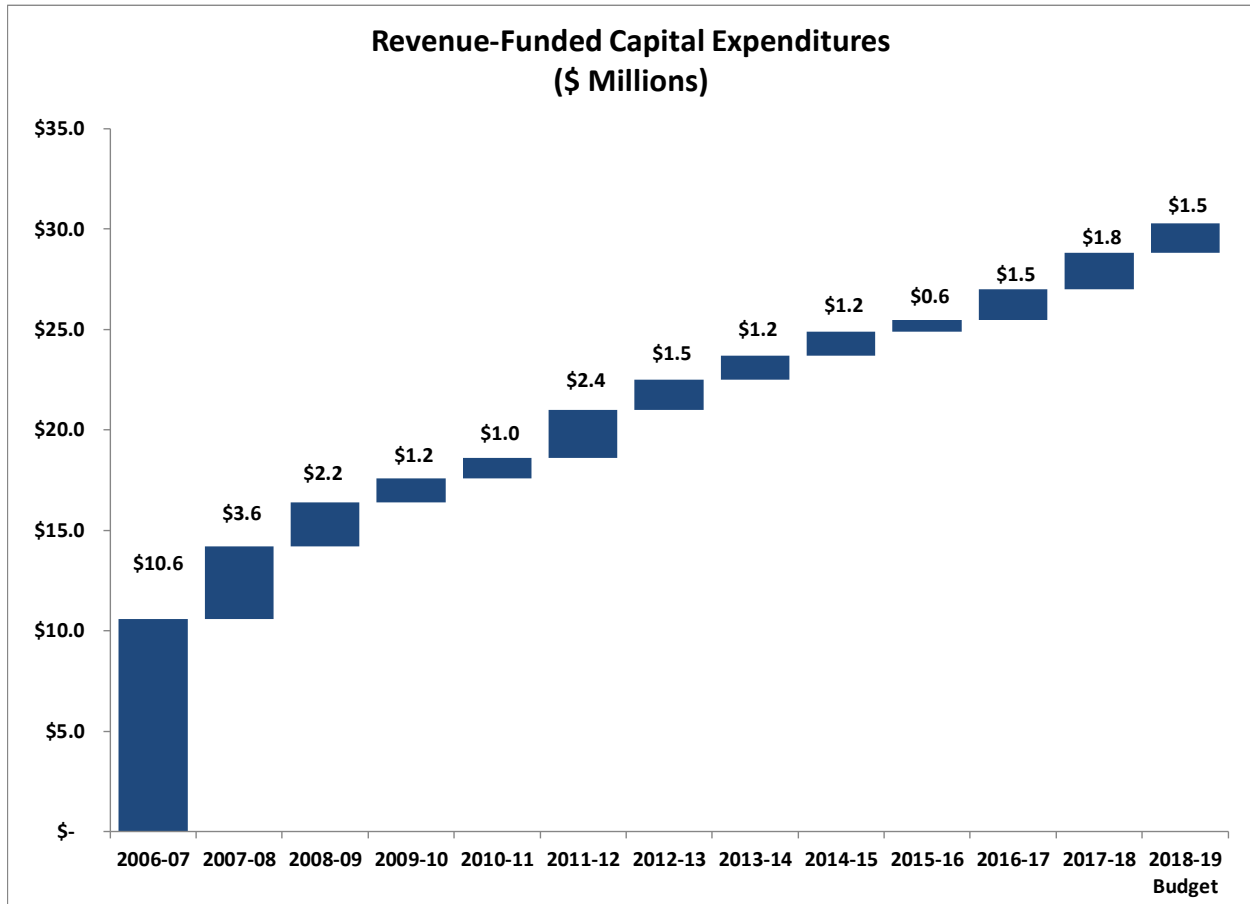
### Revenue-Funded Capital Expenditures

Revenue-Funded Capital Expenditures are for capital projects that are generally below \$1 million and completed within one year. Revenue-funded capital projects may include minor construction, purchase of vehicles or heavy equipment, maintenance repairs that improve an asset's useful life, as well as planning studies or preliminary engineering analysis for major capital improvements. Due to their relatively minor cost, it is appropriate to fund these items using cash rather than long-range debt.

Since 2006-07, SVCW has spent approximately \$28.8 million on Revenue-Funded Capital. Prior to formally adopting the Capital Improvement Program in fiscal year 2007-08, Member Entities made



relatively large cash contributions to address SVCW's immediate capital project needs. Since 2008-09, however, SVCW has averaged \$1.4 million annually in Revenue-Funded capital expenditures.



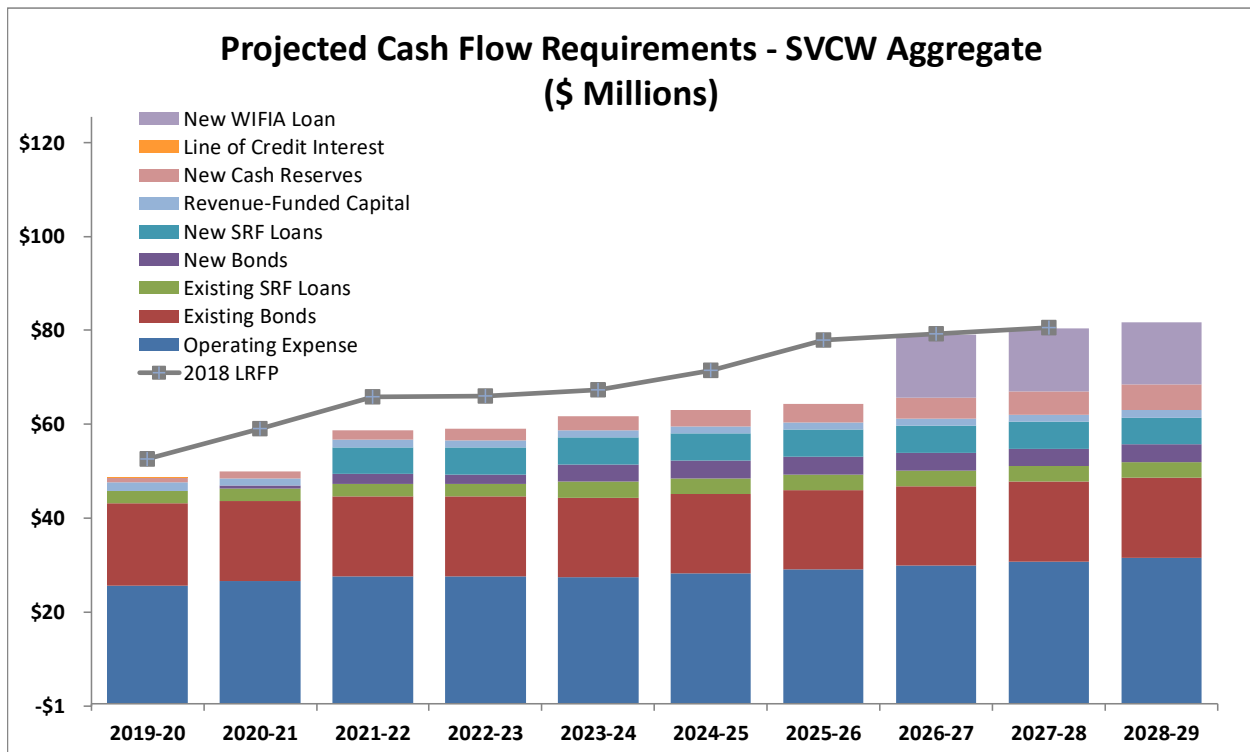
### Cash Reserves

The SVCW Commission has adopted cash reserve policies that document the goals and amounts intended to be held in reserves. Each year, the SVCW budget process reviews reserve balances and makes adjustments necessary to meet the policy. In 2017-18, \$1 million was contributed to the Capital Improvement Program Reserve.

## SECTION 5 – TEN-YEAR FINANCIAL PROJECTIONS

In fiscal year 2019-20 SVCW anticipates total expenditures will be \$48.2 million for all costs of operations, debt service, revenue-funded capital, and reserve contributions. This figure is anticipated to grow to \$81.3 million over the next ten years:

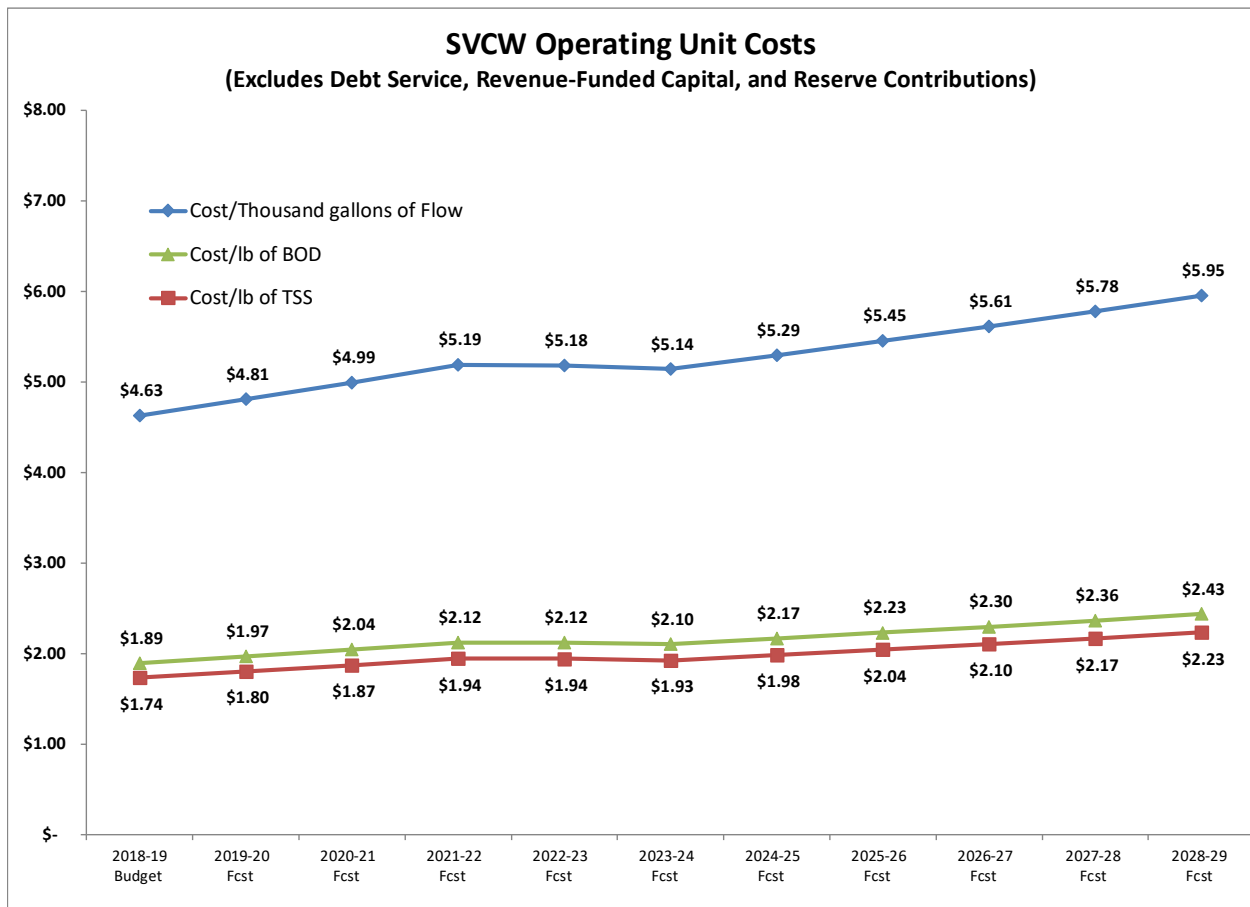
Projected SVCW Cash Flow Requirements - Aggregate (\$ Millions)										
Description	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
Operating Expense	\$ 25.15	\$ 26.09	\$ 27.13	\$ 27.09	\$ 26.87	\$ 27.68	\$ 28.51	\$ 29.36	\$ 30.23	\$ 31.12
Existing Bonds	17.46	17.02	17.01	17.00	17.00	17.01	16.98	16.98	16.98	16.97
Existing SRF Loans	2.63	2.63	2.63	2.63	3.32	3.32	3.32	3.32	3.32	3.32
New Bonds	-	0.68	2.12	2.12	3.77	3.77	3.77	3.77	3.77	3.77
New SRF Loans	-	-	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75
Line of Credit Interest	0.20	-	-	-	-	-	-	-	-	-
New WIFIA Loan	-	-	-	-	-	-	-	13.36	13.36	13.36
Revenue-Funded Capital	1.80	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
New Cash Reserves	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50
<b>TOTAL</b>	<b>\$ 48.24</b>	<b>\$ 49.42</b>	<b>\$ 58.14</b>	<b>\$ 58.60</b>	<b>\$ 61.22</b>	<b>\$ 62.53</b>	<b>\$ 63.83</b>	<b>\$ 78.54</b>	<b>\$ 79.91</b>	<b>\$ 81.30</b>



## Operating Expenditures

Total operating expenses will increase by approximately 3.65 percent annually over the next decade. The Financial Plan has incorporated future benefits of power generation, revenues from food waste, and improved productivity from automation.

SVCW Operating Expenditures (\$ Millions)											
Description	2018-19 Budget	2019-20 Forecast	2020-21 Forecast	2021-22 Forecast	2022-23 Forecast	2023-24 Forecast	2024-25 Forecast	2025-26 Forecast	2026-27 Forecast	2027-28 Forecast	2028-29 Forecast
Personnel	\$ 15.7	\$ 16.4	\$ 17.0	\$ 17.7	\$ 18.4	\$ 18.9	\$ 19.5	\$ 20.0	\$ 20.5	\$ 21.1	\$ 21.7
Utilities	1.7	1.8	1.9	1.7	1.8	1.9	2.0	2.0	2.1	2.2	2.3
Administrative Costs	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6
Equipment & Supplies	2.7	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6
Chemicals	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.9	1.9	2.0	2.0
Professional Services	0.8	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.1	1.1	1.1
Contractual Services	1.6	1.7	1.7	1.8	1.9	1.9	2.0	2.0	2.1	2.1	2.2
Regulatory and Training	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5
<b>Total Expenditures</b>	<b>\$ 25.0</b>	<b>\$ 25.9</b>	<b>\$ 26.9</b>	<b>\$ 27.7</b>	<b>\$ 28.7</b>	<b>\$ 29.5</b>	<b>\$ 30.4</b>	<b>\$ 31.3</b>	<b>\$ 32.2</b>	<b>\$ 33.1</b>	<b>\$ 34.1</b>
Less Misc. Revenue	(0.8)	(0.8)	(0.8)	(0.5)	(1.6)	(2.7)	(2.7)	(2.8)	(2.8)	(2.9)	(3.0)
<b>Net Operating Expend.</b>	<b>\$ 24.2</b>	<b>\$ 25.1</b>	<b>\$ 26.1</b>	<b>\$ 27.1</b>	<b>\$ 27.1</b>	<b>\$ 26.9</b>	<b>\$ 27.7</b>	<b>\$ 28.5</b>	<b>\$ 29.4</b>	<b>\$ 30.2</b>	<b>\$ 31.1</b>



## Debt Service Structure / Annual Debt Service Payments

SVCW uses debt as necessary to fund its CIP. Through its Member Entities, SVCW has already funded or has received funding commitments of \$457 million for capital improvements. Sources of funds include Wastewater Revenue Bonds, Member Entity cash contributions, SRF Loans, and grants.

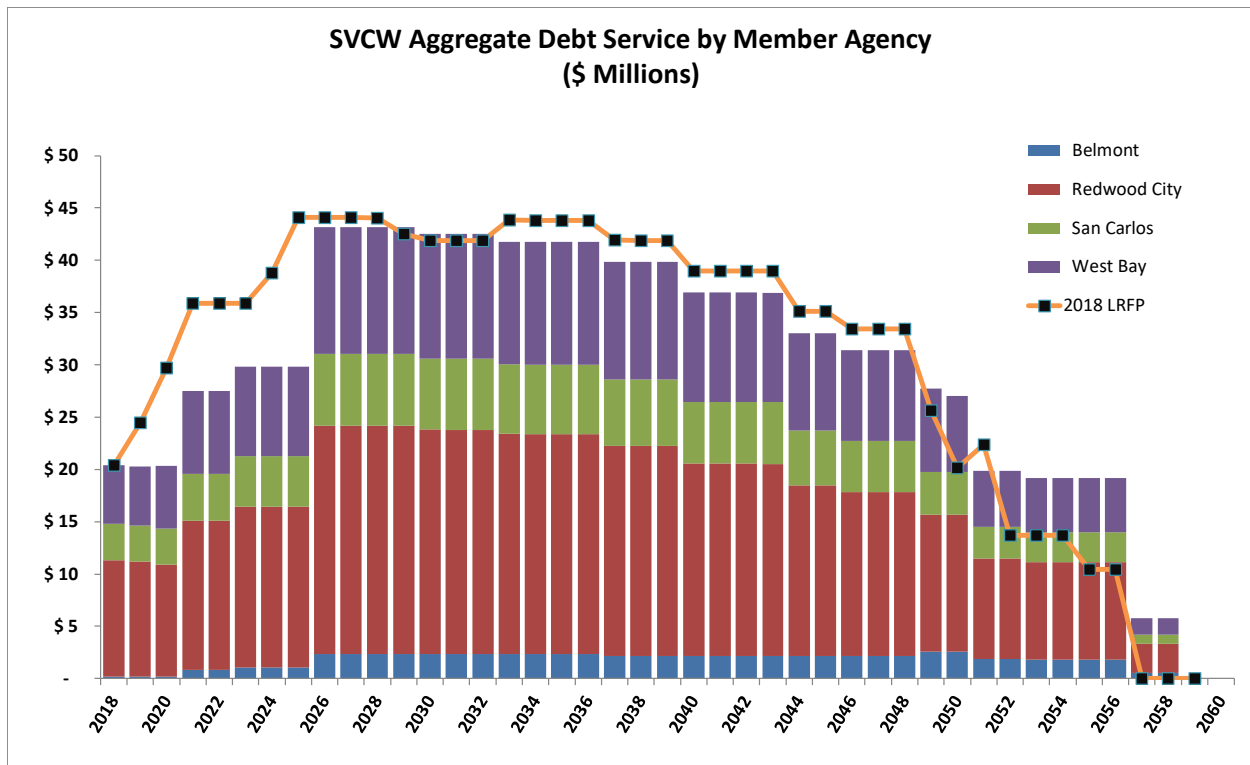
Source of CIP Funds to date (\$ millions)			
Description	All-in TIC / Interest Rate	Max Proceeds	Available Proceeds at 10/31/18
<b>Bonds</b>			
2008 Wastewater Revenue Bonds	5.03%	\$ 10.01	\$ -
2009 Wastewater Revenue Bonds	5.12%	55.86	-
2014 Wastewater Revenue Bonds	4.18%	65.54	-
2015 Wastewater Revenue Bonds	3.75%	30.00	-
2018 Wastewater Revenue Bonds	3.43%	148.98	101.12
Subtotal - Bonds		310.38	101.12
<b>Cash Contributions in lieu of Debt</b>			
Belmont		34.15	10.10
Redwood City		10.00	-
West Bay Sanitary District		13.02	13.02
Subtotal - Cash		57.16	23.12
<b>State Revolving Fund Loans</b>			
Control Building	2.60%	11.36	-
WWTP Improvements	1.80%	31.55	-
Conveyance Planning	1.60%	14.00	2.78
Subtotal - SRF		56.91	2.78
<b>Line of Credit</b>			
Wells Fargo LOC	LIBOR-based	65.00	51.30
<b>Grant Funding</b>			
PG&E Cogeneration Grant		2.40	0.60
California Energy Commission		0.50	-
Subtotal - Grant Funding		2.90	0.60
<b>TOTAL</b>		<b>\$ 492.36</b>	<b>\$ 178.91</b>

Looking forward, approximately \$559 million of the CIP remains to be funded. This LRFPP recommends the following debt structure, with a comparison to the prior year's LRFPP:

Description	2018 LRFP	2019 LRFP
<b>Remaining CIP to be funded</b>	<b>\$581 Million</b>	<b>\$559 Million</b>
Fixed Rate Bonds / % of New Debt	\$371M / 65%	\$24M / 4.3%
Variable Rate Bonds / % of New Debt	\$115M / 19%	\$48M / 8.5%
Government Loans / % of New Debt	\$65M / 11%	\$349M / 62.4%
Proceeds or Cash / % of New Debt	\$30M / 5%	\$139M / 24.8%
Weighted Average Cost of Capital %	3.64%	2.88%

The updated debt structure, compared to 2018 estimates, will reduce service payments through the next 23 years. These savings are significant especially over the next seven years due to unique WIFIA structure that allows debt amortization to be deferred for up to five years after completion of construction.

Over the entire 41-year period displayed below, total aggregate debt service is now estimated at \$1.28 billion, or approximately \$40 million (in nominal dollars) less than the prior year’s LRFP. If discounted to today’s dollars, this difference is valued at a Net Present Value of \$46 million.



### *SVCW Wastewater Revenue Bonds*

Financing Agreements adopted between SVCW and its Member Entities obligate each of these agencies to make payments to SVCW for their respective allocable share of debt service. The City of Belmont has, to date, not participated in SVCW Bond financing and is therefore not obligated to make debt service payments on bonds currently outstanding.

Existing bond debt service payments are \$17.5 million in fiscal year 2019-20, including four issuances from 2009, 2014, 2015, and 2018. Only one new Bond Debt issuance is planned in 2021, and a variable-rate issuance in 2023.

### *State Revolving Fund Loans*

SVCW has thus far financed certain projects by entering into three separate sale-repurchase agreements with the State Water Resources Control Board (SWRCB). This program is funded from the California State Revolving Fund (SRF) program. The project funds, including any accrued interest, are repaid in annual installments commencing one year after construction.

Current SRF loan payments will peak at \$3.3 million. These loans financed the Control Building, certain Wastewater Treatment Improvements loans, and conveyance system planning efforts.

SVCW is currently in discussions with the SWRCB to secure a \$140.8 million SRF loan for the gravity pipeline element of RESCU, anticipated to close in 2019.

### *Line of Credit*

SVCW holds a \$30 million Line of Credit (LOC), with the ability to increase it to \$65 million. This LOC provides bridge financing for CIP projects. It remains a valuable tool to manage cash flow and to date has reduced overall borrowing costs. Specifically, the LOC furnishes interim cash flows between bond issuances or when SVCW awaits reimbursement of construction costs funded by the SRF program. When borrowing through SRF, SVCW pays for services and afterwards submits paid invoices to the state for reimbursement. Reimbursement generally takes 90 to 120 days and the LOC acts as a bridge loan during this period.

## Revenue-Funded Capital Expenditures

SVCW anticipates investing approximately \$1.5 million annually in critical projects to maintain ongoing operations. These projects are purchased and may be installed and managed by staff, examples of which include vehicles, valves, pumps, motors, gear assemblies, technology devices, or maintenance equipment.

## Cash Reserves Contributions

The table below shows the projected annual cash reserve contributions to the Capital Improvement Program Fund, its earnings, and the balances. After ten years SVCW is projected to have nearly \$53 million in cash reserves that could be used for the next generation of capital improvements.

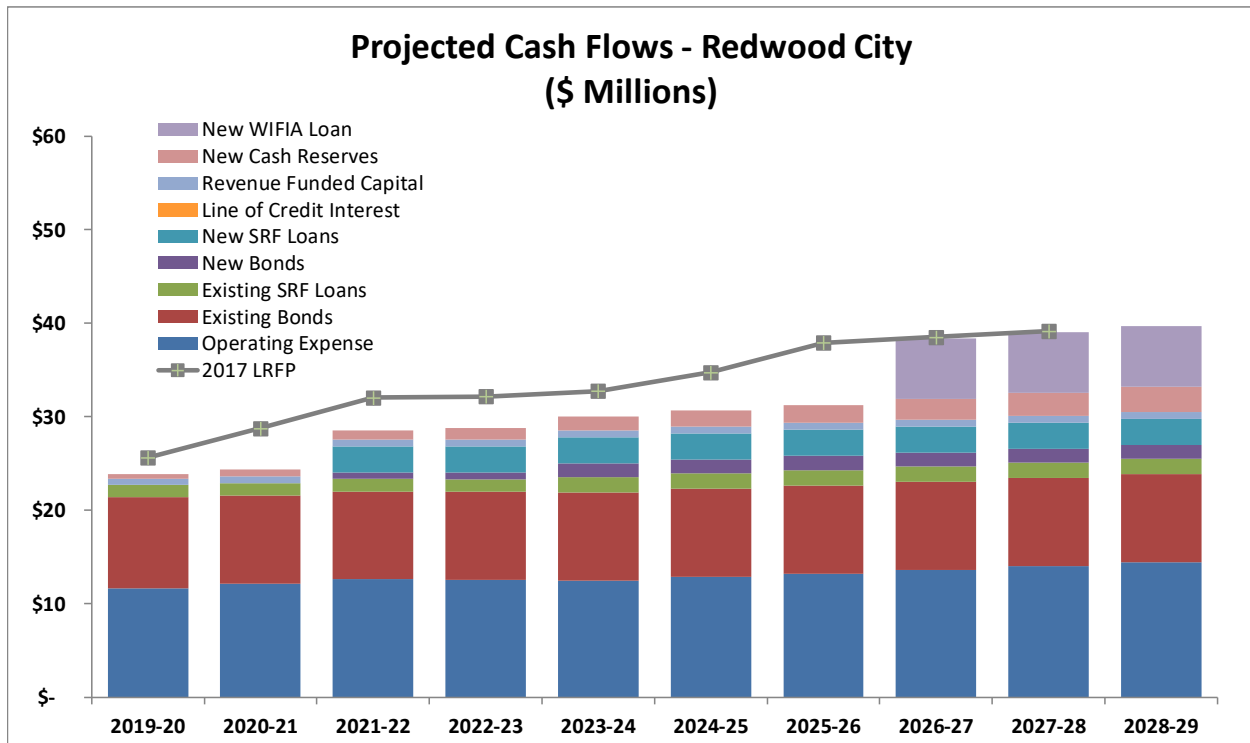
CIP Cash Reserves Forecast (\$ Millions)											
Description	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	
Beginning Balance	\$ 17.1	\$ 18.3	\$ 20.0	\$ 22.2	\$ 25.0	\$ 28.3	\$ 32.1	\$ 36.4	\$ 41.3	\$ 46.8	
Contributions	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	
Earnings	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	
<b>Ending Balance</b>	<b>\$ 18.3</b>	<b>\$ 20.0</b>	<b>\$ 22.2</b>	<b>\$ 25.0</b>	<b>\$ 28.3</b>	<b>\$ 32.1</b>	<b>\$ 36.4</b>	<b>\$ 41.3</b>	<b>\$ 46.8</b>	<b>\$ 52.8</b>	

Cash Reserve contributions follow SVCW policy at \$1 million contributed annually through fiscal year 2020-21, after which it increases annually by \$500 thousand until contributions match annual depreciation expense.

## Total Cash Flow Projections by Member Entity

The following charts and tables describe the cash flow projections required for all SVCW expenditures. Each Member Entity is also provided with a detailed description for their own planning purposes.

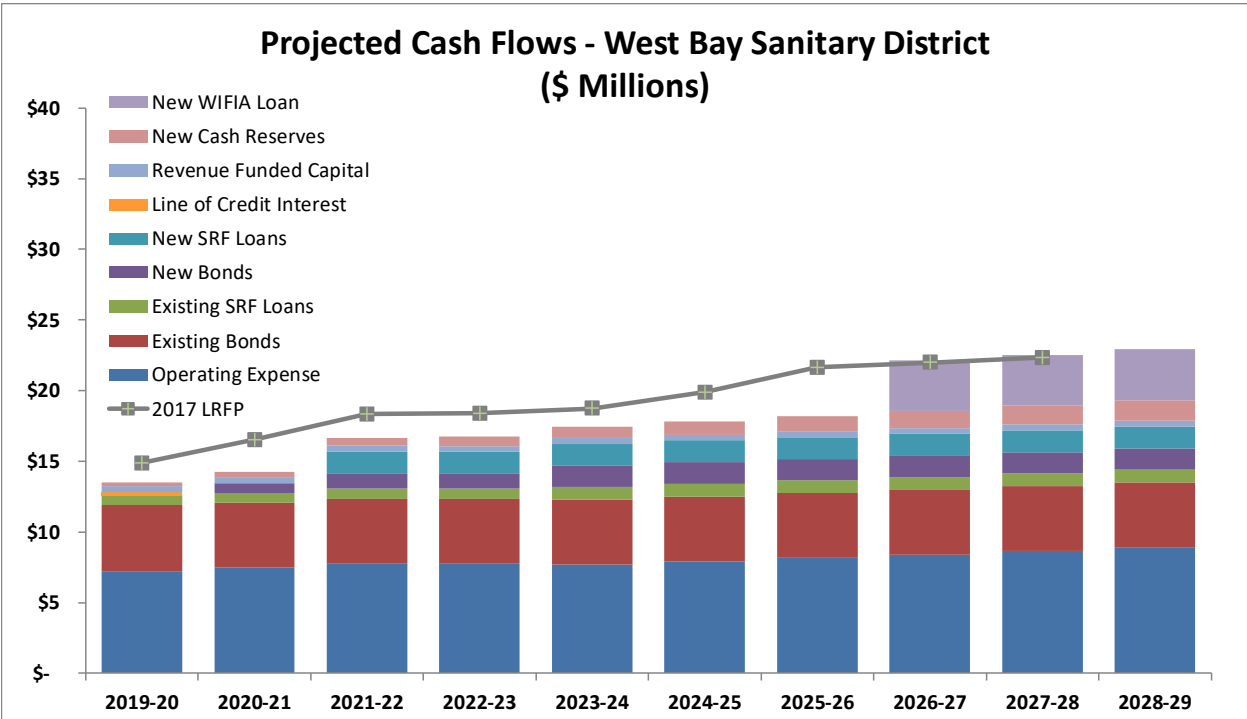
### Redwood City



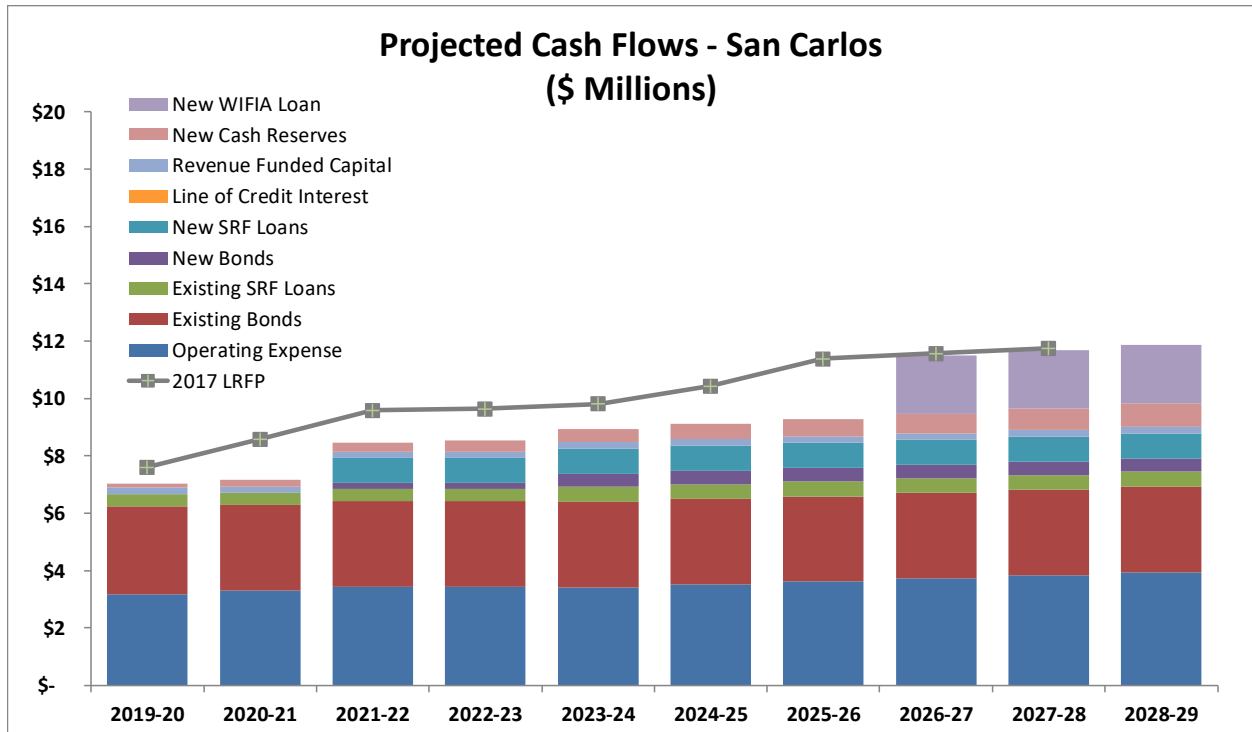
Projected SVCW Cash Flow Requirements - Redwood City (\$ Millions)										
Description	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
Operating Expense	\$ 11.68	\$ 12.12	\$ 12.60	\$ 12.58	\$ 12.48	\$ 12.85	\$ 13.24	\$ 13.63	\$ 14.04	\$ 14.46
Existing Bonds	9.68	9.43	9.42	9.42	9.42	9.41	9.41	9.41	9.41	9.40
Existing SRF Loans	1.32	1.32	1.32	1.32	1.65	1.65	1.65	1.65	1.65	1.65
New Bonds	-	-	0.70	0.70	1.50	1.50	1.50	1.50	1.50	1.50
New SRF Loans	-	-	2.79	2.79	2.79	2.79	2.79	2.79	2.79	2.79
Line of Credit Interest	-	-	-	-	-	-	-	-	-	-
New WIFIA Loan	-	-	-	-	-	-	-	6.49	6.49	6.49
Revenue Funded Capital	0.87	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
New Cash Reserves	0.49	0.73	0.97	1.21	1.46	1.70	1.94	2.19	2.43	2.67
<b>TOTAL</b>	<b>\$ 24.04</b>	<b>\$ 24.32</b>	<b>\$ 28.53</b>	<b>\$ 28.76</b>	<b>\$ 30.03</b>	<b>\$ 30.64</b>	<b>\$ 31.27</b>	<b>\$ 38.39</b>	<b>\$ 39.04</b>	<b>\$ 39.69</b>



West Bay Sanitary District



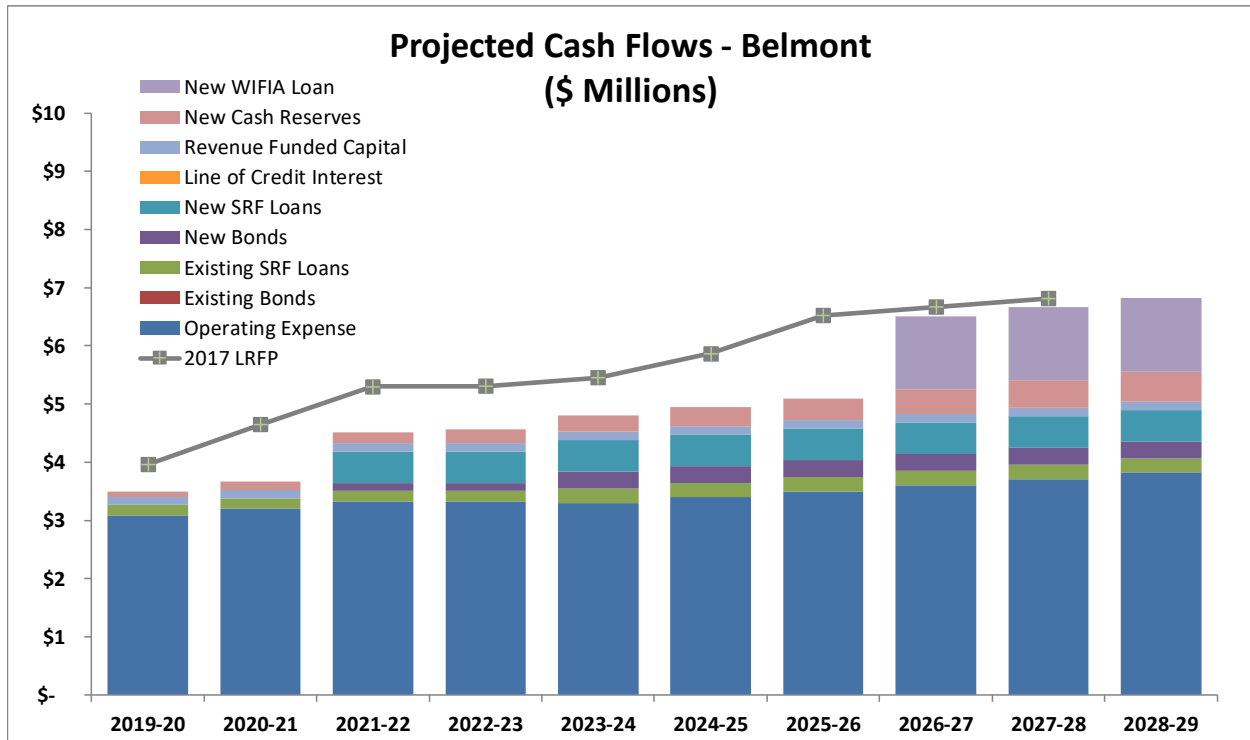
Projected SVCW Cash Flow Requirements - West Bay Sanitary District (\$ Millions)											
Description	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	
Operating Expense	\$ 7.19	\$ 7.46	\$ 7.76	\$ 7.75	\$ 7.69	\$ 7.92	\$ 8.16	\$ 8.40	\$ 8.65	\$ 8.90	
Existing Bonds	4.71	4.59	4.60	4.59	4.59	4.59	4.59	4.58	4.58	4.58	
Existing SRF Loans	0.73	0.73	0.73	0.73	0.91	0.91	0.91	0.91	0.91	0.91	
New Bonds	-	0.68	1.07	1.07	1.51	1.51	1.51	1.51	1.51	1.51	
New SRF Loans	-	-	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	
Line of Credit Interest	0.20	-	-	-	-	-	-	-	-	-	
New WIFIA Loan	-	-	-	-	-	-	-	3.59	3.59	3.59	
Revenue Funded Capital	0.48	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	
New Cash Reserves	0.27	0.40	0.54	0.67	0.81	0.94	1.07	1.21	1.34	1.48	
<b>TOTAL</b>	<b>\$ 13.58</b>	<b>\$ 14.27</b>	<b>\$ 16.64</b>	<b>\$ 16.75</b>	<b>\$ 17.45</b>	<b>\$ 17.82</b>	<b>\$ 18.18</b>	<b>\$ 22.14</b>	<b>\$ 22.53</b>	<b>\$ 22.92</b>	



Projected SVCW Cash Flow Requirements - San Carlos (\$ Millions)											
Description	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	
Operating Expense	\$ 3.19	\$ 3.31	\$ 3.44	\$ 3.43	\$ 3.40	\$ 3.51	\$ 3.61	\$ 3.72	\$ 3.83	\$ 3.94	
Existing Bonds	3.07	2.99	2.99	2.99	3.00	3.00	2.98	2.99	2.99	2.99	
Existing SRF Loans	0.41	0.41	0.41	0.41	0.51	0.51	0.51	0.51	0.51	0.51	
New Bonds	-	-	0.22	0.22	0.47	0.47	0.47	0.47	0.47	0.47	
New SRF Loans	-	-	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	
Line of Credit Interest	-	-	-	-	-	-	-	-	-	-	
New WIFIA Loan	-	-	-	-	-	-	-	2.02	2.02	2.02	
Revenue Funded Capital	0.27	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	
New Cash Reserves	0.15	0.23	0.30	0.38	0.45	0.53	0.61	0.68	0.76	0.83	
<b>TOTAL</b>	<b>\$ 7.09</b>	<b>\$ 7.16</b>	<b>\$ 8.46</b>	<b>\$ 8.53</b>	<b>\$ 8.94</b>	<b>\$ 9.11</b>	<b>\$ 9.28</b>	<b>\$ 11.49</b>	<b>\$ 11.68</b>	<b>\$ 11.87</b>	

*Belmont*

Belmont has, to date, chosen to not participate in SVCW Bond issuances, including the 2018 Bond Issuance. This produces lower debt service payments for Belmont as compared to the 2018 LRFP, albeit the City of Belmont has financed \$22.5 million for SVCW-related capital needs on its own.



Projected SVCW Cash Flow Requirements - Belmont (\$ Millions)										
Description	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
Operating Expense	\$ 3.09	\$ 3.20	\$ 3.33	\$ 3.33	\$ 3.30	\$ 3.40	\$ 3.50	\$ 3.60	\$ 3.71	\$ 3.82
Existing Bonds	-	-	-	-	-	-	-	-	-	-
Existing SRF Loans	0.18	0.18	0.18	0.18	0.24	0.24	0.24	0.24	0.24	0.24
New Bonds	-	-	0.14	0.14	0.29	0.29	0.29	0.29	0.29	0.29
New SRF Loans	-	-	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
Line of Credit Interest	-	-	-	-	-	-	-	-	-	-
New WIFIA Loan	-	-	-	-	-	-	-	1.26	1.26	1.26
Revenue Funded Capital	0.17	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
New Cash Reserves	0.09	0.14	0.19	0.24	0.28	0.33	0.38	0.43	0.47	0.52
<b>TOTAL</b>	<b>\$ 3.53</b>	<b>\$ 3.67</b>	<b>\$ 4.52</b>	<b>\$ 4.56</b>	<b>\$ 4.80</b>	<b>\$ 4.95</b>	<b>\$ 5.10</b>	<b>\$ 6.51</b>	<b>\$ 6.67</b>	<b>\$ 6.83</b>

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## **SECTION 6 – SENSITIVITIES**

Traditional risks to the efficient completion of large capital plans include unanticipated increases such as inflation and interest rate volatility. The risks of inflation and rising interest rates are outside the control of SVCW; however, strategies can mitigate these risks. The Plan, for instance, assumes a 4% inflation factor in operating costs. Further, interest rates utilized by the Model are conservative and generally based on historical averages and, as a result, are presumed to be higher than current market rates. As another example of cost preparedness, SVCW increased the CIP estimates by implementing cost inflators through the midpoint of construction.

To assess the impact of borrowing at interest rates higher than the conservative rates assumed in the recommendation, a sensitivity-analysis was conducted by increasing the weighted cost of capital by approximately 50 basis points (0.50%). Such an increase would result in a greater debt service cost of (Net Present Value) \$23.8 million over the life of the debt issued.

### **Capital Improvement Program Adherence**

The timing of the projects is considered achievable under present economic and operational assessments. Based upon the size of the CIP the cost is significant and the interest expense is also significant. Adhering to the timing of the CIP is singularly the most cost-effective strategy to minimize inflation and interest rate risks. As the regional economy continues to expand, costs will continue to rise. Delays to the CIP by one year will likely increase costs by approximately \$26.6 million based upon a construction cost inflation factor of 4%. SVCW has shown that its Progressive Design-Build project delivery method has so far managed to avoid such inflationary schedule risks.

### **Government Loan Availability**

The SWRCB has secured \$57 million in SRF loans thus far. The low cost of these loans, combined with attractive repayment Ranges, increased the competition from other agencies. While the SWRCB has been unable to meet its current demand for SRF loans, it has identified the SVCW RESCU program as eligible for a \$140.8 million SRF loan. SVCW is actively working to close this loan in mid-2019, though the agreement is not yet completed.

In October 2018 the Environmental Protection Agency (EPA) selected SVCW's Letter of Interest for a WIFIA loan. The Authority is now in negotiations with the EPA to secure \$208 million for the RESCU program, with potential flexibility to draw up to \$233 million.

## **Inflation**

Operating Expenditures - The LRFIP includes inflationary assumptions of approximately 4% on operating costs. The Consumer Price Index (CPI) is a measure of the “average change in prices over time in a fixed market basket of goods and services” which translates to a guide for determining the prices on food, energy, fuel and other goods and services. CPI is a good indicator of how the economy holds up against inflation and surrounding economic changes.

Capital Expenditures – Construction costs of labor and materials continue to increase. While SVCW negotiates for best pricing on projects, the rise in material and labor costs will place upward pressure on the CIP. SVCW accounted for capital project inflation by increasing the CIP budget by a range of 3.7% to 4.25% through the midpoint of construction, adding \$42.6 million.

## **Interest Rates**

It is impossible to predict interest rate levels or the timing of changes. What is known, however, is today’s interest rates remain near historical lows. Since tax-exempt interest rates are already at historical low levels, a decrease in rates is unlikely. A more plausible outcome would be for the market to experience higher interest rates in the future.

Changes in interest rates would be somewhat mitigated with SRF Loan funding, since its rate is 50% of the State’s public borrowing cost. Publicly issued debt, however, would bear the entire market increase with estimated rates.

If SVCW’s Weighted-Average Cost of Capital was to increase by 50 basis points (or 0.5%), SVCW annual debt service payments (at its maximum aggregate point) would increase by \$2.18 million. Over the entire amortization Range, the cost of this change in interest rates would be a Net Present Value of \$23.8 million. It should be noted, however, that both the SRF Loan interest rates and publicly issued bond rates assumed in the Model have a significant cushion versus the current market (e.g. fixed rates are approximately 0.82% higher than the recent 2018 Fixed Bond rate).

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## SECTION 7 – SUMMARY

SVCW provides this Long Range Financial Plan as a recommendation and implementation strategy to fund the next decade of capital improvements. The Plan documents the analysis of possible alternatives. Due to the extensive nature and cost of the CIP, leveraging long Range debt is the most practical funding method. Individual Members may of course determine that, for their own specific purposes, cash contributions may be appropriate.

Due to the historical lack of a sinking fund and cash reserves, the recommended debt strategy is in lieu of a pay-go cash strategy. Debt allows SVCW to distribute costs over the expected useful lives of constructed assets, and also provides fairness to Members' ratepayers by spreading costs across generations and facilitating moderate and consistent rate increases. In general, CIP funding sources include 1) Capital markets by issuing publicly traded revenue bonds; 2) government loans through SRF and WIFIA programs when available; and 3) cash that has been accrued by the Members Agencies.

This LRFP's recommendations and its outcomes are for planning purposes. SVCW believes it is a reasonable forecast of expenditures over the next year, including a well-informed position that SVCW will be able to access government loan programs from the SWRCB and the EPA. This LRFP therefore is useful for Member Agencies as they consider budgets and analyze their sewer rates.



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